

Application Form (Draft EIA Report)

For

Proposed Rough stone Quarry – 2.50.0 Ha
at

S.F.No. 603/1(Part-A) of Panchakshipuram Village, Hosur
Taluk, Krishnagiri District, Tamilnadu State

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

Category of the Project: B1 Cluster Mining

Baseline Period: May, June & July 2022

*Environmental Consultant
& Laboratory details:*

Ecotech Labs Pvt Ltd,



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

Proponent details:

Thiru.R.Rajasekaran,
S/O. Ramasubbu,
No. 89, Thally Hudco,
Hosur Taluk,
Krishnagiri District .

From

M/s.S.S.V Blue Metals
Thiru.R.Rajasekaran (Proponent)
S/o.Ramasubbu
No.89, Thally HUDCO
Hosur Taluk,
Krishnagiri District.

To

The District Environmental Engineer
TamilNadu Pollution Control Board
Plot No.140A,
SIPCOT Industrial Complex,
Hosur -635126
Tamil Nadu.

Sir,

Sub: Request to conduct Public Hearing - Environmental Clearance for Thiru.R.Rajasekaran Rough stone Quarry over a total extent of 2.50.0Ha at S.F. No. 603/1 (Part-A) of Panchakshipuram Village, Hosur Taluk, Krishnagiri District, Tamil Nadu State – Reg.

Ref: 1. Letter No. SEIAA-TN/F.No.9261/TOR-1204/2022 dated 14.07.2022

Please find enclosed herewith the application of Draft EIA report along with necessary enclosures seeking environmental clearance for Thiru.R.Rajasekaran Rough stone Quarry over a total extent of 2.50.0Ha at S.F. No. 603/1 (Part-A) of Panchakshipuram Village, Hosur Taluk, Krishnagiri District, Tamil Nadu 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 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

M/s.S.S.V Blue Metals,
Prop - Thiru.R.Rajasekaran,
S/O. Ramasubbu,
No. 89, Thally Hudco,
Hosur Taluk,
Krishnagiri District

UNDERTAKING

I, Thiru.R.Rajasekaran, undertaking that the Draft Environmental Impact Assessment (EIA) Report for Rough Stone Quarry over an extent of 2.50.0 Ha at S.F.No. 603/1(Part-A) of Panchakshipuram Village, Hosur Taluk, Krishnagiri District, Tamilnadu State under project category B1 and Schedule S.No.1(a)

TOR issued by the State Expert Appraisal Committee, TN vide Letter No. SEIAA-TN/F. No. 9261/ ToR-1204/2022 Dated: 14.07.2022.

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

S.S.V Blue Metals

Prop: Thiru. R. Rajasekaran

Plot No.48A, 2nd Main Road,
Ram Nagar, South Extension,
Pallikarantal, Chennai - 600 100.
GST NO. 33AADCE6103A2ZH
PAN NO. AADCE6103A



Eco Tech Labs Pvt Ltd

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

UNDERTAKING

I, Dr. A. Dhamodharan, Managing Director confirms that this Draft EIA Report of Rough Stone and Gravel Quarry over an extent of 2.50.0 Ha at S.F.No. 603/1 (Part-A) of Panchakshipuram Village, Hosur 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 misleading information mentioned in this Report.

Signature:

Name: Dr. A. Dhamodharan

Designation: Managing Director

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

NABET Certificate No: NABET/EIA/2124/SA 0147

Date:

Place: Chennai

Declaration by Experts contributing to the EIA of Existing Rough Stone Quarry- 2.50.0

Ha by M/s.S.S.V Blue Metals at S.F.No. S.F. No. 603/1 (Part-A), of Panchakshipuram Village, Hosur 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: 01.03.202 to Till now





Contact information: M/s. Ecotech Labs Pvt Ltd.,

No. 48, 2nd Main road, Ram Nagar South Extension,

Pallikaranai

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

2	WP	Dr. A. Dhamodhara n	<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. Dhamodhara n	<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>Period: March 2022 – Till now</p> <p>*Involves Public Hearing</p>	
5	EB	Dr. A. Dhamodhara n	<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>	

			<i>Period: March 2022 – Till now</i>	
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><i>Period: March 2022 – Till now</i></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><i>Period: March 2022 – Till now</i></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><i>Period: May 2022 – Till now</i></p>	-Kiel
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><i>Period: March 2022 – Till now</i></p>	0.0.0.0
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><i>Period: March 2022 – Till now</i></p>	-Kiel

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. 603/1(Part-A) Panchakshipuram Village, Hosur 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

Project	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
Project Proponent	<i>M/s. S.S.V Blue Metals</i>	
Project Location	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

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<i>Project Location</i>	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

EXECUTIVE SUMMARY

1. Project Background:

The Proposed Rough stone quarry project total extent area is 2.50 Ha in S.No 603/1(Part-A) of Panchakshipuram Village of Hosur Taluk, Krishnagiri District. It is a existing quarry. The lease area applied for quarry lease is undulating terrain with gentle sloping towards Eastern side covered with Rough stone and the project comes under B1 category.

The quarry operation is proposed to carry out with conventional open cast semi mechanized mining with 6.0 meter vertical bench with a bench width of 5.0 meter. Quarrying operation is carried out Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to needy Crusher. Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting.

The quarry operation is proposed up to depth for 50m (1m top soil + 50m Rough stone) 5m Above surface ground level and 86m below surface level. The Total Geological reserve is about 1029364 m³ of Rough Stone. The Mineable Reserves and Proposed Yearwise production is carried out 466694 m³ of Rough stone to be mined for (Sixty months) Five years only.

Precise area communication letter received from the the District Collector Krishnagiri Rc.No.182/2018/kanimam dated 09.03.2018. Mining Plan was approved by The Deputy Director, Department of Geology & Mining, Krishnagiri vide Rc.No.G.M.182/2018/Mines dated 20.08.2018. 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 the radius of 15Km.

The project does not require huge amount water for quarry operation and total water requirement is 2.0 KLD. (0.5 KLD) Drinking water use only Packaged drinking water is available from the nearby

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approved water vendors and (1.0 KLD) and (0.5 KLD) of water use only road tankers supply in Panchakshipuram Village which is about \approx 1.62 Km-W it will also sourced from tank water suppliers. The project cost is about Rs. 1,12,65,000/- (One Crores Twelve lakhs and sixty five thousand rupees only).

2. Nature & Size of the Project

The Existing Rough Stone Quarry over an extent of 2.50.0 Hectares land is located at Panchakshipuram Village of Hosur Taluk, Krishnagiri District.

Mineral intends to quarry	: Rough stone
District	: Krishnagiri
Taluk	: Hosur
Village	: Panchakshipuram
S. F. Nos.	: 603/1(Part-A)
Extent	: 2.50.0 Hectares

Table 1: Brief Description of the Project

S. No	Particulars	Details
1	Latitude	12°35'48.48"N to 12°35'56.64"N
2	Longitude	77°47'21.61"E to 77°47'28.27"E
3	Site Elevation above MSL	856m from MSL
4	Topography	Undulating terrain
5	Land use of the site	Government Poramboke land
6	Extent of lease area	2.50.0 Ha
7	Nearest highway	SH-17A Hosur to Denkanikottai is about 1.01 Km on West of the area
8	Nearest railway station	Hosur Railway Station – 13.62 km, NE
9	Nearest airport	Kempegowda International Airport Bengaluru

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		- Airport – 66.12 km, NW
10	Nearest town / city	Town - Hosur - 14.02 Km -NE City - Hosur - 15.00 Km -NE District – Krishnagiri - 46.12 Km - SE
11	Rivers / Canal	Nil in 15 km radius
12	Lake	❖ Nanjappan Kodigai Eri – 6.94 km E ❖ Vasa Lake – 5.2 km N ❖ Vannama lake – 11.34 km SW ❖ Rama Naicken lake – 14.34 km NE ❖ Tahally lake – 14.41 km W
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	❖ Udedurgam R.F – 12.24 Km SE ❖ Denkanikottai R.F – 9.17 km SE ❖ Sanamavu Forest – 11.21 km NE
17	Seismicity	Proposed Lease area come under Seismic zone-II

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 and Gravel extracted will be transported to be Stone crusher of district Krishnagiri.
- ❖ The raw Rough stone as well as the crushed material of stone is in high demand in real estate, construction projects as well as in building construction projects.
- ❖ Rough stone is quarried for producing crusher aggregates to the nearby building contractors, road contractors and nearby villagers.
- ❖ After quarrying the entire reserves mined out, the area will be used as water reservoir to have an artificial recharge to the nearby wells.
- ❖ No damage to the land is caused, no reclamation or back filling is required.

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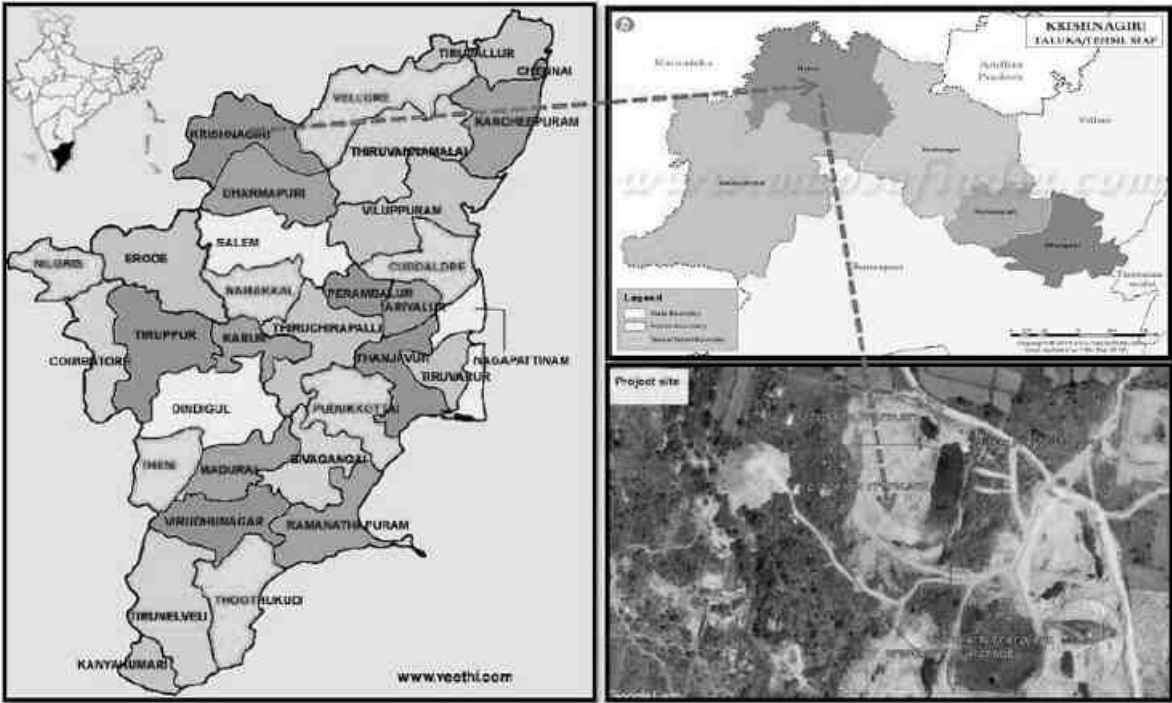


Figure 1: Location Map of the Project Site



Figure 2: Google Image of the Project Site

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4. Charnockite

Charnockite and granitic gneisses are extensively quarried as rough stone which is used as aggregates for construction of building, laying of roads and for preparation of value added products like hollow blocks, pillar stones, M-sand etc. Charnockite occurs as massive bodies, greyish colour, medium to coarse grained, composed quartz, feldspar and orthopyroxene. At places, metamorphic gneissic banding (alternate dark and black colour) in charnockite is noticed. Top portion, it gives gneissic appearance but 1-5m depth below it is typical charnockite of grey colour. The area is mainly composed of Archaean Crystalline Metamorphic Complex. The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high grade metamorphic rock. The general trend of formation is E-W dip S 600.

5. Geological Resources

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

Geological Resources is estimated at 1029364 m³ of Rough stone.

Table 2. Geological resources

GEOLOGICAL RESERVES								
Section	Bench	L(m)	W(m)	D(m)	Volume In M³	Geological Reserves in m³ @ 95%	Mine waste in m³ @ 5%	Top Soil in m³
XY-AB	I	13	79	1				1027
	II	13	79	7	7189	6830	359	
	III	13	79	7	7189	6830	359	
	IV	13	114	7	10374	9855	519	
	V	92	188	7	121072	115018	6054	
	VI	92	188	7	121072	115018	6054	
	VII	92	188	7	121072	115018	6054	
	VIII	92	188	7	121072	115018	6054	
TOTAL					509040	483587	25453	1027

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XY-CD	I	77	50	1				3850
	II	77	50	2	7700	7315	385	
	III	77	50	7	26950	25603	1347	
	IV	77	50	7	26950	25603	1347	
	V	127	129	7	114681	108947	5734	
	VI	127	129	7	114681	108947	5734	
	VII	127	129	7	114681	108947	5734	
	VIII	127	129	7	114681	108947	5734	
TOTAL					520324	494309	26015	3850
GRAND TOTAL					1029364	977896	51468	4877

Table 3. Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODCUTION RESERVES									
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In M³	Recoverable Reserve in m³ @ 95%	Mine waste in m³ @ 5%	Top Soil in m³
I-YEAR	XY-AB	I	1	60	1				60
		II	1	59	7	413	392	21	
		III	1	54	7	378	359	19	
		IV	1	84	7	588	559	29	
		V	79	148	7	81844	77752	4092	
TOTAL						83223	79062	4161	60
II-YEAR	XY-CD	I	61	26	1				1586
		II	60	24	2	2880	2736	144	
		III	60	24	7	10080	9576	504	
		IV	55	19	7	7315	6949	366	
		V	99	93	7	64449	61227	3222	
	TOTAL						84724	80488	4236
III-YEAR	XY-AB	VI	74	138	7	71484	67910	3574	

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	XY-CD	VI	94	83	7	54614	51883	2731	
	TOTAL					126098	119793	6305	
IV- YEAR	XY-AB								
		VII	69	128	7	61824	58733	3091	
	XY-CD	VII	89	73	7	45479	43205	2274	
	TOTAL					107303	101938	5365	
V- YEAR	XY-AB								
		VIII	64	118	7	52864	50221	2643	
	XY-CD	VIII	84	63	7	37044	35192	1852	
	TOTAL					89908	85413	4495	
GRAND TOTAL						491256	466694	24562	1646

6.Mining

Opencast mining

Opencast method of mechanized mining is adopted to extract Rough Stone. Machineries like Tractor mounted compressor attached with Jack hammers is being used to drilling and Proposed Control area. Excavators are operated for quarrying of Rough Stone and Tippers / Lorries are used for transportation of Rough Stone to the destination.

Process Description

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

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7. Water Requirement

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

Table 4. Water Balance

Purpose	Quantity	Sources
Drinking Water	1.0KLD	Packaged Drinking water vendors available in Panchakshipuram village which is about \approx 1.62 km, W
Green belt	0.5KLD	Other domestic activities through road tankers supply
Dust suppression	0.5KLD	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 5. Man Power

	Skilled	Operator	2
		Mechanic	1
		Blaster/Mat	1
	Semi skilled	Driver	2
	Unskilled	Musdoor/Labours	5
		Office boy	1
		Cleaners	3
	Management & Supervisory staff		3
Total			18 Nos

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

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9. Solid Waste Management

Table. 6 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. 7 500m Radius Cluster Mine

(i) Details of Existing quarries

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	Tvl.M.R.Enterprises Panchakshipuram, Hosur taluk, Krishnagiri District	Hosur taluk- Panchakshipuram Village	603/1(Part-2)	3.00.0	Roe.No.92/20 16/Mines Dt:08.08.2016	17.08.20 16 to 16.08.20 22
2	Thiru. P.Kalaikovan, S/o M.Ponnusamy, 12/165 Thamson Pet, Kaveripattinam, Krishnagiri Taluk & District	Hosur taluk- Panchakshipuram Village	603/1(Part-3)	3.25.0	Roe.No.93/20 16/Mines Dt:04.06.2018	13.06.20 18 to 12.06.20 28

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3	Thiru.K.gopinath S/o.Kothnadaramaiah	Hosur taluk-Panchakshipuram Village	603/1(Part-B)	2.50.0	Roe.No.183/2018/Mines Dt:06.12.2016	06.12.2019 to 05.12.2029
4	Thiru B.Arun kumar	Hosur taluk-Panchakshipuram Village	603/1(Part-4)	3.00.0	Roe.No.94/2016/Mines Dt:19.12.2016	26.12.2016 to 25.12.2026
			Total	11.75.0		

(ii) Details of abandoned/old quarries.

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	R.Ramareddy	Panchakshipuram Village Hosur taluk	545/1,2,3 & 628	2.15.5	Roe.245/2010	28.2.2011 to 27.2.2016 Lease expired
2	Tvl.Veerabadrswamy	Panchakshipuram Village Hosur taluk	627	1.45.5	Roe.79/212 Mines Dt.26.04.2012 and 23.12.2013	03.01.2014 to 02.01.2019 lease expired
3	B.Gowdappa	Panchakshipuram Village Hosur taluk	603/1 (Part-I)	5.00.0	Roe.583/2005 Mines dated 18.6.2005	8.8.2005 to 7.8.2015 lease expired
4			Total	8.61.0		

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(iii) Details of proposed quarries

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	Tvl.S.S.v.Blue Metals, Prop.Thiru R.rajasekaran, S/o Ramasubbu, Prop.S.S.v Blue Metal, No.89 Thally Hudco, Hosur Taluk, Krishnagiri	Panchakshipuram Village Hosur taluk	603/1(Part-A)	2.50.0	Roc.182/2018 mines dated 09.03.2018	Precise area Instant Proposal
2	Thiru S.G.Anandha Kumar	Panchakshipuram Village Hosur taluk	738	3.96.5	Roc.1077/2018 mines dated 04.2.2019	Precise area given
3			Total	6.46.5		

(iv) Details of applied area

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Remarks
Nil	Nil	Nil	Nil	Nil	Nil	Nil

10. Land Requirement

The total extent area of the project is 2.50.0 Ha, Patta land in Panchakshipuram Village, Hosur Taluk, Krishnagiri District.

Table 8 Land Use Breakup

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Sl. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Quarrying pit	1.40.0	1.86.3
2.	Infrastructure	Nil	0.01.0
3.	Roads	0.01.0	0.02.0
4.	Green Belt & dump	Nil	0.60.7
5.	Unutilized	1.09.0	Nil
	Total	2.50.0 Ha	2.50.0 Ha

11. Human Settlement

There are no habitations within 500m radius. There are villages located in this area within 5km radius of the quarry.

Table 9 Habitation

Direction	Village	Distance in Kms	Population
North	Machinayakanapalli	1.85 Kms	200
East	Nagappan Agraharam	1.5 Kms	220
South	Jagirkarupalli	1.8 kms	250
west	Panchakshipuram	1.5 Kms	230

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.

10 Litre diesel per hour for excavating for mining and loading for gravel needed.

13. Scope of the Baseline Study

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

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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 to 23 °C
- ii) Average Maximum Temperature : 30 to 40 °C
- iii) Average Annual Rainfall of the area : 821 mm

13.2 Air Environment

Ambient air monitoring was carried out on monthly basis in the surrounding areas of the Mine Lease area to assess the ambient air quality at the source. To know the ambient air quality at a larger distance i.e., in the study area of 10 km. radius, air quality survey has been conducted at 5 locations. Major air pollutants like Particulate Matter (PM₁₀), Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂) were monitored and the results are summarized below.

The baseline levels of PM₁₀ (64-41 µg/m³), PM_{2.5} (31-18 µg/m³), SO₂(14-5 µg/m³), NO₂ (29-10µg/m³), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from May to July 2022.

13.3 Noise Environment

Ambient noise levels were measured at 5 locations around the proposed project site. The maximum Day noise and Night noise were found to be 61 dB(A) and 38 dB(A) respectively in

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Vanamangalam, The minimum Day Noise and Night noise were 38 dB(A) which was observed in project site.

13.4 Water Environment

- The average pH ranges from 7.12 – 7.98.
- TDS value varied from 596 mg/l to 774 mg/l
- Hardness varied from 200 to 554 mg/l
- Chloride varied from 31.3 to 82.2 mg/l

13.5 Land Environment

The analysis results shows that the majority of soil in the project and surrounding area is slightly alkaline in nature and pH value ranges from 6.80 to 7.92 with organic matter 2.7 to 3.6 %. 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 Patta land. There is no displacement of the population within the project area and adjacent nearby area. Social development of nearby villages will be considered in this project.
- The mine area does not cover any habitation. Hence the mining activity does not involve any displacement of human settlement.

15. Greenbelt Development

1. The development of greenbelt in the peripheral buffer zone of the mine area.
2. Green belt has been recommended as one of the major components of Environmental Management Plan, which will improve ecology, environment and quality of the surrounding area.

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3. Local trees like Neem, Pungam, Panai, Vilvam, etc. will be planted along the lease boundary and avenues as well as over non-active dumps at a rate of 140 trees per annum with interval 5m.

4. The rate of survival expected to be 70% in this area

Table.10 Plantation/ Afforestation Program

Name of species proposed	Survival	No of species
Neem, Vilvam, Vaagai, Eachai, Naval, Mantharai, Magizha Maram, Vila Maram, Poo Marudhu, Panai, Marudha maram, Thandri, Sengondrai, Poovarasu, Thethankottai Maram, Pungam, Vanni maram	70%	1100
Total		1100

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 equipment will be carried out.

16.2 Noise Environment and Mitigation Measures

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

17. Responsibilities for Environmental Management Cell (EMC)

The responsibilities of the EMC include the following:

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- 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 1,09,40,000/-** 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 .11 Project Cost details

S. No.	Description	Cost
1	Fixed Asset Cost	89,40,000/-
2	Operational Cost	20,00,000/-
3	Environmental Management Cost	3,25,000/-
	Total	1,12,65,000/-

20. Corporate Environmental Responsibility

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

Table 12 CER Cost

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S.No.	CER Activity	CER value (Rs)
1.	1. Government Primary School Provision of <ul style="list-style-type: none"> ➤ Solar powered smart class, ➤ Infrastructure, ➤ Environmental books for library (in Tamil language), ➤ Greenbelt facilities and ➤ Basic amenities such as safe drinking water, Hygienic Toilets facilities, furniture. 	5,00,000
Total		5,00,000

21. Benefits of the Project

- There is 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 construction industry thereby indirectly benefiting the masses.
- Quarrying in this area is not going to have any negative impact on the social or cultural life of the villagers in the near vicinity.

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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 is a decision-making tool, which guides the project proponent in taking appropriate decisions for proposed projects. 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. EIA also lessens conflicts by promoting community participation, informs project proponent, and helps to lay the base for environmentally sound projects.

The Ministry of Environment & Forests, Govt. of India, made environmental clearance (EC) for certain development projects mandatory through its notification of 27/01/1994 under the Environment Protection Act, 1986 and subsequently the MoEF came out with Environment Impact Notification, S.O.1533(E), and dt.14/09/2006. It has been made mandatory to obtain environmental clearance for different kinds of developmental projects (Schedule-1 of notification). The proposed project falls under item 1(a) of the EIA notification, 2006.

1.2. General Information on Mining of Minerals

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

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transported to the neighboring districts. These products enter into the market in different parts of the country.

1.3. Environmental Clearance

Notification dated 14th September 2006, vide S.O.1599(E), any project or activity specified in Category B. As per the Gazette Notification, dated 14th September 2006.

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.

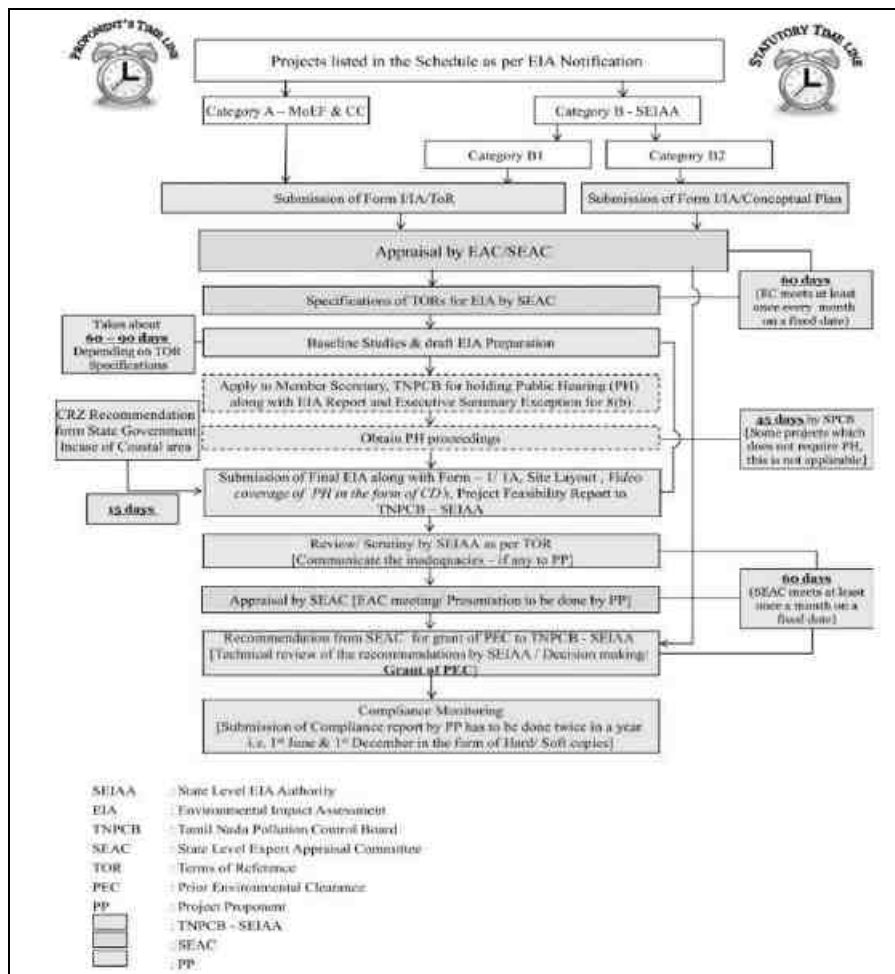


Figure 1.1 EIA – Process flow chart

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

1.4. Terms of Reference (ToR)

The terms of Reference have been issued by SEAC TN vide Letter No. SEIAA-TN/F. No. 9261/ToR-1204/2022 Dated: 14.07.2022. 38 additional ToR points were recommended by SEAC TN in addition to the Standard ToR Points. The replies for the same were addressed in this report.

1.5. Post Environmental Clearance Monitoring

1.5.1. Methodology adopted

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

Table 1-1 Post Environmental Clearance Monitoring

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

1.6. Generic Structure of the EIA Document

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

Chapter 2: Project Description In this chapter the proponent should also furnish detailed description of the proposed project, such as the type of the project, need for the project, project

Project	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
Project Proponent	<i>M/s. S.S.V Blue Metals</i>	
Project Location	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

location, layout, project activities during construction and operational phases, capacity of the project, project operation i.e., land availability, utilities (power and water supply) and infrastructure facilities such as roads, railways, housing and other requirements. If the project site is near a sensitive area, it is to be mentioned clearly why an alternative site could not be considered. The project implementation schedule estimated cost of development as well as operation etc should be also 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.

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

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

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

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

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

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

1.7. Details of Project Proponent

Project Proponent : M/s. S.S.V Blue metals Rough stone Quarry,
Status of the Proponent : Partner Thiru.R.Rajasekaran, Government Poromboke Land
Proponent's Name & Address : S/o. Ramasubbu,
No.89, Thally Hudco,
Krishnagiri district– 635110.

<i>Project</i>	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>M/s. S.S.V Blue Metals</i>	
<i>Project Location</i>	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

1.8. Brief Description of the Project

M/s. S.S.V Blue Metals - Partner Thiru.R.Rajasekaran, S/o. Ramasubbu, No.89, Thally Hudco, Krishnagiri district- 635110 has applied for the grant of quarry lease to quarry Rough Stone over an extent of 2.50.0 Hectares. of Government Poromboke Land in S.F. No. 603/1(Part-A) of Panchakshipuram Village, Hosur Taluk, Krishnagiri District of Tamil Nadu State for a period of Five Years.

M/s. S.S.V Blue metals - Partner R.Rajasekaran applied for mining of rough stone in survey numbers – 603/1(Part-A) of Mugalur Village, Panchakshipuram Village, Hosur Taluk, Krishnagiri Tamil Nadu State over an extent of 2.50.0 hectares in Government Poromboke Lands for a period of 5 years.

Precise Area Communication Letter was communicated vide Letter No. Rc.No. 182/2018/Kaniman dated 09.03.2018 2019 from The District Collector, Geology and Mining, Krishnagiri district, Krishnagiri for Preparation of Mining Plan and Obtaining Prior Environmental Clearance for Mining of Rough stone over an extent of 2.50.0 hectares for a period of 5 years.

1.9. 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. Excavators are operated for quarrying of Rough Stone and Tippers / Lorries are used for transportation of Rough Stone to the destination. It is a mechanized quarrying operation using shot hole drilling with the help of compressor and jack hammers, smooth blasting. Rough Stone are removed using Hydraulic excavator and loaded directly to the tippers and transported to the crushing plants for breaking into required size from 75mm jelly to 10mm chips. The project is located at Panchakshipuram Village, Hosur Taluk, Krishnagiri District, Tamil Nadu. It is a undulating terrain. The total allotted mine lease for the proposed project is 2.50.0 Ha with their proposed production scheduled for the five years about 757730m³ of Rough Stone.

<i>Project</i>	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>M/s. S.S.V Blue Metals</i>	
<i>Project Location</i>	<i>Panchakshipuram Village, Hosur 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

M/s. S.S.V Blue metals - Partner R.Rajasekaran applied for mining lease of Rough stone in survey numbers – 603/1(Part-A) in Panchakshipuram Village, Hosur Taluk, Krishnagiri District and Tamil Nadu State over an extent of 2.50.0 hectares Government Poromboke Lands for a period of 5 years.

Precise Area Communication Letter was communicated vide letter No. Rc. No. 182/2018/Mines dated 09.03.2018 from the district collector, Geology and Mines, Krishnagiri district for Preparation of Mining Plan.

2.2. Type of the project:

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

The mines within 500m radius from the project site is listed below:

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

Table 2-1 Quarry within 500m Radius

(v) Details of Existing quarries

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	Tvl.M.R.Enterprises Panchakshipuram, Hosur taluk, Krishnagiri District	Hosur taluk- Panchakshipuram Village	603/1(Part- 2)	3.00.0	Roe.No.92/2016/Mines Dt:08.08.2016	17.08.2016 to 16.08.2022
2	Thiru. P.Kalaikovan, S/o M.Ponnusamy, 12/165 Thamson Pet, Kaveripattinam, Krishnagiri Taluk & District	Hosur taluk- Panchakshipuram Village	603/1(Part- 3)	3.25.0	Roe.No.93/2016/Mines Dt:04.06.2018	13.06.2018 to 12.06.2028
3	Thiru.K.gopinath S/o.Kothnada ramaiah	Hosur taluk- Panchakshipuram Village	603/1(Part- B)	2.50.0	Roe.No.183/2018/Mines Dt:06.12.2016	06.12.2019 to 05.12.2029
4	Thiru B.Arun kumar	Hosur taluk- Panchakshipuram Village	603/1(Part- 4)	3.00.0	Roe.No.94/2016/Mines Dt:19.12.2016	26.12.2016 to 25.12.2026
			Total	11.75.0		

(vi) Details of abandoned/old quarries.

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	R.Ramareddy	Panchakshipuram Village Hosur taluk	545/1,2,3 & 628	2.15.5	Roe.245/2010	28.2.2011 to 27.2.2016 Lease expired
2	Tvl.Veera badraswamy	Panchakshipuram Village Hosur taluk	627	1.45.5	Roe.79/212 Mines Dt.26.04.2012 and 23.12.2013	03.01.2014 to 02.01.2019 lease expired
3	B.Gowdappa	Panchakshipuram Village Hosur taluk	603/1 (Part- I)	5.00.0	Roe.583/2005 Mines dated 18.6.2005	8.8.2005 to 7.8.2015 lease expired
4			Total	8.61.0		

(vii) Details of proposed quarries

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	Tvl.S.S.v.Blue Metals, Prop.Thiru R.rajasekaran, S/o Ramasubbu, Prop.S.S.v Blue Metal, No.89 Thally Hudco, Hosur Taluk,	Panchakshipuram Village Hosur taluk	603/1(Part- A)	2.50.0	Roc.182/2018 mines dated 09.03.2018	Precise area Instant Proposal

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

	Krishnagiri					
2	Thiru S.G.Anandha Kumar	Panchakshipuram Village Hosur taluk	738	3.96.5	Roc.1077/2018 mines dated 04.2.2019	Precise area given
3			Total	6.46.5		

(viii) Details of applied area

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Remarks
Nil	Nil	Nil	Nil	Nil	Nil	Nil

2.3. Need for the project:

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

Krishnagiri District is comprised of Archaean peninsular gneisses such as Charnockites, Hornblende gneisses, Biotite gneisses and migmatites, dolerites and are intruded by younger formations like pegmatite and quartz veins. The peninsular gneisses/ migmatite consists of biotite mica, plagioclase and orthoclase feldspar and quartz and are found as sheet rocks. The rock formations surrounded by shear zones in between the country rocks and later period of intrusions, fractured / joint, weathered rock formations, the metamorphosed rock formations are in enormous in nature. The massive rock formations which are not suitable for the productions of granite slabs are also suitable and used to

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

produce rough stones. The predominant occurrence of granitic gneissic rock formations which are most suitable to produce rough stone, jelly and for making M. Sand, crusher dust.

2.4. Brief Description of the project

Table 2-2 Salient Features of the Project

S. No	Description	Details
1	Project Name	M/s.S.S.V blue metals rough stone quarry
2	Proponent	Thiru.R.Rajasekaran
3	Mining Lease Area Extent	2.50.0 Ha
4	Location	603/1(Part-A), Panchakshipuram Village, Hosur Taluk, Krishnagiri Dt.
5	Latitude	12°35'48.48"N to 12°35'56.64"N
6	Longitude	77°47'21.61"E to 77°47'28.27"E
7	Topography	Undulating terrain
8	Site Elevation above MSL	856m above MSL
9	Topo sheet No.	57 – H/14
10	Minerals of Mine	Rough stone
11	Proposed production of Mine	Geological Reserves – 1029364 m ³ Mineable Reserves – 466694 m ³ Proposed production for five years – 466694 m ³ of Rough Stone
12	Ultimate depth of Mining	50m below ground level
13	Method of Mining	Opencast mechanized Mining with a bench height of 7m and bench width of 5m is proposed.
14	Source of water	Packaged Drinking water vendors available in Panchakshipuram Village which is about ≈ 1.62 km, W from the project site.
15	Manpower	18 Nos.

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

16	Mining Plan Approval	Mining Plan was approved by The Deputy Director, Geology & Mining, Krishnagiri vide Rc.No.G.M.182/2018/Mines dated :20.08.2018
17	Precise Area Communication	The Proponent has obtained Precise area communication letter received from District Collector, Krishnagiri Rc.No.182/2018/kaniman dated 09.03.2018.
18	Ground water	The quarry operation is proposed up to a depth of 50m below ground level. The ground water table is reported as 102 m below ground level in nearby open 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.
19	Habitations within 500m radius of the Project Site	There is no Habitation within 500m radius
20	Rivers / Canal/Lake	<ul style="list-style-type: none"> ➤ Nanjappan Kodigai Eri – 6.94 km E ➤ Vasa Lake – 5.2 km N ➤ Vannama lake – 11.34 km SW ➤ Rama Naicken lake – 14.34 km NE ➤ Tahally lake – 14.41 km W
21	Reserved Forest / Wildlife Sanctuary	<ul style="list-style-type: none"> ➤ Udedurgam R.F – 12.24 Km SE ➤ Denkanikottai R.F – 9.17 km SE ➤ Sanamavu Forest – 11.21 km NE

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	



Figure 2.1 Google Earth Image of the Project Site

2.4.1. Details of Quarry within 500m Radius – Cluster Mines

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

Table 2-3 Quarry within 500m Radius

(i) Details of Existing quarries

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	Tvl.M.R.Enterprises Panchakshipuram, Hosur taluk, Krishnagiri District	Hosur taluk- Panchakshipuram Village	603/1(Part- 2)	3.00.0	Roe.No.92/2016/Mines Dt:08.08.2016	17.08.2016 to 16.08.2022

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

2	Thiru. P.Kalaikovan, S/o M.Ponnusamy, 12/165 Thamson Pet, Kaveripattinam, Krishnagiri Taluk & District	Hosur taluk- Panchakshipuram Village	603/1(Part- 3)	3.25.0	Roe.No.93/2016/Mines Dt:04.06.2018	13.06.2018 to 12.06.2028
3	Thiru.K.gopinath S/o.Kothnada ramaiah	Hosur taluk- Panchakshipuram Village	603/1(Part- B)	2.50.0	Roe.No.183/2018/Mines Dt:06.12.2016	06.12.2019 to 05.12.2029
4	Thiru B.Arun kumar	Hosur taluk- Panchakshipuram Village	603/1(Part- 4)	3.00.0	Roe.No.94/2016/Mines Dt:19.12.2016	26.12.2016 to 25.12.2026
			Total	11.75.0		

(ii) Details of abandoned/old quarries.

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	R.Ramareddy	Panchakshipuram Village Hosur taluk	545/1,2,3 & 628	2.15.5	Roe.245/2010	28.2.2011 to 27.2.2016 Lease expired
2	Tvl.Veera badraswamy	Panchakshipuram Village Hosur taluk	627	1.45.5	Roe.79/212 Mines Dt.26.04.2012 and 23.12.2013	03.01.2014 to 02.01.2019 lease expired

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

3	B.Gowdappa	Panchakshipuram Village Hosur taluk	603/1 (Part- I)	5.00.0	Roe.583/2005 Mines dated 18.6.2005	8.8.2005 to 7.8.2015 lease expired
4			Total	8.61.0		

(iii)Details of proposed quarries

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Lease Period
1	Tvl.S.S.v.Blue Metals, Prop.Thiru R.rajasekaran, S/o Ramasubbu, Prop.S.S.v Blue Metal, No.89 Thally Hudco, Hosur Taluk, Krishnagiri	Panchakshipuram Village Hosur taluk	603/1(Part-A)	2.50.0	Roc.182/2018 mines dated 09.03.2018	Precise area Instant Proposal
2	Thiru S.G.Anandha Kumar	Panchakshipuram Village Hosur taluk	738	3.96.5	Roc.1077/2018 mines dated 04.2.2019	Precise area given
3			Total	6.46.5		

(iv) Details of applied area

S.No	Name of the Lessee	Village	S.F.No.	Extent in Het	GO No.& Date	Remarks
Nil	Nil	Nil	Nil	Nil	Nil	Nil

Total cluster area: 18.21.50 Ha

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

2.4.2. Site Connectivity:

The site is connected to SH17A Hosur to Denkanikottai Road.



Figure 2.2 Site Connectivity

2.5. Location Details:

Table 2-4: Location Details

S. No	Particulars	Details
1.	Latitude	12°35'48.48"N to 12°35'56.64"N
2.	Longitude	77°47'21.61"E to 77°47'28.27"E
3.	Site Elevation above MSL	856m from MSL
4.	Topography	Undulated terrain
5.	Land use of the site	Government Poramboke land
6.	Extent of lease area	2.50.0 Ha

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

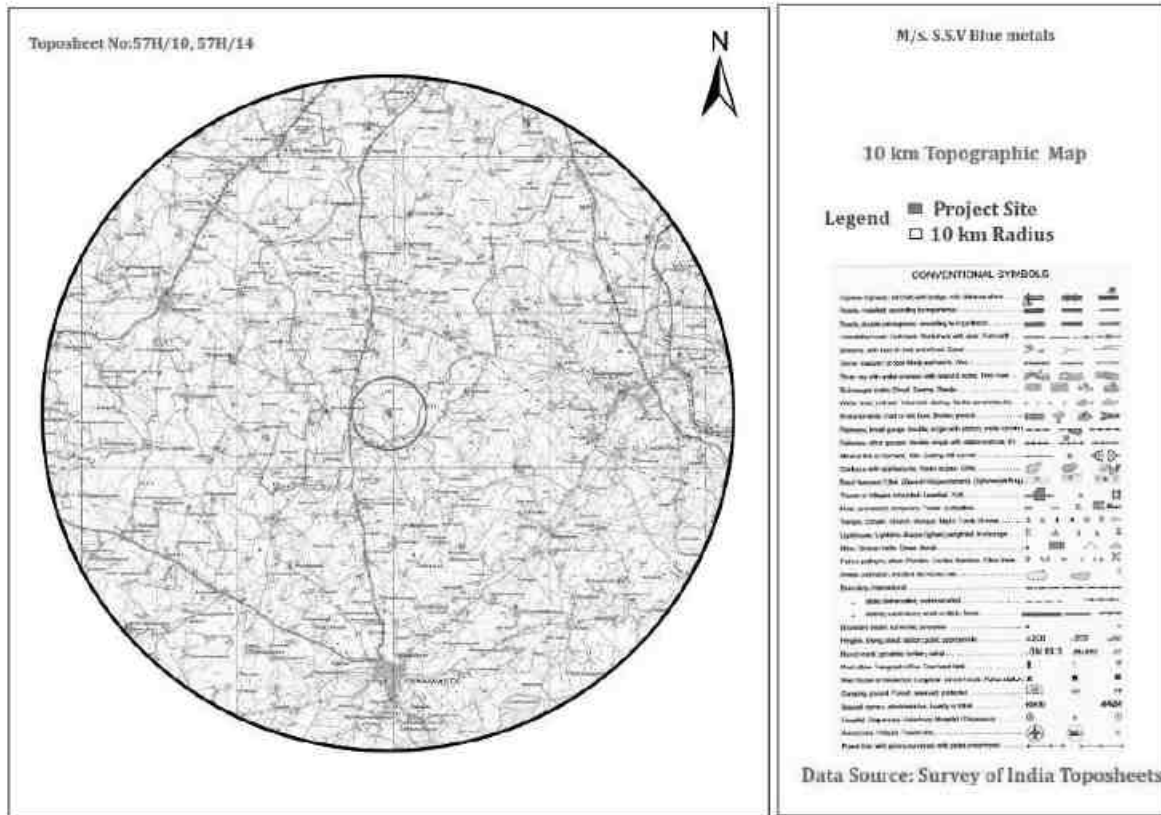


Figure 2.3: Topo Map of Project Site

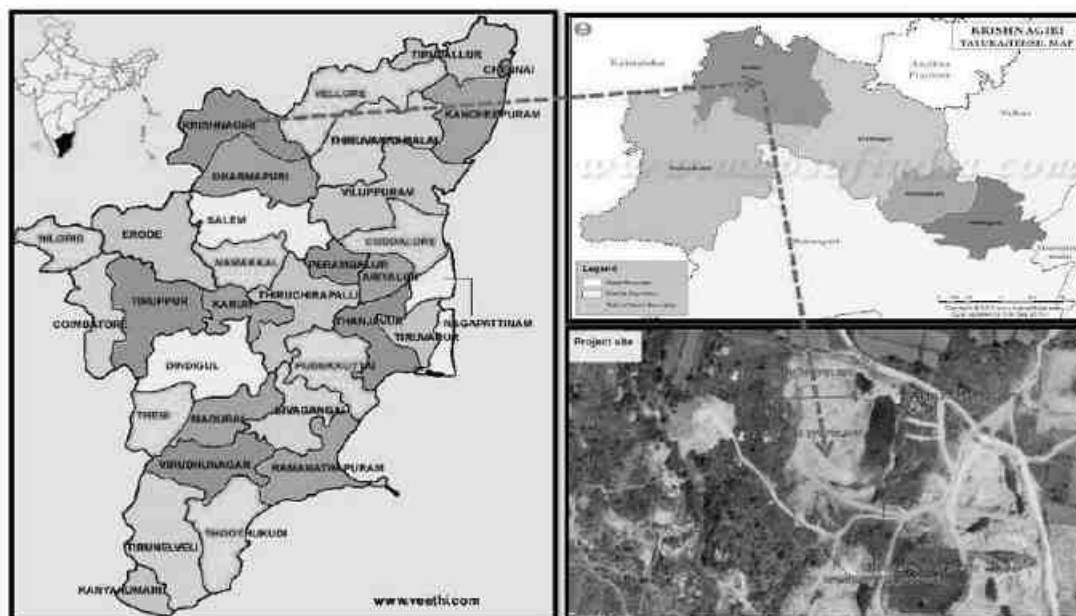


Figure 2.4 Location of the project site

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	



Figure 2.5: Environmental Sensitivity within 15km radius

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

2.5.1. Site Photographs

The site photographs of the project site are as follows.

12°35'55.59"N, 77°47'24.47"E

North



12°35'52.60"N, 77°47'25.76"E

South



12°35'53.87"N, 77°47'27.71"E

East



12°35'54.67"N, 77°47'24.70"E

West



Figure 2.6: Site Photographs

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s. S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

2.5.2. Land Use Breakup of the Mine Lease Area

The area applied for quarry lease is an undulated terrain southern covered with Rough Stone which does not sustain any type of vegetation. The altitude of the area is 856m above MSL. The land use pattern in and around the mine have no adverse effect in the environment changes.

The land use pattern at the end of the lease period:

Table 2-5: Land use pattern

Sl. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Quarrying pit	1.40.0	1.86.3
2.	Infrastructure	Nil	0.01.0
3.	Roads	0.01.0	0.02.0
4.	Green Belt & dump	Nil	0.60.7
5.	Unutilized	1.09.0	Nil
	Total	2.50.0 Ha	2.50.0 Ha

2.5.3. Human Settlement

There are no habitations within the radius of 500m. the nearby habitations are as follows

Table 2-6: Habitation

Direction	Village	Distance in Kms	Population
North	Machinayakanapalli	1.85 Kms	200
East	Nagappan Agraharam	1.5 Kms	220
South	Jagirkarupalli	1.8 kms	250
west	Panchakshipuram	1.5 Kms	230

Project	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
Project Proponent	<i>M/s. S.S.V Blue Metals</i>	
Project Location	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

2.6. Leasehold Area

M/s.S.S.V Enterprises Thiru.R.Rajasekaran applied for mining of Rough stone in survey numbers 603/1(Part-A) in panchakshipuram Village, Hosur Taluk, Krishnagiri District and Tamil Nadu State over an extent of 2.50.0 hectares in Government Poromboke Lands for a period of 5 years . The area lies in the latitude of 12°35'48.48"N to 12°35'56.64"N and longitude of 77°47'21.61"E to 77°47'28.27"E. The area is marked in the survey of India Topo sheet No. 57 – H/14. There is no human settlement within 500m radius from the lease area.

2.7. Geology

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

The general geological sequence of formation is given below:

- Quaternary - Laterites, Sands and Clays
- Tertiary - Sandstone, Gravels and Clays
- Cretaceous - Limestone,
- Calcareous Sandstone and Clay unconformity.
- Archaean - Charnockites, Gneisses, Granites, Dolerites and Pegmatite

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

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. Depth of well in hard rock generally ranges between 8 and 15m below ground

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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 sandstone and marl. The Tertiary formation is 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, sand stone of tertiary formation are the potential groundwater reservoirs.

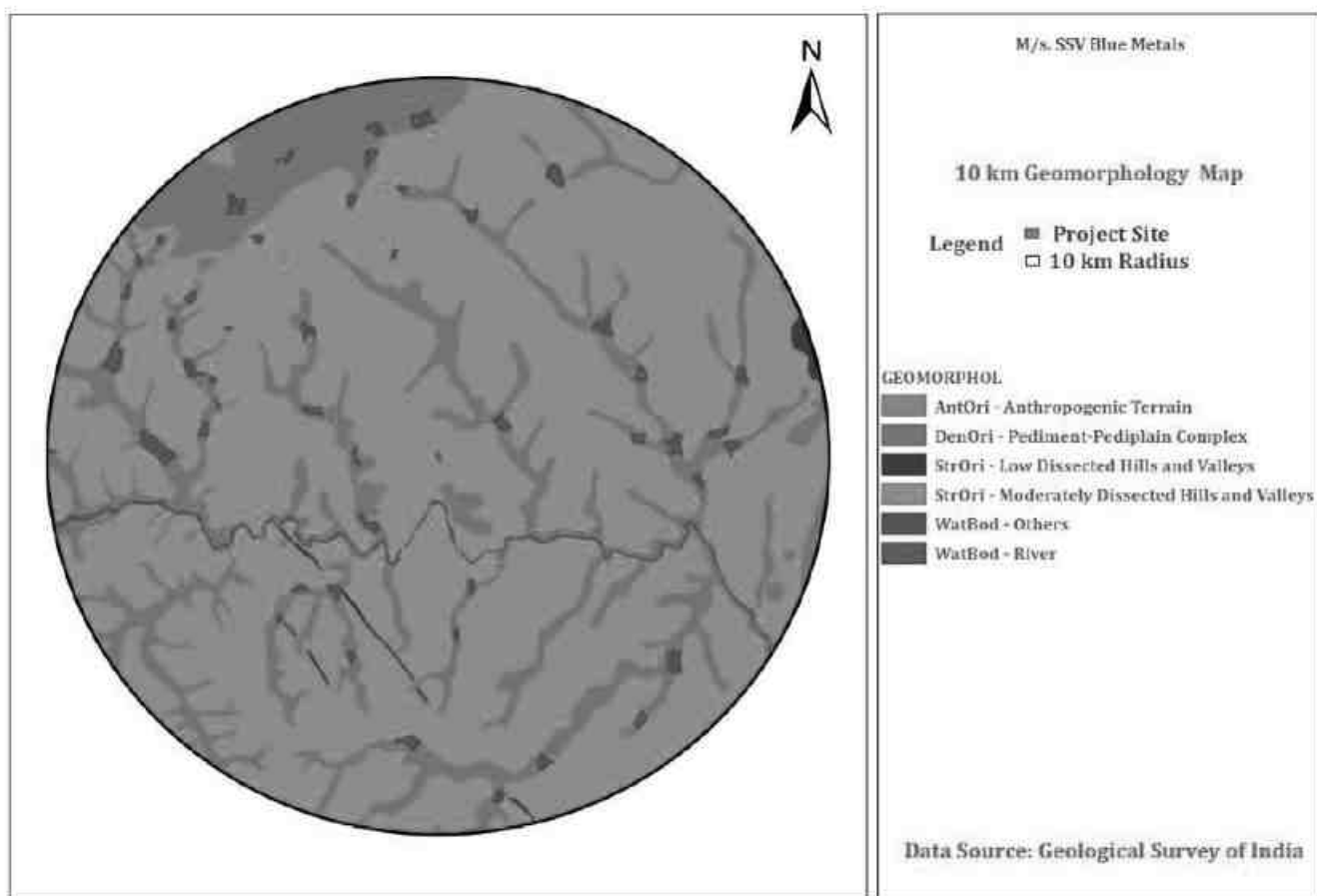


Figure 2.7 Geomorphology around 10km radius from the project site

The proposed project lies in the active quarry area.

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2.8. Quality of Reserves:

The mining lease area is of 2.50.0 Ha. The proposed production of Rough stone for Five Years is 466694m³. Due to significant role in the domestic as well as infrastructural market, making the mining of Stone along with associated minor minerals is economically viable.

Table 2-7: Details of Mining

S. No	Particulars	Details		
1	Method of Mining	Open Cast mechanized		
2	Geological Reserves	1029364m ³ of Rough stone		
3	Mineable Reserves	466694m ³		
4	Proposed production for five years	757730m ³		
5	Elevation Range of the Mine Site	856m MSL		
6	Bench Height	Opencast mechanized Mining with a bench height of 7m and bench width of 5m is proposed.		
7	Ultimate Pit Dimension	<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;">195.0 m(L)X 139.0 m(W) X 50.0m(D)</td> </tr> </table>	ULTIMATE PIT DIMENSION	195.0 m(L)X 139.0 m(W) X 50.0m(D)
ULTIMATE PIT DIMENSION				
195.0 m(L)X 139.0 m(W) X 50.0m(D)				

2.9. Geological Reserves

Topsoil: Thickness of top soil in this area is 1.0 m and the total volume of top soil will be 4877m³. The Geological reserve is estimated as 1029364 m³ respectively at the rate of 95% recovery upto a depth of wise. The Geological reserve of rough stone and Top soil is calculated up to depth of 5m from above ground surface level and 45m from below surface ground level, Total depth-50 m.

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Table 2-8:Geological Reserves

GEOLOGICAL RESERVES								
Section	Bench	L(m)	W(m)	D(m)	Volume In M³	Geological Reserves in m³ @ 95%	Mine waste in m³ @ 5%	Top Soil in m³
XY-AB	I	13	79	1				1027
	II	13	79	7	7189	6830	359	
	III	13	79	7	7189	6830	359	
	IV	13	114	7	10374	9855	519	
	V	92	188	7	121072	115018	6054	
	VI	92	188	7	121072	115018	6054	
	VII	92	188	7	121072	115018	6054	
	VIII	92	188	7	121072	115018	6054	
TOTAL					509040	483587	25453	1027
XY-CD	I	77	50	1				3850
	II	77	50	2	7700	7315	385	
	III	77	50	7	26950	25603	1347	
	IV	77	50	7	26950	25603	1347	
	V	127	129	7	114681	108947	5734	
	VI	127	129	7	114681	108947	5734	
	VII	127	129	7	114681	108947	5734	
	VIII	127	129	7	114681	108947	5734	
TOTAL					520324	494309	26015	3850
GRAND TOTAL					1029364	977896	51468	4877

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2.10. Mineable reserve

Top soil: The thickness of top soil in this area is 1.0mts and the Total volume of Top soil will be 1646m³. The Mineable reserves is 466694 m³ at the rate of 95% recovery upto a depth of wise. Total depth 50m Above surface ground level 5m and below surface ground level 50m.

Table 2-9 Mineable Reserve

MINEABLE RESERVES								
Section	Bench	L(m)	W(m)	D(m)	Volume In M3	Mineable Reserves m3 @ 95%	Mine waste in m3 @ 5%	Top Soil in m3
XY-AB	I	1	60	1				60
	II	1	59	7	413	392	21	
	III	1	54	7	378	359	19	
	IV	1	84	7	588	559	29	
	V	79	148	7	81844	77752	4092	
	VI	74	138	7	71484	67910	3574	
	VII	69	128	7	61824	58733	3091	
	VIII	64	118	7	52864	50221	2643	
TOTAL					269395	255926	13469	60
XY-CD	I	61	26	1				1586
	II	60	24	2	2880	2736	144	
	III	60	24	7	10080	9576	504	
	IV	55	19	7	7315	6949	366	
	V	99	93	7	64449	61227	3222	
	VI	94	83	7	54614	51883	2731	
	VII	89	73	7	45479	43205	2274	
	VIII	84	63	7	37044	35192	1852	
TOTAL					221861	210768	11093	1586
GRAND TOTAL					491256	466694	24562	1646

2.11. Year wise Production

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The average proposed rate of production of Rough Stone is about 466694m³ for Five Years.

The proposed production for five years are given below.

Table 2-10 Year wise development and Production

YEARWISE DEVELOPMENT AND PRODCUTION RESERVES									
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Recoverable Reserve in m3 @ 95%	Mine waste in m3 @ 5%	Top Soil in m3
I-YEAR	XY-AB	I	1	60	1				60
		II	1	59	7	413	392	21	
		III	1	54	7	378	359	19	
		IV	1	84	7	588	559	29	
		V	79	148	7	81844	77752	4092	
	TOTAL						83223	79062	4161	60
II-YEAR	XY-CD	I	61	26	1				1586
		II	60	24	2	2880	2736	144	
		III	60	24	7	10080	9576	504	
		IV	55	19	7	7315	6949	366	
		V	99	93	7	64449	61227	3222	
	TOTAL						84724	80488	4236	1586
III-YEAR	XY-AB	VI	74	138	7	71484	67910	3574	
	XY-CD	VI	94	83	7	54614	51883	2731	
	TOTAL						126098	119793	6305
IV-YEAR	XY-AB	VII	69	128	7	61824	58733	3091	
	XY-CD	VII	89	73	7	45479	43205	2274	
	TOTAL						107303	101938	5365
V-YEAR	XY-AB	VIII	64	118	7	52864	50221	2643	
	XY-CD	VIII	84	63	7	37044	35192	1852	
	TOTAL						89908	85413	4495
GRAND TOTAL						491256	466694	24562	1646

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2.12. Type of Mining

2.12.1. Method of Working:

Opencast method of mechanized mining is adopted to extract Rough Stone. Machineries like Tractor mounted compressor attached with Jack hammers is being used to drilling and Proposed Control area. Excavators are operated for quarrying of Rough Stone and Tippers / Lorries are used for transportation of Rough Stone to the destination.

It is a mechanized quarrying operation using shot hole drilling with the help of compressor and jack hammers, smooth blasting. Rough Stone are removed using Hydraulic excavator and loaded directly to the tippers and transported to the crushing plants for breaking into required size from 75mm jelly to 10mm chips.

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 equipment 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

Loading of waste and rough stone shall be carried out by 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

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

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

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2.12.2. Energy:

Electricity for mines and lights only at nights (working is restricted on day time only between 9Am to 5Pm. Diesel (HSD) will be used for quarrying machines around **607548 litres** of HSD will be used for the entire project life. Diesel will be brought from nearby diesel pumps. No power is required for the project. Lightings on the night 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 8186 m³ = 8186/ 60 = 136.43 hours
 Diesel consume 136.43 working hours = 136.43 hours x 10 liters
Total diesel Total diesel consumption = 1364 litres of HSD will be utilized for top soil

(i) For Rough stone:

Per hour excavator will consume = 16 liters / hour
 Per hour excavator will excavate = 20m³ of rough stone
 For 1818090m³ = 757730/ 20 = 37886.5 hours
 Diesel consume 40904.5 working hours = 37866.5 hours x 16 liters
 Total diesel consumption = 606184 litres of HSD for Rough stone
 Total diesel consumption is around = **607584 litres of HSD for the entire period of**

life

2.12.3. Topsoil

The topsoil of the lease area is 8186 m³.
 There is no overburden anticipated during the entire rough stone quarrying operation.

Table 2-11 Dimension of dumps

ULTIMATE PIT DIMENSION
195.0 m(L)X 139.0 m(W) X 50.0m(D)

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2.13. 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 2-12: Man Power Requirements

	Skilled	Operator	2
		Mechanic	1
		Blaster/Mat	1
	Semi skilled	Driver	2
	Unskilled	Musdoor/Labours	5
		Office boy	1
		Cleaners	3
	Management & Supervisory staff		3
Total			18 Nos

No child less than 21 years will be entertained during quarrying operations.

2.14. Water Requirement

This rough stone quarry project does not require huge water and electricity.

Table 2-13 Water Requirement

Purpose	Quantity	Sources
Drinking Water	1.0KLD	Packaged Drinking water vendors available in Panchakshipuram village which is about \approx 1.62 km, W from the project site.
Green belt	0.5KLD	Other domestic activities through road tankers supply
Dust suppression	0.5KLD	From road tankers supply
Total	2.0 KLD	

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2.15. Project Cost

Project Cost/Investment Cost

The total project cost is **Rs. 1,12,65,000/-** including land cost and deployment of machinery and creation of infrastructural facilities like Labour shed, Sanitary facility, fencing cost etc, electrifications and water supply.

Table 2-14 Investment Cost

1	<u>A. Fixed Asset Cost:</u>	
	1. Land Cost	: Rs. 87,00,000/- (Leased tender amount for Government Poramboke Land)
	2. Labour Shed	: Rs. 1,20,000/-
	3. First aid room & accessories	: Rs. 50,000/-
	4. Sanitary Facility	: Rs. 70,000/-
	Total Fixed cost=	Rs.89,40,000/-
2	<u>B. Operational Cost:</u>	
	<u>Machinery cost</u>	: Rs.20,00,000/-
3	<u>C. EMP Cost:</u>	
	(i)EMP Estimation	:
	Air quality sampling	: Rs.25,000/-
	Water quality sampling	: Rs.25,000/-
	Noise monitoring	: Rs.25,000/-
	Drinking water facility	: Rs. 1,10,000/-
	Safety kits	: Rs. 60,000/-
	Water sprinkling	: Rs. 55,000/-
	Afforestation	: Rs. 25,000/-
	Total=	Rs. 3,25,000/-
	Total Project Cost(A+B+C)	: Rs. 1,12,65,000/-

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Total Project Cost: Rs. 1,12,65,000/- (One crore twelve lakhs and sixty five thousands rupees only).

2.16. Corporate Social Responsibility

The following Corporate Environment Responsibility (CER) activities before the commencement of the quarrying activities.

Table 2-15 CER Cost

S.No.	CER Activity	CER value (Rs)
1.	2. Government Higher Secondary School Provision of <ul style="list-style-type: none"> ➤ Solar powered smart class, ➤ Infrastructure, ➤ Environmental books for library (in Tamil language), ➤ Greenbelt facilities and ➤ Basic amenities such as safe drinking water, Hygienic Toilets facilities, furniture. 	5,00,000
Total		5,00,000

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3. Description of the Environment

3.1. Introduction

This Chapter describes the baseline environmental conditions around the project site for various environmental attributes, i.e., physical, biological, and socio-economic conditions, within the 10-km radial zone of the proposed project site, which is termed as the study area. Topography, drainage, meteorology, air, noise, water, soil and land constitute the physical environment, whereas flora and fauna constitute the biological environment. Demographic details and occupational pattern in the study area constitute socio-economic environment.

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.

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3.2. Background and Salient Environmental Features of the Study Area:

M/s.S.S.V.Blue Metals, Thiru.R.Rajasekaran applied for mining of Rough stone in survey numbers 603/1(Part-A) in Panchakshipuram Village, Hosur Taluk, Krishnagiri District and Tamil Nadu State over an extent of 2.50.0 hectares in Government Poromboke Lands for a period of 5 years . The area lies in the latitude of 12°35'48.48"N to 12°35'56.64"N and longitude of 77°47'21.61"E to 77°47'28.27"E. The area is marked in the survey of India Topo sheet No. 57 – H/14. There is no human settlement within 500m radius from the lease area.

3.2.1. Study Period

To establish the base line environmental status of the physico-chemical, biological and socio-economic parameters in the project area and within the project influence area the baseline study and primary data collection has been carried out during 1st May 2022 to 31st July 2022. Field monitoring for meteorological conditions, ambient air quality, Water quality, Noise quality, Soil quality etc. has been carried out, which constitute major portions of the Baseline environmental studies. In addition to these other major aspects like Geology, Hydrology, ground water and water conservation, Land use, Socioeconomic study, Ecology and biodiversity etc. are also covered.

All this information is based on primary and secondary information sources and surveys and constitute the baseline environmental studies. The entire data have been collected through actual physical surveys and observations, literature surveys, interaction with locals, government agencies and departments.

3.2.2. Environmental Setting and Salient Environmental Features of the Project Area:

The proposed mine is situated in S.No. 603/1 (Part-A) of Panchakshipuram Village, Hosur Taluk, Krishnagiri District . The site is well connected with State Highway- 17A (1.01km, West direction). Nearest Railway station is Hosur Railway Station which is located at 13.62 km North East from the Project Site. Nearest Airport form the project site is Kampegowda International Airport Bangalore located at 66.12 km.

Location map and Topo map showing site and surrounding environment features within the 10-km area is provided in Figure 3.2 & Figure 3.3 respectively.

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Figure 3.2 Environmental sensitivity around 15km radius

3.2.3. Components of Methodology of Baseline Survey

The guiding factors for the present baseline study are the Ministry of Environment, Forests & Climate Change's (MoEF&CC) requirements for the Environmental Impact Assessment (EIA) notification and local regulations and directives. The methodology to conduct baseline environmental survey has been considered as per the guidelines given in the Environmental Impact Assessment Guidance Manual. Further, a buffer area extending up to 10 km radius from the site has been studied. The studies were conducted by considering the following:

The various environmental attributes were divided into primary and secondary studies. Primary attributes such as air environment, water, soil, noise, flora and fauna, and Socio- economic were assessed by conducting field studies, on-site monitoring and review of the past studies conducted. Baseline data on environmental attributes (Air, Noise, Water and Soil) have been collected for May to July 2022 in the study area. The data has been collected by by engaging NABL/MoEF

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accredited laboratory team of M/s. Ecotech Labs Pvt. Ltd., Secondary attributes such as land use studies, geology, physiological characteristics, and socio-economic environment have been assessed by literature review of previous studies conducted by various government publications.

3.2.4. Frequency of Monitoring

Table 3-1 Frequency of Sampling and Analysis

Atributes	Sampling	Frequency
Air environment – Meterological (wind speed, wind direction, rainfall, humidity, temperature)	Project site	1 hourly continuous
Air environment – Pollutants PM 10 PM 2.5 SO ₂ NO _x	6 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	6 locations	24 hourly Once in 6 locations
Water (Ground water) pH, Temperature, Turbidity, Magnesium Hardness, Total Alkalinity, Chloride, Sulphate, Fluoride, Nitrate, Sodium, Potassium, Salinity, Total nitrogen, Total Coliforms, Fecal Coliforms	6 locations	Once in 6 locations
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,	6 locations	Once in 6 locations

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Electrical Conductivity, Permeability, Water holding capacity, Porosity)		
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

3.3. Physical Environment

3.3.1. Topography

Krishnagiri district is located approximately between 11°12'N and 12°49'N of the North Latitude and between 77°27'E and 78°38'E of east longitude. The total geographical area of the district is 5143 Sq. Km. Krishnagiri district is elevated from 300m to 1400m above the mean sea level. The district is surrounded by Vellore and Tiruvannamalai districts in the East, Karnataka in the West, Andhra Pradesh in the North, Dharmapuri district in the South.

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 MSL. The plateau region along the western boundary and the northwestern part of the district has an average elevation of 914 m MSL. The Guthrayan Durg with an elevation of 1395 m MSL is the highest peak in the district.

3.3.2. Drainage

Krishnagiri district forms parts of Cauvery and East Coast Minor Rivers basins. Cauvery River forms the southwestern boundary of the district. Dodda Halla is the most important tributary of Cauvery draining the rugged terrain in the northwestern part of the district. Ponnaiyar is the major river draining the district and is ephemeral in nature. It originates from Nandhi hills in Karnataka, enters Tamil Nadu west

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of Bagalur and flows almost in a southeasterly direction till it reaches Manjamedu from where it flows along the district boundary before entering the district, again near Hanuman Tirtham. After flowing for a short distance in an easterly direction, it again follows the district boundary before entering the neighboring Dharmapuri district. Pambar and Burgur Ar., are among the important tributaries of Ponnaiyar draining part of the district.

3.3.3. Geology & Hydrogeology

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

The general geological sequence of formation is given below:

Quaternary - Laterites, Sands and Clays

Tertiary - Sandstone, Gravels and Clays

Cretaceous - Limestone,

Calcareous Sandstone and Clay unconformity.

Archaean - Charnockites, Gneisses, Granites, Dolerites and Pegmatite

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

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. 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

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within 100 m and 1 to 4 fracture zones between 100 and 200 m.

The Cretaceous formation is represented by Arenaceous Lime stone, Calcareous sand - stone and marl. The Tertiary formation is argillaceous comprising of Silty clay stones, argillaceous Lime stone. 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, sand stone of tertiary formation are the potential groundwater reservoirs.

3.3.4. Aquifer Systems

Occurrence and storage of groundwater depend upon three factors viz., Geology, Topography and rainfall in the form of precipitation. Apart from Geology, wide variation in topographic profile and intensity of rainfall constitutes the prime factors of groundwater recharge. Aquifers are part of the more complex hydro geological system and the behaviour of the entire system cannot be interpreted easily. In hard rock terrain the occurrence of Ground Water is limited to top weathered, fissured and fractured zone which extends to maximum 30 m on an average it is about 10-15 m in Krishnagiri District. In Sedimentary formations, the presence of primary inter granular porosity enhances the transmitting capacity of groundwater where the yield will be appreciable. The sedimentary area which occupies the eastern part of the District along the coastal tract is more favourable for groundwater recharge.

Ground Water occurs both in semi confined and confined conditions. A brief description of occurrence of groundwater in each formation is furnished below. Alluvial Formations In the river alluvium groundwater occurs under water table condition. The maximum thickness is 37 m and the average thickness of the aquifer is approximately 12 m. These formations are porous and permeable which have good water bearing zones. Tertiary Cuddalore sandstone Tertiary formations are represented by Cuddalore Sandstone and characterised as fluvial to brakish marine deposits. Predominantly this formation is divided into Lower and Upper Cuddalore formations. In the Upper Cuddalore formations the groundwater occurs in semi confined conditions, whereas in the Lower Cuddalore the groundwater occurs in confined condition with good groundwater potential.

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Cretaceous Formations Groundwater occurring in the lens shape in the sandy clay lenses and fine sand is underlain by white and black clay beds which constitute phreatic aquifer depth which ranges 10m to 15m below ground level. Phreatic aquifer in Limestone is potential due to the presence of Oolitic Limestone. Hard Rock Formations Groundwater occurs under water table conditions but the intensity of weathering, joint, fracture and its development is much less in other type of rocks when compared to gneissic formation. The groundwater potential is low, when compared with the gneissic formations

Granitic Gneiss

Groundwater occurs under water table conditions in weathered, jointed and fractural formations. The pore space developed in the weathered mantle acts as shallow granular aquifers and forms the potential water bearing and yielding zones water table is shallow in canal and tank irrigation regions and it is somewhat deeper in other regions.

Charnokite

Groundwater occurs under water table conditions but the intensity of weathering, joint, fracture and its development is much less when compared to gneissic formations. The groundwater potential is low, when compared with the gneissic formations.

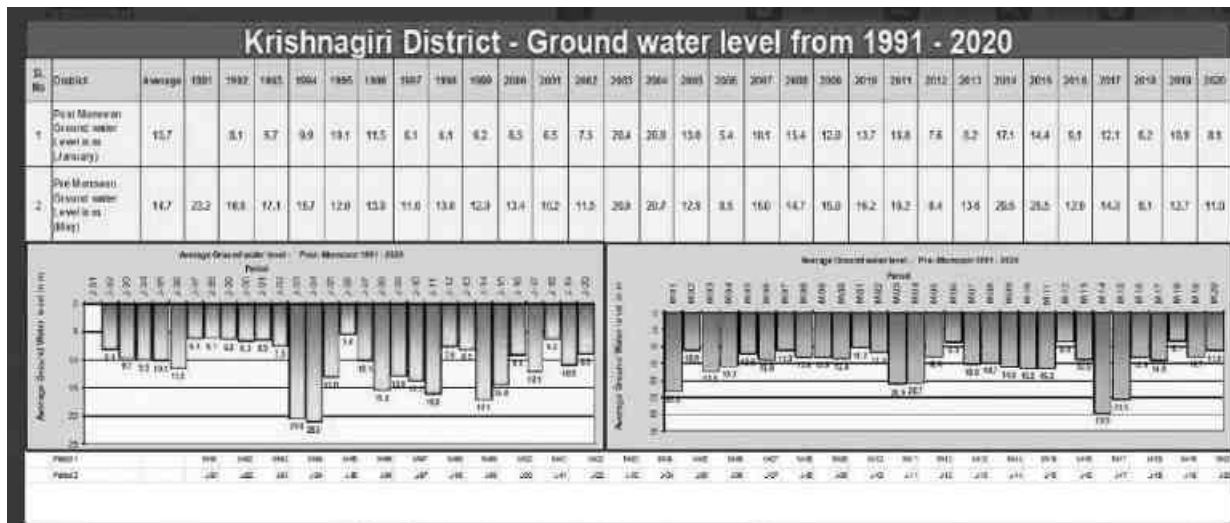
3.3.4.1. Aquifer Parameters

The thickness of aquifer in this district is highly erratic and varies between 15 m to 40 m below ground level. The inter granular Porosity is essentially dependent on the intensity and degree of weathering and fracture development in the bed rock. As discussed earlier deep weathering has developed in Gneissic formations and moderate weathering in charnockite formations.

Type Of Aquifer	Discontinuous Unconfined To Semi-Confined Aquifers In Fissured Formations
Aquifer Parameters	
Well yield lpm:	36 – 1125
Transmissivity (T)(m ² /day)	8 – 73
Permeability (K)m/day:	0.78 – 23
Depth of Water level	8m to 25m

Source: <https://www.twadboard.tn.gov.in/content/krishnagiri>

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The project falls under Krishnagiri Block, which is categorized as Overexploited zone as per Annexure to G. O (Ms) No. 161, Public Works (R2) Department, Dated: 23.10.2019, where the eligibility for the extraction of groundwater, extraction will be permitted only in Safe/Semi critical and Non metro area for residential development where there is no any provision of piped water supply by Local body.)

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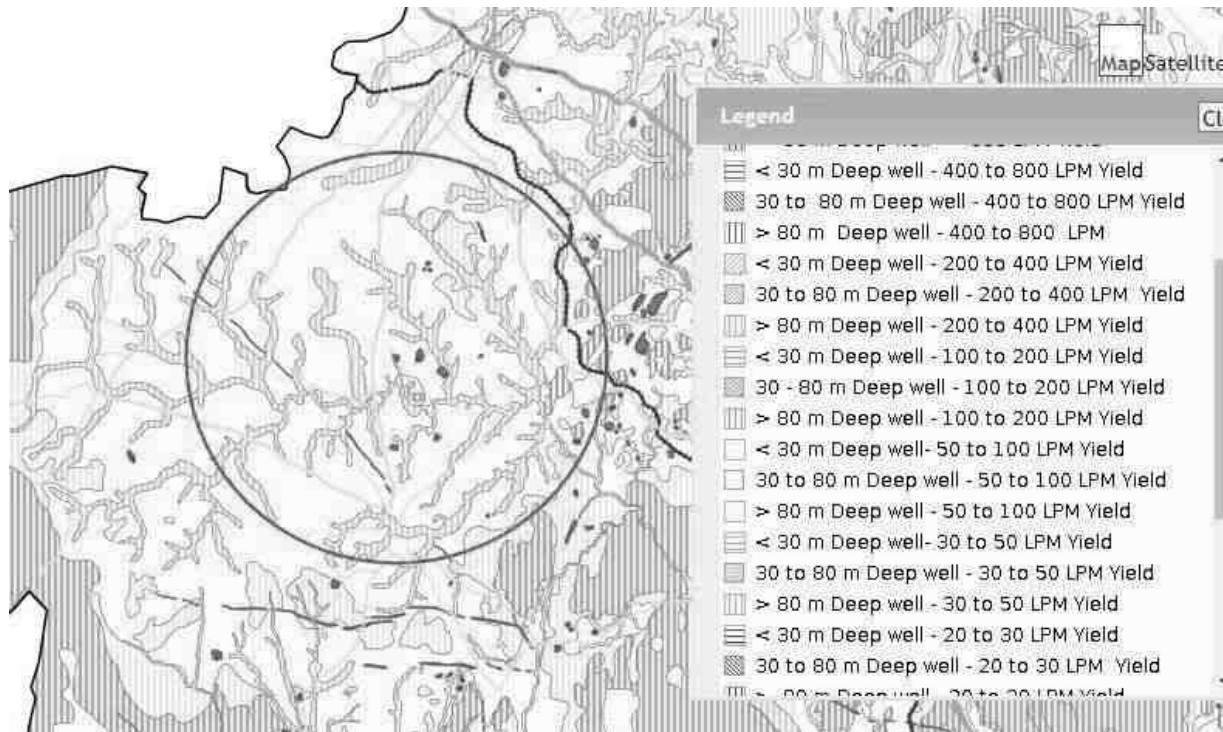


Figure 3.3 Groundwater potential around 10 km radius (Source: Bhuvan)

3.4. Seismicity of the Study Area

Based on tectonic features and records of past earthquakes, a seismic zoning map of India has been prepared by a committee of experts under the auspices of Bureau of Indian Standard (BIS Code: IS: 1893: Part I 2002). As per Seismic map of India the study area falls in Zone-II (Least active Zone). The seismic zone map of study area is given in Figure 3.7.

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Figure 3.3 Seismic Map of India

3.5. Land use Analysis

3.5.1. Land Use Classification

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

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3.5.2. 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 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

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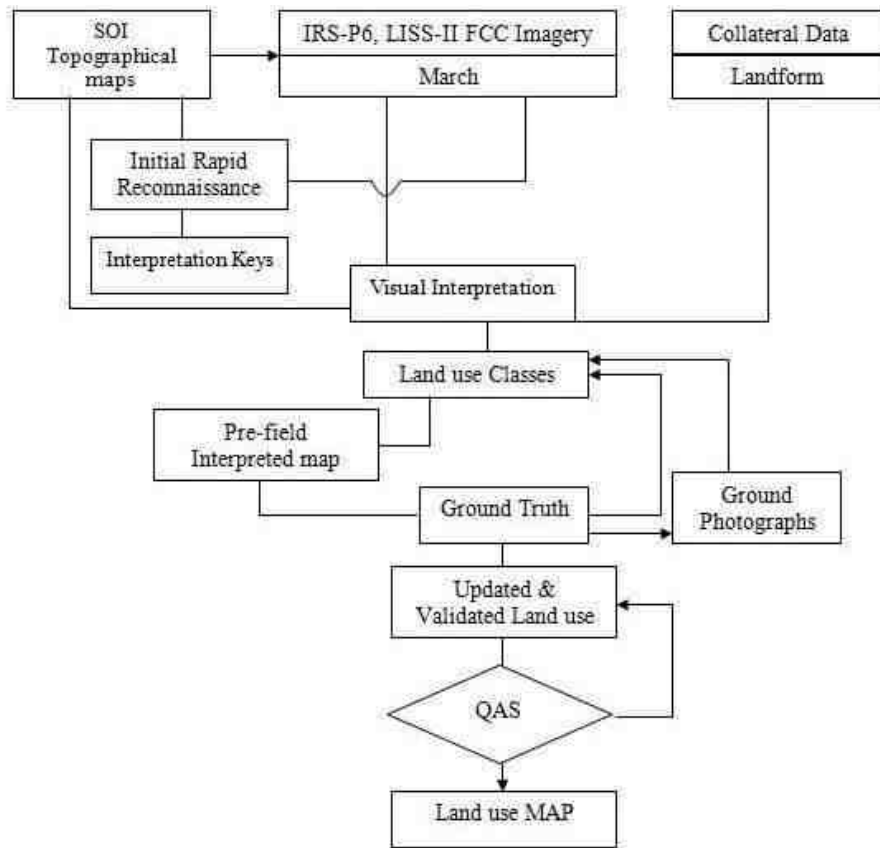


Figure 3.4 Flow Chart showing Methodology of Land use mapping

3.5.3. Satellite Data

IRS Resourcesat-2 LISS-III multispectral satellite data of 05th March 2016 was utilized for the present study. Details of satellite data is given below. The rectification of imagery was carried out on to bring the digital data on the earth coordinate system by means of ground control point (GCP) assignments/SOI toposheets.

3.5.4. Scale of mapping

Considering the user defined scale of mapping, 1:50000 IRS-P6, LISS-III data on 1:50000 Scale 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.

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3.5.5. 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.

February 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. Digitisation of the study area (10 km radius from the proposed site) from the topo maps
2. In the present study the IRS –P6 satellite image and SOI topo sheets of 47-F/01,02,03 have been procured and interpreted using the ERDAS imaging and ARC-GIS soft ware adopting the necessary interpretation techniques.
3. Satellite data interpretation and vectorisation 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 -I being the broad classification about the land covers that is Built-up land, agriculture land, waste land, wet lands, and water bodies. These are followed by level –II where built-up land is divided into towns/cities as well villages. The Agriculture land is divided into different classes such as cropland, Fallow, Plantation, while wastelands are broadly divided into, Land with scrub and without Scrub and Mining and Industrial wasteland. The wetlands are classified into inland wetlands, coastal wetlands and islands. The water bodies are classified further into River/stream, Canal, Tanks and bay. In the present study level II classification has been undertaken. The SOI Topo map is presented in Annexure and Satellite imagery of 10 km radius from the project site is presented Annexure

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3.5.6. 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.

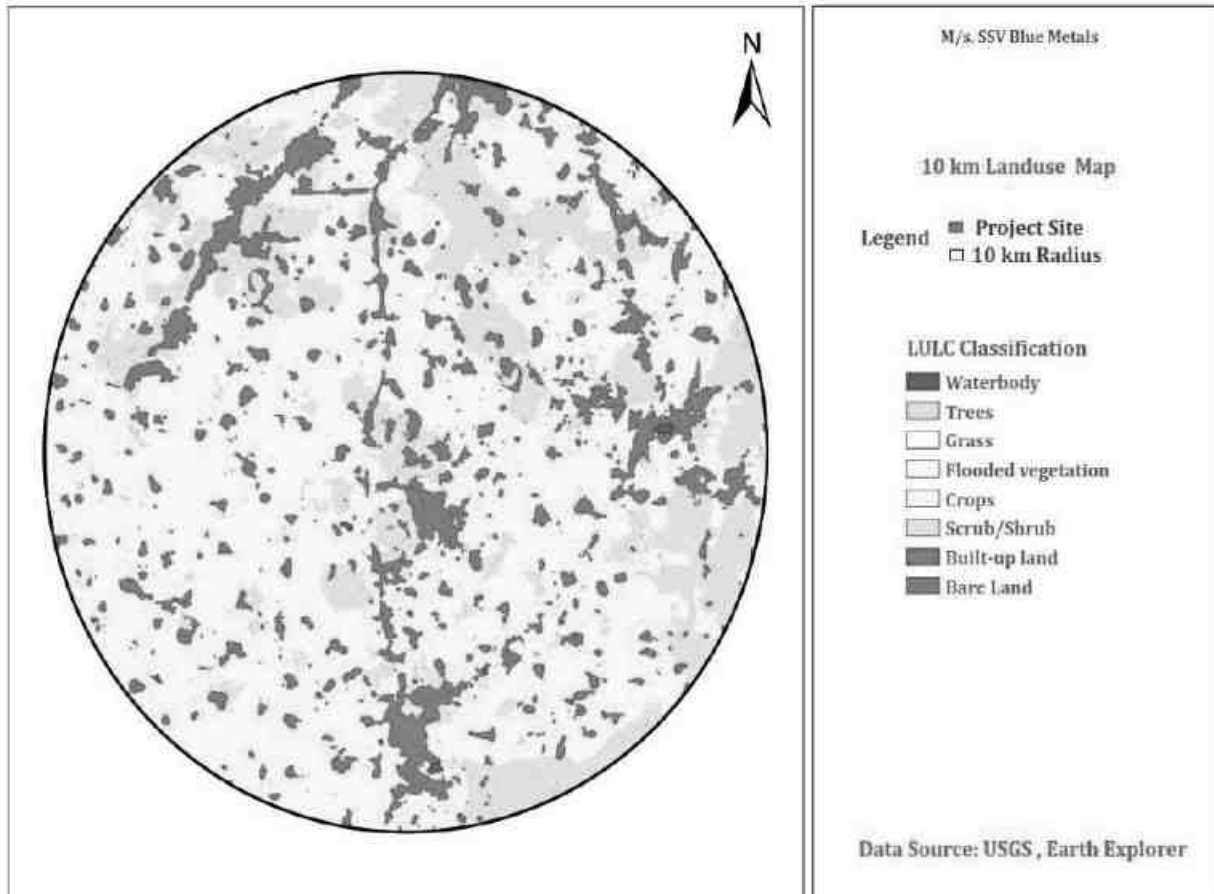


Figure 3.5 Land use classes around 10 km radius from the project site

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3.6. Description of the Land Use / land cover classes

3.6.1. Built-up land

It is defined as an area of human settlements composed of houses, commercial complex, transport, communication lines, utilities, services, places of worships, recreational areas, industries etc. Depending upon the nature and type of utilities and size of habitations, residential areas can be aggregated into villages, towns and cities. All the man-made construction covering land belongs to this category.

3.6.2. Agricultural land

This category includes the land utilized for crops, vegetables, fodder and fruits. Existing cropland and current fallows are included in this category.

It is described as an area under agricultural tree crops, planted adopting certain agricultural management techniques.

3.6.3. Forest land

These are the areas bearing an association predominantly of trees and other vegetation types (within the notified forest boundaries) capable of producing timber and other forest produce. The study area of 10 km buffer comprise of Forest plantation, forest blanks and Scrub Forest,

3.6.4. Wastelands

Wastelands are the degraded or underutilized lands most of which could be brought under productive use with proper soil and water management practices. Wasteland results from various environmental and human factors.

3.6.5. Land with or without Scrub

The land, which is outside the forest boundary and not utilized for cultivation. Land with or without scrub usually associated with shallow, stony, rocky otherwise non-arable lands.

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3.6.6. Water bodies

The category comprises area of surface water, either impounded in the form of ponds, reservoirs or flowing as streams, rivers and canals. River cater channel is inland waterways used for irrigation and for flood control.

3.6.7. Wastelands

Wastelands are the degraded or under utilized lands most of which could be brought under productive use with proper soil and water management practices. Wasteland results from various environmental and human factors.

The study reveals that the following major land use in the study area of 10 km radius from the project boundary

- Crop land (27 %) and scrubs (30%) occupies majority of the area.
- About 24 % is built up area land used for various developmental activities.
- Around 17% occupies vegetation
-

3.7. Soil Environment

Soil is the most important medium for supporting agricultural development. Its properties influence fertility, water retention capacity, physical support capacity of plant roots, determination of various other chemical constituent parameters. It is thus a vital necessity to study the nutrient status of soil regime.

3.7.1. Selection Criteria for Soil Sampling Location

For studying soil quality of the study area and with a view to ascertain the impacts due to proposed activities on the nearby agriculture, vegetative, urban settlement land , six sampling locations, representing various land use conditions, were selected to assess the existing soil conditions in and around the project area. The location of the soil samples is presented in Table 3.5.

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Table 3-2 Soil sampling location

Sample Code	Sampling locations	Distance, km	Direction
SQ - 1	Project Site	-	-
SQ - 2	Vanamangalam Village	2.83	WNW
SQ - 3	Doddabelur Govt. School	3.95	ESE
SQ - 4	Nagappan Agraharam	1.84	N
SQ - 5	Holiday valley resort	3.03	S

3.7.2. Methodology

3.7.2.1. Sampling Technique

Soils vary from place to place. In view of this, efforts should be made to take the samples in such a way that it is fully representative of the field. Random five sub-locations were identified at each location. Scrap away surface liter; obtain a uniformly thick slice of soil from the surface to the plough depth from each place. A V-Shaped cut is made with a spade to remove 1 to 2 cm slice of soil. The sample may be collected on the blade of the spade and put in a clean bucket. In this way collect samples from all the spots marked for one sampling unit. In case of hard soil, samples are taken with the help of augur from the plough depth and collected in the bucket. Pour the soil from the bucket on a piece of clean paper or cloth and mix thoroughly. Spread the soil evenly and divide it into 4 quarters. Reject two opposite quarters and mix the rest of the soil again. Repeat the process till left with about half kg of the soil, collect it and put in a clean cloth / polyethylene bag. Each bag should be properly marked with the name of sampling location & number to identify the sample.

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3.7.2.2. Storage Technique

Collected Samples are immediately transported to the laboratory. They are shade dried in wooden or enameled trays (except for the analysis of moisture content) and stored. The dried soils are ground using mortar and pestle (taking care to break only the clods but not the sand and gravel particles) and sieved through a 2mm mesh sieve.

3.7.2.3. Soil Quality Parameters and Method of Analysis

The analysis of soil properties shall be done as per standard methods as described in the Methods Manual of Soil Testing in India, Department of Agriculture & Co-operation, Ministry of Agriculture, Government of India, New Delhi.

Table 3-3 Method for Analysis of Soil Properties

S.No.	Parameters	Method of Analysis
Physical Parameters		
1	Moisture content (%)	Gravimetric
2	Water Holding Capacity (%)	Gravimetric
3	Bulk Density (%)	Gravimetric
4	Texture	Hydrometer Method
5	Sand (%)	Hydrometer Method
6	Clay (%)	Hydrometer Method
7	Silt (%)	Hydrometer Method
Chemical Properties		
9	PH	Electrometric (pH meter)
10	EC ($\mu\text{S}/\text{m}$)	Electrometric
11	Total Nitrogen as N, Kg/ha	Kjeldhal Method
12	Available Phosphorous, Kg/ha	Spectrophotometer
13	Available Potassium, Kg/ha	Flame Photometer
14	Exchangeable Calcium as Ca, m.eq/100g	Titrimetric

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15	Exchangeable Magnesium as Mg, m.eq/100g	
16	Exchangeable Sodium as Na, m.eq/100g	
17	Organic matter (%)	

3.7.2.4. Protocol for Assessment of Soil Physico-Chemical Properties

Methods of Manual of Soil Testing in India, Department of Agriculture & Cooperation, Ministry of Agriculture, Government of India, New Delhi, shall be followed for collection of soil samples, its preparation for testing and analyzing various physico-chemical properties of soil.

3.7.2.5. Soil Quality Analysis

The homogenized samples were analyzed for physico chemical characteristics. The physical and chemical analysis results of the soil samples collected at site are presented in **Table 3.7.**

Table 3-4 Physicochemical Characteristics of Soil

S.No	Parameters	Unit	SQ 1	SQ2	SQ 3	SQ 4	SQ 5
1	pH (at 25°C)		7.80	7.65	7.92	6.80	7.85
2	Bulk Density		1.4	1.1	1.2	1.2	1.8
3	Electrical conductivity, mS/cm (1:5 Suspension)	mS/cm	0.20	0.31	0.15	0.22	0.14
4	Total Nitrogen as N, Kg/ha	kg/ha	0.026	0.015	0.028	0.034	0.025
5	Available Phosphorous, Kg/ha	kg/ha	204	223	178	196	194
6	Available Potassium, Kg/ha	kg/ha	23	22	24	25	22
7	Calcium as Ca, mg/Kg	mg/Kg	23	21	48	26	20
8	Magnesium as Mg, mg/Kg	mg/Kg	27	37	51	26	29
9	Sodium as Na, mg/Kg	mg/Kg	75	72	80	82	74
10	Organic matter (%)	%	3.4	3.2	3.6	3.4	2.7
11	Sand (%)	%	54	52	56	54	53
12	Clay (%)	%	7	8	1	3	5
13	Silt (%)	%	39	40	43	43	42

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3.7.2.6. Interpretation of Soil Characteristics

Soil Texture:

As per the grain size distribution the percentage of Sand in all sampled soil was found varied from 52% to 56%, Silt varied from 39% to 43% and Clay from 1% to 8% during study season.

Soil Reaction:

Soil pH is an important soil property, which affects the availability of several plant nutrients. It is a measure of acidity and alkalinity and reflects the status of base saturation. The soil pH ranges were observed from 6.80 to 7.85 during study season, thereby indicating the soil is neutral to slightly alkaline in nature.

Macronutrients: Nutrients like nitrogen (N), phosphorus (P) and potassium (K) are considered as primary nutrients and sulphur (S) as secondary nutrient. These nutrients help in proper growth, development and yield differentiation of plants and are generally required by plants in large quantity.

Available Nitrogen:

Nitrogen is an integral component of many compounds including chlorophyll and enzyme essential for plant growth. It is an essential constituent for amino acids which is building blocks for plant tissue, cell nuclei and protoplasm. It encourage aboveground vegetative growth and deep green colour to leaves. Deficiency of nitrogen decreases rate and extent of protein synthesis and result into stunted growth and develop chlorosis.

Available Phosphorus:

Phosphorus is important component of adenosine di-phosphate (ADP) and adenosine tri-phosphate (ATP), which involves in energy transformation in plant. It is essential component of deoxyribonucleic acid (DNA), the seat of genetic inheritance in plant and animal. Phosphorous take part in important functions like photosynthesis, nitrogen fixation, crop maturation, root development, strengthening straw in cereal crops etc. The availability of phosphorous is restricted under acidic and alkaline soil reaction mainly due to P-fixation. In acidic condition it get fixed with aluminium and iron and in alkaline condition with calcium.

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Available Potassium:

Potassium is an activator of various enzymes responsible for plant processes like energy metabolism, starch synthesis, nitrate reduction and sugar degradation. It is extremely mobile in plant and help to regulate opening and closing of stomata in the leaves and uptake of water by root cells. It is important in grain formation and tuber development and encourages crop resistance for certain fungal and bacterial diseases.

3.8. Water Environment

Water quality is a complex subject, which involves physical, chemical, hydrological and biological characteristics of water and their complex and delicate relations. The quality of water is of vital concern for mankind since it is directly linked with human welfare. Water quality characteristics of aquatic environments arise from multitude of physical, chemical and biological interactions. The water bodies are continuously subjected to dynamic state of changes with respect to their geo-chemical characteristics. The dynamic balance in aquatic ecosystem is upset by human activities. For assessment of baseline data of water quality status, general reconnaissance survey of River upstream and downstream of proposed study area will be done. “Protocol for Water Quality Monitoring” notified by Govt of India in conjunction with CPCB Guidelines for Water Quality Monitoring, 2007-08, shall be followed

3.8.1. Selection Criteria for Water Sampling Location

In case of groundwater sampling only tubewells, dug-well and handpumps which are in use should be selected. There are no surface water within 10km radius around the project site.

3.8.2. Sampling Frequency

Grab samples of surface and ground water were collected and analyzed once during study period (post Monsoon).

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Table 3-5 Test method used for Analysis

S.No.	Parameter	Test Method
1	Colour	APHA 23rd EDITION 2120 C
2	Odour	APHA 23rd EDITION 2150 B
3	Taste	IS 3025 Part 8 (Reaff:2017)
4	Turbidity	IS : 3025 Part 10-1984 (Reaff: 2017)
5	pH at 25 °C	IS : 3025 Part 11- 1983 (Reaff: 2017)
6	Electrical Conductivity @25°C	IS : 3025 Part 14- 1984 (Reaff: 2019)
7	Total dissolved solids	IS : 3025 Part 16-1984 (Reaff: 2017)
8	Total Suspended solids	IS : 3025 Part 17-1984 (Reaff: 2017)
9	Total Alkalinity as CaCO ₃	IS : 3025 Part 23- 1986(Reaff:2019)
10	Total Hardness as CaCO ₃	IS : 3025 Part 21-2009 (Reaff:2019)
11	Calcium as Ca	IS : 3025 Part 40-1991 (Reaff:2019)
12	Magnesium as Mg	APHA 23rd EDN-3500 Mg B
13	Chloride as Cl ⁻	IS : 3025 Part 32-1988 (Reaff: 2019)
14	Sulphate as SO ₄	APHA 23rd EDN -4500-SO ₄ - E
15	Nitrate as NO ₃	APHA 23rd EDN -4500- NO ₃ - B
16	Iron as Fe	IS : 3025 Part 53-2003 (Reaff:2019)
17	Manganese as Mn	APHA 23rd EDN -3500-Mn D
18	Fluoride as F	APHA 23rd EDN -4500-F B&D
23	Sodium as Na	IS : 3025 Part 45-1993 (Reaff:2019)
24	Potassium as K	IS : 3025 Part 45-1993 (Reaff:2019)
25	Nickel as Ni	APHA 23rd EDN -3111 B

3.8.3. Selection Criteria for water Sampling Location

For studying water quality of the study area and with a view to ascertain the impacts due to proposed

activities on the nearby agriculture, vegetative, urban settlement land , six sampling locations, representing various land use conditions, were selected to assess the existing soil conditions in and around the project area. The location of the water samples collected is presented in Table 3.5.

Table 3-6 Soil sampling location

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Sample Code	Sampling locations	Distance, km	Direction
GW - 1	Project Site	-	-
GW - 2	Vanamangalam Village	2.83	WNW
GW - 3	Doddabelur Govt. School	3.95	ESE
GW - 4	Nagappan Agraharam	1.84	N
GW - 5	Holiday valley resort	3.03	S

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Table 3-7 Ground Water Quality

S. No	Parameter	Unit	Test Method	GW 1	GW 2	GW 3	GW 4	GW 5	Acceptable Limit as Per 10500:2012
1	Colour	Hazen	APHA 23rd EDITION 2120 C	1	1	10	2	1	5
2	Turbidity	NTU	IS : 3025 Part 10-1984 (Reaff: 2017)	BQL(L OQ:1.0)	BQL(LOQ:1 .0)	12.3	BQL(L OQ:1.0)	BQL(L OQ:1.0)	1
3	pH at 25 °C	-	IS : 3025 Part 11- 1983 (Reaff: 2017)	7.51	7.67	7.12	7.98	7.63	6.5-8.5
4	Electrical Conductivity @25°C	µS/cm	IS : 3025 Part 14- 1984 (Reaff: 2019)	1084	1196	1289	1191	1408	Not Specified
5	Total dissolved solids	mg/l	IS : 3025 Part 16-1984 (Reaff: 2017)	596	658	709	655	774	500
6	Total Suspended solids	mg/l	IS : 3025 Part 17-1984 (Reaff: 2017)	BQL(L OQ:2.0)	BQL(LOQ:2 .0)	12.3	BQL(L OQ:2.0)	BQL(L OQ:2.0)	Not Specified
7	Total Alkalinity as CaCO3	mg/l	IS : 3025 Part 23-1986(Reaff:2019)	251	194	269	176	172	200
8	Total Hardness as CaCO3	mg/l	IS : 3025 Part 21-2009 (Reaff:2019)	372	432	404	396	554	200
9	Calcium as Ca	mg/l	IS : 3025 Part 40-1991	253	138	110	114	136	75

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			(Reaff:2019)						
10	Magnesium as Mg	mg/l	APHA 23rd EDN-3500 Mg B	119	21.2	31.8	27.0	52.0	30
11	Chloride as Cl-	mg/l	IS : 3025 Part 32-1988 (Reaff: 2019)	31.3	80.2	74.4	82.2	76.3	250
12	Sulphate as SO4	mg/l	APHA 23rd EDN - 4500-SO42- E	106.4	186.7	144.2	184.2	233.3	200
13	Nitrate as NO3	mg/l	APHA 23rd EDN - 4500- NO3- B	0.232	43.98	50.99	44.42	46.98	45
14	Iron as Fe	mg/l	IS : 3025 Part 53-2003 (Reaff:2019)	BQL(L OQ:0.1)	BQL(L OQ:0.1)	4.744	BQL(L OQ:0.1)	BQL(L OQ:0.1)	1
16	Fluoride as F	mg/l	APHA 23rd EDN - 4500-F B&D	0.232	0.352	BQL(LO Q:0.2)	0.409	0.314	1
17	Sodium as Na	mg/l	IS : 3025 Part 45-1993 (Reaff:2019)	24.8	76.4	65.4	79.2	82.6	Not Specified
18	Potassium as K	mg/l	IS : 3025 Part 45-1993 (Reaff:2019)	6.08	5.1	5.21	1.49	11.5	Not Specified

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3.8.4. Interpretation of Ground Water Quality

The analysis results indicate that the pH ranged between 7.12 to 7.98, which are well within the specified standard of 7.3 to 8.0 limit. Total hardness was recorded to range from 200 to 554 mg/l, which is within the permissible limit 600 mg/l at all locations. The Total Dissolved Solids (TDS) concentration recorded ranged between 500 to 774 mg/l and was within the permissible limits (2000 mg/l) at all locations.

Chlorides at all the locations were within the permissible limits (1000 mg/l) as it ranged between 31.3 – 82.2 mg/l. Sulphates at all the locations were within the permissible limits (400 mg/l) as it ranged between 106.4 – 233.3mg/l.

3.9. 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
Summer season	:	March to May
Monsoon season	:	July to September
Post-monsoon season	:	October to November

i) Climate

Like the rest of the state, Krishnagiri experiences hot weather between April and July and is relatively cooler in December and January. The area exhibits a subtropical climate and the temperature that goes upto 42°C in summer and falls down to 27°C in December – January. The wind direction is NE-SW and vice-versa. Average annual rainfall is about 1071.4 mm in monsoon season..

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ii) Temperature

The average daily temperature ranges from a maximum of 33.7 °C to a minimum of 24.2 °C

iii) Rainfall:

The historical rainfall data of past years is collected. The maximum rainfall is observed in November, 2015 with a rainfall of 1061.3 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
2014	0.5	3.4	0.0	0.0	35.7	117.6	50.9	130.9	130.6	196.3	135.0	106.9
2015	1.7	0.0	0.0	49.5	45.4	32.2	102.2	140.4	70.3	179.8	1061.3	574.0
2016	0.5	0	0	0	198.1	109.3	59.6	51.7	275.3	28.8	66.1	247.2
2017	4.5	0	0	0	1.8	58.5	86.6	233.4	71.2	269.8	583.8	84.2
2018	2.2	0.9	2.9	0	0	39.2	95.9	197.7	62.5	149.9	171.9	31.8
2019	0.1	1.5	0	0	0	56	191.5	142.9	197.5	277.6	145.4	214.7
2020	40.7	0.1	0	52.2	1	26	188.4	92.1	158.1	241.1	570.4	229.3

Source: Customized Rainfall Information System (CRIS), Hydromet Division, GOI

iv) Relative humidity

The district enjoys a subtropical climate. The period from April to July is generally hot and dry. The weather is pleasant during the period from November to January. Usually mornings are more humid than afternoons. The relative humidity is on an average between 65 and 85% in the mornings. Humidity in the afternoons is generally between 40 and 70.

v) Wind Speed:

Wind speed was in the range of 2 Km/hr to 20 Km/hr. The wind speed was almost close to each other during the whole study period.

The site-specific meteorological data for the study period (May to July 2022) is presented below. The maximum and minimum values for all the parameters except wind speed and wind direction are presented below.

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vi) Metrological Data

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

vii) 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 May to July 2022. The wind rose is plotted using WR Plot.

viii) Selection of Sampling Locations:

Four Monitoring locations along with the project site is selected based on Wind Direction & Wind Speed.

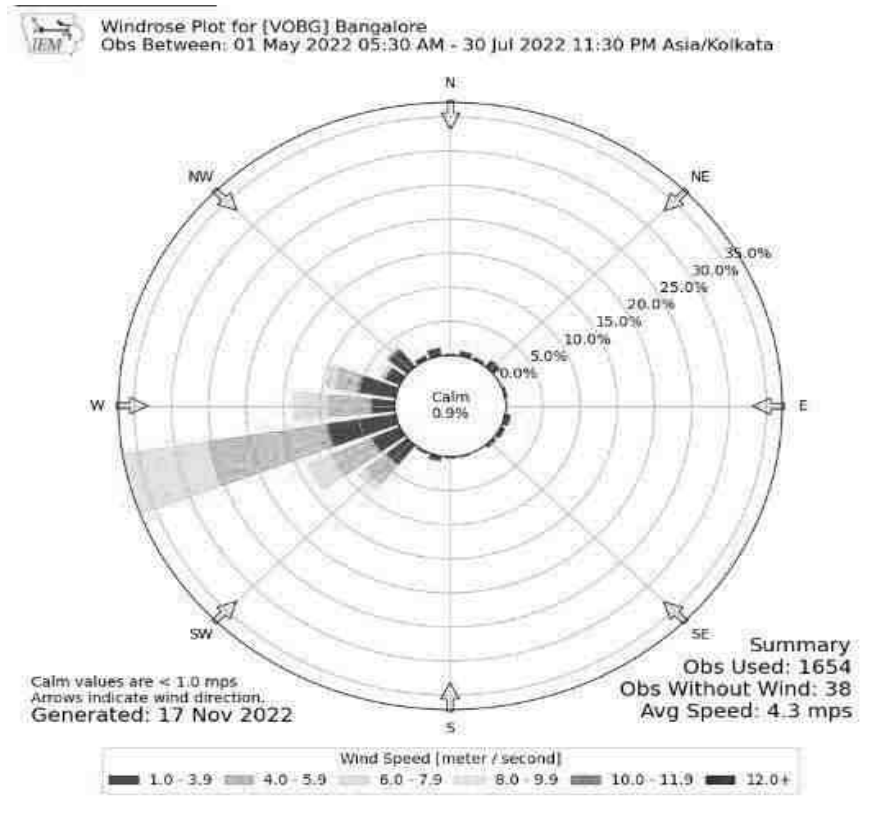


Figure 3.6 Windrose

Project	Rough stone Quarry – 2.40.0 Ha	Draft EIA Report
Project Proponent	M/s.R.V.Enterprises	
Project Location	Mugalur Village, Shoolagiri Taluk, Krishnagiri District	

3.10. Ambient Air Quality

Environmental Parameters: Ambient Air			
Monitoring Period	May – July 2022		
Design Criteria	The monitoring stations are selected based on factors like topography/terrain, prevailing meteorological conditions like predominant wind direction (May - July 2022), etc, play a vital role in selection of air sampling stations. Based on these criteria, 6 air sampling stations were selected in the area as shown below.		
Monitoring Locations	Location & Code	Distance (km)	Direction
	Project Site -AAQ 1	-	-
	Vanamangalam Village-AAQ 2	2.83	WNW
	Doddabelur Govt. School-AAQ 3	3.95	ESE
	Nagappan Agraharam-AAQ 4	1.84	N
	Holiday valley resort-AAQ 5	3.03	S
Methodology	Respirable Particulate Matter (PM10) - Gravimetric (IS 5182: Part 23:2006) Particulate Matter PM2.5 - Gravimetric (Fine particulate matter) Sulphur Dioxide - Calorimetric (West & Gaeke Method) (IS 5182: Part 02: 2001) Nitrogen Dioxide - Calorimetric (Modified Jacob & Hocheiser Method) (IS 5182: Part 06:2006)		
Frequency of Monitoring	2 days in a week, 4 weeks in a month for 3 months in a season.		

3.10.1. 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>		Chapter 3 Description of the Environment
<i>Project Proponent</i>		
<i>Project Location</i>		

Code	Location	PM 10 ($\mu\text{g}/\text{m}^3$)				PM 2.5 ($\mu\text{g}/\text{m}^3$)				SO2 ($\mu\text{g}/\text{m}^3$)				NOx ($\mu\text{g}/\text{m}^3$)			
		Min	Max	Avg	98 percentile	Min	Max	Avg	98 percentile	Min	Max	Avg	98 percentile	Min	Max	Avg	98 percentile
AAQ 1	Project Site	41	53	47.3	52.9	18	26	21.5	25.7	5	10	7	9.8	10	24	15.6	23.2
AAQ 2	Vanamangalam Village-AAQ 2	45	54	49	54.1	18	28	22.4	27.2	5	12	7.7	11.6	11	27	17.9	26.7
AAQ 3	Doddabelur Govt. School-AAQ 3	49	59	54.3	59.1	21	28	24.1	27.8	5	12	8.4	12	12	28	19	27
AAQ 4	Nagappan Agraharam-AAQ 4	52	64	58	63	20	31	25.7	30.3	8	14	10.3	13.2	17	29	23.7	29.2
AAQ 5	Holiday valley resort-AAQ 5	44	56	49.6	55.8	18	27	22.6	26.7	5	11	7.8	10.6	10	25	17.7	24.1
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 ($\mu\text{g}/\text{m}^3$)			

Table 3-8 Ambient Air Quality

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s.S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

3.10.2. Interpretation of ambient air quality:

Observation:

The Maximum value of PM₁₀ (64 (µg/m³) is observed in the Nagappan Agraharam. , PM 2.5 (31(µg/m³) in Nagappan Agraharam , NO_x (29 (µg/m³) – , Sox (14(µg/m³) is observed in Nagappan Agraharam .

PM 10 & PM 2.5:

The main source of **PM₁₀ and PM_{2.5}** is the dust emission and soot. The proposed mine lease area is located nearer to the **private crusher unit**. There will be a possibility of emission of fine particulate matter. The high value of 64 µg/m³ may occur due to inadequate control measures in the crushers. The dust emissions are substantial which leads to adverse impacts on workers as well as surrounding environment. In addition to that, the small collector roads near the monitoring locations are found to be mud road, which is unpaved leaving a way to dust emission.

NO_x:

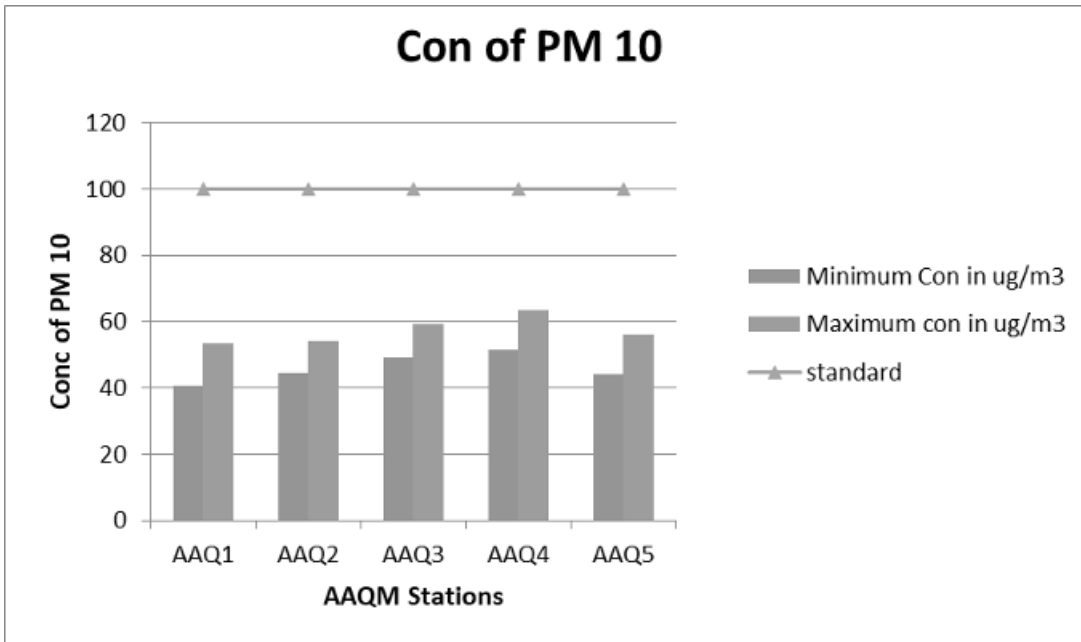
The major source of NO_x is due to combustion of fossil fuels. The highest value is observed in Nagappan Agraharam .Burgur is located nearer to SH 17A connecting Hosur to Denkanikottai where the movement of Public and Private transport for commutation will be more contributing to NO_x emission. Apart from that, this road forms the route for transporting the mined out minerals from the existing nearby mine for marketing.

SO_x:

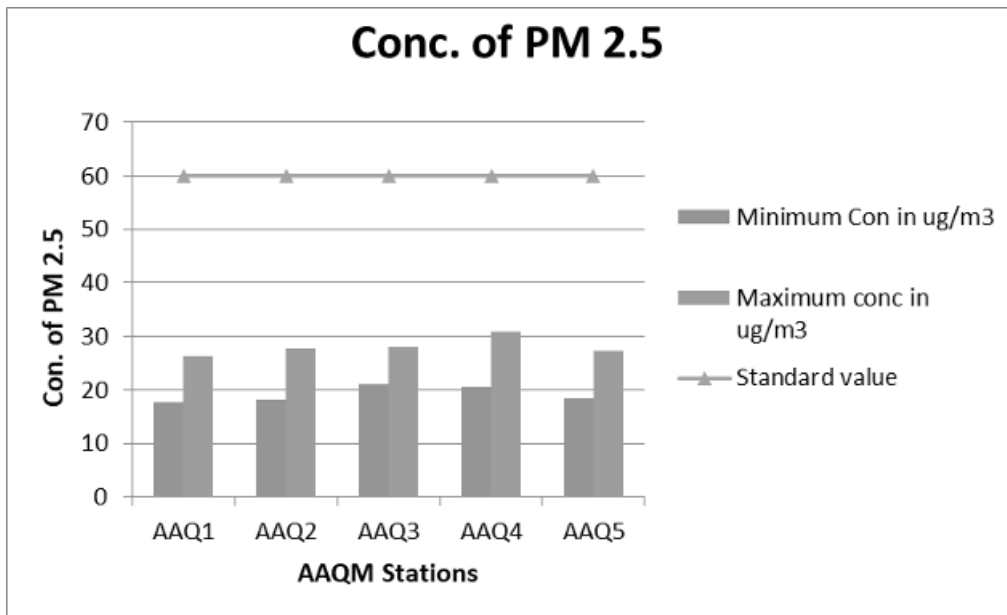
The main source of SO_x is Burning of fossil fuels such as coal, oil and natural gas. The project site is surrounded by cluster of mines which are in operation, where there is a usage of fuel for the operation of machineries which is contributing to the higher values of SO_x.

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

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s.S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

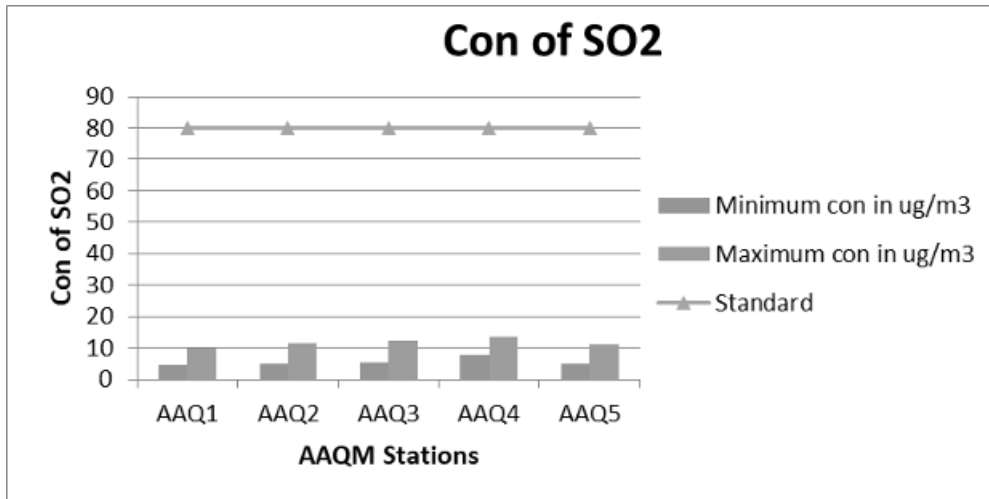


Concentration of PM10 ($\mu\text{g}/\text{m}^3$) in Study Area

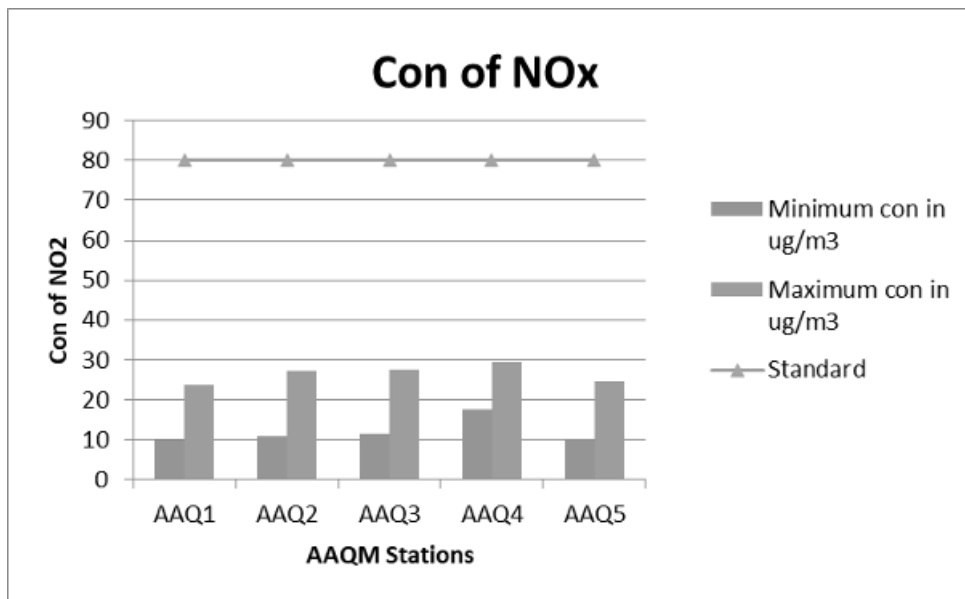


Concentration of PM2.5 ($\mu\text{g}/\text{m}^3$) in Study Area

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Project Proponent	M/s.S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	



Concentration of SO_x (µg/m³) in Study Area



Concentration of NO_x (µg/m³) in Study Area

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s.S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

3.11.Noise Environment:

Table 3-9 Noise Analysis

Environmental Parameters: Noise Analysis			
Monitoring Period	May – July 2022		
Design Criteria	Based on the Sensitivity of the area		
Monitoring Locations	Location Code	Distance	Direction
	Project Site -N 1	-	-
	Vanamangalam Village-AAQ 2	2.83	WNW
	Doddabelur Govt. School-AAQ 3	3.95	ESE
	Nagappan Agraharam-AAQ 4	1.84	N
	Holiday valley resort-AAQ 5	3.03	S
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 5 locations - Once in a season		

Ambient Noise Levels are monitored in the chosen 5 Locations including the project Site and the monitoring results are summarized below

3.11.1. Day Noise Level (Leq day)

Table 3-10 Day Noise Level (Leq day)

Location	Leq day in dB(A)		
	Max	Min	Average
Project Site -N 1	53	38	48
Vanamangalam Village-N 2	61	51	57
Doddabelur Govt. School-N 3	56	44	51
Nagappan Agraharam-N 4	55	41	50
Holiday valley resort-N 5	58	47	53

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Project Proponent	M/s.S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

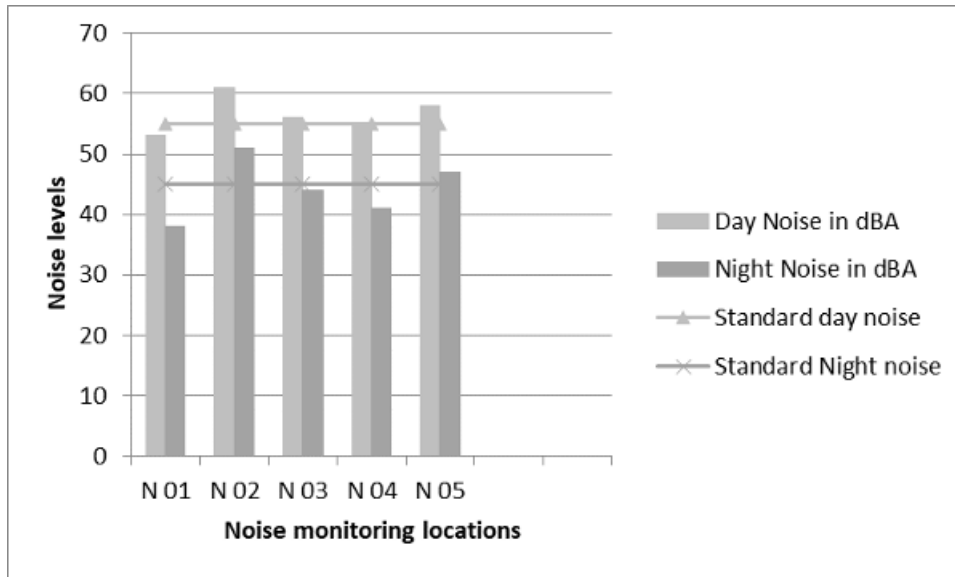


Figure 3.7 Day Noise Level (Leq day)

3.11.2. Night Noise Level (Leq Night)

Table 3-11 Night Noise Level (Leq Night)

Location	Leq Night in dB(A)		
	Max	Min	Average
Project Site -N 1	40	30	35
Vanamangalam Village-N 2	45	37	40
Doddabelur Govt. School-N 3	49	40	44
Nagappan Agraharam-N 4	41	34	38
Holiday valley resort-N5	45	36	41

Project	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s.S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

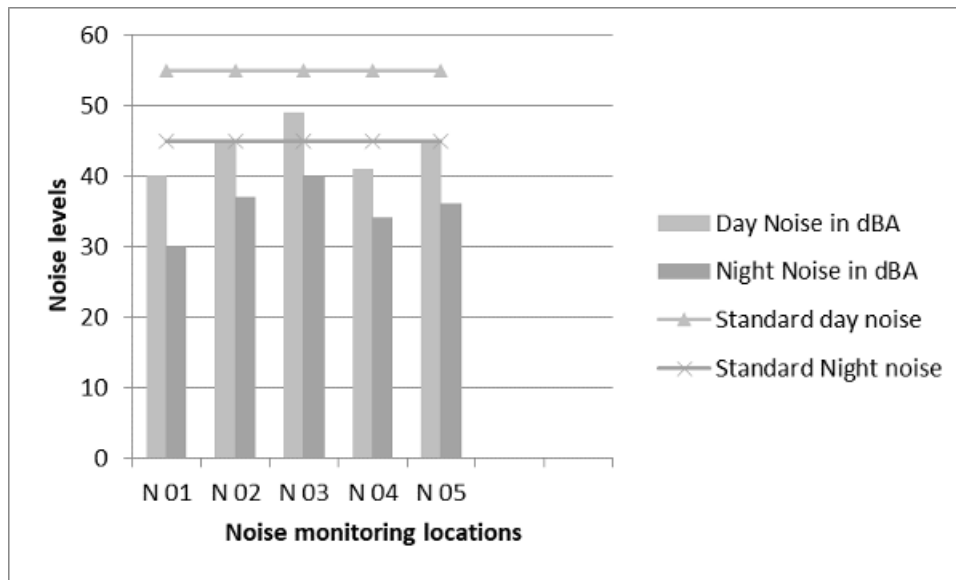


Figure 3.8 Night Noise Level (Leq Night)

3.11.3. Observation:

The maximum Day noise were found to be 61 dB(A) respectively in Vanamangalam. The night noise was found to be 49 dB(A) at Doddabelur Govt. School. The minimum Day Noise and Night noise were 38 dB(A) and 30 dB(A) in Project site.

3.12. Ecology and Biodiversity

Ecology and Biodiversity is studied for 5 km radius around the project site. Project site and 2 km around the project site is considered as core zone and from 2 km to 5 km radius, it is considered as buffer zone.

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

3.12.1. Methods available for floral analysis:

Plot Sampling Methods

Project	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
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Project Location	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

- 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.

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.

3.12.2. Tools Used

1. Nails,
2. String/Ropes,
3. Paper,
4. Pen,
5. Tape,
6. Hammer
7. GPS
8. Camera
9. Binocular

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Project Proponent	M/s.S.S.V Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

3.12.3. Field study & Methodology adopted:

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

3.12.4. Study outcome:

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

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

Table 3-12 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

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<i>Project Proponent</i>	<i>M/s.S.S.V Blue Metals</i>	
<i>Project Location</i>	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

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 3-13 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	Cassia siamea	ManjalKonrai	3	2	6	0.50	33.33	1.5	0.07	2.52	2.17	1.11	5.81	Least Concern
3	Acacia nilotica	Karuvelai	4	4	6	0.67	66.67	1	0.28	3.36	4.35	4.45	12.1 6	Least Concern
4	Bambusa vulgaris	Moongil	4	4	6	0.67	66.67	1	0.50	3.36	4.35	7.92	15.6 3	Not assessed
5	Anacardium occidentale	Cashew	1	1	6	0.17	16.67	1	0.44	0.84	1.09	6.96	8.88	Not assessed
6	Alstonia scholaris	Elilaiपालai	2	2	6	0.33	33.33	1	0.27	1.68	2.17	4.31	8.16	Least Concern
7	Psidium guajava	Guava	3	3	6	0.50	50.00	1	0.23	2.52	3.26	3.61	9.39	Not assessed
8	Aegle marmelos	Vilvam	1	1	6	0.17	16.67	1	0.16	0.84	1.09	2.50	4.43	Not assessed
9	Causuarina equisetifolia	Savukku	2	2	6	0.33	33.33	1	0.21	1.68	2.17	3.34	7.20	Not assessed
10	Albizia amara	Wunja	1	1	6	0.17	16.67	1	0.20	0.84	1.09	3.22	5.14	Not assessed
11	Cocos nucifera	Thennai	10	6	6	1.67	100.00	1.67	0.15	8.40	6.52	2.39	17.3 2	Not assessed
12	Artocarpus heterophyllus	Palaa	2	2	6	0.33	33.33	1	0.18	1.68	2.17	2.85	6.70	Not assessed
13	Bombax ceiba	Sittan	4	4	6	0.67	66.67	1	0.08	3.36	4.35	1.27	8.98	Not assessed
14	Azadirachta	Veppam	17	6	6	2.83	100.00	2.83	0.13	14.2	6.52	1.98	22.7	Not assessed

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	indica							333 3		9			9	
15	Delonix regia	Cemmayir-Konrai	1	1	6	0.17	16.67	1	0.21	0.84	1.09	3.34	5.27	Least Concern
16	Delonix elata	Perungondrai	1	1	6	0.17	16.67	1	0.17	0.84	1.09	2.62	4.54	Least Concern
17	Dalbergia sissoo	Shisham	1	1	6	0.17	16.67	1	0.15	0.84	1.09	2.29	4.21	Not assessed
18	Ficus benghalensis	Alai	2	2	6	0.33	33.33	1	0.08	1.68	2.17	1.19	5.04	Not assessed
19	Annona squamosa	Sitapalam	1	1	6	0.17	16.67	1	0.23	0.84	1.09	3.61	5.53	Not assessed
20	Pithecellobium dulce	Kodukapuli	1	1	6	0.17	16.67	1	0.14	0.84	1.09	2.18	4.11	Not assessed
21	Ficus religiosa	Arasa maram	3	3	6	0.50	50.00	1	0.09	2.52	3.26	1.35	7.13	Not assessed
22	Couroupita guianensis	Nagalingam	5	3	6	0.83	50.00	1.67	0.14	4.20	3.26	2.18	9.64	Not assessed
23	Musa paradise	Vaazhai	3	3	6	0.50	50.00	1	0.08	2.52	3.26	1.19	6.97	Not assessed
24	Prosopis juliflora	Vaelikaruvai	3	3	6	0.50	50.00	1	0.21	2.52	3.26	3.34	9.13	Not assessed
25	Mangifera indica	Mamaram	7	6	6	1.17	100.00	1.16 666 7	0.07	5.88	6.52	1.11	13.5 2	Data insufficient
26	Mimusops elengi	Magizham	2	2	6	0.33	33.33	1	0.18	1.68	2.17	2.85	6.70	Not assessed
27	Morinda pubescens	Nuna	6	6	6	1.00	100.00	1	0.24	5.04	6.52	3.74	15.3 1	Not assessed
28	Thespesia populnea	Poovarasam	3	3	6	0.50	50.00	1	0.15	2.52	3.26	2.39	8.18	Not assessed
29	Tectona grandis	Thekku	3	3	6	0.50	50.00	1	0.12	2.52	3.26	1.88	7.66	Not assessed
30	Tamarindus indica	Puli	10	6	6	1.67	100.00	1.66 666 7	0.20	8.40	6.52	3.09	18.0 2	Not assessed
31	Syzygium cumini	naval	5	1	6	0.83	16.67	5	0.11	4.20	1.09	1.79	7.07	Not assessed
32	Carica papaya	Papaya	3	3	6	0.50	50.00	1	0.09	2.52	3.26	1.43	7.21	Not assessed

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33	Ziziphus mauritiana	Elandai	1	1	6	0.17	16.67	1	0.28	0.84	1.09	4.45	6.38	Not assessed
34	Citrus medica	Elumichai	2	2	6	0.33	33.33	1	0.23	1.68	2.17	3.61	7.46	Not assessed
Total			119	92					6.35					

Table 3-14 Shrubs in the Core Zone

S. No.	Scientific Name	Local Name	Total No. of species	Total Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Relative Density	Relative Frequency	IUCN Conservation Status
1	Jatropagossypifolia	Kaatamanaku	28	17	24	1.17	0.71	1.65	14.43	17.17	Not Assessed
2	Lantana trifolia	Shrub verbana	10	3	24	0.42	0.13	3.33	5.15	3.03	Not Assessed
3	Robiniapseudoacacia	Black locust	17	5	24	0.71	0.21	3.4	8.76	5.05	Least Concern
4	Lantana camara	Unnichedi	9	6	24	0.38	0.25	1.5	4.64	6.06	Not Assessed
5	Calotropis gigantea	Erukam	14	12	24	0.58	0.50	1.17	7.22	12.12	Not Assessed
6	Stachytarpheaurticifolia	Rat tail	15	9	24	0.63	0.38	1.67	7.73	9.09	Not Assessed
7	Datura metal	Ummattangani	5	4	24	0.21	0.17	1.25	2.58	4.04	Not Assessed
8	Hibiscus rosa sinensis	Sembaruthi	3	2	24	0.13	0.08	1.5	1.55	2.02	Not Assessed
9	Tabernaemontanadivaricata	Crepe Jasmine	3	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
10	Chloromolaena odorata	Venapacha	9	6	24	0.38	0.25	1.5	4.64	6.06	Least

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											Concern
11	Euphorbia geniculata	Amman Pacharisi	3	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
12	Catharanthus roseus	Nithyakalyani	3	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
13	Woodfordiafruiticosa	Velakkai	3	3	24	0.13	0.13	1	1.55	3.03	Least Concern
14	Morindapubescens	Mannanunai	2	2	24	0.08	0.08	1	1.03	2.02	Not Assessed
15	Acalypha indica	Kuppaimeni	20	8	24	0.83	0.33	2.5	10.31	8.08	Not Assessed
16	Parthenium hysterophorous	Vishapoundu	50	13	24	2.08	0.54	3.85	25.77	13.13	Not Assessed

Table 3-15 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	Plumbago zeylanica	Chittiramoolam	3	3	30	0.10	0.10	1	1.19	3.23	Not assessed
2	Mimosa pudica	Thottacherungi	6	5	30	0.20	0.17	1.2	2.38	5.38	Least concern
3	Sida acuta	Malaidangi	10	3	30	0.33	0.10	3.33	3.97	3.23	Not assessed
4	Scrophularia nodosa	Sarakkothini	15	7	30	0.50	0.23	2.14	5.95	7.53	Not assessed
5	Helicteresisora	Valampuri	2	2	30	0.07	0.07	1	0.79	2.15	Not assessed
6	Cynodondactylon	Arugu	12	6	30	0.40	0.20	2	4.76	6.45	Not assessed
7	Sporobolus fertilis	Giant Parramatta Grass	9	4	30	0.30	0.13	2.25	3.57	4.30	Not assessed
8	Viburnum dentatum	Viburnum	5	5	30	0.17	0.17	1	1.98	5.38	Least concern
9	Heraculem spondylium	Hog Weed	20	10	30	0.67	0.33	2	7.94	10.75	Not assessed

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10	Laportea canadensis	Peruganchori	30	20	30	1.00	0.67	1.5	11.90	21.51	Not assessed
11	Euphorbia hirta	Amman Pacharisi	5	4	30	0.17	0.13	1.25	1.98	4.30	Not assessed
12	Tridax procumbens	Vettukaayathalai	5	4	30	0.17	0.13	1.25	1.98	4.30	Not assessed
13	Tephrosia purpurea	Kavali	20	4	30	0.67	0.13	5	7.94	4.30	Not assessed
14	Sida cordifolia	Maanikham	45	4	30	1.50	0.13	11.25	17.86	4.30	Not assessed
15	Tridax procumbens	Cuminipachai	15	4	30	0.50	0.13	3.75	5.95	4.30	Not assessed
16	Ruellia strepens	Grandinayagam	25	4	30	0.83	0.13	6.25	9.92	4.30	Not assessed
17	Senna occidentalis	Nattamsakarai	25	4	30	0.83	0.13	6.25	9.92	4.30	Not assessed

3.12.5. Calculation of species diversity by Shannon – wiener Index, Evenness and richness by Margalef:

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

Table 3-16 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

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

Table 3-17 Species Diversity

Scientific Name	Common Name	No. of Species	Pi	ln (Pi)	Pi x ln (Pi)
Ficus Carica	Athi Maram	2	0.017857	-4.02535	-0.07188
Cassia siamea	ManjalKonrai	2	0.017857	-4.02535	-0.07188
Acacia nilotica	Karuvelai	4	0.035714	-3.3322	-0.11901
Bambusa vulgaris	Moongil	4	0.035714	-3.3322	-0.11901
Anacardium occidentale	Cashew	2	0.017857	-4.02535	-0.07188
Alstonia scholaris	Elilaipalai	2	0.017857	-4.02535	-0.07188
Psidium guajava	Guava	3	0.026786	-3.61989	-0.09696
Aegle marmelos	Vilvam	1	0.008929	-4.7185	-0.04213
Causuarina equisetifolia	Savukku	2	0.017857	-4.02535	-0.07188
Albizia amara	Wunja	1	0.008929	-4.7185	-0.04213
Cocos nucifera	Thennai	15	0.133929	-2.01045	-0.26926
Artocarpus heterophyllus	Palaa	2	0.017857	-4.02535	-0.07188
Bombax ceiba	Sittan	4	0.035714	-3.3322	-0.11901
Azadirachta indica	Veppam	10	0.089286	-2.41591	-0.21571
Delonix regia	Cemmayir-Konrai	1	0.008929	-4.7185	-0.04213
Delonix elata	Perungondrai	1	0.008929	-4.7185	-0.04213
Dalbergia sissoo	Shisham	1	0.008929	-4.7185	-0.04213
Ficus benghalensis	Alai	2	0.017857	-4.02535	-0.07188
Annona squamosa	Sitapalam	1	0.008929	-4.7185	-0.04213
Pithecellobium dulce	Kodukapuli	1	0.008929	-4.7185	-0.04213
Ficus religiosa	Arasa maram	3	0.026786	-3.61989	-0.09696
Couroupita guianensis	Nagalingam	5	0.044643	-3.10906	-0.1388

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Musa paradise	Vaazhai	3	0.026786	-3.61989	-0.09696
Prosopis juliflora	Vaelikaruvai	3	0.026786	-3.61989	-0.09696
Mangifera indica	Mamaram	8	0.071429	-2.63906	-0.1885
Mimusops elengi	Magizham	2	0.017857	-4.02535	-0.07188
Morinda pubescens	Nuna	6	0.053571	-2.92674	-0.15679
Thespesia populnea	Poovarasam	3	0.026786	-3.61989	-0.09696
Tectona grandis	Thekku	3	0.026786	-3.61989	-0.09696
Tamarindus indica	Puli	8	0.071429	-2.63906	-0.1885
Syzygium cumini	naval	1	0.008929	-4.7185	-0.04213
Carica papaya	Papaya	3	0.026786	-3.61989	-0.09696
Ziziphus mauritiana	Elandai	1	0.008929	-4.7185	-0.04213
Citrus medica	Elumichai	2	0.017857	-4.02535	-0.07188
Total		112			-3.22

H (Shannon Diversity Index) =1.76

Shrubs

Scientific Name	Common Name	No. of Species	Pi	ln (Pi)	Pi x ln (Pi)
Jatropagossypifolia	Kaatamanaku	28	0.14433	-1.93565	-0.27937
Lantana trifolia	Shrub verbana	10	0.051546	-2.96527	-0.15285
Robiniapseudoacacia	Black locust	17	0.087629	-2.43464	-0.21335
Lantana camara	Unnichi	9	0.046392	-3.07063	-0.14245
Calotropis gigantea	Erukam	14	0.072165	-2.6288	-0.18971
Stachytarphaeurticifolia	Rat tail	15	0.07732	-2.55981	-0.19792
Datura metal	Ummattangani	5	0.025773	-3.65842	-0.09429
Hibiscus rosa sinensis	Sembaruthi	3	0.015464	-4.16925	-0.06447
Tabernaemontanadivaricata	Crepe Jasmine	3	0.015464	-4.16925	-0.06447
Chloromolaena odorata	Venapacha	9	0.046392	-3.07063	-0.14245
Euphorbia geniculata	Amman Pacharisi	3	0.015464	-4.16925	-0.06447
Catharanthus roseus	Nithyakalyani	3	0.015464	-4.16925	-0.06447
Woodfordiafruticosa	Velakkai	3	0.015464	-4.16925	-0.06447
Morindapubescens	Mannanunai	2	0.010309	-4.57471	-0.04716
Acalypha indica	Kuppaimeni	20	0.103093	-2.27213	-0.23424
Parthenium hysterophorous	Vishapoondur	50	0.257732	-1.35584	-0.34944
		194			-2.3656

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H (Shannon Diversity Index) =1.97

Herbs

Scientific Name	Common Name	No. of Species	Pi	ln (Pi)	Pi x ln (Pi)
Plumbago zeylanica	Chittiramoolam	3	0.011905	-4.43082	-0.05275
Mimosa pudica	Thottacherungi	6	0.02381	-3.73767	-0.08899
Sida acuta	Malaidangi	10	0.039683	-3.22684	-0.12805
Scrophularia nodosa	Sarakkothini	15	0.059524	-2.82138	-0.16794
Helicteresisora	Valampuri	2	0.007937	-4.83628	-0.03838
Cynodondactylon	Arugu	12	0.047619	-3.04452	-0.14498
Sporobolus fertilis	Giant Parramatta Grass	9	0.035714	-3.3322	-0.11901
Viburnum dentatum	Viburnum	5	0.019841	-3.91999	-0.07778
Heraculem spondylium	Hog Weed	20	0.079365	-2.5337	-0.20109
Laportea canadensis	Peruganchori	30	0.119048	-2.12823	-0.25336
Euphorbia hirta	Amman Pacharisi	5	0.019841	-3.91999	-0.07778
Tridax procumbens	Vettukaayathalai	5	0.019841	-3.91999	-0.07778
Tephrosia purpurea	Kavali	20	0.079365	-2.5337	-0.20109
Sida cordifolia	Maanikham	45	0.178571	-1.72277	-0.30764
Tridax procumbens	Cuminipachai	15	0.059524	-2.82138	-0.16794
Ruellia strepens	Grandinayagam	25	0.099206	-2.31055	-0.22922
Senna occidentalis	Nattamsakarai	25	0.099206	-2.31055	-0.22922
		252			-2.56298

H (Shannon Diversity Index) =2.39

Table 3-18 Evenness

Details	H	Hmax	Evenness	Species Richness (Margalef)
Trees	3.22	3.5	0.9	7
Shrubs	2.36	2.77	0.85	2.84
Herbs	2.56	2.83	0.9	2.89

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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 as a whole. Species richness is high for herb community when compared with tree and shrubs.

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3.12.7. Frequency Pattern

To understand the frequency pattern, the observed frequency is compared with the Raunkiaer's frequency. Any deviation from Raunkiaer's frequency implies disturbed community.

Classes of species in a community and normal value of class according to Raunkiaer

Table 3-19 Frequency Pattern

Class	Frequency (%)	Normal Value in the class
A	1-20	53
B	21-40	14
C	41-60	9
D	61-80	8
E	81-100	16

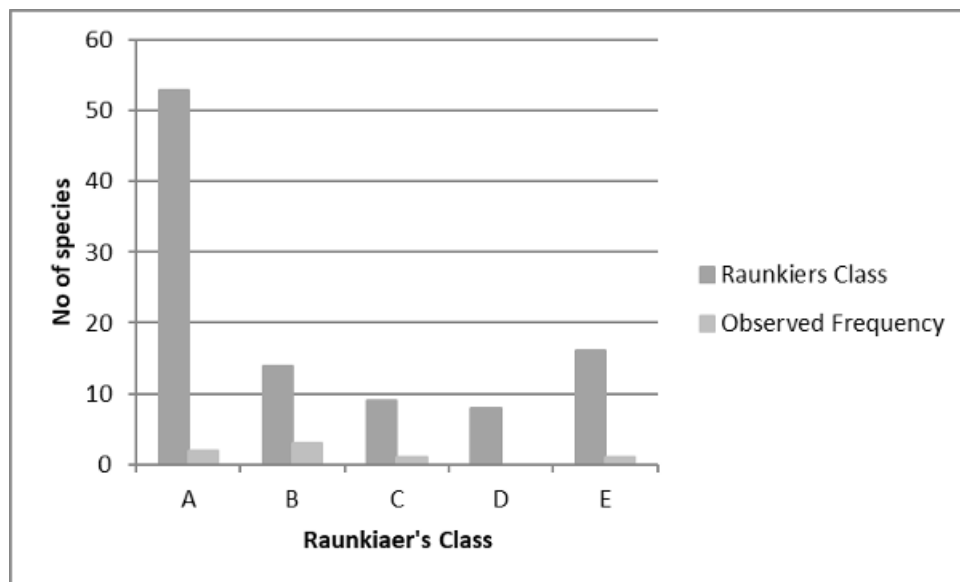
Where $A > B > C > = < D < E$

Table 3-20 Raunkiaer's class for the observed species

S. No.	Scientific Name	Local Name	Frequency (%)	Class as per Raunkiaer's Law
1.	Ficus Carica	Athi Maram	33.33	B
2.	Cassia siamea	ManjalKonrai	33.33	B
3.	Acacia nilotica	Karuvelai	66.67	D
4.	Bambusa vulgaris	Moongil	66.67	D
5.	Anacardium occidentale	Cashew	33.33	B
6.	Alstonia scholaris	Elilaipalai	33.33	B
7.	Psidium guajava	Guava	50.00	C
8.	Aegle marmelos	Vilvam	16.67	A
9.	Causuarina equisetifolia	Savukku	33.33	B
10.	Albizia amara	Wunja	16.67	A
11.	Cocos nucifera	Thennai	100	E
12.	Artocarpus heterophyllus	Palaa	33.33	B
13.	Bombax ceiba	Sittan	66.67	D
14.	Azadirachta indica	Veppam	100	E
15.	Delonix regia	Cemmayir-Konrai	16.67	A

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16.	Delonix elata	Perungondrai	16.67	A
17.	Dalbergia sissoo	Shisham	16.67	A
18.	Ficus benghalensis	Alai	33.33	B
19.	Annona squamosa	Sitapalam	16.67	A
20.	Pithecellobium dulce	Kodukapuli	16.67	A
21.	Ficus religiosa	Arasa maram	50.00	C
22.	Couroupita guianensis	Nagalingam	50.00	C
23.	Musa paradise	Vaazhai	50.00	C
24.	Prosopis juliflora	Vaelikaruvai	50.00	C
25.	Mangifera indica	Mamaram	100	E
26.	Mimusops elengi	Magizham	33.33	B
27.	Morinda pubescens	Nuna	100	E
28.	Thespesia populnea	Poovarasam	50.00	C
29.	Tectona grandis	Thekku	50.00	C
30.	Tamarindus indica	Puli	100	E
31.	Syzygium cumini	naval	16.67	A
32.	Carica papaya	Papaya	50.00	C
33.	Ziziphus mauritiana	Elandai	16.67	A
34.	Citrus medica	Elumichai	33.33	B



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Figure 3.9 Raunkiaer’s class for the observed species

Interpretation: Interpretation: The observed frequency is AC>D<E, which does not follow Raunkiaer’s Distribution Frequency and hence the ecology is disturbed.

3.12.8. Floral study in the Buffer Zone:

Economically important Flora of the study area

Agricultural crops: Paddy, Maize are the main crop grown. Different fruits like Banana, papaya, mangoes, guava and vegetables like brinjal, drumsticks, onion, Coriander also grown 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.

3.12.9. 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.
- Road Side 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).
- Visual Encounter Method: A visual encounter survey (VES) is one in which field personnel walk through an area or habitat for a prescribed time period systematically searching for animals.

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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:

Visual encounter methodology is adopted without any time constraint

Tools Used:

Torch for carrying out survey during night time, Binoculars, Camera, GPS, Notebook, Pen

Study in the core zone:

Visual Encounter Methodology was adopted for the study within 2 km radius and the following species were observed

Study in the core Zone

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 and the frequency of the monitoring is once in a month during the study period of May – July 2022. From the primary survey, a total of 26 species of avifauna were identified and recorded in the study area. The diversity of avifauna from this region was found to be quite high and encouraging.

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

Table 3-21 List of fauna species

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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 Man	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
Reptiles & Amphibians			
Chameleon zeylanicum	Chameleon	IV	Not listed
Calotes versicolor	Common garden lizard	II	Not listed
Bungarus caeruleus	Common krait	IV	Not listed
Ophisops leschenaultia	Snake eyed lizard	--	Not listed
Bufo melanostictus	Toad	IV	Least concern
Ptyas mucosa	Rat snakes	IV	Least concern
Hemidactylus sp.	House lizard	--	Not listed
Butterflies			
Danaus chrysippus	Plain Tiger	--	Not listed
Papilio demoleus	Common lime	--	Not listed
Euploea core	Common crow	--	Least concern
Danaus genutia	Common tiger	--	Not listed
Eurema brigitta	Small grass yellow	--	Least concern

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Table 3-22 List of Bird Species observed during the survey

Scientific Name	Common Name	Schedule of wild life protection act	IUCN conservati on status	Timing	Observed Month
Bubulcus ibis	Cattle Egret	IV	Least Concern	Morning	August
Vanellus indicus	Red-Wattled Lapwing	IV	Least Concern	Morning	September
Columba livia	Blue Rock Pigeon	-		Morning	July
Microfus affinis	House swift	-	Common	Morning	September
Coracias benghalensis	Indian Roller	IV	Least Concern	Evening	July
Merops orinetali	Common bee eater	IV	Least Concern	Evening	July
Psittacula krameri	Rose Ringed Parakeet	IV	Least Concern	Seen in morning & evening multiple times	3 months
Eudynamis scolopaceus	Koel	IV	Common, Resident	Seen in morning & evening multiple times	3 months
Aredeola grayii	Indian Pond Heron	IV	Least Concern	Evening	August
Acridotheres ginginianus	Bank Myna	IV	Least Concern	Seen in morning & evening multiple times	3 months
Astur badius	Shikra	IV	Resident	Morning	August
Sturnus pagodarum	Brahminy Starling	IV	Least Concern	Evening	August
Pavo cristatus	Peafowl	I	Least Concern	Observed during evening time	3 months
Corvus splendens	Common Crow	V	Least Concern	Seen in morning & evening	3 months

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				multiple times	
Passer domesticus	House Sparrow	IV	Common, Resident	Seen in morning & evening multiple times	3 months
Pycnonotus cafer	Red-Vented Bulbul	IV	Common	Evening	August
Egretta garzetta	Little Egret	IV	Common	Evening	September
Corvus corax	Common Raven	V	Least Concern	Seen in morning & evening multiple times	3 months
Acridotheres tristis	Common myna	IV	Common	Seen in the noon and evening	3 months
Alcedo atthis	Common kingfisher	IV	Common	Morning	September
Athene brama	Spotted Owlet	IV	Common, Resident	Spotted during night	September
Bubo bubo	Indian great horned owl	IV	Common	Spotted during night	September
Caprimulgus asiaticus	Common Indian jar	IV	Common	Evening	September
Cinnyris asiatica	Purple sunbird	IV	Least Concern	Morning	July
Columbus livibus	Pigeon	IV	Common	Seen in morning & evening multiple times	3 months
Copsychus saularis	Magpie robin	IV	Common	Evening	July
Cuculus varius	Common-Hawk Cuckoo	IV	Common, Resident	Evening	July
Cypsiurus parvus	Palm Swift	IV	Common, Resident	Evening	July
Dendrocitta vagabunda	Indian Tree pie	IV	Common, Resident	Morning	July
Dicrurus longicaudatus	Grey drongo	IV	Resident	Morning	July

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Dicrurus macrocerus	Black Drongo	IV	Common, Resident	Morning	July
Dissemurus paradiseus	Rackete tailed drongo	IV	Resident	Morning	July
Francolinus pondicerianus	Grey Partridge	IV	Common, Resident	Evening	September
Galerida malabarica	Malabar crested lark	IV	Resident	Evening	September
Gallus gallus	Red jungle fowl	IV	Resident	Evening	July
Haliastur Indus	Brahmny kite	IV	Common	Evening	September
Hierococys varius	Common hawk cuckoo	IV	Common	Evening	July
Lobvanella indicus	Redwattled lapwing	IV	Resident	Morning	July, August
Lonchura malacca	Blackheade d Munia	IV	Common, Resident	Morning	July
Megalaima merulinus	Indian cuckoo	IV	Common	Evening	July, August
Milyus migrans	Common kite	IV	Common	Evening	July
Mirafra erythroptera	Red winged Bushlark	IV	Common, Resident	Morning	August
Phalacrocorax carbo	Cormorant	IV	Common, Resident	Morning	September
Quills contronix	Grey quail	IV	Common	Seen in morning & evening multiple times	3 months
Saxicoloides fulicata	Indian Robin	IV	Common, Resident	Morning	September
Tchitrea paradisi	Paradise Flycatcher	IV	Common	Morning	July, August
Temenuchus pagodarum	Brahmny myna	IV	Common	Seen in morning & evening multiple times	3 months
Tephrodornis pondicerianus	Common wood shrike	IV	Common	Evening	July

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Uroloncha striata	Spotted munia	IV	Common	Morning	August
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3.13. Demography and Socio Economics

The demography survey study is done within 10km from the project site. The population, Household, Sex ratio, Literacy rate, SC, ST details for all the villages in the study area is listed below:

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Table 3-23 Demographic study around 10km from the project site

Villages	Household	Population	Sex Ratio		Literacy Rate		SC	ST
			Male	Female	Male	Female		
Achettipalli	697	3066	1562	1504	1056	805	910	0
Gopanapalli	342	1388	716	672	478	358	276	2
Kalugundapalli	925	3640	1890	1750	1302	992	378	0
Madagondapalli	1148	4979	2414	2565	1696	1628	498	0
Saragapalli	709	2862	1451	1411	964	748	778	0
Anniyalam	614	2558	1308	1250	890	671	823	0
Bairamangalam	1207	4932	2569	2363	1940	1436	1213	11
Bodichipalli	1176	4982	2549	2433	1638	1212	432	0
Pachapanatti	863	3895	1959	1936	1183	915	380	231
Periamadakondapalli	416	1680	866	814	594	429	252	0
Ulimangalam	341	1779	954	825	772	382	331	0
Bithireddi	693	3076	1585	1491	914	660	419	96
Bevunutham	823	3768	1985	1783	1157	778	300	3

Source: Census of India, 2011

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Since the data is taken from Census Survey of India, 2011, population projection is found to increase by 8.5% since last survey based on the data released by *World Bank, United States Census Bureau*

3.14. Traffic Impact Assessment

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



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Figure 3.10: Site Connectivity

Table 3-24: No. of Vehicles per Day

S. No	Vehicles Distribution	Number of Vehicles Distribution/Day	Passenger Car Unit (PCU)	Total Number of Vehicle in PCU
		SH-17A	-	SH-17A
1	Cars	815	1	815
2	Buses	327	3	981
3	Trucks	338	3	1014
4	Two wheelers	969	0.5	484.5
5	Three wheelers	425	1.5	637.5
	Total	2945	-	3932

Table 3-25: Existing Traffic Scenario and LOS

Road	V (Volume in PCU/hr)	C (Capacity in PCU/hr)	Existing V/C Ratio	LOS
SH17A	3932/24=164	431	0.38	B

Note: The existing level may be “Very Good” for SH17A.

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

Krishnagiri District

Krishnagiri district is bounded by Vellore and Thiruvannamalai districts in the East, Karnataka state in the west, State of Andhra Pradesh in the North Dharmapuri District in

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the south. Its area is 5143 Sq. Kms. This district is elevated from 300m to 1400m above the mean sea level. It is located between 11° 12'N to 12° 49'N Latitude, 77° 27'E to 78° 38'E Longitude.

Eastern part of the district experiences hot climate and Western part has a contrasting cold climate. The average rainfall is 830 mm per annum. March – June is summer season. July – November is Rainy Season and between December – February winter prevails. Three languages namely Tamil, Telugu and Kannada are predominantly spoken in this district. Major religions are Hindu, Islam and Christianity. This district stands as an ideal exhibit of National integration and religious harmony. The society exhibit the confluence of different languages and religion

Occupation:

Krishnagiri District is more suitable for cultivation of Horticulture crops. Other Plantation crops, medicinal plants, Fruits, Vegetables, Spices, and flowers are grown well by way of its moderate climate, high altitude and fertility of the soil. The important crops of Krishnagiri District are Paddy, Maize, Ragi, Banana, Sugarcane, Cotton, Tamarind, Coconut, Mango, Groundnut, Vegetables and Flowers.

Industrial details in the district is listed below:

Industries in the District : Premier Spinning Mill, TVS Motor Company Ltd., Exide Ltd., AV. Tech. Ltd., Titan Watches, Ashok Leyland Carborandim, Universal Ltd.,

Name of the industrial Park : Krishnagiri and Hosur

The major occupation during field survey is observed to be mining, Agriculture and in industries.

Source: District Handbook – 2018-2019

Socio-economic survey methodology

Purposive sampling methods were used for selecting respondents (male and female) for household survey. For official information of village, Gram Panchyat member has been chosen. Structured questionnaire was used for survey. For group discussion, Panchyat

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bhavan, Aanganwadi bhavan, community halls were used. Out of total 15 villages, 5 villages (25%) were surveyed for which selection criteria is based on proximity to the project site and area with dense and scarce populations were chosen.

The villages chosen for primary study area

- Bairamangalam
- Bodichipalli
- Pachapanatti
- Periamadakondapalli
- Achettipalli

10 households were surveyed in each village and the collective response are summarized below

3.13.1. Salient features in the study area:

House pattern: It is notable that nearly 30% of the houses were kachcha at survey area.

Employment: Main occupation of the people in the study area was labour work and agriculture and some other business. The labours were getting daily wage in the range of Rs.200-450, depending on type of work involved.

Fuel: Most of the villagers use fire woods and LPG for cooking purpose

Main Crops: The principal crops grown in agricultural farm were Cashew, Mango, Banana, Tapioca, Tomato, Brinjal, Bhendi, Onion, Turmeric, Chillies

Migration: During survey, it was found that local population were migrating for employment purpose. Since due to the presence of various industrial units, migration from other places were also noted.

Sanitation: More than 90% of the households were having toilet facilities in their houses. Drainage system was maintained in the study area.

Drinking Water Facilities: Ground water is the major source of drinking water in the villages wherein hand pumps, tap water and dug wells are installed.

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Education Facilities: Most of the villages had education facilities in the form of Anganwadi and Primary Schools. Higher education facilities were available in the range of 5-10 km. Colleges and other diploma courses were available at district place.

Transportation Facility: For transportation purpose Auto, Public and Private Bus services were available. Transportation facilities were frequently available in the study area and connecting major cities. Private vehicles like Bicycles & Motor Cycles were mostly used by villagers for transportation purpose

Awareness and Opinion about the project

- The respondents all the villages are aware about this project.
- Since most of the respondents were about the project, some of the people welcomed this project for the employment opportunity but they need commitment that, only local people should be hired for the work. Some fear that water level in the region will decrease due to mine and associated activities.
- The skill based employment should be given to the local people.
- Road accident may increase due to Mine transport and associated activities.

Expectation from the project

- Local employment
- Plantation at nearby areas and ensure their survival rate.
- Increase educational facility in Govt. School and promote vocational & higher educational institute.

Other Infrastructural Facilities Available in the District

(Source: District Handbook – 2018-2019)

Drinking Water facility: The project falls under Krishnagiri Block

Source of water in Krishnagiri Block: Dug well, Filter point & Tube well

River: The main rivers that flow across the district are Kaveri and South Pennar Kaveri enters the district from South West in Denkanikottai taluk and exists in South West direction. It forms a waterfalls at Hokenakkal and joins Mettur Dam. South Pennar

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originates in Nandidurg of Karnataka and flows through Hosur, Krishnagiri and Uthangari Taluks. Vanniyar and Markanda rivers join this South Pennar

The communication details of the district is furnished below

Telephone:

- No. of Telephones in use : 31070
- No.of Telephones Exchanges : 64
- No.of Public calls with STD /ISD : 351

Post Office: . Head post office : 1

- a. Sub Post Office : 38
- b. Branch Post Offices : 263

Transport Facility of the District:

Railway Stations: 7

Banking Sector: 353 Cooperative Societies & Banks are available in the District.

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4. Anticipated Environmental Impacts & Mitigation Measures

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

4.1. Introduction

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

Environmental Impacts can be group into Primary impacts & Secondary Impacts.

Primary Impacts: These impacts are directly attributed by the project.

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

Assessment of impacts is done for the following Environmental Parameters:

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

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4.2. LAND ENVIRONMENT:

Aspect	Impact	Mitigation Measures		
<i>Mining of Rough stone</i>	<p>The proposed 2.50.0 Ha mines rough stone of 757730m³ respectively. The quarry operation is proposed to carry out with conventional open cast mechanized mining with 7.0-meter vertical bench and bench width of 5.0 meter. At the end of 5 years, mining lease area will be converted into ultimate pit of</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;">195.0 m(L)X 139.0 m(W) X 50.0m(D)</td> </tr> </table> <p>This may lead to soil erosion, degradation and resource loss.</p>	ULTIMATE PIT DIMENSION	195.0 m(L)X 139.0 m(W) X 50.0m(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 1100 Nos of local tree species (Neem, Magizham, Tamarind, Elandhai and Vilvam) every year 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 topsoil of the lease area is 1m³.</p>
ULTIMATE PIT DIMENSION				
195.0 m(L)X 139.0 m(W) X 50.0m(D)				

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	<p>The main impact of open cast mining on land-use is land degradation. The land is bound to be excavated for mining of Rough Stone Quarry.</p> <p>Impact on soil of the study area will be minimal as there are no wastewater generated, heavy metal infusion, stack emissions.</p> <p>Impact due to transformation of terrain characteristics over the large area results in soil degradation.</p>	<p>Topsoil formation will be backfilled in the odai portion of the lease area. And Partly used for road low lying area and Plantation Purposes.</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>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>
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	<p>Solid waste will be generated from the mining activity as there will be refuse also generation of domestic waste. If it not properly managed, may cause odor and health problem to the workers.</p>	<p>The 95% recovery is achieved by extracting the entire mineable reserve. Hence there will be no refuse generation due to the mining activity. Apart from that, a very meagre quantity of domestic waste will be generated in the project, which will be handed over to the local body on daily basis.</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>	The mining in the area may cause ground water contamination due to intersection of the water table and mine runoff.	The water table will not be intersected during mining, as the ultimate depth is limited upto 50 meter below the ground level, whereas the ground water table is at 102m 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

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	<p>The ground water depletion may occur due to mining activity</p>	<p>be used for carrying out mining activity.</p> <p>The ground water table is at a depth of 102m 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>Chemicals consisting of nitrate used for blasting may pollute the surface run off.</p>	<p>Further, the run-off water will be stored in sumps and after proper treatment; water will be used in the mining operation for dust suppression.</p>
	<p>Improper management of Domestic</p>	<p>Provision of urinals/Latrines along with</p>

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	wastewater in the Mine lease may create unhygienic conditions in the site thereby causing health impacts to the labors	septic tank followed by soak pit arrangement will be provided in the Mine Lease area for the proper management of wastewater
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4.4. AIR ENVIRONMENT:

Aspect	Impact	Mitigation Measures
<i>Drilling, Blasting, Loading and unloading, Transportation of the excavated mineral.</i>	<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 (0.90 m³ bucket capacity</p>	<p><i>Mitigation Measures during Operation Phase</i></p> <p>It is proposed to plant 1100 Nos of local species along the haul roads, outer periphery within the lease area to prevent the impact of dust in consultation with Forest department for the plantation of trees (Neem, Magizham, Tamarind, Elandhai and Vilvam) in two tier to combat air pollution and with herbs (Nerium) in between the tree species.</p> <p>Planning transportation routes of the mined out mineral, so as to reach the nearest paved roads (an approach road) by</p>

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	<p>(with rock breaker attachment) will be used for excavation of the mineral which contributes to the generation of fugitive dust. In addition, blasting will be done using explosives leading to the generation of dust.</p> <p><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 	<p>shortest route connecting to SH 17A.</p> <p>Alternatively, gravelled road may be constructed between mine lease area and nearest major district road connectivity. The speed of trucks plying on the haul road will be limited to 20km/hr to avoid generation of dust.</p> <p>The trucks will be covered by tarpaulin.</p> <p>Overloading will be avoided.</p> <p>Personal Protective Equipments (PPEs) like eye goggles, dust mask, leather gloves, safety shoes & boots will be provided to the workers engaged at dust generation points like excavation and loading points.</p> <p>0.5 kLD of water will be proposed for sprinkling on unpaved roads to avoid dust</p>
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	workers as well as nearby villagers. <u>Effect on Plants</u> <ul style="list-style-type: none"> Stomatal index may be minimized due to dust deposit on leaf. 	generation during transportation.
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4.5. NOISE ENVIRONMENT:

Aspect	Impact	Mitigation Measures
<i>Drilling, Blasting, Loading and unloading, Transportation of the excavated mineral.</i>	Usage of Equipments (Excavator – 82 dBA, Tipper -, Jack Hammer), Machinery and trucks used for transportation will generate noise. Noise from the machinery can cause hypertension, high stress level, hearing loss, sleep disturbance etc due to prolonged exposure.	<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

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	<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>	<p>(20km/hr) to prevent undue noise from empty vehicles.</p> <p>The noise generated by the machinery will be reduced by proper lubrication of the machinery and other equipments.</p> <ul style="list-style-type: none"> • It is proposed to plant 1250 Nos. of local species (Neem, Mandharai, Athi, Ashoka and Villam) to reduce the impact of noise in the study area. The development of green belts around the periphery of the mine will be implemented to attenuate noise. • The trucks will be connected to SH 17A • Health check-up camps will be organized once in six months. • 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 barren land hence no site clearance is required. Only few shrubs and herbs like parthenium sp., prosopis juliflora were present.
Planting of trees	Development of afforestation in the mine lease area will have a positive impact as the land was initially a barren.	7.5m safety distance will be provided all along the boundary of the mine lease area. Around 0.60.7 Ha of land is utilized for greenbelt development (1100 Nos – 5 years) This will attract avifauna thus enhancing the existing ecological environment.

4.7. SOCIO ECONOMIC ENVIRONMENT:

Aspect	Impact	Mitigation Measures
Proposed implementation of Mining activity	Land acquisition for the implementation of the project may result in loss of assets, which in return will make the PAP to shift, losing their normal routine and livelihood	The proposed project is a Government Poromboke Land and the land is vacant where there are no human settlement within 500m radius. Hence the project does not involve Rehabilitation and

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		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 Panchakshipuram, which is 1.68 km NW away from the project site.
Grazing and Rearing activities in the nearby villages	The Grazing and rearing of local animals like Sheep, Goat and cows is observed in the nearby villages, which may be affected due to the project as the 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 and gravel 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	As a part of CER, 2% of the project cost

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	resource augmentation & Community resource development	will be allocated. The detailed agenda, which is to be executed, has been framed. The salient features of the programme are as follows: Developing the library, sports/drinking water facility in nearby Government school.
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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 labor
2.	Screening of Labours	Labours will be checked for health condition before employing them in mining activity	All the labours will be checked and screened for health before employing them After employing them, periodical medical check-ups will be held once in every six months

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5. ANALYSIS OF ALTERNATIVES

5.1. General

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

ToR issued by the SEIAA-TN vide Letter No. SEIAA-TN/F. No. 9261/ ToR-1204/2022 Dated: 14.07.2022. The study for alternative analysis involves in-depth examination of site and technology.

5.2. Analysis for Alternative Sites and Mining Technology

5.2.1. 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 principle by the State Government, there is no case for studying and exploring any other site as an alternative.

5.2.2. Alternative Technology

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

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Table 5-1 Alternative for Technology and other Parameters

Sr. No.	Particular	Alternative Option 1	Alternative Option 2	Remarks
1.	Technology	Opencast semi mechanized mining	Opencast mechanized mining	Opencast mechanized mining is preferred
2.	Employment	Local employment.	Outsource employment	Local employment is preferred Benefits: Provides employment to local people along with financial benefits No residential building/ housing
3.	Labour transportation	Public transport	Private transport	Local labors will be deployed from Panchakshipuram, Machinayakanapalli, Nagappan Agraharam so they will either reach mine site by bicycle or by foot. Benefits: Cost of transportation of labors will be negligible
4.	Material transportation	Public transport	Private transport	Material will be transported through trucks/trolleys on the contract basis Benefits: It will give indirect employment.
5.	Water	Tanker supplier	Ground water	Tanker supply will be preferred. Water will be sourced from Koottur Panchakshipuram Village, 1.5 km in West.

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6. Environmental Monitoring Plan

6.1. Introduction

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

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

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

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

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

Table 6-1 Environmental Monitoring Programme

Parameters	Sampling	Frequency	Location
Air environment – Pollutants PM 10 PM 2.5 SO ₂	5 locations	24 hourly twice a week 4 hourly. Twice a week, One non monsoon season 8 hourly, twice a week	Project Site, Vanamangalam Village, Doddabelur Govt. School, Nagappan Agraharam, Holiday valley resort

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NO _x		24 hourly, twice a week	
Noise	5 locations	24 hourly Once in 5 locations	Project Site, Vanamangalam Village, Doddabelur Govt. School, Nagappan Agraharam, Holiday valley resort
Water (Ground water) <ul style="list-style-type: none"> • pH • Temperature • Turbidity • Magnesium Hardness • Total Alkalinity • Chloride • Sulphate • Fluoride • Nitrate • Sodium • Potassium • Salinity • Total nitrogen • Total Coliforms • Fecal Coliforms 	5 locations	Once in 5 locations	Project Site, Vanamangalam Village, Doddabelur Govt. School, Nagappan Agraharam, Holiday valley resort
Water (surface water) <ul style="list-style-type: none"> • pH • Temperature • Turbidity • Magnesium Hardness • Total Alkalinity • Chloride • Sulphate • Fluoride 	Sample from nearby lakes/river	One time Sampling	Devaganapalli Lake

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<ul style="list-style-type: none"> • Nitrate • Sodium • Potassium • Salinity • Total nitrogen • Total Coliforms • Fecal Coliforms 			
Soil (Organic matter, Texture, pH, Electrical Conductivity, Permeability, Water holding capacity, Porosity)	5 locations	Once in 5 locations	Project Site, Vanamangalam Village, Doddabelur Govt. School, Nagappan Agraharam, Holiday valley resort
Ecology and biodiversity Study	Study area covering 5 km radius	One time Sampling	
Socio- Economic study (Population, Literacy Level, employment, Infrastructure like school, hospitals & commercial establishments)	Villages around 5 km radius	One time Sampling	

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Table 6-2: Monitoring Schedule during Mining

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

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7. Additional Studies

7.1. General

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

7.2. Public Hearing:

As the proposed mining project falls under 1(a), Category B1 – Cluster Mining.

Existing Quarries – 1. Tvl.M.R.Enterprises – 3.00.0 Ha

2. Thiru. P.Kalaikovan – 3.25.0 Ha

3. Thiru.K.Gopinath – 2.50.0 Ha

4. Thiru B.Arun kumar-3.00.0 Ha

Abandoned / Old Quarries – 1.R.Ramareddy – 2.15.5 Ha

2.Tvl.Veera badraswamy – 1.45.5 Ha

3.B.Gowdappa- 5.00.0 Ha

Proposed Quarries – 1. Tvl.S.S.v.Blue Metals – 2.50.0 Ha

2. Thiru S.G.Anandha Kumar- 3.96.5 Ha

Other Proposed / Applied Quarries – Nil.

The Total extent of the Existing / Proposed quarries are 26.82.5 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.

7.3. 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 concerned. The industry has to identify the hazards, assess the associated risks and bring the risks to tolerable level on a continuous basis.

Mining is a hazardous operation and consists of considerable environmental, health and safety risk to miners. Safety risk assessment is the systematic identification of potential hazards in workplace as a first step to controlling the possible risk involved. Unsafe conditions in mines lead

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to a number of accidents and cause loss and injury to human lives, damage to property, interruption in production etc.

Risk Assessment is a systematic method of identifying and analyzing the hazards associated with an activity and establishing a level of risk for each hazard.

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. Because of the existing hazards of mining as an activity and the complexity of mining machinery and equipment and the associated systems, procedures and methods, it is not possible to be naturally safe. Regardless of how well the machinery or methods are designed, there will always be potential for serious accidents. It is not possible for an external agency to ensure the safety of an organization such as a mining company nor of the machinery or methods it uses.

Risk Assessment tools are used to help to prevent major hazards in mining industry, e.g., fire, explosion, wind-blast, outbursts, spontaneous combustion, roof instability, chemical and hazardous substances, etc., from injuring miners. The structured process associated with risk assessment helps to characterize the major hazards and evaluate engineering, management and work process factors that impact how a mine mitigates its highest risk. The degree of success is influenced by the existing risk management culture at the mining operation, identification of risk, the design of the risk assessment, the risk management, the character of the risk assessment process, the extent of the existing controls, and the quality of the new ideas.

7.3.1. Need for Risk Assessment

- Identify hazards—something with the potential to cause harm,
- Assess the likelihood, or probability, of harm arising from the hazard,
- Assess the severity of harm resulting from realization of the hazard,
- Combine assessments of likelihood and severity to produce an assessment of risk and
- Use the assessment of risk as an aid to decision making.

7.3.2. Objectives of Risk Assessment

- Identifying hazardous activities
- Assessment of risk level and severity in different operations

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- Identification of control measures
- Setting monitoring process
- Reduce the impact of mishaps of all kinds
- Reduce the inherent potential for major accidents.

7.4. Identification of Hazard

7.4.3. 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.

7.4.4. Drilling and Blasting

Drilling and Blasting parameters are as follows

Diameter of the hole		2-36 mm
Spacing		60 Cms
Depth		to 1.5m
Charge / Hole		D.Cord with water or 70 gms 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		40 gms of 25mm dia cartridge
Quantity of rock broken per d		5.15 m ³ .

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.	Detonators	Class - 3	Ordinary and elec (OD & ED)	6.5 x 32
3.	Safety fuse	Class - 6	Blue sump fuse coils of 10mts each	

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

1. The minimum recommended delay time of 8m/s 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.

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

a. Mitigation measures to minimize the risk

- At the time of loading no person will be allowed within the swing radius of the excavation.
- The dumpers/ trucks will stand near the loading equipment and fully braked when the muck is filled in it.
- The truck would be brought to a lower level so that the loading operation suits to the ergonomic condition of the workers.
- The workers will be provided with helmets, gloves and safety boots; loading and unloading operations will be carried out only during daylight
- All the mining machineries will be regularly maintained and checked such as brakes, lights and horns to keep in the efficient working order.
- The Applicant stores the explosives as per the Indian Explosives Act, 1958.
- The explosives to be used in mines being a small quantity, the District collector may be approached to keep the stocks not exceeding 5kgs at time or any other quantity permitted by the concerned authorities in a portable magazine of S & B types.
- An authorized explosive agency is engaged to carry out blasting.

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- The blasting time in a day is between 5 PM to 6 PM.
- First Aid Box is kept ready at all the time.
- Necessary precautionary announcement is being carried out before the blasting operation.

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 (14 Nos.) and regular inspection for their use.
- In case of eventuality, first aid will be given by the senior safety officer 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 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 willfully do anything likely to endanger life or limb in the mine, or negligently or willfully 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 labours only;
- Regular maintenance and testing of all mining equipment as per manufacturer’s guidelines;
- Suppression of dust by sprinkling water on the haulage roads;

7.4.5. Safety Team:

The effective implementation of compliance of Safety Rules/ Statutory Provisions will be ensured. The safety officer will be engaged, meeting the requirement of Mines Act and their duties and responsibilities. The safety officer will be responsible for identification of the hazardous conditions and unsafe acts of workers and advice on corrective actions, conduct safety audit,

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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.

7.4.6. 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 centre will be used for the mines around the 500m radius.

7.5. 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.

7.5.1 Emergency Management Plan For Proposed Mines On Site- Offsite Emergency Preparedness Plan:

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

Major objectives of this onsite – offsite emergency plans are:

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

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

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

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

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

7.5.2. Emergency Plan:

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

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7.5.3. 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.

7.6. 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.

7.7. Resettlement and Rehabilitation:

The proposed Mine lease area is a Government poromboke 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.

8.2. Physical Benefits

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

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

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

c. Enhancement of Green Cover & Green Belt Development: As a part of reclamation plan, native tree species will be planted along the safety boundary (0.39.0 Ha) 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 at the rate of 250 trees per year along with some fruit bearing and medicinal trees during the mining plan period.

8.3. Social Benefits

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

As a part of CER, 2% of the project cost will be allocated. The detailed agenda, which is to be executed has been framed. The salient features of the programme are as follows:

Developing the library, Sports/Drinking water facility in the nearby government school

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8.4. PROJECT COST / INVESTMENT DETAILS

Investment

i) Land cost

It's a Government Poromboke land. Lease tender for Government poromboke land is **Rs.87,00,000.**

ii) Refilling / Fencing

For fencing the cost involved is **Rs.70,000.**

iii) Laborers shed

The machine operators will be from nearby local villages, hence no cost is involved. Rest shelter will be constructed as semi-permanent structure at the cost of **Rs.1,20,000.**

iv) Sanitary facility

Sanitary facility will be constructed as semi-permanent structure, the cost will be around **Rs.50,000.**

v) Machinery to be used

The excavators of 0.90m bucket capacity and tippers of 10/20s capacity will be used. The quantity of Diesel consumption is based on the working hours of Excavators (Filling Factor and loading Cycling) Average Diesel consumption of Hitachi Excavator model EX 150-200 is **12 Litres/ Hr.**

Machinery cost **Rs.20,00,000/-**

8.3.2 Expenditure

i) Drinking water facility for the laborers

Drinking water at the cost of **Rs.1,10,000/-** for a period of five years.

ii) Air, Noise/ Vibration & Water quality test:

Air, Noise/Vibration & Water quality test maintenance at the cost of **Rs.75,000/-** for a period of five years.

<i>Project Name</i>	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>M/s.S.S.V. Blue Metals</i>	
<i>Project Location</i>	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

iii) Safety kits:

Rs.60,000 will be spent for the safety kits such as Helmet, Goggles, Ear plugs, Ear mask, Safety shoes and Reflector jackets.

iv) Water sprinkling

Water sprinkling on haul roads for dust suppression, the cost will be around **Rs. 55,000/-** for a period of five years.

v) Afforestation

Afforestation is proposed within the lease applied area, plantation will be carried out on the safety boundary of the proposed mine lease area. The cost estimate is around **Rs.55,000/-**

Project Cost Budget:

Table 8-1 Budget for the proposed project

1	<u>D. Fixed Asset Cost:</u>	
	5. Land Cost	: Rs. 87,00,000/- (Leased tender amount for Government Poramboke Land)
	6. Labour Shed	: Rs. 1,20,000/-
	7. First aid room & accessories	: Rs. 50,000/-
	8. Sanitary Facility	: Rs. 70,000/-
	Total Fixed cost=	Rs.89,40,,000/-
2	<u>E. Operational Cost:</u>	
	<u>Machinery cost</u>	: Rs.20,00,000/-
3	<u>F. EMP Cost:</u>	
	(i)EMP Estimation	:
	. Air quality sampling	: Rs.25,000/-
	. Water quality sampling	: Rs.25,000/-
	. Noise monitoring	: Rs.25,000/-
	. Drinking water facility	: Rs. 1,10,000/-

<i>Project Name</i>	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

	Safety kits	:	Rs. 60,000/-
	Water sprinkling	:	Rs. 55,000/-
	Afforestation	:	Rs. 25,000/-
	Total=		Rs. 3,25,000/-
	Total Project Cost(A+B+C)	:	Rs. 1,12,65,000/-

<i>Project Name</i>	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>M/s.S.S.V. Blue Metals</i>	
<i>Project Location</i>	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

9. Environmental Management Plan

9.1. General:

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, while the ultimate pit slope has been kept 45° from horizontal. Moreover, all safety standards / safeguards will be implemented as per prescribed guidelines.

9.3. Mine Drainage

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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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.

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, M/s.S.S.V.Blue Metals 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.	<ul style="list-style-type: none"> Planting of trees along the safety distance of the Mine Lease Area Water will be sprinkled in the site as dust suppression measure.
2.	Water	Wastewater Generation	Improper management of Domestic wastewater in the Mine lease may create unhygienic conditions in the site thereby causing	<ul style="list-style-type: none"> Provision of urinals/Latrines along with septic tank followed by soak pit arrangement will be provided in the Mine Lease area

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			health impacts to the labors	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	<ul style="list-style-type: none"> • Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas
4.	Land	Improper management of Storm water Runoff	Storm water Runoff may result in Soil Erosion	<ul style="list-style-type: none"> • Garland drainage of 1m x 1m will be provided to avoid storm water run-off.
4.	Social Responsibility	Mining workers	Unhygienic site sanitation facilities may cause health damage to workers.	<p>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</p> <ul style="list-style-type: none"> ✓ By complying with the safety procedures, norms and guidelines (as applicable) as outlined in the National Building Code of India, Bureau of Indian Standards.

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

<i>Project Name</i>	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

Table 9-2: Budgetary Allocation for EMP during Mining

S. No	Description	Budgetary Allocation (in
1.	EMP COST	
1.	Drinking water facility	Rs. 1,10,000/-
2.	Safety kits	Rs. 60,000/-
3.	Water sprinkling	Rs. 55,000/-
4.	Afforestation	Rs. 25,000/-
2.	Environmental Monitoring	
1.	Air Quality Monitoring	25,000
2.	Water Quality Monitoring (Bore well water)	25,000
3.	Noise Monitoring	25,000
Total Cost		3,25,000

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Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

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

M/s.S.S.V Enterprises Thiru.R.Rajasekaran applied for mining of Rough stone in survey numbers 603/1(Part-A) in Panchakshipuram Village, Hosur Taluk, Krishnagiri District and Tamil Nadu State over an extent of 2.50.0 hectares in Government Poromboke Lands for a period of 5 years . The area lies in the latitude of 12°35'48.48"N to 12°35'56.64"N and longitude of 77°47'21.61"E to 77°47'28.27"E. The area is marked in the survey of India Topo sheet No. 57 – H/14. There is no human settlement within 500m radius from the lease area.

10.2. Project Overview

Table 10-1 Project Overview

S. No.	Description	Details
1	Project Name	M/s.S.S.V blue metals rough stone quarry
2	Proponent	Thiru.R.Rajasekaran
3	Mining Lease Area Extent	2.50.0 Ha
4	Location	603/1(Part-A), Panchakshipuram Village, Hosur Taluk, Krishnagiri Dt.
5	Latitude	12°35'48.48"N to 12°35'56.64"N
6	Longitude	77°47'21.61"E to 77°47'28.27"E
7	Topography	Undulating terrain
8	Site Elevation above MSL	856m above MSL
9	Topo sheet No.	57 – H/14

Project Name	Rough stone Quarry – 2.50.0 Ha	Draft EIA Report
Project Proponent	M/s.S.S.V. Blue Metals	
Project Location	Panchakshipuram Village, Hosur Taluk, Krishnagiri District	

10	Minerals of Mine	Rough stone
11	Proposed production of Mine	Geological Reserves – 1029364m ³ Mineable Reserves – 466694m ³ Proposed production for five years – 466694m ³ of Rough Stone
12	Ultimate depth of Mining	50m below ground level (5m Above Ground Level & 45m Below Ground Level)
13	Method of Mining	Opencast mechanized Mining with a bench height of 7m and bench width of 5m is proposed.
14	Source of water	Packaged Drinking water vendors available in Panchakshipuram Village which is about ≈ 1.62 km, W from the project site.
15	Manpower	18 Nos.
16	Mining Plan Approval	Mining Plan was approved by The Deputy Director, Geology & Mining, Krishnagiri vide Rc.No.G.M.182/2018/Mines dated :20.08.2018
17	Precise Area Communication	The Proponent has obtained Precise area communication letter received from District Collector, Krishnagiri Rc.No.182/2018/kaniman dated 09.03.2018.
18	Ground water	The quarry operation is proposed up to a depth of 86m below ground level. The ground water table is reported as 102 m below ground level in nearby open 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.
19	Habitations within 500m radius of the Project Site	There is no Habitation within 500m radius
20	Rivers / Canal/Lake	❖ Nanjappan Kodigai Eri – 6.94 km E ❖ Vasa Lake – 5.2 km N ❖ Vannama lake – 11.34 km SW ❖ Rama Naicken lake – 14.34 km NE ❖ Tahally lake – 14.41 km W
21	Reserved Forest / Wild life Sanctuary	➤ Udedurgam R.F – 12.24 Km SE ➤ Denkanikottai R.F – 9.17 km SE ➤ Sanamavu Forest – 11.21 km NE

<i>Project Name</i>	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

10.3. Justification of the proposed project

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 study base for roads.

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

Table 10-2: Anticipate Impacts & Appropriate Mitigation Measures

S. No.	Potential Impact	Mitigation Measure
1	The main impact in the air environment is dust emission during various mining activities such as drilling, blasting, excavation, loading and transportation. The dust emission may affect the quality of ambient air in the and around the mine area. The increased emission may cause respiratory & Cardiovascular	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

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	problems in human health	approach roads & mine premises.
2	Waste water will be generated due to mining activity and from other domestic activities. These may contaminate the ground water leading to ground water. The mining activity may affect the ground water table	No waste water will be generated from the mining activity of minor minerals as the project only involves lifting of over burden from mine site. The wastewater generated from the domestic activity will be disposed off safely through the proposed septic tank Mining will not intersect ground water table. Hence the water table will not be impacted due to the proposed project
3	Noise will be generated in the mine area during various mining activities such as blasting, drilling, excavation. During transportation of the mined out mineral, there may be noise generation due to the movement of vehicles. This may impact the health condition of the workers by creating headache	Periodical monitoring of noise will be done. No other equipments except the transportation vehicles and Excavator (as & when required) for loading will be allowed at site. Noise generated by these equipments shall be intermittent and does not cause much adverse impact. Plantation will be carried out along approach roads. The plantation minimizes propagation of noise and also arrest dust.
4	Solid waste will be generated from the mining activity as there will be refuse after 95% recovery and also generation of domestic waste	The 100% recovery is achieved by extracting the entire mineable reserve. Hence there will be no refuse generation due to the mining activity.

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<i>Project Location</i>	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

		<p>Apart from that, a very meagre quantity of domestic waste will be generated in the project, which will be handed over to the local body on daily basis.</p>
5	<p>During mining activities, there are chances of workers getting health issues or may be prone to accidents</p>	<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 Name</i>	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>M/s.S.S.V. Blue Metals</i>	
<i>Project Location</i>	<i>Panchakshipuram Village, Hosur 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.

11.2.1 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.

<i>Project Name</i>	<i>Rough stone Quarry – 2.50.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>M/s.S.S.V. Blue Metals</i>	
<i>Project Location</i>	<i>Panchakshipuram Village, Hosur Taluk, Krishnagiri District</i>	

- We shall establish, maintain & periodically review our documented management systems, objectives and performance in consultation with our employees and prevailing best practices.
- Effective communication of organization's policy and objectives to employees and seeking feedbacks from all our employees and concerned stakeholders for continual improvement.

ANNEXURE-I

**STANDARD TOR CONDITIONS WITH
ADDITIONAL TOR POINTS**



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

STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY – TAMIL NADU

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

Phone No. 044-24359973

Fax No. 044-24359975

TERMS OF REFERENCE (ToR)

Lr No.SEIAA-TN/F.No.9261/ToR-1204/2022 Dated: 14.07.2022.

To


M/s. SSV Blue metals
Thiru. R.Rajeseakaran
S/o. Ramasubba
No.89, Thally HUDCO
Hosur Taluk
Krishnagiri District

Sir / Madam,

Sub: SEIAA, Tamil Nadu – Terms of Reference with public Hearing (ToR) for the Proposed Rough Stone quarry lease over an extent of 2.50.0Ha at S.F. No. 603/1 (part), Panchakshipuram Village , Hosur Taluk, Krishnagiri District, Tamil Nadu by M/s. SSV blue metals - 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/76807/2022, 09.05.2022.
 2. Your application submitted for Terms of Reference dated: 17.05.2022
 3. Minutes of the 287th SEAC meeting held on 22.06.2022.
 4. Minutes of the 532nd SEIAA meeting held on 14.07.2022.

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


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The proponent, M/s. SSV Blue metals has submitted application for Terms of Reference (ToR) with public Hearing on 17.05.2022, in Form-I, Pre- Feasibility report for the proposed Rough Stone quarry lease over an extent of 2.50.0Ha at S.F. No. 603/1 (part), Panchakshipuram Village, Hosur Taluk, Krishnagiri District, Tamil Nadu.

Discussion by SEAC and the Remarks:-

Proposed Rough Stone quarry lease over an extent of 2.50.0Ha at S.F. No. 603/1 (part), Panchakshipuram Village , Hosur Taluk, Krishnagiri District, Tamil Nadu by M/s. SSV blue metals for Terms of Reference

(SIA/TN/MIN/76721/2022, 07.05.2022)

The proposal was placed in this 287th Meeting of SEAC held on 22.06.2022. The details of the project furnished by the proponent are available in the website (parivesh.nic.in).

The SEAC noted the following

1. The Project Proponent, M/s. SSV blue metals has applied for Terms of Reference for the Rough Stone quarry lease over an extent of 2.50.0 Ha at S.F. No. 603/1 (part), Panchakshipuram Village, Hosur Taluk, Krishnagiri District, Tamil Nadu, Tamil Nadu. It is Govt Poromboke land.
2. The proposed quarry/activity is covered under Category "B1" of Item 1(a) "Mining Projects" of the Schedule to the EIA Notification, 2006.
3. As per the mining plan the lease period is 5 years. The mining plan is for the period of five years & production should not exceed 466694cu.m of rough stone. The annual peak production is 119793cu.m of Rough Stone (3rd year). The ultimate depth is 50 m BGL.

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

1. 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 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.


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2. 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.
3. 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.
4. **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.**
5. 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.
6. 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,
 - a. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
 - b. Quantity of minerals mined out.
 - c. Highest production achieved in any one year
 - d. Detail of approved depth of mining.
 - e. Actual depth of the mining achieved earlier.
 - f. Name of the person already mined in that leases area.
 - g. If EC and CTO already obtained, the copy of the same shall be submitted.
 - h. Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
7. 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).
8. The PP shall carry out Drone video survey covering the cluster, Green belt , fencing etc.,
9. The proponent shall furnish photographs of adequate fencing, green belt along the periphery


MEMBER SECRETARY
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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.
10. 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.
 11. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
 12. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. 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.
 13. 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.
 14. 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.
 15. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
 16. 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.


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SEIAA-TN

17. 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.
18. 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.
19. 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.
20. Impact on local transport infrastructure due to the Project should be indicated.
21. 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.
22. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.
23. Public Hearing points raised and commitments of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project and to be submitted to SEIAA/SEAC with regard to the Office Memorandum of MoEF& CC accordingly.
24. The Public hearing advertisement shall be published in one major National daily and one most circulated vernacular daily.
25. The PP shall produce/display the EIA report, Executive summary and other related information with respect to public hearing in Tamil Language also.
26. 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.
27. 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.


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- 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.
28. Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner
 29. 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.
 30. 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.
 31. 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.
 32. 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.
 33. 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.
 34. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
 35. 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.
 36. 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.
 37. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit


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stating to abide the EMP for the entire life of mine.

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

Appendix -I
List of Native Trees Suggested for Planting

No	Scientific Name	Tamil Name	Tamil Name
1	<i>Aegle marmelos</i>	Vilvam	விவம்
2	<i>Adenanthera pavonina</i>	Marjadi	மஞ்சாடி, ஆனைக்குன்றுமணி
3	<i>Albizia lebbek</i>	Vaagai	வாகை
4	<i>Albizia amara</i>	Usil	உசில்
5	<i>Bauhinia purpurea</i>	Marutharai	மந்தாரை
6	<i>Bauhinia racemosa</i>	Aathi	ஆத்தி
7	<i>Bauhinia tomentosa</i>	Iruvathi	இருவாத்தி
8	<i>Buchanania axillaris</i>	Kattuma	காட்டுமர
9	<i>Borassus flabellifer</i>	Panai	பனை
10	<i>Butea monosperma</i>	Murukkamaram	முருக்கமரம்
11	<i>Bobax caiba</i>	Ilavu, Sevvilavu	இலவு
12	<i>Calophyllum inophyllum</i>	Punnai	புள்ளை
13	<i>Cassia fistula</i>	Sarakondrai	சரக்கொன்றை
14	<i>Cassia roxburghii</i>	Sengondrai	செங்கொன்றை
15	<i>Chloroxylon sweetenia</i>	Purasamaram	பூசு மரம்
16	<i>Cochlospermum religiosum</i>	Kongu, Marjallavu	கோங்கு, மஞ்சள் இலவு
17	<i>Cordia dichotoma</i>	Naruvuli	நருவூளி
18	<i>Cretova adansonii</i>	Mavalingum	மாவிலங்கம்
19	<i>Dillenia indica</i>	Uva, Uzha	உவா
20	<i>Dillenia pentagyna</i>	SiruUva, Sitruzha	சீறு உவா
21	<i>Diospyro sebenum</i>	Karungali	கருங்காலி
22	<i>Diospyro schloroxylon</i>	Vaganai	வாகை
23	<i>Ficus amplissima</i>	Kalltchi	கல் இச்சி
24	<i>Hibiscus tiliaceou</i>	Aatrupoovarasu	ஆற்றுப்பூவரசு
25	<i>Hardwickia binata</i>	Aacha	ஆச்சா
26	<i>Holoptelia integrifolia</i>	Aayili	ஆயி மரம், ஆயிலி
27	<i>Lansea coromandelica</i>	Odhiam	ஒதியம்
28	<i>Lagerstromia 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	பிளிப்பட்டை
32	<i>Madhuca longifolia</i>	Iluppai	இலுப்பை
33	<i>Manilkara hexandra</i>	UlakkaiPaalai	உலக்கை பாலை
34	<i>Mimusops elengi</i>	Magizhamaram	மகிழ்மரம்
35	<i>Mitragyna parvifolia</i>	Kadambu	கடம்பு
36	<i>Morinda pubescens</i>	Nuna	நுணா
37	<i>Morinda citrifolia</i>	Vellai Nuna	வெள்ளை நுணா
38	<i>Phoenix sylvestre</i>	Eachai	ஈச்சமரம்
39	<i>Pongamia pinnat</i>	Pungam	புங்கம்

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40	<i>Premna mollissima</i>	Munnai	முள்ளை
41	<i>Premna serratifolia</i>	Narumunnai	தறு முள்ளை
42	<i>Premna tomentosa</i>	Malaiipoovarasu	மலை பூவரசு
43	<i>Prosopis cinerea</i>	Vanni maram	வண்ணி மரம்
44	<i>Pterocarpus marsupium</i>	Vengai	வேங்கை
45	<i>Pterospermum canescens</i>	Vennangu, Tada	வேணிணங்கு
46	<i>Pterospermum xylocarpum</i>	Polavu	பூவடி
47	<i>Puthranjiva roxburghii</i>	Karipala	கறிபாலா
48	<i>Salvadora persica</i>	Ugaa Maram	ஊகா மரம்
49	<i>Sapindus emarginatus</i>	Manipungan, Soapukai	மணிப்புகள் சோப்புக்காய்
50	<i>Saraca asoca</i>	Asoca	அசிசாகா
51	<i>Streblus asper</i>	Piray maram	பிராய் மரம்
52	<i>Strychnos nuxvomica</i>	Yetti	எட்டி
53	<i>Strychnos potatorum</i>	Therthang Kottai	தேத்தாங் கொட்டை
54	<i>Syzygium cumini</i>	Naval	நாவல்
55	<i>Terminalia belleric</i>	Thandri	தாண்டிரி
56	<i>Terminalia arjuna</i>	Ven marudhu	வேனி மருது
57	<i>Toona ciliata</i>	Sandhana vembu	சந்தாந வேம்பு
58	<i>Thesposia populnea</i>	Purvarasu	பூவரசு
59	<i>Walsuratrifoliata</i>	valsura	வால்சுரா
60	<i>Wrightia tinctoria</i>	Veppalai	வேப்பாலை
61	<i>Pithecellobium dulce</i>	Kodukkapuli	கொடுக்காபுளி

Discussion by SEIAA and the Remarks:-

The proposal was placed in the 532nd Authority meeting held on 14.07.2022. 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 condition in addition to the following conditions:

1. 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.
2. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological structures etc.
3. 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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4. 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.
5. 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.
6. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.
7. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.
8. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.
9. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.
10. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.
11. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.
12. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.
13. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.
14. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.
15. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.
16. The project proponent shall study and furnish the details on potential fragmentation impact of natural environment, by the activities.
17. 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.


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18. 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.
19. The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.
20. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following
 - a) Soil health & bio-diversity.
 - b) Climate change leading to Droughts, Floods etc.
 - c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people.
 - d) Possibilities of water contamination and impact on aquatic ecosystem health.
 - e) Agriculture, Forestry & Traditional practices.
 - f) Hydrothermal/Geothermal effect due to destruction in the Environment.
 - g) Bio-geochemical processes and its foot prints including environmental stress.
 - h) Sediment geochemistry in the surface streams.
21. 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.
22. 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.
23. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.
24. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.


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


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


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- 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 with cost implications and submitted.
- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site



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Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.

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



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


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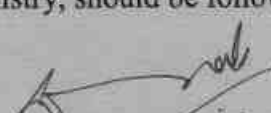
should also be obtained and copy furnished.

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


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



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

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

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

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


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Mining of Minerals published February 2010.


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


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

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

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


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- 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. The EO/BDO, Panchakshipuram Village, Hosur Taluk, Krishnagiri District
8. Stock File.

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

COMPLIANCE OF TOR CONDITIONS

Point wise compliance of ToR points issued by SEIAA, TN vide letter No. SEIAA-TN/F. No. 9261/ToR-1204/2022 Dated: 14.07.2022 for Mining of Minor Minerals in the Mine of “Proposed Rough stone quarry Over an Extent of 2.50.0 Ha at S.F.No. 603/1(Part) of Panchakshipuram Village, Hosur Taluk, Krishnagiri District, Tamilnadu State.

ToR Ref.	Description	Response	Page Ref. in EIA Report
1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 came into force w.r.t. the highest production achieved prior to 1994.	<p>This is a existing mining project of Proposed Rough stone and Gravel quarry</p> <p>The Proponent has obtained Precise area communication letter received from District Collector, Krishnagiri Rc.No.182/2018/kaniman dated 09.03.2018.</p> <p>Mining Plan was approved by The Deputy Director, Geology & Mining, Krishnagiri vide Rc.No.G.M.182/2018/Mines dated 20.08.2018</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 & Gravel for five years is proposed in</p>	<p>Chapter-2</p> <p>Table No.2.10</p> <p>Page No.34</p>

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

		<p>the EIA/EMP in chapter no-2.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Year</th> <th style="text-align: center;">Rough stone (m³)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">I</td> <td style="text-align: center;">79062</td> </tr> <tr> <td style="text-align: center;">II</td> <td style="text-align: center;">80488</td> </tr> <tr> <td style="text-align: center;">III</td> <td style="text-align: center;">119793</td> </tr> <tr> <td style="text-align: center;">IV</td> <td style="text-align: center;">101938</td> </tr> <tr> <td style="text-align: center;">V</td> <td style="text-align: center;">85413</td> </tr> <tr> <td style="text-align: center;">Total</td> <td style="text-align: center;">466694</td> </tr> </tbody> </table>	Year	Rough stone (m ³)	I	79062	II	80488	III	119793	IV	101938	V	85413	Total	466694	
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Total	466694																
2.	A copy of document in support of the fact that the Proponent is the rightful lessee of the mine should be given.	The mine lease area of 2.50.0 hectare in Panchakshipuram Village for Rough stone quarry approved by Deputy Director, Geology & Mining, Krishnagiri vide Rc.No.G.M 182/2018/Mines dated 20.18.2018.	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.	<p>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.</p> <p>The mining plan of the project site has been submitted to The Deputy Director, Dept. of Geology & Mining, Krishnagiri.</p>	Annexure-VI Chapter- II														
4	All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/toposheet should be provided. Such an Imagery of the	Details of coordinates of all corners of proposed mining lease area have been incorporated in mining plan and Chapter 2 of EIA/ EMP Report.	Chapter-2, Fig no. 2.1 Page. no. 21														

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

	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, important water bodies, streams and rivers and soil characteristics	Topo map as attached in Chapter-2	Chapter-2, Fig no. 3.1 Page. no. 43
6.	Details about the land proposed for mining activities should be given with information as to whether conforms to the land use policy of the state; land diversion for mining should have approval from State land use board or the concerned authority	Details about the land proposed for mining activities should be given Chapter 2.	Chapter-2 Page 30
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	Noted.	

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

	<p>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.35</p>
9	<p>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.</p>	<p>Study area comprises of 10 km radius from the mine lease boundary. Key Plan showing core zone (ML area).</p>	<p>Chapter-2 Fig no. 2.5 Page no.27</p>
10	<p>Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water</p>	<p>Land Use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, National park, migratory routes of fauna, water bodies, human</p>	<p>Chapter-2, Table no. 2.5 Page no.29</p>

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

	<p>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>settlements 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>There is no overburden anticipated during the entire rough stone quarrying operation.</p>	<p>Chapter-2, Page no.37</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 Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be</p>	<p>Complied.</p> <p>The proposed mining lease area is not falling under forest land.</p>	

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	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. 78
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	There is a relatively poor sighting of animals in the core and buffer areas of the mining lease. No significant impact is anticipated	

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

17	<p>Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves/ (existing as well as proposed), if any, within 10km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the State Wildlife Department/Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.</p>	<p>There is no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger / Elephant Reserves / Critically Polluted areas within 10 km radius of the mining lease area.</p>	
18	<p>A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be</p>	<p>Details biological study (flora & fauna) within 10 km radius of the project site have been incorporated in Chapter-3 of EIA/ EMP Report.</p> <p>No flora & fauna listed in scheduled I have been found in study area so there is no need of conservation plan. However, all care will be taken for protection of flora & fauna, if any in the lease hold area.</p>	<p>Chapter – 3 Pg No. 80</p>

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

	<p>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>		
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 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</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 2.50.0 Ha

	<p>also need to obtain approval of the concerned Coastal Zone Management Authority)</p>		
<p>21</p>	<p>R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village located in the mine lease area will be shifted or not. The issues relating to shifting of Village including their R&R and socio-economic aspects should be discussed in the report.</p>	<p>There is no Rehabilitation and resettlement is involved. Land classified as government Poramboke Land.</p>	

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

22	<p>One season (non-monsoon) and (Summer Season), (Post monsoon) primary baseline data on ambient air quality CPCB Notification of 2009 water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report.</p> <p>Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre- dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500m of the mine lease in the pre- dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.</p>	<p>Baseline data collected during Pre-Monsoon Season and Monsoon (May to July 2022) 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
23	<p>Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of</p>	<p>Air quality modelling & Impact of Air quality will be furnished in Final EIA report</p> <p>Transportation of mineral during</p>	<p>Chapter-4</p> <p>Page No.24</p>

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

	<p>movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided.</p> <p>The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing predominant wind direction may also be indicated on the map.</p>	<p>operation of mines will be done by road & SH-17A through dumpers and the impact of movement of vehicles are incorporated in EIA/EMP report.</p> <p>Air quality modelling & Impact of Air quality will be furnished in Final EIA report</p>	
24	<p>The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.</p>	<p>Total water requirement: 2.0 KLD Dust Suppression: 0.5 KLD Domestic Purpose: 1 KLD Plantation :0.5 KLD Domestic Water will be sourced from nearby Panchakshipuram village which is about \approx 1.62 km.</p>	<p>Chapter-2 Page no.38</p>
25	<p>Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.</p>	<p>Not Applicable Water will be taken from nearby villages</p>	
26	<p>Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be</p>	<p>At the last stage of mining operation, almost complete area will be worked to restore the land to its optimum reclamation for future use as water reservoir.</p>	

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

	provided.		
27	Impact of the project on the water quality, both surface and groundwater should be assessed and necessary safeguard measures, if any required, should be provided.	Impact of the project on the water quality & its mitigation measures has been incorporated in Chapter-4 of EIA/EMP report.	Chapter-4 Page No.109
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: 50 m BGL The ground water table is reported as 102m below surface ground level in nearby wells of this area. Now, the present quarry shall be proposed above the water table and hence, quarrying may not affect the ground water So mine working will not be intersecting the ground water table.	Chapter-4 Page no. 108
29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.	There is no any stream crossing in the proposed quarry	Executive Summary
30	Information on site elevation, working depth, groundwater table etc. Should be	Highest elevation: 856 AMSL Depth: 50 m Below Ground Level	Chapter-2 Table no. 2.2 Page no. 19

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	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 plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant pollution	Green Belt Development plan is proved given in Chapter 2.	Chapter-2
32	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked	Impact on local transport infrastructure due to the project has been assessed. There shall not be much impact on local transport. Traffic density from the proposed mining activity has been incorporated in EIA/EMP report.	Chapter-3 Page No.101

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	<p>out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project proponent shall conduct impact of Transportation study as per Indian Road Congress Guidelines</p>		
33	<p>Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA report.</p>	<p>Adequate infrastructure & other facilities shall be provided to the mine workers. Details are given in chapter-2 of EIA/EMP</p>	Chapter-2
34	<p>Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.</p>	<p>Conceptual post mining land use and Reclamation and restoration sectional plates are given in Mining Plan followed by Scheme of mining.</p>	Mining plates Annexure VII
35	<p>Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project in the mining area may be detailed</p>	<p>Suitable measure will be adopted to minimize occupational health impacts of the project. The project shall have positive impact on local environment. Details are given in chapter-10 of EIA/EMP.</p>	Chapter-10 Pg No. 115

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

36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	Suitable measure will be adopted to minimize occupational health impacts of the project.	Chapter-10 Pg No. 1117
37	Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Suitable measures has been discussed in Chapter 4	Chapter-4 Pg No. 115
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. 135
39	Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and incorporated in the final EIA/EMP Report of the	Public Hearing proceedings will be furnished in Final EIA report	

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	Project.														
40	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.	Not applicable No. litigation is pending against the project in any court.													
41	The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">S. No</th> <th style="text-align: center;">Description</th> <th style="text-align: center;">Cost</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Fixed Asset Cost</td> <td style="text-align: right;">89,40,000/-</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Operational Cost</td> <td style="text-align: right;">20,00,000 /-</td> </tr> <tr> <td></td> <td>Total</td> <td style="text-align: right;">10,940,000/</td> </tr> </tbody> </table> <p>EMP Cost: 23,36,000/-</p>	S. No	Description	Cost	1	Fixed Asset Cost	89,40,000/-	2	Operational Cost	20,00,000 /-		Total	10,940,000/	Chapter-2 Pg No. 39
S. No	Description	Cost													
1	Fixed Asset Cost	89,40,000/-													
2	Operational Cost	20,00,000 /-													
	Total	10,940,000/													
42	Disaster Management Plan	Disaster Management and Risk Assessment has been incorporated in Chapter-7	Chapter-7 Pg No. 123												
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. 132												
44	Besides the above, the below mentioned general points are also to be followed:														
(a)	Executive Summary of the EIA/EMP report	Executive Summary of EIA Report is given from page No.9-24													
(b)	All documents to be properly referenced with index and	Complied													

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	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.	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 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,	The EIA report has been prepared and complying with the circular issued by MoEF vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August 2009.	

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	should also 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 with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation	There are no changes in prepared EIA as per submitted Form-1 & PFR	
(i)	As per the circular no. J-11011/618/2010-IA. II(I) dated 30.5.2012, report on the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project by the Regional Office of Ministry of Environment & Forests, if applicable.	Will be complied after grant environment clearance from SEIAA, Tamilnadu	
(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	All Sectional Plates of Quarry is enclosed in Mining Plan.	

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	and sections (iii) sections of mine pit and external dumps, if any clearly showing the features of the adjoining area.		
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Additional ToR Compliance

Discussion by SEAC

S.No.	Condition	Compliance
1.	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 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.	Agree to comply.
2.	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 30m below ground level.	Slope stability report will be submitted with final EIA.
3.	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.	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
4.	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	Noted. Agree to comply.

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	travel beyond 30m from the blast site.	
5.	The EIA Coordinator shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and Photographic evidence.	Complied. The photographs are attached in EIA report.
6.	<p>If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,</p> <ol style="list-style-type: none"> a. What was the period of the operation and stoppage of the earlier mines with the last work permit issued by the AD/DD mines? b. Quantity of minerals mines out. c. Highest production achieved in any one year. d. Details of approved depth of mining. e. Actual depth of the mining achieved earlier. f. Name of the person already mined in that leases area. g. If EC and CTO already obtained, the copy of the same shall be submitted. h. Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches. 	<p>Thiru.Gowdappa</p> <p>Agreed to comply</p>
7.	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	<p>Complied.</p> <p>All corners with coordinates of the mine lease area has attached with EIA report in chapter 2</p>

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	should clearly show the land use and other ecological feature of the study area (core and buffer zone)	
8.	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.
9.	The Project Proponent shall furnish 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.	Complied. The photographs of fencing and green belt attached as per SEAC recommendation.
10.	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	The details of Geological reserves, Mineable reserves and Yearwise production reserves are tabulated in Chapter 2. The mining methodology and impacts are follow as on prescribed norms by Government.
11.	The PP shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.	Complied. Manpower requirements table attached in EIA report chapter 2
12.	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	Hydro geological study report will be submitted along final EIA report.

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	(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.	
13.	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
14.	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.
15.	Rainwater harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	Noted. Agree to comply.
16.	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	Current land use of the study area has attached in EIA report chapter 3. Operational and post operational land

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	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	use will be submitted.
17.	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 overburden is in the form of top soil formation, it will be removed during the quarrying operation the same was preserved all along the boundary barrier for afforestation.
18.	Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered	Noted
19.	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.
20.	Impact on local transport infrastructure due to the Project should be indicated.	Traffic impact assessment has given in EIA report chapter 3.
21.	A tree survey study shall be carried out (nos., name of the species, diameter, etc.) both within the	No tree species were found inside the project site. only few shrubs and

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	mining lease applied area & 300m buffer zone and its management during mining activity.	thorny bushes were present. Tree survey study details given in EIA report chapter 3.
22.	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Noted. The mine plan and mine closure plan has been approved by the Deputy Director, Department of Mining and Geology, Krishnagiri District
23.	Public hearing points raised and commitments of the PP on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project and to be submitted to SEIAA/SEAC with regard to the Office Memorandum of MoEF & CC accordingly.	Noted and will be complied in Final EIA report.
24.	The Public hearing advertisement shall be published in on major National daily and one most circulated vernacular daily	Noted. Agree to comply.
25.	The PP shall produce/display the EIA report, Executive summary and other related information with respect to public hearing Tamil Language also.	Noted
26.	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
27.	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	Noted. Agree to comply

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	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.	
28.	Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted as per the advice of local forest authorities/ botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meter wide and in between blocks in an organized manner.	The green belt plan enclosed with mining plates in Annexure VII
29.	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.
30.	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.
31.	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 impacts of the project has prepared and incorporated in Environmental management plan.

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	occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	
32.	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.
33.	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.
34.	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.
35.	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
36.	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	Agree to comply. The certified compliance report will be submitted in Final EIA report.

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37.	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.
38.	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.

Discussion by SEIAA

ToR Ref.	Description	Response
1	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.	Noted and details has been incorporated in chapter 3 of the Draft EIA report.
2	The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological structures etc.	Noted and attached in annexures
3	As per the MoEF& CC office memorandum F.No 22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.	Noted.
4	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	The emission details have been discussed in the Chapter 4 of the

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	temperature reduction including control of other emission and climate mitigation activities.	Draft EIA report.
5	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	The ecological details have been discussed in the Chapter 3 of the Draft EIA report.
6	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	Noted and Agreed to comply.
7	The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.	Noted and Agreed to comply.
8	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	All the data's regarding soil were collected and the details have been discussed in the Chapter 3 of the Draft EIA report.
9	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	The Biodiversity study has been conducted and the details has been incorporated in the Chapter 3 of the Draft EIA report.
10	The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	Noted and Agreed to comply.
11	The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites	Noted and the details of the water bodies have been incorporated in the Chapter 3 of the Draft

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		EIA report.
12	The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.	The EMP details have been discussed in the Chapter 8 of the Draft EIA report.
13	The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.	Noted and Agreed to comply.
14	The Environmental Impact Assessment should study impact on protected areas, Reserye Forest, National Parks, Corridors and Wildlife pathways, near project site.	Noted and Agreed. We kindly inform that there is no protected areas such as Reserve Forests, National Parks, Wildlife Corridors around 1 km radius from the proposed project site.
15	The project proponent shall study and furnish the impact of project on plantations in adjoin patta lands, Horticulture, Agriculture and livestock.	Noted and Agreed.
16	The project proponent shall study and furnish the details on potential fragmentation impact of natural environment, by the activities.	Noted and Agreed.
17	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.	Noted and Agreed.
18	The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment.	Noted and Agreed.

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	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.	
19	The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.	Noted and Agreed. We kindly inform that there is no protected areas such as Reserve Forests around 1 km radius from the proposed project site.
20	<p>Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following</p> <ul style="list-style-type: none"> a) Soil health & bio-diversity. b) Climate change leading to Droughts, Floods etc. c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people. d) Possibilities of water contamination and impact on aquatic ecosystem health. e) Agriculture, Forestry & Traditional practices. f) Hydrothermal/Geothermal thermal effect due to destruction in the Environment. g) Bio-geochemical processes and its foot prints including environmental stress h) Sediment geochemistry in the surface streams. 	Details incorporated in chapter 3
21	Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping &	Details incorporated in chapter 3

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	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 water bodies 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.	
22	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.	Details incorporated in chapter 9
23	To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.	Details incorporated in chapter 7
24	Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.	Noted
25	Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.	Noted.

ANNEXURE-II
PRECISE AREA COMMUNICATION LETTER

ANNEXTURE 2 10 AUG 2018

ந.க.எண்.182/2018/கனிமம்

மாவட்ட ஆட்சியர் அலுவலகம்,
(புவியியல் மற்றும் சுரங்கத்துறை)
கிருஷ்ணகிரி மாவட்டம்,
கிருஷ்ணகிரி.
நாள் 09.02.2018

குறிப்பாணை

பொருள்: கனிமங்களும் குவாரிகளும் - சிறுகனிமம் - சாராரண கற்கள் கிருஷ்ணகிரி மாவட்டம் - ஓசூர் வட்டம் - பஞ்சாட்சிபுரம் கிராமம் அரசு புல எண் 603/1 (பகுதி-ஏ) ல் 250.0 ஹெக்டேர் பரப்பளவில் அரசு நிலத்தில் அமைந்துள்ள சாதாரண கற்குவாரிக்கு டெண்டருடன் இணைந்த ஏல முறையில் குத்தகை வழங்க டெண்டர்/பொது ஏலம் நடத்தப்பட்டது - பொது ஏலத்தில் அதிக தொகை கோரிய திரு.ராஜசேகரன் த/பெ ராமசுப்பு, எண்.1சி-89 தனி அட்கோ, ஓசூர் வட்டம், கிருஷ்ணகிரி 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.ராஜசேகரன் த/பெ ராமசுப்பு, எண்.1சி-89 தனி அட்கோ, ஓசூர் வட்டம், கிருஷ்ணகிரி மாவட்டம் என்பவரது டெண்டர் விண்ணப்பம் நாள்: 06.02.2018.

கிருஷ்ணகிரி மாவட்டம், ஓசூர் வட்டம், பஞ்சாட்சிபுரம் கிராமம் அரசு புல எண் 603/1 (பகுதி-ஏ) ல் 250.0 ஹெக்டேர் பரப்பளவில் அமைந்துள்ள சாதாரண கற்குவாரிக்கு ஐந்து ஆண்டுகளுக்கு குவாரி குத்தகை வழங்குவது தொடர்பாக 07.02.2018 அன்று நடைபெற்ற பொது ஏலத்தில் திரு.ராஜசேகரன் த/பெ ராமசுப்பு, எண்.1சி-89 தனி அட்கோ, ஓசூர் வட்டம், கிருஷ்ணகிரி மாவட்டம் என்பவர் அரசு நிர்ணயம் செய்த குறைந்தபட்ச குத்தகை தொகையை விட அதிக தொகையான ரூ.87,00,000/- (ரூபாய் எண்பத்தி ஏழு 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 மட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும், அரசு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி செய்யவேண்டும்.

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



2. எனவே, கிருஷ்ணகிரி மாவட்டம், ஓசூர் வட்டம், பஞ்சாட்சிபுரம் கிராமம் ஆரக் புல எண் 603/1 (பகுதி) ல் 250.0 ஹெக்டேர் 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 மாசுகட்டுப்பாட்டு வாரிய இசைவு ஆகியவற்றை சமர்ப்பிக்கவேண்டும் என திரு.ராஜசேகரன் த/பெ ராமசுப்பு, 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.

பெறுதல் :

திரு.ராஜசேகரன்
த/பெ ராமசுப்பு,
எண்.1சி-89 தனி அட்கோ,
ஓசூர் வட்டம், கிருஷ்ணகிரி மாவட்டம்

பதிவகுச்சில் ஒப்பந்தக்
அட்டையுடன்

மாவட்ட ஆட்சியர்,
கிருஷ்ணகிரி

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

S. DHANASEKAR,
RQP/MAS/225/2011/A

ANNEXURE-III
MINING PLAN APPROVED LETTER

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

To
M/s. S.S.V BLUE METALS
Prop.R.Rajasekaran ,
S/o Ramasubbu,,
No.89, Thally Hudco,,
Hosur Taluk,
Krishnagiri District.

Roc.182/2018/Mines

dated 20.03.2018

Sir,

Sub: Mines and Minerals - Krishnagiri District - Hosur Taluk - Panchakshipuram - Government Poramboke Land in S.F.No.603/1 (Part-A) - Over an extent of 2.50.0 Hectares - Precise area given for the proposed grant of Quarry lease for Rough Stone for a period of 5 years from the date of execution of lease deed to M/s. S.S.V Blue Metals Prop.R.Rajasekaran - 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.182/2018/Mines dated 09.03.2018.
 3. M/s. S.S.V Blue Metals Prop.R.Rajasekaran, S/o Ramasubbu, No.89, Thally Hudco, Hosur Taluk, Krishnagiri District letter dated

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M/s. S.S.V Blue Metals Prop.R.Rajasekaran, S/o Ramasubbu, Thally Hudco, Hosur Taluk, Krishnagiri District had been given precise area of an extent of 2.50.0 hectares in Government Poramboke land in S.F.No (Part-A) of Panchakshipuram village, Hosur Taluk, Krishnagiri District for a period of **Five years** from the date of execution of lease deed under Tender Auction System under the provisions of Tamil Nadu Minor Mineral Concessions 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 M/s.S.S.V Blue Metals Prop.R.Rajasekaran submitted draft Mining Plan for approval for the proposed rough stone quarry over an extent of 2.50.0 Hectares in Government Poramboke land in S.F.No.603/1(Part-A) of Panchakshipuram Village, Hosur Taluk, Krishnagiri District for a period **Five years** from the date of execution of lease deed.

3. The Mining Plan submitted by M/s. S.S.V Blue Metals Prop.R.Rajasekaran has been scrutinized as per the guide lines/ Instructions issued by the Commissioner of Geology and Mining, Chennai-3 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 conditions.


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

- i) That the mining plan is approved without prejudice to any applicable to the quarry lease from time to time whether are made by the Central Government, State Government or authority.
- ii) This approval of the mining plan does not in any way approval of the Government in terms of any other provision and Minerals (Development and Regulation) Act 1957, or connected laws including Forest (Conservation) Act 1980 other connected Laws industry Forest (Conservation) Forest Conservation Rules 1981 Environment protection Indian Explosive Act 1884 (Central Act IV of 1884) and made There under, Minor Mineral Conservation and De Rules, and The Tamil Nadu Minor Mineral Concession rule:
- iii) That the mining plan is approved without prejudice to order or directions from any court of competent jurisdiction
- iv) The applicant has incorporated all the conditions and detail the District Collector, Krishnagiri Memorandum Roc.No.182/2018/ Mines dated 09.03.2018 and the should be adhered without any omission during quarrying.
- v) The applicant should get prior clearance from the Environment Impact Assessment Authority, Chennai -15 and submit it to the District Collector, Krishnagiri.

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

Sl. No	Name of the lessee	Village/Taluk	S.F.No.	Extent in hecets.	Collector's proceedings & date
1	M/s.S.S.V BLUE METALS Prop.R.Rajasekaran , S/o Ramasubbu,, No.89, Thally Hudco., Hosur Taluk, Krishnagiri District	Panchakshipuram / Hosur Taluk	603/1 (PART-A)	2.50.0	Rc.182/2018, Mines dated 09.03.2018
2	Tvl. M.R.Enterprises, Panchakshipuram, Hosur Taluk, Krishnagiri District	Panchakshipuram/ Hosur Taluk	603/1 (Part-2)	3.00.0	Roc. 92/2016 (Mines) Dt. 29.08.2016

3	Thiru.P.Kalaikovan, S/o M.Ponnusamy, 12/165, Thamson pet, Kaveripattinam, Krishnagiri Taluk & District.	Panchakshipuram/ Hosur Taluk	603/1 (Part-3)	3.25.0	Rc.93/2016/ Mines – Dist. Gazette No.2 dated 29.01.2016
4	Thiru.K.Gopinath S/o.Kothandaramaiah	Panchakshipuram/ Hosur Taluk	603/1 (PART-B)	2.50.0	Rc.183/2018/ Mines dated 09.03.2018
			Total	11.25.0	


 Deputy Director
 Geology and Mining
 Krishnagiri

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

ANNEXURE-IV
500M Radius letter

From
Thiru L.Suresh, M.Sc.,
Assistant Director (Addl.Charge),
Dept of Geology and Mining,
Collectorate,
Krishnagiri.

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

Roc.No.182/2018/Mines

Dated : 03 .08.2021.

Sir,

Sub: Mines and Minerals – Krishnagiri District – Rough Stone – Krishnagiri District – Hosur Taluk – Panchatchipuram Village – Government land S.F.No. 603/1 (Part-A) – over an extent of 2.50.0 Hect Rough Stone quarry lease application preferred by Tvl. S.S.V. Blue Metals, Prop. Thiru R. Rajasekaran, S/o Ramasubbu, NO. C 89 Thalli Hudco, Hosur Taluk, Krishnagiri District -Details of quarries situated within 500 mts radial distance – requested by the applicant – Details furnished - reg.

- Ref:
- 1 The Gazette of India, Ministry of Environment Forest and Climate change Notification, New Delhi dt:01.07.2016.
 - 2 The District Collector, Krishnagiri Pro.Roc. No.182/2018/Mines dated: 09.03.2018.
 3. Mining Plan approved by the Assistant Director of Geology and Mining, Krishnagiri in Roc.No.182/2018/Mines Dated: 20.08.2018.
 4. Tvl. S.S.V. Blue Metals, Prop.Thiru R. Rajasekaran, S/o Ramasubbu, NO. C 89 Thalli Hudco, Hosur Taluk, Krishnagiri District dated: 02.08.2021.

I am to invite kind attention to the references cited above.

Tvl. S.S.V. Blue Metals. Prop. Thiru R. Rajasekaran, S/o Ramasubbu, NO. C 89 Thalli Hudco, Hosur Taluk, Krishnagiri District have preferred a quarry lease application for quarrying Rough stone quarry lease for a period of 05 years over an extent of 2.50.0 Hect of Government land in S.F.No. 603/1 (part-A) of Panchatchipuram Village Village Hosur Taluk, Krishnagiri District vide the District Collector, Krishnagiri Pro.Roc.No.182/2018/ Mines dated: 09.03.2018 have communicated precise area over an extent of 2.50.0 Hect in Patta S.F.No.738 of Panchatchipuram Village Village Hosur Taluk, Krishnagiri District and requested the

applicant to furnish the approved Mining Plan and Environmental Clearance from the Competent Authority for the above said area.

The Mining Plan submitted by the applicant has been approved by the Assistant Director of Geology and Mining, Krishnagiri vide the reference 3rd cited.

In the reference 4th cited the applicant has requested to furnish the details of quarries situated within 500mts radial distance from the said quarry.

As per the notification issued by the Ministry of Environment Forest and Climate Change Notification, New Delhi dt. 01.07.2016, vide the reference 1st cited, the following instructions was given.

The leases not operative for three years or more and leases which have got environmental clearance as on 15th January, 2016 shall not be counted for calculating the area of cluster, but shall be included in the Environmental Management plan and the Regional Environmental Management plan.

As requested by the applicant and based on the above said MoEF notification the details of quarries situated within 500 mts Radial distance from the said quarry is furnished as follows:

(i) Details of Existing quarries.

Sl. No.	Name of the lessee	Village	S.FNo.	Extent in Het	GO No.& Date	Lease period.
1	Tvl. M.R. Enterprises, Panchakshipuram, Hosur Taluk, Krishnagiri District	Hosur Taluk – Panchatchipuram Village	603/1 (Part-2)	3.00.0	Roe.No. 92/2016/Mines dt: 08.08.2016.	17.08.2016 to 16.08.202
2	Thiru P. Kalaikovan, S/o M. Ponnusamy, 12/165 Thamson Pet, Kaveripattinam, Krishnagiri Taluk & District	Hosur Taluk – Panchatchipuram Village	603/1 (Part-3)	3.25.0	Roe.No. 93/2016/Mines dt: 04.06.2018	13.06.2018 to 12.06.2028
3	Thiru.K.Gopinath S/o. Kothanda ramaiah	Hosur Taluk – Panchatchipuram Village	603/1 (Part-B)	2.50.0	Roe.No. 183/2018/Mines dt: 06.12.2016	06.12.2019 To 05.12.2029
4	Thiru B. Arun Kumar	Hosur Taluk Panchatchipuram Village	603/1 (Part-4)	3.00.0	Roe. No. 94/2016 Dt. 19.12.2016	26.12.2016 to 25.12.2026
			Total	11.75.0		

(ii) Details of abandoned/Old quarries.

Sl.No.	Name of the lessee	Village	S.FNo.	Extent in Het	GO No.& Date	Lease period.

1	R.Ramareddy	Panchakship uram Village HosurTaluk	545/1,2,3 & 628	2.15.5	Roe. 245/2010	28.2.2011 to 27.2.2016 Lease Expired
2	Tvl. Veerabadrswamy Blue Metal	Panchakshi Puram Village HosurTaluk	627	1.45.5	Roe. 79/2012 Mines Dt. 26.04.2012 and 23.12.2013	03.01.2014 to 02.01.2019 lease expired
3	B.Gowdappa	Panchakshi Puram Village HosurTaluk	603/1 (Part-1)	5.00.0	Roe. 583/2005 Mines dated 18.6.2005	8.8.2005 to 7.8.2015 Lease Expired
			Total	8.61.0		

(iii) Details of Proposed quarries

Sl. No.	Name of the lessee	Village	S.FNo.	Extent in Het	GO No.& Date	Lease period.
1	Tvl. S.S.V. Blue Metals, Prop. Thiru R. Rajasekaran, S/o Ramasubbu, Prop. S.S.V Blue Metal, No. 89 Thally Hudco, Hosur Taluk, Krishnagiri District	Panchakshi puram Village HosurTaluk	603/1 (Part-A)	2.50.0	Roc. 182/2018 mines dated 09.03.2018	Prcise area given Instant Proposal
2	Thiru S. G. Anandha Kumar	Panchakshipur am Village HosurTaluk	738	3.96.5	Roc. 1077/2018 Mines dated 4.2.2019	Prcise area given
			Total	6.46.5		

(iv) Details of applied area.

Sl.No.	Name of the lessee	Village	S.FNo.	Extent in Het	GO No.& Date	Remarks
Nil	Nil	Nil	Nil	Nil	Nil	Nil

Assistant Director (Additional Charge),
Dept of Geology and Mining,
Krishnagiri.

To

Tvl. S.S.V Blue Metals,
Prop.Thiru R. Rajasekaran,
S/o Ramasubbu,
Prop. S.S.V Blue Metal,
No. 89 Thally Hudco,
Hosur Taluk,
Krishnagiri District

ANNEXURE-V
FMB, A REGISTER, VILLAGE MAP

ANNEXTURE - IV

சமீபத்தில் பட்டியல் எண் 23

வட்டம். திருமகலி

எண். 95.

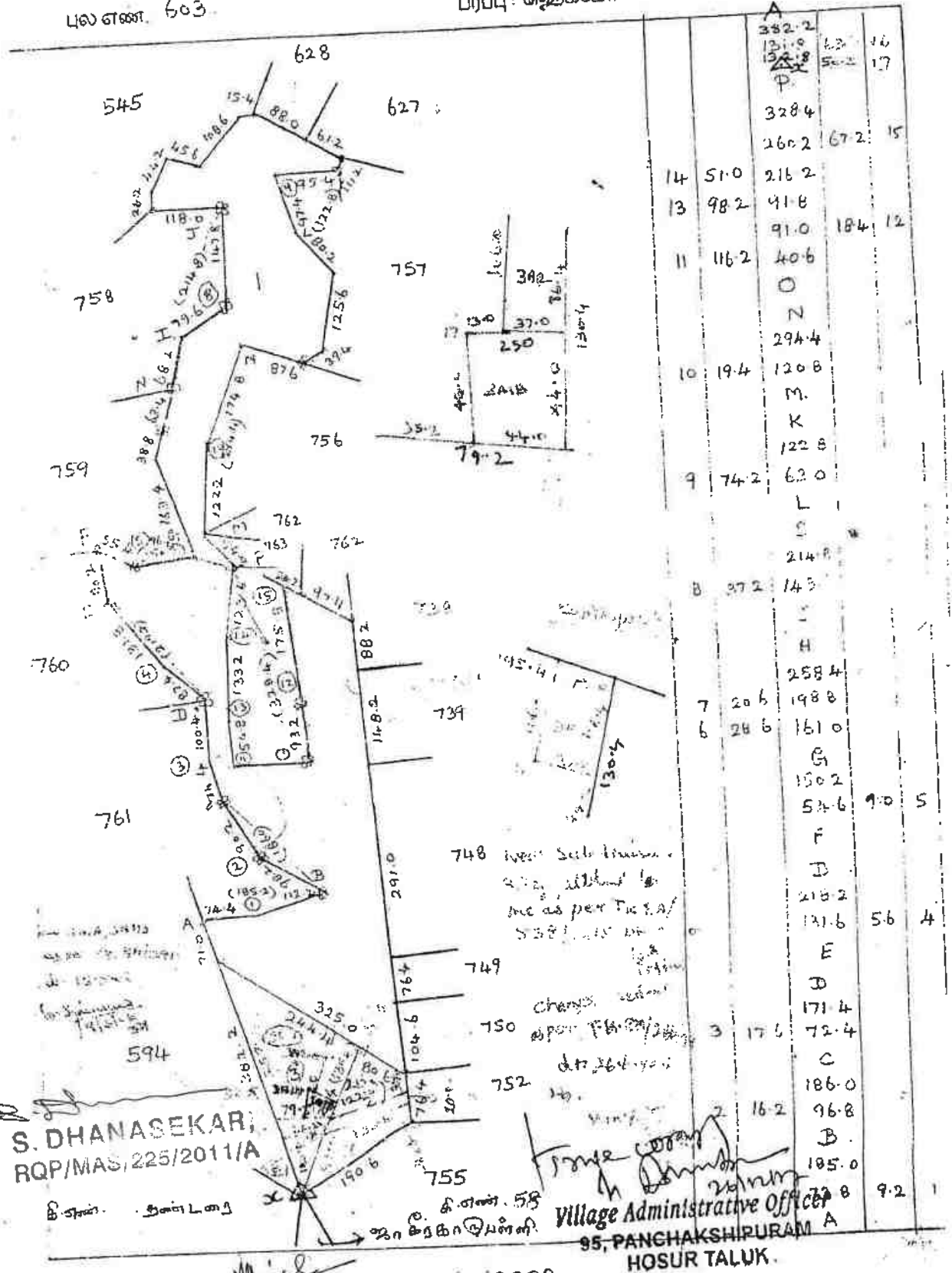
பட்டம். சூரூர்

சிராமம்

பெயர். மஹேந்திரபுரம்

பல எண். 603

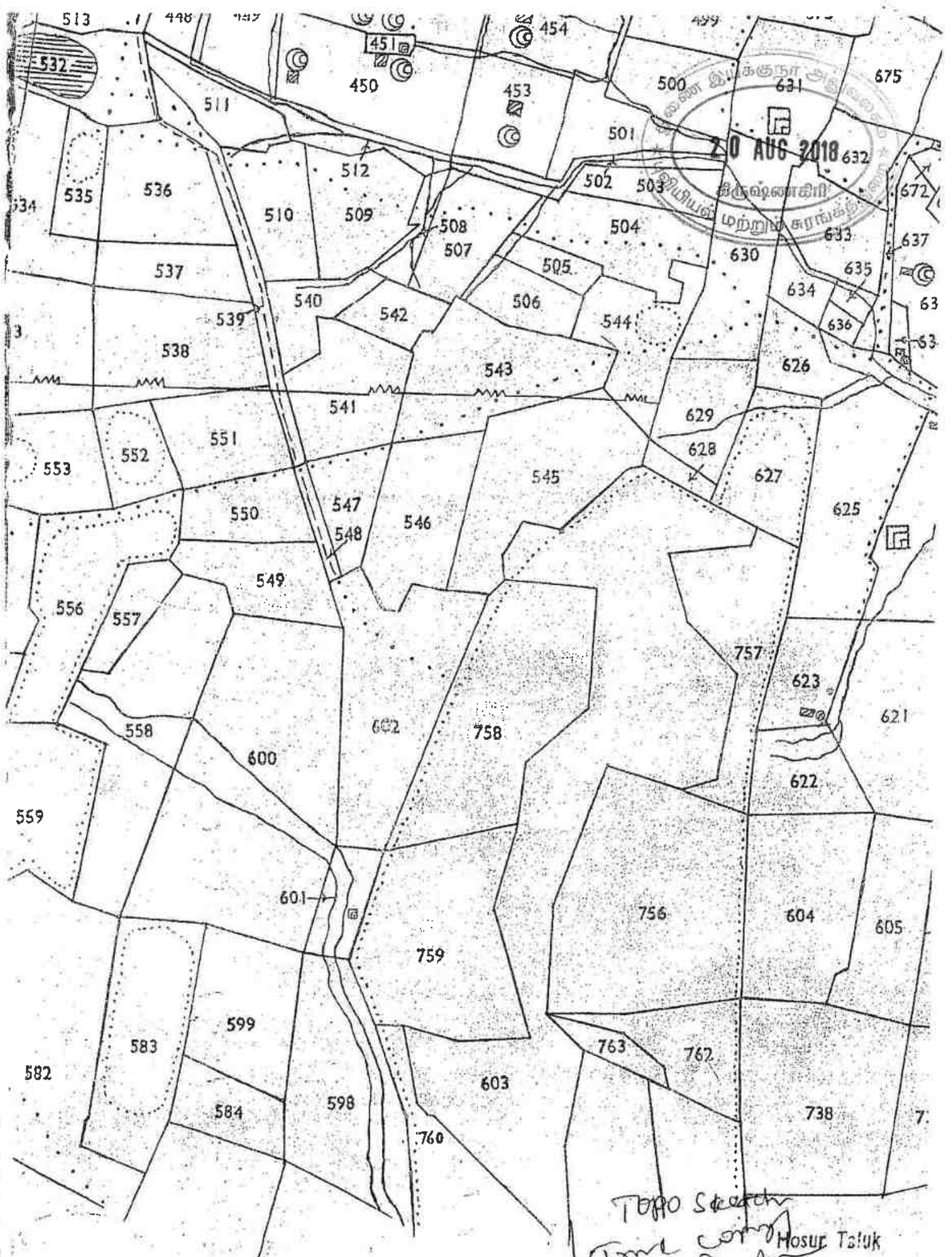
பரப்பு: ஒன்றங்கிலர் 25 ஏர். 51.5



		382.2			
		131.0	6.2	16	
		132.8		17	
		50.2			
		328.4			
		260.2	67.2	15	
14	51.0	216.2			
13	98.2	41.8			
		91.0	18.4	12	
11	116.2	40.6			
		0			
		294.4			
10	19.4	120.8			
		M.			
		K			
		122.8			
9	74.2	62.0			
		L			
		214.8			
B	37.2	14.3			
		H			
		258.4			
7	20.6	198.8			
6	28.6	161.0			
		G			
		150.2			
		54.6	9.0	5	
		F			
		D			
		218.2			
		131.6	5.6	4	
		E			
		D			
		171.4			
3	17.6	72.4			
		C			
		186.0			
2	16.2	96.8			
		B.			
		185.0			
		187.8			
		A			
		9.2		1	

S. DHANASEKAR;
RQP/MAS/225/2011/A

Village Administrative Officer
95-PANCHAKSHIRURAM
HOSUR TALUK.



TOPO Sketch
 Town corner
 M. Dhanasekar
 26/12/18
 Village Administrative Officer
 95, PANCHAKSHIPURAM
 HOSUR TALUK

M. Dhanasekar

S. DHANASEKAR,
 ROP/MAS/225/2011/A

1	2	3	4	5	6	7	8	9	10	11	12	
602	3E	602-3 பா	ர	பு	...	8-5	10	1 09	0 78.0	0 85	559 மு. கிள்ளப்பா வும் இன்னும் இரண்டு பேர் களும். *	
									3 29.0	3 56		
603	1	603-பா	அ	தி.ஏ.த.	...	...	...	...	21 20.5	...	...	தீர்வை ஏற்படாத தரிக.
	2	-பா	ர	பு	...	8-5	...	0 62	1 60.0	1 00	88 மு. குள்ளப்பா(எ) முனியப்பா.	
	3	-பா	ர	பு	...	8-5	10	1 09	2 71.0	2 94	560 ந. மாரப்பாவும் இன்னும் இரண்டு பேர்களும். *	
									25 51.5	3 94		
604	IA	604- பா	ர	பு	...	8-5	10	1 09	0 28.0	0 31	181 இ. சையது சாயபு.	
	IB	-பா	ர	பு	...	8-5	10	1 09	1 09.5	1 19	260 ந. பாஷாசாயபு.	
			ர	பு	...	8-5	10	1 09	1 37.5	1 50	19 ந. ஆபிகல்வா.	
									2 75.0	3 00		
605	1	605-பா	ர	பு	...	8-5	10	1 09	1 26.0	1 35	240 மு. நாராய ணப்பா.	
	2	-பா	ர	பு	...	8-5	10	1 09	0 59.5	0 65	70 மு. கிருஷ்ணப்பா.	
									1 85.5	2 00		
606	1	606-பா	ர	பு	...	8-5	10	1 09	0 01.5	0 06	240 மு. நாராய ணப்பா.	
	2	-பா	ர	பு	...	8-5	10	1 09	0 81.0	0 88	70 மு. கிருஷ்ணப்பா.	
									0 82.5	0 94		
607	...	607	ர	பு	...	8-5	10	1 09	0 71.5	0 75	240 மு. நாராய ணப்பா.	
608	...	608	ர	பு	...	8-5	10	1 09	1 06.5	1 12	75 வெ. கிருஷ் ணப்பா.	
609	...	609	ர	பு	...	8-5	0	1 09	0 60.0	0 62	75 வெ. கிருஷ் ணப்பா.	
610	...	610	அ	பு	...	8-5	10	1 09	2 00.5	2 19	...	

* விவரப்பட்டியைப் பார்க்கவும்.

True copy
Village Administrative Officer
95, PANCHAKSHIPURAM
HOSUR TALUK

**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 : 2.50.0Ha.

S.F. NO : 603/1 (PART-A)

VILLAGE : PANCHAKSHIPURAM.

TALUK : HOSUR.

DISTRICT : KRISHNAGIRI.

STATE : TAMIL NADU.

APPLICANT

**M/s. S.S.V BLUE METALS
PROP: THIRU.R.RAJASEKARAN,**

S/o.RAMASUBBU,

NO. 89, THALLY HUDCO,

HOSUR TALUK,

KRISHNAGIRI DISTRICT.

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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5.0	GEOLOGY AND MINERAL RESERVES	12
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ANNEXURES

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7.	COPY OF RQP CERTIFICATE	VII
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LIST OF PLATES

SL. NO.	DESCRIPTION	PLATE NO.	SCALE
1	LOCATION PLAN	I	NOT TO SCALE
2	ROUTE MAP	IA	NOT TO SCALE
3	TOPO SHEET KEY MAP	IB	1:50,000
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M. J. S.

M/s. S.S.V BLUE METALS
PROP: THIRU.R. RAJASEKARAN,
S/o. RAMASUPPU,
NO. 89, THALLY HUDCO,
HOSUR TALUK,
KRISHNAGIRI DISTRICT.



CONSENT LETTER FROM THE APPLICANT

The Mining Plan in respect of **Rough Stone** quarry over an extent of **2.50.0 Hectares** of **Government Poromboke land** in S.F.Nos.603/1 (PART-A) of **PANCHAKSHIPURAM Village, HOSUR TALUK, 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,
Omalar 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.

Signature of the Applicant
For M/s. S.S.V BLUE METALS


R.RAJASEKARAN

Place: KRISHNAGIRI

Date:





Prop : **S. DHANASEKAR**, M.Sc.(Geo), M.M.E.A.I
Geologist / Recognized Qualified person.

KRK MEMORIAL MINING SERVICES

5/30-B, Awwai 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 **2.50.0 Hectares** of **Government Poromboke land** in **S.F.Nos.603/1 (PART-A)** of **PANCHAKSHIPURAM** Village, **HOSUR TALUK, KRISHNAGIRI** District, Tamil Nadu State for **M/s. S.S.V BLUE METALS PROP: THIRU.R.RAJASEKARAN** 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:



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



Over an extent of 2.50.0 Hectares of Government Poromboke land in S.F.Nos.603/1 (PART-A) of
PANCHAKSHIPURAM Village, HOSUR Taluk, KRISHNAGIRI District, 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. M/s. S.S.V BLUE METALS PROP:R. RAJASEKARAN, S/o. RAMASUBBU residing at NO.89, THALLY HUDCO, HOSUR TALUK, And KRISHNAGIRI DISTRICT has applied for the grant of quarry lease Under Tender/Auction to quarry **Rough Stone** over an extent of **2.50.0Hectares**. of **Government Poromboke land** in S.F.Nos.603/1 (PART-A) of **PANCHAKSHIPURAM Village, HOSUR 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. 87, 00,000 /- in a tender cum public action conducted by the Government of Tamilnadu and Rough Stone quarry lease had been granted to M/s. S.S.V BLUE METALS PROP: THIRU.R.RAJASEKARAN in 2.50.0 Hectares of **Government Poromboke land** in S.F.Nos. 603/1 (PART-A) of **PANCHAKSHIPURAM Village, HOSUR TALUK, and KRISHNAGIRI District** of Tamil Nadu State for a period of FIVE Years Vide Proceeding RC.No. 182/2018/MINES dated: 09.03.2018.
3. The District Collector, **KRISHNAGIRI** in his letter Rc. No. 182/2018/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 M/s. S.S.V BLUE METALS PROP: THIRU.R.RAJASEKARAN 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.

M. Raju

S. Dhanasekar
S.DHANASEKAR, M.Sc.(Geo)
ROP/MAS/225/2011/A

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 would 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 then 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 **2417380M³** and Mineable Reserves is estimated as **757730M³** and recoverable reserves is estimated as **757730M³** 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 **757730M³** of **Rough Stone**.
Production Schedule is proposed an average production of **151546M³** of **Rough Stone** per year.
11. Environmental parameters,
- There is no interstate boundary around 10Kms radius.
 - 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,
- Dust Control at source while drilling and Proposed Control Blasting,
 - Dust suppression at loading point and transport haul roads,
 - 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.
 - Unnecessary land degradation should be avoided or damaged land should be reclaimed or rehabilitated.
 - Avoid uneven rat hole mining and follow scientific and systematic mining by safe bench system of open cast mining.
 - Mining near major fracture zones if any should be avoided to control ground water fluctuation in the adjacent agricultural lands.
 - Emission test of vehicles should be in stack to maintain minimum emission level of flue gases.

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

2.0 EXECUTIVE SUMMARY:

a.	Name of the Village	:	PANCHAKSHIPURAM
b.	Name of the Panchayat / Union	:	PANCHAKSHIPURAM / HOSUR
c.	The proposed total Movable Reserves	:	757730M³ (Total Depth of 91m - Top Soil 1m + Rough stone 90m) Above Surface Ground Level is 5m and Below Surface Ground Level is 86m.
d.	The proposed quantity of reserves (level of production) for Five Years to be mined is (Recoverable reserves)	:	757730M³ (Total Depth of 91m - Top Soil 1m + Rough stone 90m) Above Surface Ground Level is 5m and Below Surface Ground Level is 86m.
e.	Total extent of the area	:	2.50.0Ha
f.	Proposed Period of mining	:	Five years
g.	Proposed Depth of mining	:	5m from above ground Surface level and 86m from below ground surface level. Total depth- 91m
h.	Existing Pit Dimension	:	PIT : 14005 Sq.mt X Avg. 18.6m (D) = 260493Cbm
i.	Average production per year	:	151546M³
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.89,40,000/- Rs. 20,00,000/- Rs. 3,25,000/-
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° 35' 48.48" N To 12° 35' 56.64" N 77° 47' 21.61" E To 77° 47' 28.27" E 12° 35' 55.62" N 77° 47' 28.27"E 12° 35' 48.49" N 77° 47' 27.61"E 12° 35' 56.65" N 77° 47' 21.61"E 12° 35' 54.06" N 77° 47' 21.94"E

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3.0 GENERAL INFORMATION:

3.1	a.	Name of the Applicants	:	M/s. S.S.V BLUE METALS PROP : THIRU.R.RAJASEKARAN
	b.	Address of the Applicant with phone No and e-mail id if any	:	S/o. RAMASUBBU, NO. 89, THALLY HUDCO, HOSUR TALUK, KRISHNAGIRI DISTRICT.
	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. 182/2018/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 HA
Tamilnadu	Krishnagiri	Panchakshipuram / hosur	Hosur	Panchakshipuram	603/1 Part-A	2.50.0
TOTAL =						2.50.0 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° 35' 48.48" N To 12° 35' 56.64" N 77° 47' 21.61" E To 77° 47' 28.27" E		
e.	Existence of Public Road / Railway line if any nearby the area and approximate distance		:	MACHINAYAKANAPALLI -- JAGIRKARUPALLI Via= 1.0 Km MATTHIGIRI - DENKANIKOTTAI = 15.0 Km KRISHNAGIRI - HOSUR - MATTHIGIRI - PANCHAKSHIPURAM = 72Kms Quarry site is located in Eastern side at a distance of 1.5 km. from PANCHAKSHIPURAM Village.		

Mejje

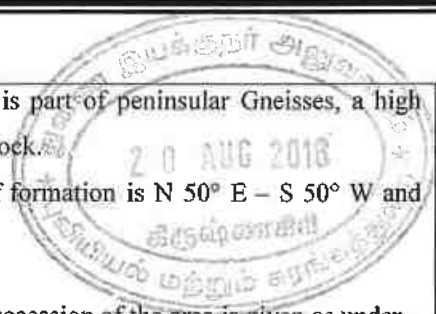
PART - A

5.0 GEOLOGY AND MINERAL RESERVES:



5.1	a. Topography	:	<ol style="list-style-type: none"> The area for fresh quarry lease is Undulating 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. No major river is found nearby the fresh area. Water table is noticed at a depth of 102m from below the surface in the adjacent open wells of the area. Temperature of the area is reported to be 18°C to a maximum of 38°C during summer. Rainfall of this area is about 800mm to 900 mm during the monsoons in a year. 									
	b. Infrastructures nearby the Existing Lease area. <ol style="list-style-type: none"> Post Office Police Station G.H Fire service Railway Station School Airport Seaport 	:	PANCHAKSHIPURAM – 2.0 kms DENKANIKOTTAI – 7.0kms DENKANIKOTTAI – 7.0kms DENKANIKOTTAI – 7.0kms KELAMANGALAM – 9.0 kms PANCHAKSHIPURAM – 2.0 kms BANGALORE - 42 Kms CHENNAI – 282 kms									
	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"> <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 Charnockites</td> </tr> </tbody> </table>		Age	Rock Formation	1.	Recent to Sub recent	Soil, Alluvium	2.	Archaean	Granites, basic granulites, Peninsular Gneiss, Calc Gneiss and Charnockites
	Age	Rock Formation										
1.	Recent to Sub recent	Soil, Alluvium										
2.	Archaean	Granites, basic granulites, Peninsular Gneiss, Calc Gneiss and Charnockites										
	d. Geology of the Lease Area		<ol style="list-style-type: none"> The area is mainly composed of Archaean crystalline metamorphic complex. The rock type noticed in the area for lease is Granite Gneiss which contains mostly Quartz and Feldspar with some ferromagnesian minerals. 									

M. Rajan



3. The Granite Gneiss is part of peninsular Gneisses, a high grade metamorphic rock.
4. The general trend of formation is N 50° E – S 50° W and dip towards SE-70°.

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	Peninsular 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

14005 Sq.mt X Avg. 18.6m (D) = 260493Cbm

b. Geological Reserves:
Top Soil: The Thickness of Top soil in this area is 1.0m and the total volume of topsoil will be 4877m³. The Geological reserve is estimated as 2417380m³ respectively, at the rate of 100% recovery up to a depth of wise. The Geological reserve of Rough stone and Top soil is calculated up to a depth of **5m** from above surface ground level and **86m** from below surface ground level, **Total Depth-91m (1m top soil + 90m Rough Stone).**

GEOLOGICAL RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m(100%)	Topsoil
XY-AB	I	13	79	1			1027
	II	13	79	5	5135	5135	
	III	13	79	5	5135	5135	
	IV	13	114	5	7410	7410	
	V	123	188	5	115620	115620	
	VI	123	188	5	115620	115620	
	VII	123	188	5	115620	115620	
	VIII	123	188	5	115620	115620	
	IX	123	188	5	115620	115620	
	X	123	188	5	115620	115620	
	XI	123	188	5	115620	115620	
	XII	123	188	5	115620	115620	
	XIII	123	188	5	115620	115620	
	XIV	123	188	5	115620	115620	
	XV	123	188	5	115620	115620	
	XVI	123	188	5	115620	115620	
	XVII	123	188	5	115620	115620	
	XVIII	123	188	5	115620	115620	
	XIX	123	188	5	115620	115620	
Total=					1751980	1751980	1027

Major



XY-CD	I	77	50	1			
	II	77	50	2	7700		
	III	77	50	5	19250		
	IV	77	50	5	19250		
	V	96	129	5	61920	61920	
	VI	96	129	5	61920	61920	
	VII	96	129	5	61920	61920	
	VIII	96	129	5	61920	61920	
	IX	96	129	5	61920	61920	
	X	96	129	5	61920	61920	
	XI	96	129	5	61920	61920	
	XII	96	129	5	61920	61920	
	XIII	96	129	5	61920	61920	
	XIV	96	129	5	61920	61920	
Total=					665400	665400	3850
Grand Total=					2417380	2417380	4877

c. Mineable Reserves:

Top soil:

The Thickness of Top soil in this area is 1.0mts and the Total volume of Topsoil will be $8186m^3$. The mineable reserves and the recoverable reserves are $757730m^3$ and $757730m^3$ respectively, at the rate of 100% recovery up to a depth of wise. **Total Depth-91m** Above Surface Ground level 5m and Below Surface Ground Level 86m. (1m top soil + 90m Rough Stone).

MINEABLE RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m(100%)	Topsoil
XY-AB	I	110	60	1			6600
	II	110	59	5	32450	32450	
	III	110	54	5	29700	29700	
	IV	110	84	5	46200	46200	
	V	110	148	5	81400	81400	
	VI	105	138	5	72450	72450	
	VII	100	128	5	64000	64000	
	VIII	95	118	5	56050	56050	
	IX	90	108	5	48600	48600	
	X	85	98	5	41650	41650	
	XI	80	88	5	35200	35200	
	XII	75	78	5	29250	29250	
	XIII	70	68	5	23800	23800	
	XIV	65	58	5	18850	18850	
	XV	60	48	5	14400	14400	
	XVI	50	38	5	9500	9500	
	XVII	40	28	5	5600	5600	
	XVIII	30	18	5	2700	2700	
	XIX	20	8	5	800	800	
TOTAL=					612600	612600	6600

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XY-CD	I	61	26	1			1586
	II	60	24	2	2880	2880	
	III	60	24	5	7200	7200	
	IV	55	19	5	5225	5225	
	V	68	93	5	31620	31620	
	VI	63	83	5	26145	26145	
	VII	58	73	5	21170	21170	
	VIII	53	63	5	16695	16695	
	IX	48	53	5	12720	12720	
	X	43	43	5	9245	9245	
	XI	38	33	5	6270	6270	
	XII	33	23	5	3795	3795	
	XIII	28	13	5	1820	1820	
	XIV	23	3	5	345	345	
Total=				145130	145130	1586	
Grand Total=				757730	757730	8186	

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	:	<p>Bench height = 7mts.</p> <p>Bench width = 5mts</p>
6.4	Details of Overburden / Mineral Production proposed for Five year	:	<p>Top Soil/ Overburden production details follows:</p> <p>The Thickness of topsoil noticed in this area is 1.0m and the total volume of topsoil will be 8186m³.</p>
<p>Year wise reserves calculations :</p> <p>Rough stone production details as follows:</p> <p>The average proposed rate of production of Rough Stone is about 75773 0m³ for five years. The average proposed rate of production of Rough Stone is about 151546m³ per year. at the rate of 100% recovery upto a 91m depth (1m Top soil + 90m Rough Stone) Above Surface Ground level 5m and Below Surface Ground Level 86m. Proposed Production of five Years.</p>			

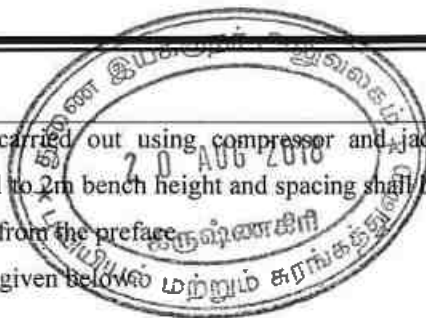
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YEARWISE RESERVES

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m (100%)	Topsoil	
I Year	XY-AB	I	110	60	1				
		II	110	59	5	32450	32450		
		III	110	54	5	29700	29700		
		IV	110	84	5	46200	46200		
	XY-CD	I	61	26	1			1586	
		II	60	24	2	2880	2880		
		III	60	24	5	7200	7200		
		IV	55	19	5	5225	5225		
		V	68	93	5	31620	31620		
	Total						155275	155275	8186
II Year	XY-AB	V	110	148	5	81400	81400		
		VI	105	138	5	72450	72450		
	Total						153850	153850	
III Year	XY-AB	VII	100	128	5	64000	64000		
		VIII	95	118	5	56050	56050		
	XY-CD	VI	63	83	5	26145	26145		
		VII	58	73	5	21170	21170		
		VIII	53	63	5	16695	16695		
Total						184060	184060		
IV Year	XY-AB	IX	90	108	5	48600	48600		
		X	85	98	5	41650	41650		
		XI	80	88	5	35200	35200		
	XY-CD	IX	48	53	5	12720	12720		
		X	43	43	5	9245	9245		
Total						147415	147415		
V Year	XY-AB	XII	75	78	5	29250	29250		
		XIII	70	68	5	23800	23800		
		XIV	65	58	5	18850	18850		
		XV	60	48	5	14400	14400		
		XVI	50	38	5	9500	9500		
		XVII	40	28	5	5600	5600		
		XVIII	30	18	5	2700	2700		
		XIX	20	8	5	800	800		
	XY-CD	XI	38	33	5	6270	6270		
		XII	33	23	5	3795	3795		
		XIII	28	13	5	1820	1820		
		XIV	23	3	5	345	345		
	Total						117130	117130	
	Grand Total						757730	757730	8186

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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 8186m³. Topsoil formation will be removed and Dumping to All Side of the 7.5m & 10.0m boundary barrier of the lease area. And it will be utilised for plantation purposes.

Proposed Dump Dimensions:
Top Soil-6371 Sqm X 1.28m(H) =8186m ³

6.7 Brief Note on Conceptual Mining Plan for the entire lease period

: Conceptual Mining Plan is prepared with an object of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc., Average Ultimate Pit dimension in given as Under,

ULTIMATE PIT DIMENSIONS				
Section	Bench	Length in (m)	Width in (m)	Depth in (m)
XY-AB	i	110	60	1
	ii	110	59	5
	iii	110	54	5
	iv	110	84	5
	v	110	148	5

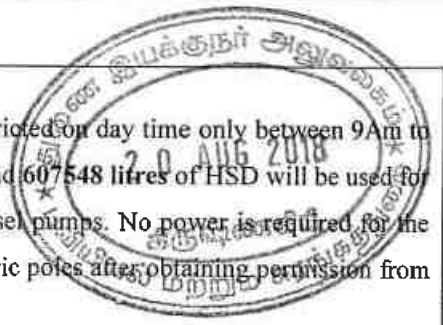
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	vi	105	138	5
	vii	100	128	5
	viii	95	118	5
	ix	90	108	5
	x	85	98	5
	xi	80	88	5
	xii	75	78	5
	xiii	70	68	5
	xiv	65	58	5
	xv	60	48	5
	xvi	50	38	5
	xvii	40	28	5
	xviii	30	18	5
	xix	20	8	5
XY-CD	i	61	26	1
	ii	60	24	2
	iii	60	24	5
	iv	55	19	5
	v	68	93	5
	vi	63	83	5
	vii	58	73	5
	viii	53	63	5
	ix	48	53	5
	x	43	43	5
	xi	38	33	5
	xii	33	23	5
	xiii	28	13	5
	xiv	23	3	5

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.

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Energy:

Electricity for mines and lights only at nights (working is restricted on day time only between 9Am to 5Pm). Diesel (HSD) will be used for quarrying machines around 607548 litres of HSD will be used for the entire project life. Diesel will be brought from nearby diesel pumps. No power is required for the project. Lightings on the night will be taken from nearby electric poles after obtaining permission from concerned authorities.

For Top soil:

Per hour excavator will consume = 10 litres / hour
 Per hour excavator will excavate = 60m³ of Top soil
 For 8186m³ = 8186/60
 = 136.43 hours
 Diesel consumption 136.43 working hours = 136.43 x 10 litres
Total diesel consumption = 1364litres of HSD will be utilized for top soil

For Rough stone:

Per hour excavator will consume = 16 litres / hour
 Per hour excavator will excavate = 20m³ of rough stone
 For 757730m³ = 757730/20
 = 37886.5hours
 Diesel consume 37886.5working hours = 37886.5hours x 16 litres
Total diesel consumption = 606184 litres of HSD will be utilized for rough stone

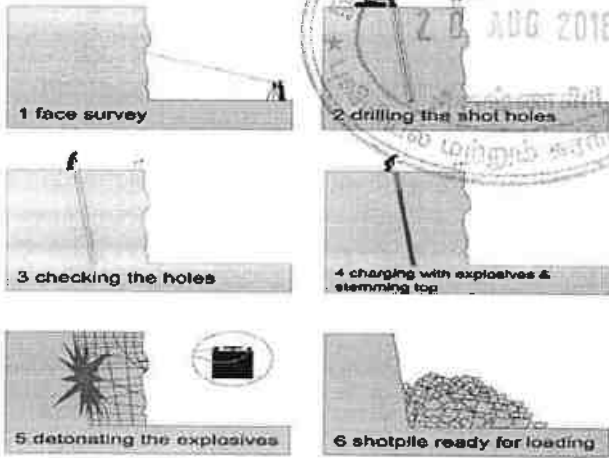
Total diesel consumption is around = 607548 litres of HSD for the entire period of life

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"> <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>505.15 M³.</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	:	505.15 M ³ .
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Quantity of rock broken per day	:	505.15 M ³ .																														

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ROCK BLASTING



7.2 Types of Explosives

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

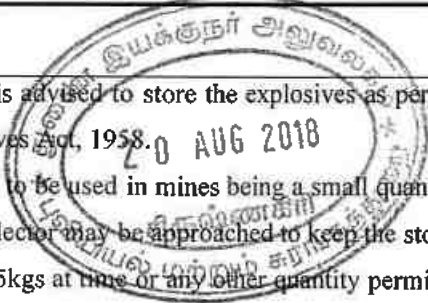
S. No	Description	Class / Division	Type	Size
1.	Slurry	Class - 3	Nitro Compound	25 x 200
2.	Detonators	Class - 3	Ordinary and elec (OD & ED)	6.5 x 32
3.	Safety fuse	Class - 6	Blue sump fuse coils of 10mts each	

7.3 Measures proposed to minimize ground vibration due to 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.

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7.4	Storage of Explosives and safety measures to be taken while Proposed Control Blasting.	<p style="text-align: center;">  20 AUG 2018 </p> <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 or 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 102m below ground level in nearby wells of this area. (Mining depth taken as 5m from above ground Surface level & 86m below ground surface level. Total depth-91m). 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>

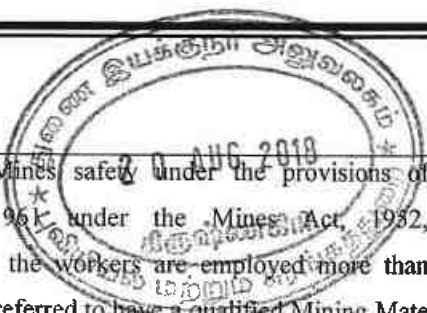
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9.0 OTHER PERMANENT STRUCTURES:

9.1	Habitations / Village	:	There are no villages within a radius of 500m. The nearest habitations with the population is given as under,																				
			<table border="1"> <thead> <tr> <th>Direction</th> <th>Village</th> <th>Distance in Kms</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>North</td> <td>MACHINAYAKANAPALLI</td> <td>1.8Kms</td> <td>200</td> </tr> <tr> <td>East</td> <td>NAGAPPAN AGRAHARAM</td> <td>1.5Kms</td> <td>220</td> </tr> <tr> <td>South</td> <td>JAGIRKARUPALLI</td> <td>1.8kms</td> <td>250</td> </tr> <tr> <td>West</td> <td>PANCHAKSHIPURAM</td> <td>1.5Kms</td> <td>230</td> </tr> </tbody> </table>	Direction	Village	Distance in Kms	Population	North	MACHINAYAKANAPALLI	1.8Kms	200	East	NAGAPPAN AGRAHARAM	1.5Kms	220	South	JAGIRKARUPALLI	1.8kms	250	West	PANCHAKSHIPURAM	1.5Kms	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)	:	MACHINAYAKANAPALLI – JAGIRKARUPALLI Via= 1.0 Km MATTHIGIRI - DENKANIKOTTAI = 15.0 Km KRISHNAGIRI - HOSUR – MATTHIGIRI - PANCHAKSHIPURAM = 72Kms Quarry site is located in Eastern side at a distance of 1.5 km. from PANCHAKSHIPURAM Village.																				
9.6	Places of Worship	:	There are no Places of Worship within a radius of 500m.																				
9.7	Reserved Forest / Forest / Social Forest / Wild Life Sanctuary etc.,	:	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 11.10 Kms Form fresh lease area. Wildlife Boundary GPS (12°32'11.95"N - 77°56' 50.58"E) Quarry Boundary GPS (12° 35' 48.50"N - 77° 47' 24.55"E)																				
9.9	Any Other Structures	:	Nil																				

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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, 1932, whenever the workers are employed more than 10, it is preferred to have a qualified Mining Mate to keep all the production workers directly under his control and supervision.</p> <p>2. The following man power is proposed for quarrying Rough Stone during the five years period to achieve the proposed production and to comply the provisions of the Government norms.</p> <table border="1"> <tr> <td>1.</td> <td>Skilled</td> <td>Operator</td> <td>2 No.</td> </tr> <tr> <td></td> <td></td> <td>Mechanic</td> <td>1 No.</td> </tr> <tr> <td></td> <td></td> <td>Blaster/Mat</td> <td>1 No.</td> </tr> <tr> <td>2.</td> <td>Semi - skilled</td> <td>Driver</td> <td>2 Nos</td> </tr> <tr> <td>3.</td> <td>Unskilled</td> <td>Musdoor / 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 colspan="2">Management & Supervisory staff</td> <td>3No.</td> </tr> <tr> <td></td> <td colspan="2">Total =</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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		Office Boy	1No																																				
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.																																				

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e.	Precautionary safety measures to the Laborers	: Safety provisions like helmet, goggles, safety shoes, Dust mask, Ear muffs etc have to be provided as per the circulars and amendments made for Mine labours under the guidance of DGMS being a mechanized operation. Necessary training will be conducted once in a year to all the employees with the help of qualified and experienced officers to train about the safe and system at quarrying operation.
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PART – B

11.0 ENVIRONMENTAL MANAGEMENT PLAN:

11.1	Existing Land Use Pattern	: The existing land use pattern is given as under.																												
		<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Land Use</th> <th>Present Area (Hect)</th> <th>Area in use during the quarrying period (Hect)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Quarrying Pit</td> <td>1.40.0</td> <td>1.86.3</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>0.01.1</td> <td>0.02.0</td> </tr> <tr> <td>4.</td> <td>Green Belt & dump</td> <td>NIL</td> <td>0.60.7</td> </tr> <tr> <td>5.</td> <td>Unutilized</td> <td>1.09.0</td> <td>NIL</td> </tr> <tr> <td></td> <td>Total =</td> <td>2.50.0Ha</td> <td>2.50.0Ha</td> </tr> </tbody> </table>	Sl. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)	1.	Quarrying Pit	1.40.0	1.86.3	2.	Infrastructure	NIL	0.01.0	3.	Roads	0.01.1	0.02.0	4.	Green Belt & dump	NIL	0.60.7	5.	Unutilized	1.09.0	NIL		Total =	2.50.0Ha	2.50.0Ha
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4.	Green Belt & dump	NIL	0.60.7																											
5.	Unutilized	1.09.0	NIL																											
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11.	Water Regime	: The ground water table is reported as 102m below ground level in nearby wells of this area. (Mining depth taken as 5m from above ground Surface level & 86m from below ground surface level. Total depth- 91m). Now, the present quarry shall be proposed above the water table. Hence, quarrying may not affect the ground water.																												
11.3	Flora and Fauna	: 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.																												
11.4	Climatic conditions	: 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.																												
11.5	Human Settlement	: The nearest habitations with the population is given .																												
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West	PANCHAKSHIPURAM	1.5Kms	230																											

D. Jayalal

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	Dust is expected to be generated from drilling, hauling roads; place of excavation etc and it will be suppressed by periodical wetting of lands.
	b. Land degradation	Land degradation is by means of cutting the trees and removal of fertile soil does not arise. Proposed usage of land for the next five years shall be less than 2.50.0Ha. Afforestation will be started during the first year of mining operation itself.
	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.

M. J. J.

	d. Socio economic benefits arising out of mining	:	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	:	There is no requirement for waste management as there is 100% recovery percentage.
11.10	Proposal of Reclamation of Land affected during mining activities and at the end of mining.	:	The present mining is proposed to an average depth of 5m from above ground Surface level. And 86m from below ground surface level. Total depth- 91m. 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.87,00,000/- (Leased Tender Amount for Government Poramboke Land)
	2. Labour Shed	:	Rs. 1,20,000/-
	3. Sanitary Facility	:	Rs. 50,000/-
	4. Fencing cost	:	Rs. 70,000/-
	Total=	:	Rs.89,40,000/-
	Operational Cost:		
	Machinery cost	:	Rs.20,00,000/-

Megala



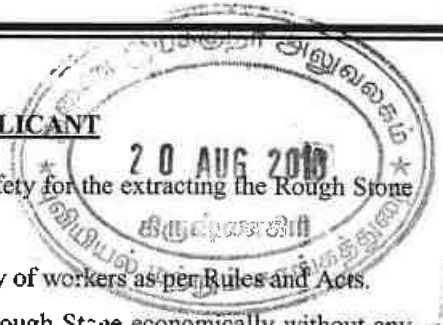
EMP Cost:		
1. Drinking water facility	:	Rs. 1,10,000/-
2. Safety kits	:	Rs. 60,000/-
3. Water sprinkling	:	Rs. 55,000/-
4. Afforestation	:	Rs. 25,000/-
5. Water quality test	:	Rs. 25,000/-
6. Air quality test	:	Rs. 25,000/-
7. Noise/vibration test	:	Rs. 25,000/-
Total=		Rs. 3,25,000/-
Total Project Cost	:	Rs. 1,12,65,000/-

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 5m from above ground Surface level. And 86m from below ground surface level. Total depth- 91m. 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 fresh lease Area.

M. J. S.

13.0 ANY OTHER DETAILS INTEND TO FURNISH BY THE APPLICANT



- (i) Permission will be obtained from the Director of Mines Safety for the extracting the 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 Rc. No. 182/2018/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 M/s. S.S.V BLUE METALS PROP: THIRU.R.RAJASEKARAN 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 fresh Rough Stone Quarry for a period of Five Years.
- (viii) The average proposed production of Rough stone for Five Years is 757730m³ and average production per year is 151546m³.

This Mining Plan is approved in accordance with the guidelines / instruction issued and in compliance of the particulars specified in the order No. 182/2018/Mines of the Deputy Director of Geology and Mining, Krishnagiri and subject to the conditions and terms and down under Tamil Nadu Minor Mineral Concession Rules, 1959 and Minor Mineral Conservation and Development Rule 2010.

[Signature]
Deputy Director of Geology and Mining
Krishnagiri.

[Signature]
S.DHANASEKAR, M.Sc., (Geo)
RQP/MAS/225/2011/A

[Signature] 20/8/18

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

Letter Rec. No. 182/2018 Dated 8.2018

[Signature]

ANNEXTURE 2 10 AUG 2018

ந.க.எண்.182/2018/கனிமம்

மாவட்ட ஆட்சியர் அலுவலகம்,
(புவியியல் மற்றும் சுரங்கத்துறை)
கிருஷ்ணகிரி மாவட்டம்,
கிருஷ்ணகிரி.
நாள் 09.02.2018

குறிப்பாணை

பொருள்: கனிமங்களும் குவாரிகளும் - சிறுகனிமம் - சாராரண கற்கள் கிருஷ்ணகிரி மாவட்டம் - ஓசூர் வட்டம் - பஞ்சாட்சிபுரம் கிராமம் அரசு புல எண் 603/1 (பகுதி-ஏ) ல் 250.0 ஹெக்டேர் பரப்பளவில் அரசு நிலத்தில் அமைந்துள்ள சாதாரண கற்குவாரிக்கு டெண்டருடன் இணைந்த ஏல முறையில் குத்தகை வழங்க டெண்டர்/பொது ஏலம் நடத்தப்பட்டது - பொது ஏலத்தில் அதிக தொகை கோரிய திரு.ராஜசேகரன் த/பெ ராமசுப்பு, எண்.1சி-89 தனி அட்கோ, ஓசூர் வட்டம், கிருஷ்ணகிரி 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.ராஜசேகரன் த/பெ ராமசுப்பு, எண்.1சி-89 தனி அட்கோ, ஓசூர் வட்டம், கிருஷ்ணகிரி மாவட்டம் என்பவரது டெண்டர் விண்ணப்பம் நாள்: 06.02.2018.

கிருஷ்ணகிரி மாவட்டம், ஓசூர் வட்டம், பஞ்சாட்சிபுரம் கிராமம் அரசு புல எண் 603/1 (பகுதி-ஏ) ல் 250.0 ஹெக்டேர் பரப்பளவில் அமைந்துள்ள சாதாரண கற்குவாரிக்கு ஐந்து ஆண்டுகளுக்கு குவாரி குத்தகை வழங்குவது தொடர்பாக 07.02.2018 அன்று நடைபெற்ற பொது ஏலத்தில் திரு.ராஜசேகரன் த/பெ ராமசுப்பு, எண்.1சி-89 தனி அட்கோ, ஓசூர் வட்டம், கிருஷ்ணகிரி மாவட்டம் என்பவர் அரசு நிர்ணயம் செய்த குறைந்தபட்ச குத்தகை தொகையை விட அதிக தொகையான ரூ.87,00,000/- (ரூபாய் எண்பத்தி ஏழு 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 மட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும், அரசு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி செய்யவேண்டும்.

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





2. எனவே, கிருஷ்ணகிரி மாவட்டம், ஓசூர் வட்டம், பஞ்சாட்சிபுரம் கிராமம் ஆரக் புல எண் 603/1 (பகுதிஏ) ல் 250.0 ஹெக்டேர் 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 மாசுகட்டுப்பாட்டு வாரிய இசைவு ஆகியவற்றை சமர்ப்பிக்கவேண்டும் என திரு.ராஜசேகரன் த/பெ ராமசுப்பு, 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.

பெறுதல் :

திரு.ராஜசேகரன்
த/பெ ராமசுப்பு,
எண்.1சி-89 தனி அட்கோ,
ஓசூர் வட்டம், கிருஷ்ணகிரி மாவட்டம்

பதிவகுச்சலில் ஒப்பந்தக்
அட்டையுடன்

மாவட்ட ஆட்சியர்,
கிருஷ்ணகிரி

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

S. DHANASEKAR,
RQP/MAS/225/2011/A

தமிழ்நாடு அரசு
2017

20 AUG 2018

கிருஷ்ணகிரி



கிருஷ்ணகிரி மாவட்ட அரசிதழ்

சிறப்பு வெளியீடு

ஆணையின்படி வெளியிடப்பட்டது

கிருஷ்ணகிரி, டிசம்பர் 30, 2017

[வேலிளம்பி, மாரகழி 15 - கிருவள்ளூர் ஆண்டு 2048]

[எண் 24

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 இவ்வறிவிக்கையுடன் இணைக்கப்பட்ட அட்டவணையில் குறிப்பிட்டுள்ள அரசு புறம்போக்கு நிலங்களில் அமைந்துள்ள சாதாரண கற்குவாரிகளிலிருந்து கட்டுமானப்பணிகளுக்கு உபயோகப்படுத்தப்படும் சாதாரண கட்டுக்கல், சக்கைகல், வேலிகல் ஜல்வி ஆகியவற்றை குவாரி செய்வதற்காக குத்தகை உரிமம் பெற விருப்பம் 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 அரசிதழுடன் இணைக்கப்பட்டுள்ள தமிழ்நாடு சிறு கனிமச் சலுகை விதிகளின் இணைப்பு VI-B ல் கண்டுள்ள படிவத்தில் பூர்த்தி செய்த விண்ணப்பங்கள் மேற்கண்ட நாள், நேரத்திற்குள் தேரிலி, தபாலிலோ, கிருஷ்ணகிரி மாவட்ட ஆட்சியர் அலுவலகத்தின் அறை எண். 30 ல் உள்ள கிருஷ்ணகிரி மாவட்ட புவியியல் மற்றும் சரங்கத்துறை, 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) ஆகியது தமிழ்நாடு சங்கங்களின் பதிவு சட்டம் 1975 (தமிழ்நாடு சட்டம் 27/1975) ஆகியவைகளின் கீழ் பதிவு பெற்றிருக்க வேண்டும்.

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

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03. சங்கத்தின் செயல்பாட்டு எல்லை சங்கவிதிகளில் (By-law) வரையறை செய்யப்பட்டு இருக்க வேண்டும் இந்த விதியின்கீழ் விண்ணப்பிக்கும் போது மேற்படி சங்கத்தின் செயல்பாட்டுக்கான வரையறை செய்யப்பட்டுள்ள பஞ்சாயத்து எல்லைக்குள் அமைந்துள்ள குவாரிகளுக்கு மட்டுமே விண்ணப்பித்தல் வேண்டும். சங்கத்தின் பூர்வீக விதிகள் நகல் இணைக்கப்பட்ட வேண்டும்.

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 9,10ல் கூறப்பட்டுள்ளபடி வருமான வரி மற்றும் சுரங்க வரி நிலுவையில்லா சான்று அல்லது ரூ 20.00 (ரூபாய் இருபது மட்டும்) மதிப்புள்ள முத்திரைத்தாளில் ஆணை உறுதி வாக்குமூலம் தோட்டரி 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) குழுவின் பெயரிலேயே வழங்கப்படும். தனி நபர் பெயரில் வழங்கப்பட மாட்டாது.

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

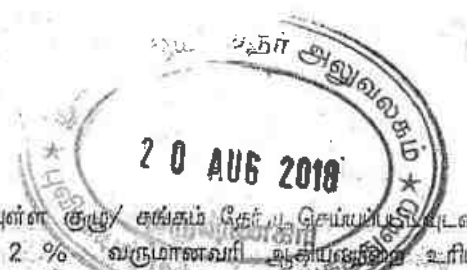
09. இவ்விதியின் கீழ் வழங்கப்படும் குவாரியின் குத்தகை காலம் 05 (ஐந்து) ஆண்டுகளாகும், குழந்தைகளைக் கேற்பவும், பொது நலன் கருதியும் கனிமத்தின் அளவைப் பொறுத்தும் குவாரி குத்தகை காலத்தை ஐந்து ஆண்டுகளுக்கு குறைவாக நிர்ணயம் செய்ய மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு. தமிழ்நாடு சிறு கனிமச் சலுகை விதிகளின் விதி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

10. ஒரே குவாரிக்கு குத்தகை கோரி சுய உதவிக்குழுவுடம் மற்றும் விடுவிக்கப்பட்ட கொத்தடிமைகளால் அமைக்கப்பட்ட தொழிலாளர் கூட்டுறவுச் சங்கமும் மனு செய்திருந்தால் முன்னுரிமை அடிப்படையில் விடுவிக்கப்பட்ட கொத்தடிமை தொழிலாளர் கூட்டுறவு 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 மாவட்ட 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/குழுவிடம் வழங்கப்பட்ட குவாரிக் குத்தகை மாவட்ட ஆட்சியரால் ரத்து செய்யப்படுவதுடன் குழு/சங்கத்தினர் எதிர்காலத்தில் முன்னுரிமை முறையில் குவாரி குத்தகை பெறும் தகுதியை இழந்தவராவர். அச்சுழந்திலையில் 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.19628 - 19629/2009 மற்றும் இவற்றின் மீது 27.02.2012 அன்று வழங்கியுள்ள ஆணைகளின்படி, இந்திய அரசு சுற்றுச் சூழல் மற்றும் வனத்துறை குறிப்பானை எண். எஸ்.11011/47/2011 - IA, II(M) நாள் 18.05.2012ன்படியும், 1959-ஆம் வருடத்தை தாழ்த்தி சிறுகனிமச் சலுகை திருத்தம் செய்யப்பட்டு சேர்க்கப்பட்ட விதிகள் 41 மற்றும் 42-ல் கண்டுள்ளவாறு அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டம் மற்றும் தமிழ்நாடு மாநில/கிருஷ்ணகிரி மாவட்ட சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் தடையின்மை சான்று பெற்று சமர்ப்பித்த பின்பு மட்டுமே குவாரி குத்தகை வழங்க முடியும்.

[Handwritten Signature]



13. எனவே இவ்விதிகளின்படி குவாரி குத்தகை உரிமம் பெற தகுதியுள்ள குழு/சங்கம் தேர்வு செய்யப்படுபவர்கள் அவர்களுக்கு முதல் காலாண்டு குத்தகை தொகை மற்றும் அதற்கான 2% வருமானவரி ஆகியவற்றை உரிய காலத்திற்குள் செலுத்தமாறு அறிவிக்கை அனுப்பப்படும். அவர்கள் முதல் காலாண்டு குத்தகை தொகையை செலுத்தியபின் அவர்களுக்கு குவாரி குத்தகை வழங்கப்பட உள்ள குவாரியின் புல் எண் பரப்பளவு ஆகிய விவரங்கள் அடங்கிய அறிவிக்கை வழங்கப்பட்டு அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டம் மற்றும் தமிழ்நாடு மாநில/கிருஷ்ணகிரி மாவட்ட சுற்றுசூழல் பாதிப்பற்றிட்டு ஆணையத்தின் தடையின்மை சான்று ஆகியவற்றை உரிய காலத்திற்குள் சமர்ப்பிக்கமாறு தெரிவிக்கப்படும்.

14. மேற்கண்ட அறிவிக்கை பெற்றுக்கொண்ட குழு/சங்கத்தினர் சுரங்கத்திட்டத்தை அங்கீகாரம் பெற்ற தகுதி வாய்ந்த நபர் (RQP) மூலம் அரசு தெரிவித்துள்ள விதிகளமற்றும் 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 சுற்றுசூழல் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் முன்பு சமர்ப்பித்து தடையின்மை சான்று கோரி விண்ணப்பித்து தடையின்மை சான்று மற்றும் தமிழ்நாடு மாசுகட்டுப்பாட்டு 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. காவேரி 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 சுற்றுசூழல் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் தடையின்மை சான்று ஆகியவற்றை குறிப்பிட்ட காலக்கெடுவிற்குள் சமர்ப்பிக்க தவறினால் மாவட்ட ஆட்சியர் அவர்களால் சம்பந்தப்பட்ட சங்க நிர்வாகிகளுக்கு மாவட்ட ஆட்சியர் முன்பு விசாரணைக்கு ஆஜராக வாப்பளித்து 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 பரப்பு வரி செலுத்த வேண்டும் மற்றும் குறிப்பிட்டுள்ள கால கெடுவிற்குள் உரிய முத்திரை தாளில் குத்தகை ஒப்பந்தப்பத்திரம் தயார் செய்து மாவட்ட ஆட்சியர் அவர்களுடன் குத்தகை ஒப்பந்தம் நிறைவேற்றி சம்பந்தப்பட்ட சார்பதிவாளர் 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.

Mysore

24. குத்தகை உரிமம் பெற்ற குழுக்கள்/ சங்கங்கள் குவாரிக்காக நிர்ணயிக்கப்பட்ட குத்தகை தொகை மட்டுமின்றி குத்தகை உரிமம் வழங்கப்பட்ட குவாரியில் இருந்து எடுத்துச் செல்லப்படும் அனைத்து வகையான சிறு கனிமங்களுக்கும் 1959 ஆம் ஆண்டு சிறு கனிமச்சலுகை விதிகள் இணைப்பு II இல் உள்ளவாறு சீனியரேஜ் கட்டணம் செலுத்தி கனிமங்களை எடுத்துச் செல்ல, கிருஷ்ணகிரி மாவட்ட புலியியல் மற்றும் சுரங்கத்துறை துணை இயக்குநர் அலுவலகத்தில் உரிய அனுப்புகைச் 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 சுரங்கவாயில் பதிவேட்டில் முறையாக பராமரித்தல் வேண்டும் அவற்றை சம்மந்தப்பட்ட அலுவலர்கள் தனித்தனிக் குழுக்களுக்கு 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, ஐஸ்லிக்கற்கள் ஆகியவற்றை மட்டும் குவாரி செய்ய வேண்டும் வெளிநாட்டிற்கு ஏற்றுமதி செய்வதற்கும் மெருகேற்ற பயன்படும் வகையிலும் உள்ள பெரிய அளவிலான கற்றுண்டங்களை 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 வேறுபாடுக்கும் 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 வா கணங்களுக்கு 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. குவாரிக் குத்தகையை 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 பொறுப்பல்ல. 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 முக்கியத்துவம் வாய்ந்த யுரதானக்கால கல்வெட்டுக்கள், சிற்ப வடிவமைப்புகள் போன்றவைகள் காணப்பட்டால் அது குறித்து அரசுக்கு தகவல் தரவேண்டும். மேலும் அப்பகுதியில் கற்கள் உடைப்பது நிறுத்தப்பட்டு அப்புராதன 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 போன்ற விவரங்கள் குறிக்கப்பட்ட தகவல் பலகையை இவ்வறிவிக்கையில் இணைக்கப்பட்ட இணைப்பு 4ல் கண்ட படிவத்தில் தனது சொந்த செலவில் தயார் செய்து குத்தகை காலம் முழுவதும் நல்ல முறையில் பராமரிக்கவேண்டும்.
37. குத்தகைதாரர் குவாரியின் எல்லைகளை தெளிவாக தெரியப்படி வண்ணமிட்ட கல் ஊன்றி அடையாளமிட்டு வைத்தபின் குவாரிசெய்ய வேண்டும். எல்லைகற்களை குத்தகை காலம் முழுவதும் தனது சொந்த செலவில் நன்கு 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 மெட்டாபெரஸ் மைன்ஸ் ரெகுலேஷன்ஸ், 1936 ஆம் ஆண்டின் சம்பளம் வழங்குதல் சட்டம், 1884 ஆம் ஆண்டின் இந்திய வெடிப்பொருட்கள் சட்டம், 1864 ஆம் ஆண்டு குறைந்தபட்ச ஊதியச்சட்டம் ஆகியவற்றிற்கு உட்பட்டு குத்தகைதாரர் கனிமங்கள் வெட்ட வேண்டும்.
41. குத்தகை கொடும் 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 தொழிலாளர்களை எக்காரணம் கொண்டும் குவாரி பணியில் ஈடுபடுத்தக்கூடாது.
44. குத்தகைதாரர் வருமானவரி நிர்ந்தர கணக்கு எண் பெற்று குவாரிக்கு செலுத்தப்படும் குத்தகை தொகைக்கும், சீனியரேஜ் 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 கொடும் விண்ணப்பத்தை எக்காரணமின்றி ரத்து செய்யவோ மாவட்ட ஆட்சியருக்கு முழு அதிகாரம் உண்டு. அதற்கு விண்ணப்பதாரர் நஷ்ட ஈடு கோர உரிமை இல்லை.
48. இவ்விதியின் கீழ் வழங்கப்படும் குத்தகை உரிமங்கள் புதுப்பிக்கப்படமாட்டாது, மற்றும் எக்காரணத்தைக் கொண்டும் கால நீட்டிப்பு வழங்கப்படமாட்டாது.
49. குத்தகை காலம் முடிந்தவுடன் அல்லது உரிமம் ரத்து செய்யப்பட்டால் குத்தகை இடத்தை குத்தகைதாரர் மனு தினமே சம்மந்தப்பட்ட வட்டாட்சியரிடம் ஒப்படைத்து அதற்கான அக்டாட்சியை 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 தனித்தனிக்கு ஆஜர் செய்ய வேண்டும்.
52. குத்தகை காலத்திலோ அதற்குப் பின்னரோ கிரமம் தவறி குத்தகையை பயன்படுத்துவதில் ஏற்படும் சகல 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.

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55. குத்தகை நிபந்தனைகள் பிற்பட்டால் குத்தகையை ரத்து செய்யவோ, செய்த தண்டனைக்கு உட்படும் இடங்களிலோ, 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 வளையும் அமைக்கப்பட வேண்டும்.

60. ஆயுதுளை 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 சமர்ப்பித்து 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 குத்தகைக் 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) (ஹெக்டேர்)	(5) (ஹெக்டேர்)	(6)
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)	33.60.5	2.00.0	மலை

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(1)	(2)	(3)	(4) (ஹெக்டேர்)	(5) (ஹெக்டேர்)	(6)
4	கல்லுக்குறுக்கி	399/1 (பகுதி-B)	13.62.0	1.00.0	கல்லாங்குத்து
5	கல்லுக்குறுக்கி	255(பகுதி)	2.48.0	1.00.0	கிருஷ்ணகிரி
6	கரியசாகரம் தலாவ்	50(பகுதி)	4.51.5	2.76.0	போடுகால் (குடும்பநல மன்றம்)
7	கிருஷ்ணகிரி டவுன்	வார்டு-பி: பிளாக்: 5/1(பகுதி-1)	49.67.0	2.50.0	கல்வெட்டுக் குழி
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	பைர மலை புறம்போக்கு
10	கொண்டப்பநாயனப்பள்ளி	202/1(பகுதி-ஏ)	15.61.5	3.00.0	கல்வெட்டு குழி
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	கல்லாங் குத்து
15	சூலாமலை	54 (பகுதி)	16.45.0	2.00.0	பாறை
16	பி.ஆர்.ஜி.மாடேப்பள்ளி	271(பகுதி)	3.56.0	3.00.0	போடுகால்
17	மல்லப்பாடி	652(பகுதி)	12.60.5	3.00.0	அரசு 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

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(1)	(2)	(3)	(4) (ஹெக்டேர்)	(5) (ஹெக்டேர்)	(6)
24	அச்செட்டிப்பள்ளி	1050/1 A	2.17.5	2.17.5	
25	நளிகாண்டூர்	40 (பகுதி)	2.24.0	1.80.0	தீ.ஏ.த.பாறை
26	கேரளப்பள்ளி	327/1 (பகுதி)	24.31.5	2.62.0	தீ.ஏ.த
27	ஆலூர்	809(பகுதி-3)	11.25.0	1.46.0	தீ.ஏ.த
28	ஆலூர்	588(பகுதி)	17.42.5	3.35.0	அரசாங்கப்பேரவைக்கு முத்தம்மன்கரடு
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	வெங்கடேசுபுரம்	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.திம்மசந்திரம்	88/1 (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

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(1)	(2)	(3)	(4) (ஹெக்டேர்)	(5) (ஹெக்டேர்)	
46	காமன்தொட்டி	1151,1155, 1212 to,1219, 1222,1225, 1226/A (பகுதி-5)	14.68.5	1.27.0	தி.ஏ.த.கரடு
47	தோரிப்பள்ளி	144(பகுதி)	3.41.5	2.30.0	தி.ஏ.த. பாறை
48	தோரிப்பள்ளி	152/2(பகுதி)	4.23.0	2.00.0	தி.ஏ.த. பாறை
49	துப்புகாணப்பள்ளி	637 (பகுதி-1)	25.27.0	4.00.0	தி.ஏ.த.கரடு
50	துப்புகாணப்பள்ளி	637 (பகுதி-2)	25.27.0	4.50.0	தி.ஏ.த.கரடு
51	துப்புகாணப்பள்ளி	637 (பகுதி-3)	25.27.0	4.50.0	தி.ஏ.த.கரடு
52	சென்னப்பள்ளி	242/4(பகுதி)	1.87.5	1.00.0	தி.ஏ.த.கரடு
53	பஸ்தலப்பள்ளி	130 (பகுதி)	16.90.0	4.66.0	தி.ஏ.த.கரடு
54	துப்புகாணப்பள்ளி	314(பகுதி-3)	36.64.0	4.94.32	தி.ஏ.த.கரடு
55	வெங்கடேசபுரம்	294(பகுதி-1)	18.36.5	3.00.0	தி.ஏ.த.கரடு
56	வெங்கடேசபுரம்	294(பகுதி-2)	18.36.5	3.75.0	தி.ஏ.த.கரடு
57	வெங்கடேசபுரம்	196(பகுதி-1)	9.70.0	2.00.0	தி.ஏ.த.கரடு
58	வெங்கடேசபுரம்	196(பகுதி-2)	9.70.0	3.25.0	தி.ஏ.த.கரடு
59	வெங்கடேசபுரம்	136(பகுதி-3)	69.36.0	4.10.0	தி.ஏ.த.கரடு
60	வெங்கடேசபுரம்	136(பகுதி-12)	69.36.0	2.70.0	தி.ஏ.த.கரடு
தேன்கனிக்கோட்டை வட்டம்					
61	ஓசபுரம்	96 (பகுதி)	2.13.5	0.82.0	தி.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	தி.ஏ.த கல்லாங்குத்து
63	மதகொண்டப்பள்ளி	265 (பகுதி-2)	8.73.0	2.50.0	தி.ஏ.த கல்லாங்குத்து
64	மதகொண்டப்பள்ளி	265 (பகுதி-3)	8.73.0	1.60.0	தி.ஏ.த கல்லாங்குத்து
65	மதகொண்டப்பள்ளி	265 (பகுதி-4)	8.73.0	1.46.0	தி.ஏ.த கல்லாங்குத்து
66	கல்கொண்டப்பள்ளி	360 (பகுதி)	0.62.5	0.62.5	தி.ஏ.த
67	நாகபல்கலம்	629 (பகுதி)	188.50.0	4.00.0	தி.ஏ.த கல்லாங்குத்து
68	கோட்டுர்	144	2.00.5	2.00.5	தி.ஏ.த கல்லாங்குத்து
69	தண்டரை	733 (பகுதி-2)	61.77.0	3.00.0	மலை புறம்போக்கு

கிருஷ்ணகிரி,
29-12-2017.

சி. சுதிரவன்,
மாவட்ட ஆட்சியர்,
கிருஷ்ணகிரி மாவட்டம்.

தமிழ்நாடு எழுதுபொருள் மற்றும் அச்சுத்துறை இயக்குநரால் சேலம் அரசினர் சினை அச்சுத்துறில் அச்சிடப்பட்டு மாவட்ட ஆட்சியரால் வெளியிடப்பட்டது.

Majid

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 சய உதவிக்குழுக்கள் ஆகியவற்றுக்கு குத்தகை உரிமம் வழங்கக் கோரும் மனு.

(அசல் மற்றும் இரண்டு நகல்களில் இணைப்புகளுடன் கொடுக்க வேண்டும்)

நாள் -2018

அனுப்புநர்

பெறுநர்

மாவட்ட ஆட்சியர்,
கிருஷ்ணகிரி மாவட்டம்,
கிருஷ்ணகிரி.

அப்பயர்,

நான் / நாங்கள் 1959 ஆம் வருட தமிழ்நாடு சிறுகனிமச் சலுகை விதி 8-ன் சார்பு விதி 10 ஏ-ன்படி எங்கள் சய உதவிக்குழுவிக்கு / 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 சய 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 இணைக்கப்பட வேண்டும்
- (ஆ) குழு / சங்க உறுப்பினர் பெயர் மற்றும் முகவரி பட்டியல் :
(உறுப்பினர் பற்றிய விவரம் மற்றும் உறுப்பினர் எண் விவரம் இணைக்கப்பட வேண்டும்).
- (இ) குழு / சங்கம் செயல்பட அனுமதிக்கப்பட்டுள்ள :
பஞ்சாயத்து விவரம்.



3. மனுக்கட்டணம் செலுத்திய விவரம் (சலான் எண் மற்றும் நாள்) :
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 செய்ப்பபடும் 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 சுரங்கவரி நிலுவை இல்லை என்பதற்கான சான்று பெற்றுள்ளனரா, ஆம் எனில் நகல் இணைக்கவும்

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

138C/12 (ஆ) சி.வெ. 24-4.

Miya

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



மேலே கொடுக்கப்பட்டுள்ள விவரங்கள் யாவும் உண்மையெனவும் இது தவிர வேறு விவரங்கள் அரசினால் கொடுக்கப்படாமலும் அதனை அளிக்க தயாராக உள்ளேன் எனவும் உறுதியளிக்கிறேன். காப்புத் தொகை மாவட்ட ஆட்சியரால் (அரசினால்) கொடுக்கப்பட்டால் அதனை செலுத்தத் தயாராக உள்ளேன் என உறுதியளிக்கிறேன். குத்தகை பெறுவது தொடர்பாகவும் சுவாரியில் சாதாரணகர்கள் வெட்டுவது தொடர்பாகவும் 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுசனிய சலுகை விதிகளையும் மாவட்ட அரசிதழில் வெளியிடப்பட்டுள்ள விதிகளையும் நன்கறிவோம் என்று உறுதியளிக்கின்றேன். சாதாரணகர்கள் வெட்ட வழங்கப்பட்ட கல்குவாரியில் மெருகேற்றி அழகுபடுத்தப் பயன்படும் வகையில் எந்த அளவிலும் கிராண்ட் கந்துண்டங்கள் வெட்ட மட்டும் எனவும் உறுதியளிக்கிறேன்.

இப்படிக்கு,
தங்கள் உண்மையுள்ள,

இயம்
நாள்.

M. Jayaram

இணைப்பு-2

குவாரியில் பராமரிக்கப்பட வேண்டிய பதிவேடு படிவம்

நாள் முன்பிருப்பு உற்பத்தி மொத்தம் வெளியேற்றம் மீதி இருப்பு வாகனத்தின் நடைச்சட்டு எண் குறிப்பு
தன்மையும் எண் குறிப்பு
அதன் எண்ணும்

(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

சிராமம்

புல எண்.

பரப்பளவு

3. மாவட்ட ஆட்சியரின் ஆணை எண் மற்றும் நாள்
4. குத்தகை காலம்
5. குவாரியில் வேலை செய்யும் 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

R. Rajan




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,
RQP/MAS/225/2011/A





வளம் கம்போம்

தமிழ்நாடு வனத்துறை

அனுப்புதல்
திரு. தீபக் எஸ். பில்கி, இ.வ.ப.,
மாவட்ட வன அலுவலர்,
ஓசூர் கால்நடை பண்ணை அஞ்சல்,
மத்திகிரி, ஓசூர் - 635 110.
தொலைபேசி எண். 04344-262259.

பெறுதல்
மாவட்ட ஆட்சித் தலைவர்,
கிருஷ்ணகிரி மாவட்டம்,
கிருஷ்ணகிரி.

ந.க.எண். 6213/2017-எல் நாள்/4-12-2017
மூன்றாவது வட்டம், கரந்திசைத் திருவள்ளூர் ஆண்டு 2048



அய்யா,

பொருள் : கனிமங்களும் குவாரிகளும் - சிறுகனிமம் - சாதாரண கற்கள் மற்றும் கிருஷ்ணகிரி மாவட்டத்தில் உள்ள அரக புறம்போக்கு நிலங்களில் உள்ள சாதாரண கற்கள் வெட்டியெடுக்க டெண்டருடன் இணைந்த எலமுறையில் குவாரி குத்தகை வழங்குதல் வனத்துறை சார்பாக பரிந்துரை செய்ய கோரியது - வனத்துறை நோக்கிலான கருத்து தெரிவித்தல் - தொடர்பாக.


பார்வை : 12/11/17

மாவட்ட ஆட்சித் தலைவர், கிருஷ்ணகிரி மாவட்டம்
ந.க.எண்.72/2017(கனிமம்) நாள்.05.09.2017 மற்றும் 15.11.2017.

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

கிருஷ்ணகிரி மாவட்டத்தில் அரக புறம்போக்கு நிலங்களில் சாதாரண கற்கள் வெட்டி எடுக்க டெண்டர் / பொது ஏலத்தில் குத்தகைக்கு விட்டு அதன்மூலம் அரகக்கு வருவாய் எட்டிட வனத்துறையின் இசைவினை வழங்கிட கிருஷ்ணகிரி மாவட்ட ஆட்சித் தலைவர் கேட்டுக்கொண்டதற்கிணங்க, வசாச்சரக அலுவலர்கள் மற்றும் பணியாளர்கள், ஓசூர், ஜவளகிரி, இராயக்கோட்டை மற்றும் கிருஷ்ணகிரி ஆகியோருடன் குவாரிப் பகுதிகளை தணிக்கை செய்யப்பட்டது கழகண்ட பட்டியல் 1-ல் குறிப்பிட்டுள்ள 1 முதல் 85 வரையிலான உத்தேச கற்குவாரிகளுக்கு கீழ்க்கண்ட நியந்தனைகளுடன் வனத்துறை நோக்கிலான கருத்து தெரிவிக்கப்படுகிறது.





- i) சாதாரண கற்குவாரி குத்தகை வழங்க ஒப்பந்தம் செய்வதற்கு (Lease deed agreement) முன்பு ஒவ்வொரு குவாரிப் பகுதிக்கும் வளத்துறையின் நிபந்தனைகளை முன்பு கையொப்பம் செய்துள்ள குவாரிப் பணி செய்ய பணி ஆணை (Work order) வழங்கப்பட வேண்டும்.
- ii) மேற்படி சாதாரண கற்குவாரி குத்தகை கோரும் புலங்கள் காவேரி வடக்கு வன உயிரின சரணாலயத்திற்கான Eco Sensitive Zone எல்லை நிர்ணயம் செய்ய பிரேரமிக்கப்பட்டு ஆணை எதிர்நோக்கியுள்ள சூழலில், காவேரி வடக்கு வன உயிரின சரணாலய எல்லையிலிருந்து 10 கி.மீ-க்குள் அமைந்திருப்பின் தேசிய வன உயிரின வாரியத்தின் முன் அனுமதி (National Board for Wildlife) பெறப்படவேண்டும்.
- iii) மலைதள பாதுகாப்பு பரிந்துரை குழு (Hill Area Conservation Authority)-ன்படி அறிவிக்கை செய்யப்பட்ட கிராம எல்லைக்குள் கற்குவாரி பணி செய்ய அனுமதி கோரியுள்ள புலங்கள் அமைந்திருப்பின், மலைதள பாதுகாப்பு பரிந்துரை குழு (Hill Area Conservation Authority)-ன் கீழ் முன் அனுமதி பெறப்பட வேண்டும்.
- iv) உத்தேச கற்குவாரி செய்யும் புலங்கள் வருவாய்த்துறை ஆவணங்களில் "காடு" என வகைப்படுத்தப்பட்ட புலங்களில் கற்குவாரிப் பணி செய்ய அனுமதிக்கக் கூடாது.
- v) உத்தேச கற்குவாரி செய்யும் புலங்கள் தமிழ்நாடு வனச்சட்டம் 1982-ன் பிரிவு 4 மற்றும் 76-ன் கீழ் காப்பு நிலம் / காப்புக்காடு என அறிவிக்கை செய்யப்பட்ட புலங்களாக இருத்தல் கூடாது.
- vi) உத்தேச கற்குவாரி செய்யும் புலங்கள் தமிழ்நாடு வனச்சட்டம் 1982-ன் பிரிவு 26-ன் கீழ் அறிவிக்கை செய்யப்பட்ட புலங்களாக இருத்தல் கூடாது.
- vii) உத்தேச கற்குவாரி செய்யும் புலங்கள் காப்புக்காட்டின் எல்லைக்கு அருகில் அமைந்திருப்பின், Standing Orders of the Board of Revenue- volume - I Section III, Sub-Section 38 (III) வருவாய்வாரிய நிலை ஆணை தொகுப்பு 1, பிரிவு 3, உட்பிரிவு 38 (III)-ன்படி காப்புக்காட்டிற்கு அருகில் உள்ள நிலத்தில் இது பரண்பாட்டிற்கு உட்படுத்த நடவடிக்கை மேற்கொள்ளப்படும் போது காப்புக்காட்டின் எல்லையிலிருந்து குறைந்த பட்சம் 60 மீட்டர் (3 Chm) தொலைவிற்கு அப்பாற்பட்டிருக்க வேண்டும் என்ற நிபந்தனையை கடைபிடிக்கப்பட வேண்டும்.
- viii) அரசாணை (நிலை) எண்.79 தொழில் (கனிமம் 1) துறை நாள்.06.04.2015-ல் குறிப்பிட்டுள்ள நிபந்தனைகளை மாவட்ட நிர்வாகம் / கனிம வளத்துறை கவனத்தில் கொள்ளவேண்டும்.

M. Jeyaraj



viii) குவாரி குத்தகை கோரும் பகுதியிலிருந்து 300 மீட்டர் தூரம் குவாரி செயல்படக்கூடாது என்பதை மாவட்ட நிர்வாகம் உறுதி செய்ய வேண்டும்.

பட்டியல் 1

சாதாரண கற்கள் வெட்டி எடுத்த பரிந்துரை செய்யப்பட்ட 1 முதல் 65 வரையிலான குவாரிப் பகுதிகளின் பட்டியல்.

Hosur Taluk

Sl. No.	Village	S.F. No.	Total Extent	Extent proposed for quarry lease	Classification	Virgin or Old quarry	Coordinates	
							Latitude	Longitude
1	Gobanapalli	327/3	1.33.5 Hects.	1.33.5	Podugal	Virgin	12°38'36.08"N	77°48'51.48"E
2	Achettipalli	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°48'45.73"E
3	Achettipalli	886, (Part)	8.85.0	3.00.0	UAW Kallan kuthu	Virgin	12°38'59.31"N	77°48'58.80"E
4	Achettipalli	888 (P) 889 890 (P) 891(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	Panchatchipuram	603/1 (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°35'40.32"N	77°47'28.59"E

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6	Panchatchipuram	603/1 (Part B)	21.20.5	2.50.0	UAW	Already leased out to Thiru Gowdeppa and a pit having average dimension of 2839 x 5.33 = 15132 CBM is observed in the area.	12° 35'48.50" N	77° 26.47" E
7	Pannapalli	75/6	2.52.0	1.85.0		Virgin	12° 47'27.619" N	78° 01'7.3" E
8	Achetipalli	1050/1A	2.17.5	2.17.5	Podugal Anathan	Two age-old pits are observed on the south-east and south-west side of the area.	12° 39'5.12" 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	Nandimangalam	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)	24.81.5	2.62.0	U.A.W	Virgin	12° 38'41.01" N	77° 48'47.56" E

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20	Kamandoddi	754 & 760 (Part-2)	36.46.5	2.10.0	Malai	Virgin old pit with an average dimension of 8001Sqm. X16.58-Mts =132657 CBM due to illicit quarrying is observed. Proposal for levying penalty forwarded.	12° 39'49.377" N	77° 57'42.108" E
21	Kamandoddi	754 & 760 (Part-3)	36.46.5	3.66.0	Malai	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=4312 Total = 63643CBM Proposal for levying penalty forwarded.	12° 39'45.911 9"N	77° 57'42.108 1"E
22	Kamandoddi	754 & 760 (Part-4)	36.46.5	3.50.0	Malai	Virgin old pit with following dimension observed due to illicit quarrying: 1.1221x10 =12210 2.1216X10 =12160 3.619X7.16 =4333 Total =28703 CBM Proposal for levying penalty forwarded.	12° 39'38.671 0"N	77° 57'43.801 0"E
23	Kamandoddi	754 & 760 (Part-5)	36.46.5	4.30.0	Malai	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 1"N	78° 57'42.865 9"E
24	Kamandoddi	1151, 1155, 1212 to 1219, 1222, 1225, 1226/A (Part-1)	14.68.5	2.70.0	UAW	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° 57'51.88" E
25	Kamandoddi	1151, 1155, 1212 to 1219, 1222, 1225, 1226/A (Part-2)	14.68.5	2.87.0	UAW	Virgin old pit with an average dimension of 1.6377X15 =95655 2.1578X12.5 =19725 3.12577x11 =13827 Total 129207CBM due to illicit quarrying is observed. Proposal for levying penalty forwarded.	12° 39'36.577 1"N	77° 57'51.761 4"E

M. Jayaraman



26	Kamandoddi	1151, 1155, 1212, 1219, 1222, 1225, 1226/A (Part-3)	14.68.5	2.82.0	UAW	Virgin old pit with an average dimension of 1.993X16 =15888 2.1293X10 =12930 3.3078x17 =52326 Total 88.02CBM due to Illicit quarrying is observed. Proposal for levying penalty forwarded.	12° 39'23.317 7°N	77° 57'51.532 3°E
27	Kamandoddi	1151, 1155, 1212 to 1219, 1222, 1225, 1226/A (Part-4)	14.68.5	2.23.0	UAW	Virgin old pit with an average dimension of 1772x4 = 3088 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° 57'52.444 3°E
28	Kamandoddi	1151, 1155, 1212 to 1219, 1222, 1225, 1226/A (Part-5)	14.68.5	1.27.0	UAW	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° 57'53.206 0°E
29	Thoripalli	144 (Part)	3.41.5	2.30.0	UAW-Parai	Old quarry Already leased out to Tmt. Manjula 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	Thoripalli	152/2 (Part)	4.23.0	2.00.0	UAW-Parai	Virgin area	12° 42'18.044 8°N	77° 57'35.232 9°E
31	Thuppuganapalli	637 (Part-1)	25.27.0	4.00.0	UAW	Virgin	12° 37'50.129 4°N	77° 57'14.725 6°E

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32	Thuppuganapalli	637 (Part-2)	25.27.0	4.50.0	UAW	Already lease granted area to Thiru Arimugam vide District Collector, Krishnagiri Pro:Rec.No.89/2008/Mincs-2 dated 07.07.2008 for a period of five years from 20.10.2008 to 19.10.2013. Old quarried pit with an average dimension of 11787 sq.mts. X 28.12 mts. = 3,31,450 cbm.	12° 37' 32.825" N	77° 57' 21.225" E
33	Thuppuganapalli	637 (Part-3)	25.27.0	4.50.0	UAW	Virgin	12° 37' 38.955" N	77° 57' 18.182" E
34	Chennapalli	242/4 (P)	1.87.5	1.00.0	UAW Karadu	Virgin	12° 38' 9.2951" N	78° 03' 3.4620" E
35	Easthapalli	130 (Part)	16.90.0	4.66.0		Virgin	12° 40' 32.91" N	78° 04' 46.69" E
36	Alur	809 (Part-3)	11.25.0	1.46.0	UAW	Previously not leased. Illicit carried out in the Northern side of the applied area for an average dimension of 1160x8.25=9570 CBM and penalty proposal against forwarded to the Sub-Collector Hosur	12° 42' 50.8366" N	77° 57' 11.4089" E
37	Thuppuganapalli	314 (Part-3)	36.64.0	4.94.32	UAW Jenu Malai	Virgin	12° 36' 55.74" N	77° 55' 16.53" E

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38	Venkatesapuram	263 (Part-1) 295	18.36.0	3.00.0		Virgin	12° 45' 19.99" N	77° 57' 23.67" E
39	Venkatesapuram	196 (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' 11.306" N	77° 55' 24.4781" E
40	Venkatesapuram	196 (Part-2)	9.70.0	3.25.0	Karadu	Already leased out area with old pit dimension 18884 Sq.M. x 27.61 Mts. = 521387 CBM	12° 44' 06.6243" N	77° 55' 22.6168" E
41	Venkatesapuram	264 (Part-2) 305	18.36.5	3.75.0		Virgin	12° 45' 21.85" N	77° 57' 29.27" E
42	Ahur	598 (Part)	17.42.5	3.35.0	Govt. Porambokku-Muthaman Karadu	Virgin	12° 42' 44.36" N	77° 55' 46.27" E

Denkanikottai Taluk

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

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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° 38'20.54" N	77° 45'14.34" E
45	Mathakondapalli	265/1 (Part-2)	8.73.0	2.50.0	UAW-Parai	Virgin	12° 38'14.98" N	77° 45'12.26" E
46	Mathagonadpalli	265/1 (Part-3)	8.73.0	1.60.0	UAW-Parai	Virgin	12° 38'10.50" N	77° 45'10.82" E
47	Mathagonadpalli	265/1 (Part-4)	8.73.0	1.46.0	UAW-Parai	Virgin	12° 38'4.14" N	77° 45'6.57" E
48	Kalukondapalli	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	Thandarai	738 (Part-2)	61.77.0	3.00.0	Malai	Virgin	12° 34'51.23" N	77° 47'45.92" E

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Krishnagiri Taluk

Sl. No.	Village	S.F. No.	Total Extent	Extent proposed for quarry lease	Classification	Virgin or Old quarry	Coordinates	
							Latitude	Longitude
52	Kalluk urukki	701 (Part-1)	83.60.5 Hects.	2.00.0	Malai	Virgin	12° 33' 21.18" N	78° 13' 22.39" E
53	Kalluk urukki	701 (Part-2)	83.60.5 Hects.	2.00.0	Malai	Virgin	12° 33' 22.00" N	78° 13' 27.18" E
54	Kalluk urukki	701 (Part-3)	83.60.5 Hects.	2.00.0	Malai	Virgin	12° 32' 45.98" N	78° 13' 34.98" E
55	Kalluk urukki	399/1 (Part-B)	13.62.0 Hects.	1.00.0	Kallan kuthu	Virgin	12° 33' 51.40" N	78° 13' 03.13" E
56	Kalluk urukki	255 (Part)	2.48.0 Hects.	1.00.0	Podugal Kumbasan Malai	Virgin	12° 34' 21.61" N	78° 12' 59.60" E
57	Kariyas agaram Thalav	50 (Part)	4.51.5	2.76.0	Kalvettu Kuzhi	Virgin	12° 44' 57.62" N	78° 05' 15.44" E
58	Krishn agiri Town	Ward-B Block-5/1(Part-1)	49.67.0	2.50.0	Baira Malai Porambokku	Virgin	12° 32' 38.59" N	78° 13' 32.91" E
59	Krishn agiri Town	Ward-B Block-5/1(Part-2)	49.67.0	2.50.0	Baira Malai Porambokku	Virgin	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	Sigarala palli	366 (Part-1)	10.05.5	2.00.0	Malai	Virgin	12° 30' 37.60" N	78° 24' 53.24" E
61	Sigarala palli	366 (Part-2)	10.05.5	2.00.0	Malai	Virgin	12° 30' 34.97" N	78° 24' 50.08" E

Majasa

20 AUG 2018

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 = 1,16,617 CBM	12° 33'18.50"N	78° 21'37.23"E
63	Scolamai	54 (Part)	16.45.0	2.00.0	Pathai	Virgin	12° 30'43.0485"N	78° 15'33.9304"E
64	Mallappadi	652 (Part)	12.60.5	2.00.0	Bodikuttai	Old Quarry with an average pit of 4038 Sq.Mts. X 7.28 Mts = 29397 CBM	12° 30'41.4854"N	78° 23'13.5666"E
65	B.R.G. Madhepalli	271 (Part)	3.56.0	3.00.0	Podugal	Old Pit in which illicit quarrying carried out and penalty levied is observed in the field. For the dimension of 11705Sq. X 7Mts.	12° 33'07.07"N	78° 19'56.06"E

கீழ்க்கண்ட பட்டியல் 2-ல் தற்காலிகமாக நிறுத்திவைக்கப்பட்டுள்ள குவாரிகளில் 1 முதல் 15 வரையான இனங்களில், இனம் 10, 11 மற்றும் 12 ஆகியவைகளில் குறிப்பிட்டுள்ள புல எண்கள் கரியானப்பள்ளி 2 காப்புக்காடு பகுதியாகும். எனவே இந்த இனங்களுக்கு மட்டும் குவாரி பணி செய்ய அனுமதி வழங்க இயலாது. இவைகள் தவிர மீதமுள்ள இனங்கள் குறித்து அய்வகெய்து பல்வேறு வகையான முடிவுகள் எடுக்கப்படவேண்டிய காரணத்தால், யாதொரு இசைவும் தற்போது வழங்க சாத்தியக்கூறுகள் இல்லை என்பதை அன்புடன் தெரிவித்துக்கொள்கிறேன்.

பட்டியல் - 2

தற்காலிகமாக நிறுத்திவைக்கப்பட்டுள்ள குவாரிகளின் விவரம் (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	Moranapalli	759 (Part)	10.76.5	2.75.0	Karandu	Virgin	12° 41' 59.6346"N 77° 53' 37.53.8027"E
2	Halekotta	529 (Part)	43.00.0	4.50.0	UAW	Virgin	12° 39' 43.72"N 77° 55' 38.87"E

M. S. S.

Shoolagiri Taluk



Sl. No.	Village	S.F. No.	Total Extent	Extent proposed for quarry lease	Classification	Virgin or-Old quarry	GPS Coordinates Latitude/ Longitude
3	Venkatesapuram	215	4.37.0	4.37.0	UAW - Karadu	Already leased are granted to Thiru Kumar and old pit having an average dimension of 40x20x 17.61 = 715318 CBM. is observed in the area.	12° 43' 42.92" N 77° 55' 26.90" E
4	Athimangam	374/1	7.38.5	3.00.0	UAW - Parai	Old quarry with a pit having an average dimension of 26x26 Sq.m x 9.5 Mts = 24947CBM	12° 44' 16.5337" N 77° 57' 38.9077" E
5	Matimpalli	53/1 (Part-1)	17.07.0	3.00.0	Karadu	Virgin	12° 41' 33.32" N 78° 3' 51.50" E
6	Matimpalli	53/1 (Part-2)	17.07.0	2.00.0	Karadu	Virgin	12° 41' 30.73" N 78° 3' 51.73" E
7	Bengai	314 (Part)	7.62.0	2.60.0	UAW-Parai	Virgin	12° 47' 19.0183" N 77° 57' 31.9787" E
8	Bengai	316/1 (Part)	3.35.5	2.20.0	UAW-Parai	Virgin	12° 47' 24.01" N 77° 57' 56.06" E
9	Bukkasingaram	176/3 176/6	0.76.5 0.61.0 <u>1.37.5</u>	1.37.5	Anathesipatti	Virgin	12° 43' 11.0009" N 77° 54' 57.7434" E
10	Basthalapalli	121 (Part-1)	22.84.0	4.30.0	Karadu	Virgin	12° 40' 08.96" N 78° 04' 42.46" E

M. J. S.



11	Bashtalapalli	131 (Part-2)	22.84.0	4.00.0	Karadu	Virgin	12° 40' 03.89" N 78° 04' 44.16" E
12	Bashtalapalli	131 (Part-3)	22.84.0	2.20.0	Karadu	Virgin	12° 39' 59.78" N 78° 04' 53.05" E

Denkanikottai Taluk

Sl No.	Village	S.F. No.	Total Extent	Extent proposed for quarry lease	Classification	Virgin or Old quarry	GPS Coordinates Latitude/ Longitude
13	Nagamangalam	1186 (Part-1)	31.50.0	2.86.0	UAW-Karadu	Virgin	12° 32' 26.3764" N 77° 54' 2.1837" E
14	Nagamangalam	1186 (Part-2)	31.50.0	2.01.0	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	Kondeppanayanapatti	63 (Part)	1.90.0	1.50.0	Kalvetti Kuzhi	Virgin	12° 40' 28.58" N 78° 07' 51.90" E

தங்கள் அன்புள்ள,
 மாவட்ட வன அலுவலர்,
 ஓசூர் வனக்கோட்டம்.
 14/12/17

S. Dhanasekar
S. DHANASEKAR,
 RQP/MAS/225/2011/A

M. J. S.

ANNEXTURE - IV

சமீபத்தில் பட்டியல் எண் 23

வட்டம். திருமகலி

எண். 95.

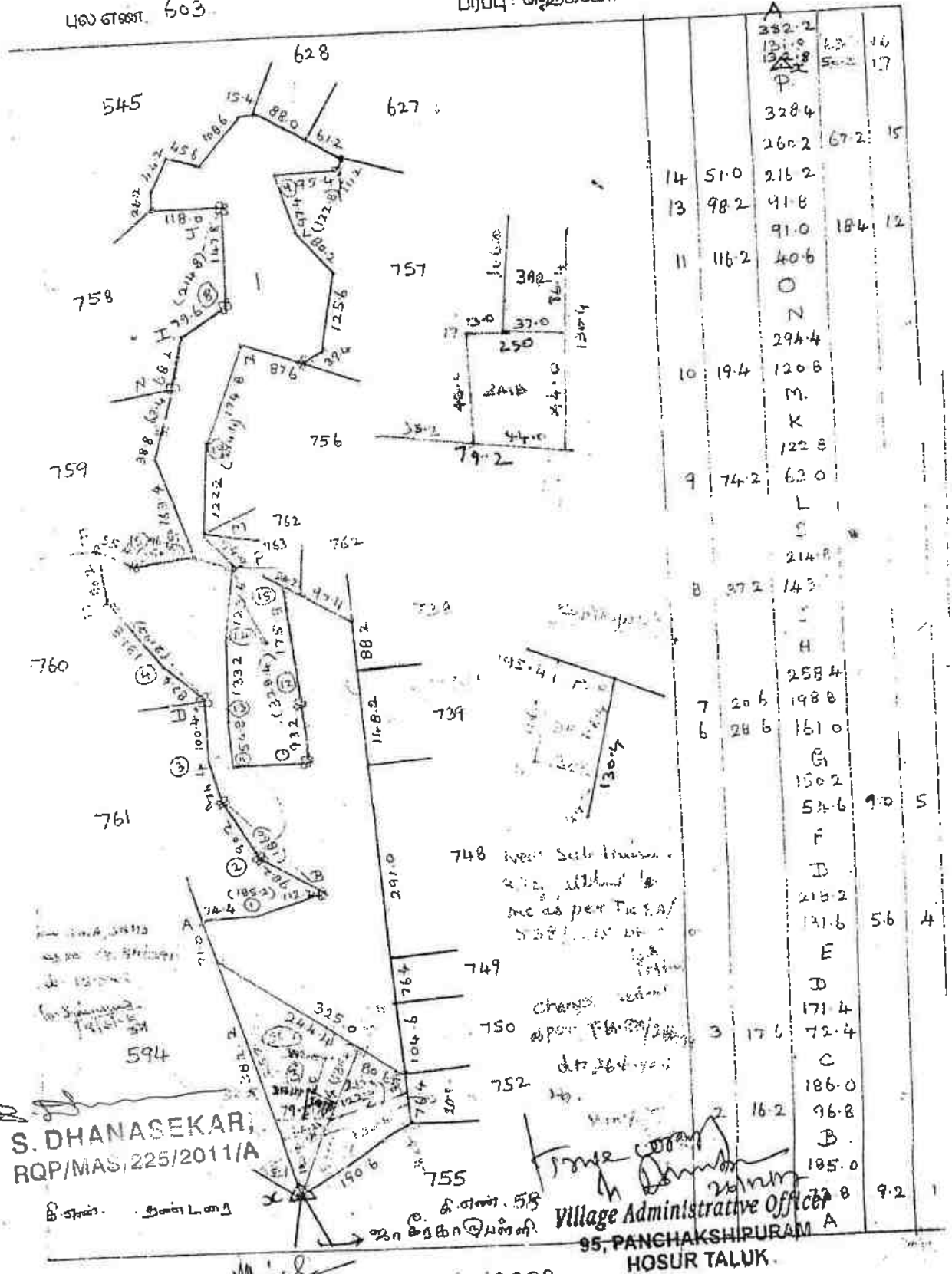
பட்டம். சூரூர்

சிராமம்

பெயர். பஞ்சாட்சிராமம்

புல எண். 603

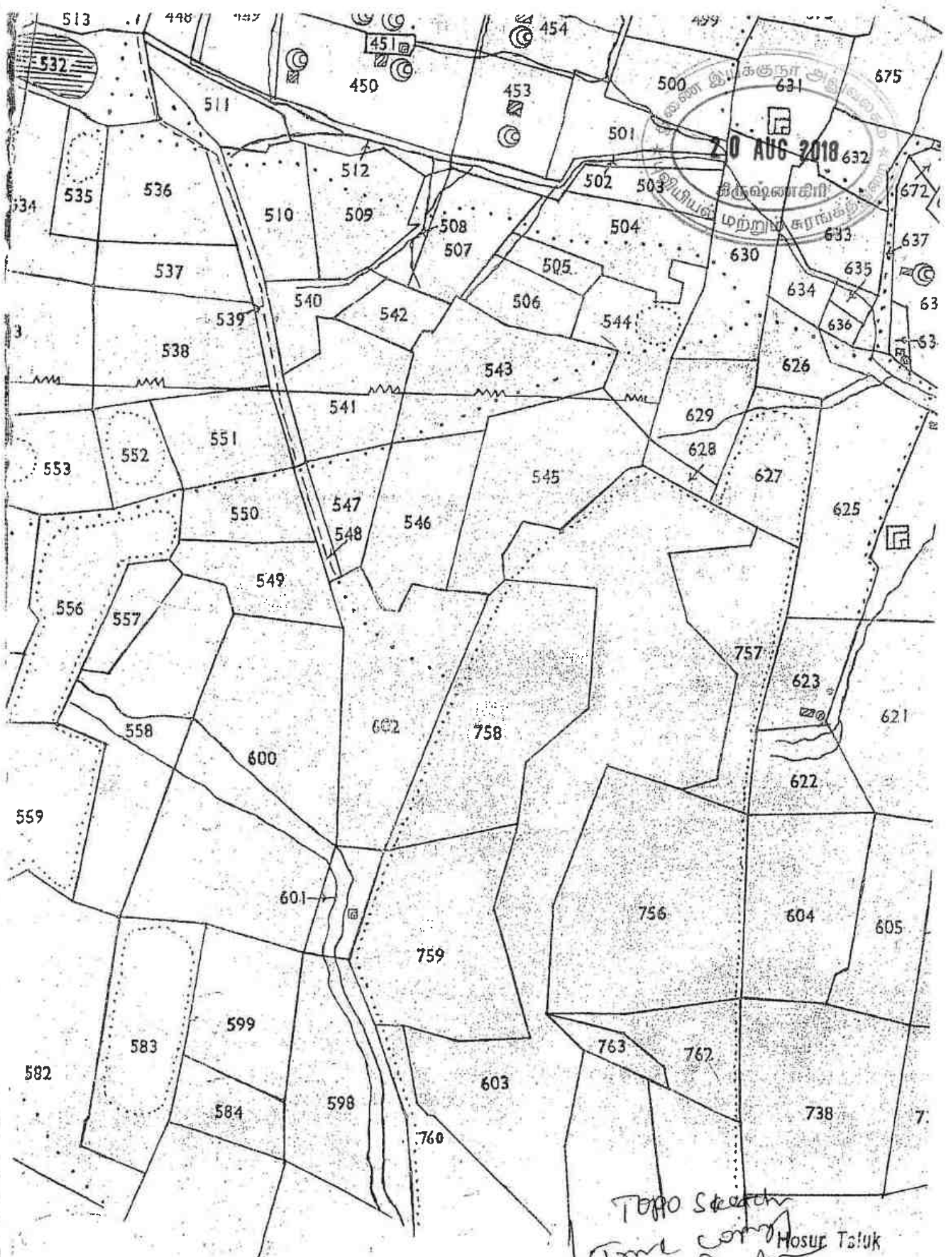
பரப்பு: ஒன்றாட்சிராமம் 25 ஏ. 51.5



		382.2			
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		132.8		17	
		50.2			
		328.4			
		260.2	67.2	15	
14	51.0	216.2			
13	98.2	41.8			
		91.0	18.4	12	
11	116.2	40.6			
		0			
		294.4			
10	19.4	120.8			
		M.			
		K			
		122.8			
9	74.2	62.0			
		L			
		214.8			
B	37.2	14.3			
		H			
		258.4			
7	20.6	198.8			
6	28.6	161.0			
		G			
		150.2			
		54.6	9.0	5	
		F			
		D			
		218.2			
		131.6	5.6	4	
		E			
		D			
		171.4			
3	17.6	72.4			
		C			
		186.0			
2	16.2	96.8			
		B.			
		185.0			
		187.8			
		9.2			

S. DHANASEKAR;
RQP/MAS/225/2011/A

Village Administrative Office
95, PANCHAKSHIRAM
HOSUR TALUK.



TOPO Sketch
 Town Comd
 M. Dhanasekar
 26/12/17
 Village Administrative Officer
 95, PANCHAKSHIPURAM
 HOSUR TALUK

M. Dhanasekar

S. DHANASEKAR,
 ROP/MAS/225/2011/A

1	2	3	4	5	6	7	8	9	10	11	12	
602	3E	602-3 பா	ர	பு	...	8-5	10	1 09	0 78.0	0 85	559 மு. கிள்ளப்பா வும் இன்னும் இரண்டு பேர் களும். *	
									3 29.0	3 56		
603	1	603-பா	அ	தி.ஏ.த.	...	...	...	...	21 20.5	...	...	தீர்வை ஏற்படாத தரிக.
	2	-பா	ர	பு	...	8-5	...	0 62	1 60.0	1 00	88 மு. குள்ளப்பா (எ) முனியப்பா.	
	3	-பா	ர	பு	...	8-5	10	1 09	2 71.0	2 94	560 ந. மாரப்பாவும் இன்னும் இரண்டு பேர்களும். *	
									25 51.5	3 94		
604	IA	604- பா	ர	பு	...	8-5	10	1 09	0 28.0	0 31	181 இ. சையது சாயபு.	
	IB	-பா	ர	பு	...	8-5	10	1 09	1 09.5	1 19	260 ந. பாஷாசாயபு.	
			ர	பு	...	8-5	10	1 09	1 37.5	1 50	19 ந. ஆபிகல்வா.	
									2 75.0	3 00		
605	1	605-பா	ர	பு	...	8-5	10	1 09	1 26.0	1 35	240 மு. நாராய ணப்பா.	
	2	-பா	ர	பு	...	8-5	10	1 09	0 59.5	0 65	70 மு. கிருஷ்ணப்பா.	
									1 85.5	2 00		
606	1	606-பா	ர	பு	...	8-5	10	1 09	0 01.5	0 06	240 மு. நாராய ணப்பா.	
	2	-பா	ர	பு	...	8-5	10	1 09	0 81.0	0 88	70 மு. கிருஷ்ணப்பா.	
									0 82.5	0 94		
607	...	607	ர	பு	...	8-5	10	1 09	0 71.5	0 75	240 மு. நாராய ணப்பா.	
608	...	608	ர	பு	...	8-5	10	1 09	1 06.5	1 12	75 வெ. கிருஷ் ணப்பா.	
609	...	609	ர	பு	...	8-5	0	1 09	0 60.0	0 62	75 வெ. கிருஷ் ணப்பா.	
610	...	610	அ	பு	...	8-5	10	1 09	2 00.5	2 19	...	

* விவரப்பட்டியைப் பார்க்கவும்.

True copy
M. Jeyaraj
Village Administrative Officer
95, PANCHAKSHIPURAM
HOSUR TALUK

"அ1" விளம்பரம்



கிருஷ்ணகிரி மாவட்டம், ஒசூர் வட்டம், பஞ்சமடசிறு

கிராம புல எண். 6031 பரப்பு 21.20.5 ஹெக்டேர் நிலத்தில்

திரு/திருமதி. _____ என்பவர் ஆண்டுகளுக்கு

சாதாரண கற்கள் வெட்டி எடுக்க மனு செய்துள்ளார். மேற்கூறிய கிராம பட்டா எண்.

_____ ல் புல எண். 6031 புறா விஸ். 2.50.0 ஹெக்டேர்

_____ ஆக மொத்தம் பரப்பு _____

ஹெக்டேர் _____ என்பவருக்கு

சாதாரண கற்கள் வெட்டி எடுக்க ஆட்சேபனை ஏதேனும் இருப்பின் இந்த அறிக்கை பிரசித்தம் செய்யப்படும் நாளான இன்றிலிருந்து 15 தினங்களுக்குள் மாவட்ட வருவாய் அலுவலர் மற்றும் மாவட்ட கூடுதல் நீதிபதி, கிருஷ்ணகிரி அவர்களுக்கு தங்களது எழுத்து மூலமான ஆட்சேபனையை தெரிவிக்கலாம்.

நாள் : 06.12.17

இடம் : பஞ்சமடசிறு

கிராம பொதுமக்கள் கையொப்பம்

1. B. சீமீ
2. சுமீ
3. Padma
4. Anchara
5. Anje

S. Dhanasekar
S. DHANASEKAR,
30P/MAS/225/2011/A

/என் முன்னால்/
V. R. Lakshmi
REVENUE INSPECTOR
MATHIGIRI FIRKA

S. Dhanasekar



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

Sri S. DHANASEKAR, resident of Old No.6, New No.8/3, Kulleppan Street, Opp. Indian Bank Line, Omdur (P.O), Salem - 636 455, son of Sri 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. DHANASEKAR,
RQP/MAS/225/2011/A**

ANNEXURE VIII
20 AUG 2018
KARNATAKA
DEPARTMENT OF MINES AND GEOLOGICAL SURVEY

PHOTO SHOWN PROPOSED LEASE AREA VIEW-1



PHOTO SHOWN PROPOSED LEASE AREA VIEW-2



Mujal

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

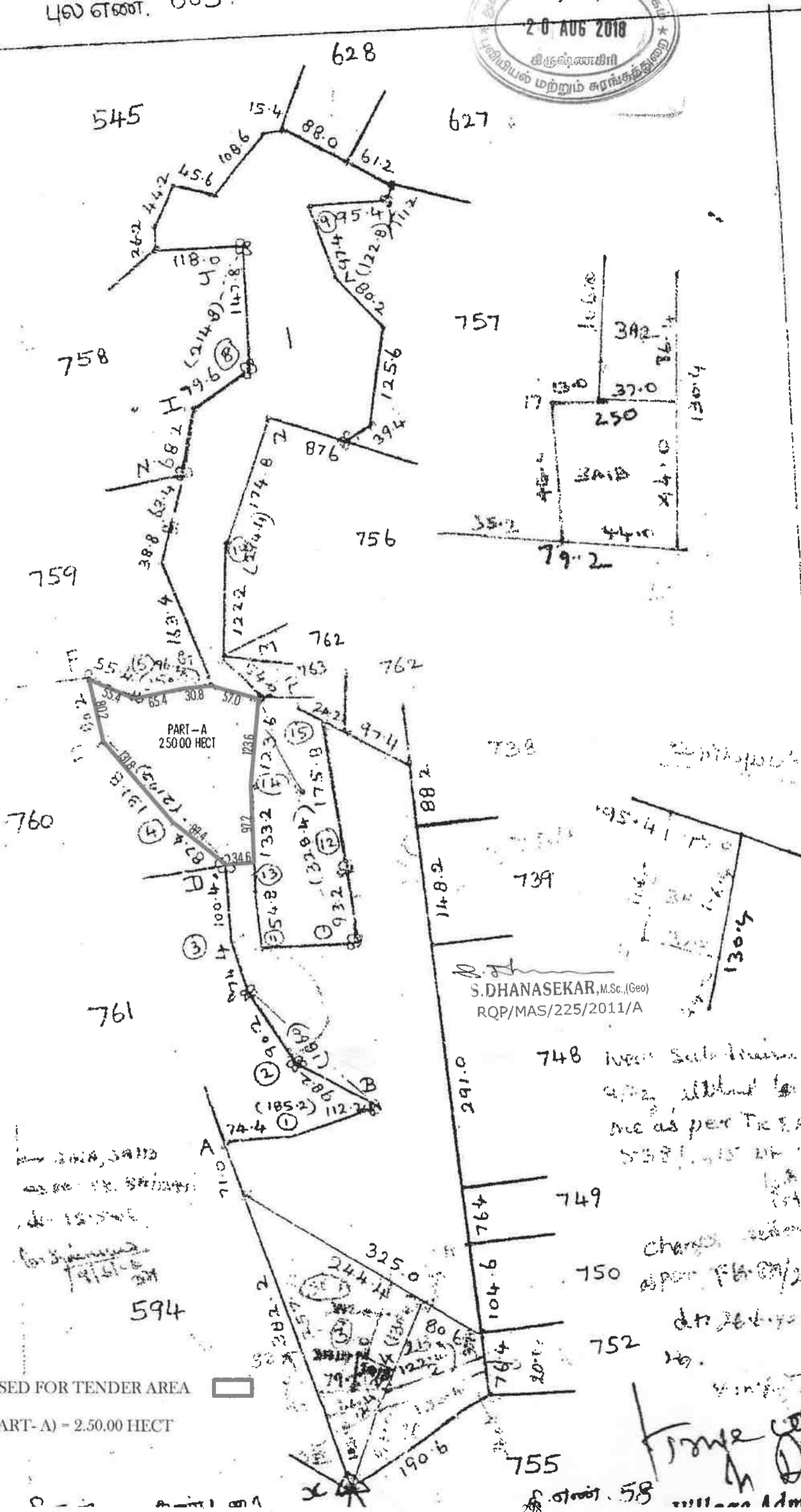
400 எண்த. 603.



பரப்பு: ஏக்கர்கள்

25

ஏ. 51.5



		382.2	
		131.9	62.0
		132.8	50.2
		P.	
		328.4	
		260.2	67.2
14	51.0	216.2	
13	98.2	91.8	
		91.0	184
11	116.2	40.6	
		O	
		N	
		294.4	
10	19.4	120.8	
		M.	
		K	
		122.8	
9	74.2	63.0	
		L	
		S	
		214.8	
8	37.2	14.3	
		T	
		H	
		258.4	
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6	28.6	161.0	
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		D	
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		E	
		D	
		171.4	
3	17.6	72.4	
		C	
		186.0	
2	16.2	96.8	
		B	
		185.0	
		8	

Handwritten signature and name of the Administrative Officer.

PROPOSED FOR TENDER AREA
 (PART-A) - 2.50.00 HECT



Date of Survey: 21.3.2018

PLATE NO-I

APPLICANT:
 M/s.S.S.V. BLUE METALS,
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.

LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

INDEX

MINE LEASE AREA : ●
 TOPO SHEET NO. : 57 H/14
 LATITUDE : 12° 35' 48.48"N to 12° 35' 56.64"N
 LONGITUDE : 77° 47' 21.61"E to 77° 47' 28.27"E

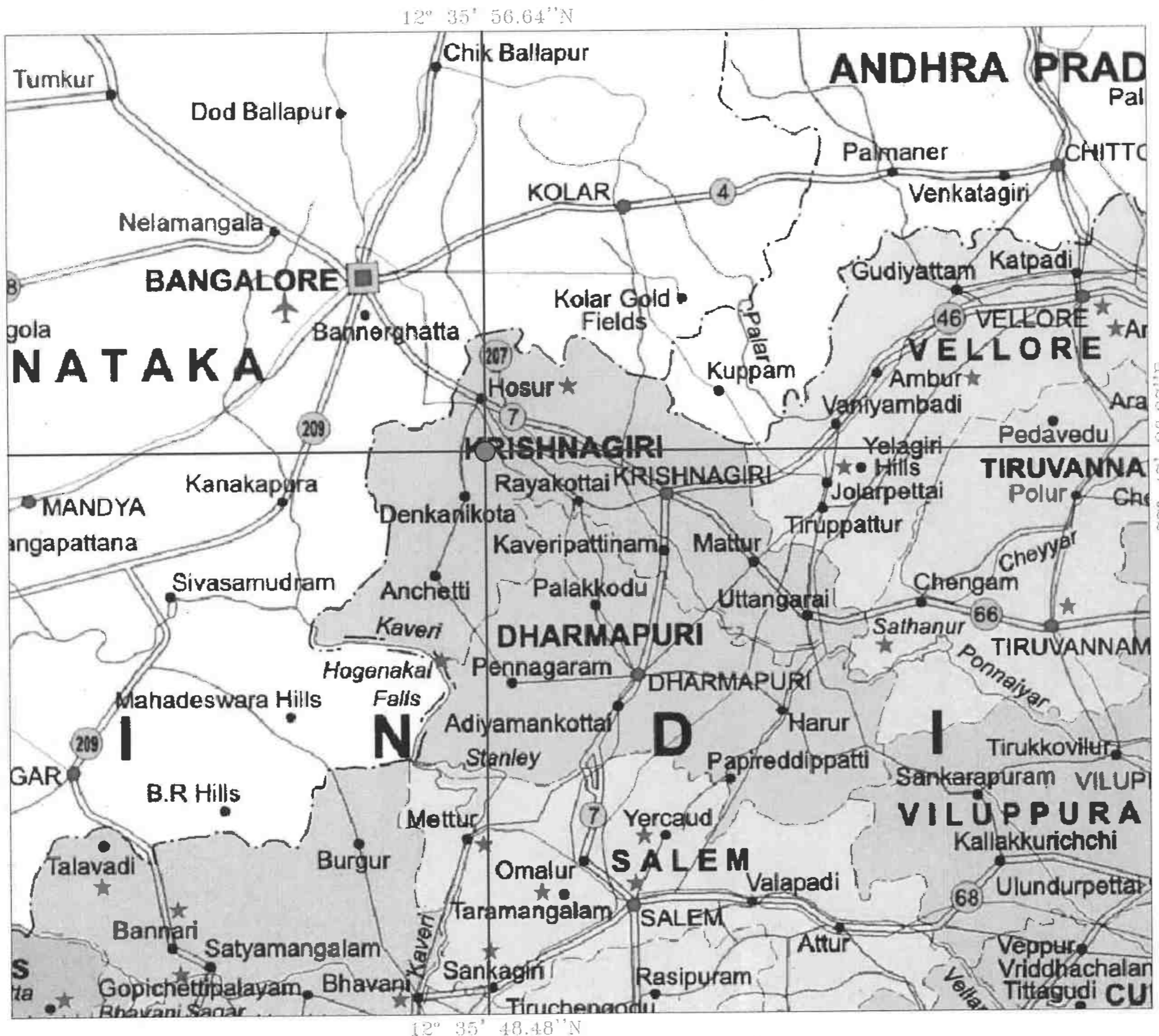
LOCATION PLAN

NOT TO SCALE

Prepared By:

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

S. Dhanasekar
 S.DHANASEKAR.M.Sc.,
 RECOGNIZED QUALIFIED PERSON
 RQP/MAS/225/2011/A



Maje

ROUTE MAP

PLATE NO-1A



S. DHANASEKAR, M. SC.,
RECOGNIZED QUALIFIED PERSON
RQP/MAS/225/2011/A

Mug



PLATE NO-I-C

Date of Survey:
21.3.2018

APPLICANT:
M/s.S.S.V. BLUE METALS,
PROP.R.RAJASEKARAN,
No.89, THALLY HUDCO,
HOSUR TALUK,
KRISHNAGIRI DISTRICT.

LOCATION:
S.F.NO : 603/1 (PART-A),
EXTENT : 2.50.00 Ha,
VILLAGE : PANCHAKSHIPURAM,
TALUK : HOSUR,
DISTRICT : KRISHNAGIRI.

INDEX

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


TOPO SHEET NO. : 57 H/14
LATITUDE : 12° 35' 48.48"N to 12° 35' 56.64"N
LONGITUDE : 77° 47' 21.61"E to 77° 47' 28.27"E

SATELLITE IMAGINARY MAP

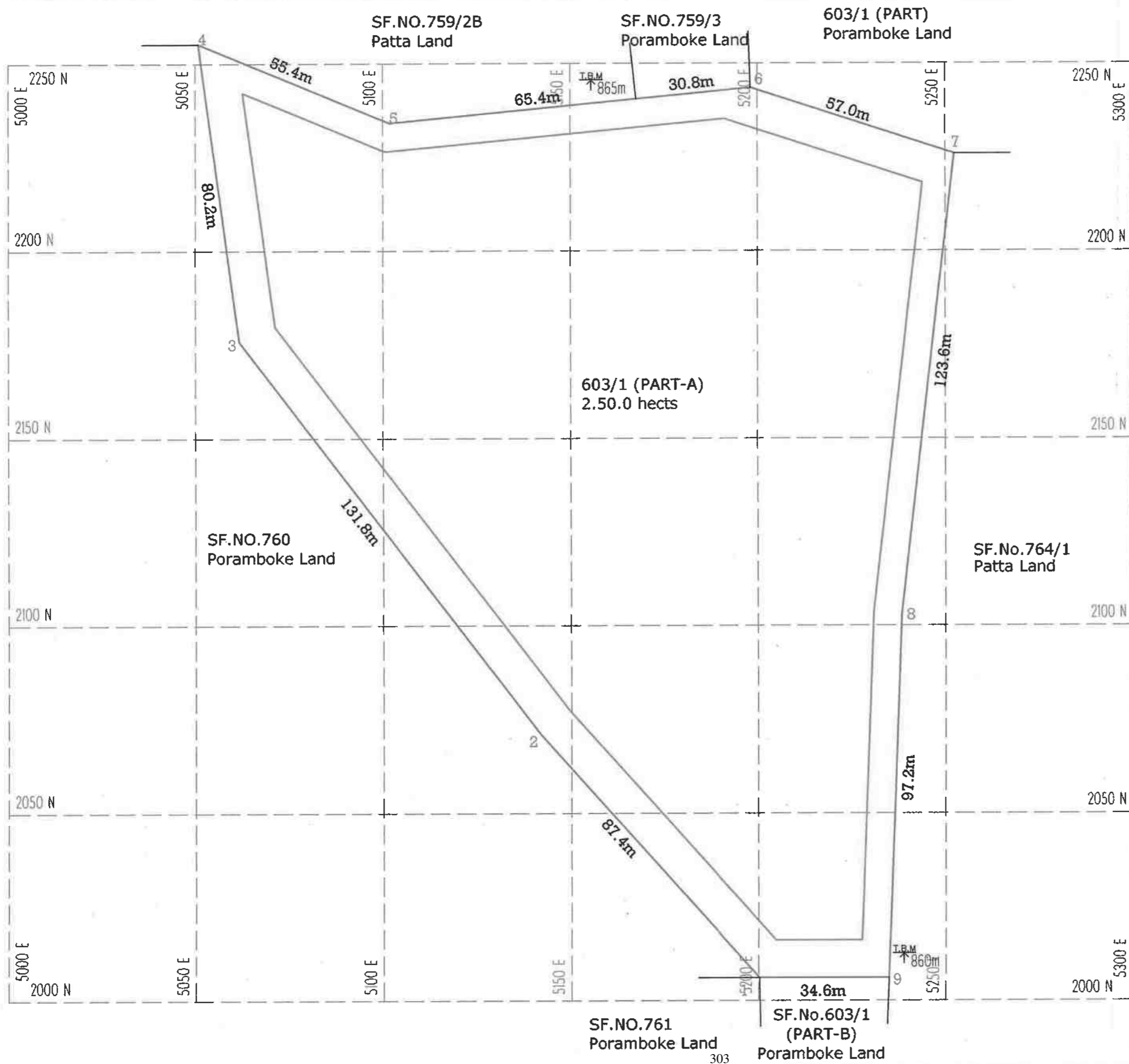
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Prepared By:

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
RQP/MAS/225/2011/A





LABEL	LATITUDE	LONGITUDE
1	12° 35' 48.50"N	77° 47' 26.47"E
2	12° 35' 50.63"N	77° 47' 24.55"E
3	12° 35' 54.06"N	77° 47' 21.94"E
4	12° 35' 56.65"N	77° 47' 21.61"E
5	12° 35' 55.94"N	77° 47' 23.29"E
6	12° 35' 56.21"N	77° 47' 26.48"E
7	12° 35' 55.62"N	77° 47' 28.27"E
8	12° 35' 51.64"N	77° 47' 27.76"E
9	12° 35' 48.49"N	77° 47' 27.61"E

Date of Survey: 21.3.2018
 PLATE NO-II

APPLICANT:
 M/s.S.S.V. BLUE METALS,
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.

LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

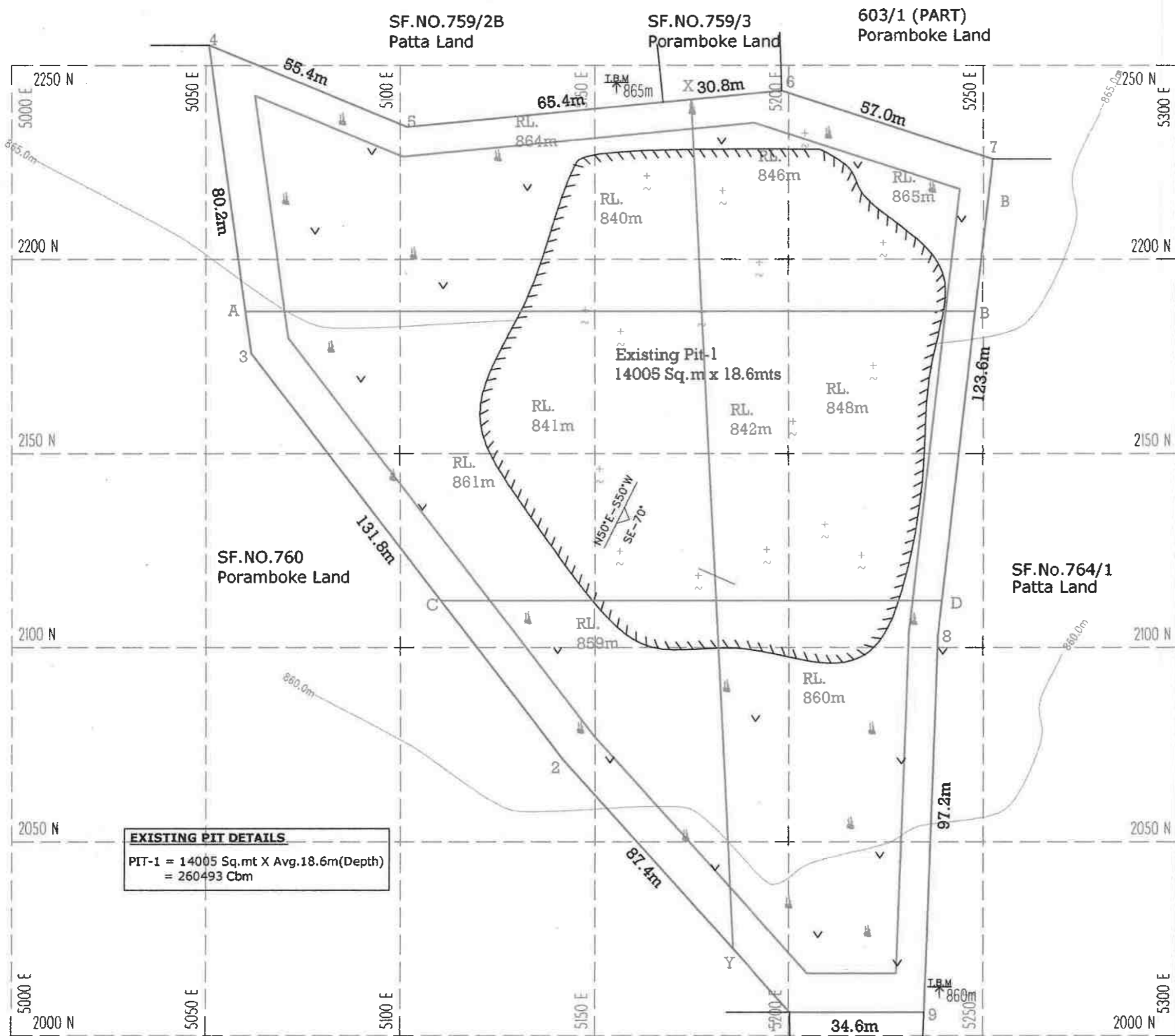
INDEX

MINE LEASE BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	

MINE LEASE PLAN
 SCALE 1 : 1000

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

S.DHANASEKAR,M.Sc.,
 RECOGNIZED QUALIFIED PERSON
 RQP/MAS/225/2011/A



EXISTING PIT DETAILS
 PIT-1 = 14005 Sq.mt X Avg.18.6m(Depth)
 = 260493 Cbm



APPLICANT:
 M/s.S.S.V. BLUE METALS,
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.

LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

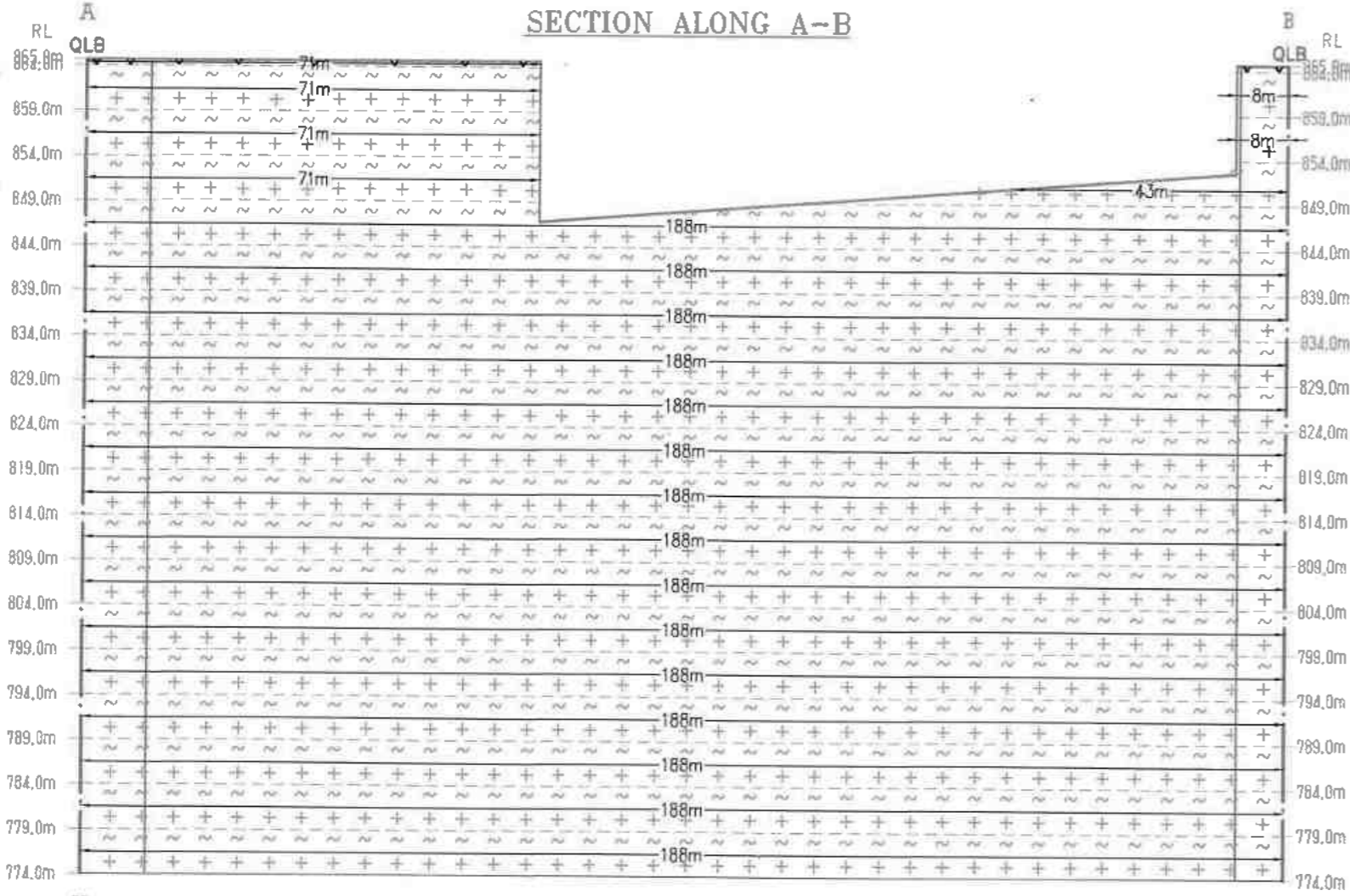
INDEX	
MINE LEASE BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
STRIKE & DIP	
OUTCROP	
ROUGH STONE	
SHRUB	
TOP SOIL	
TOPOGRAPHICAL CONTOUR	

SURFACE AND GEOLOGICAL PLAN
 SCALE 1 : 1000

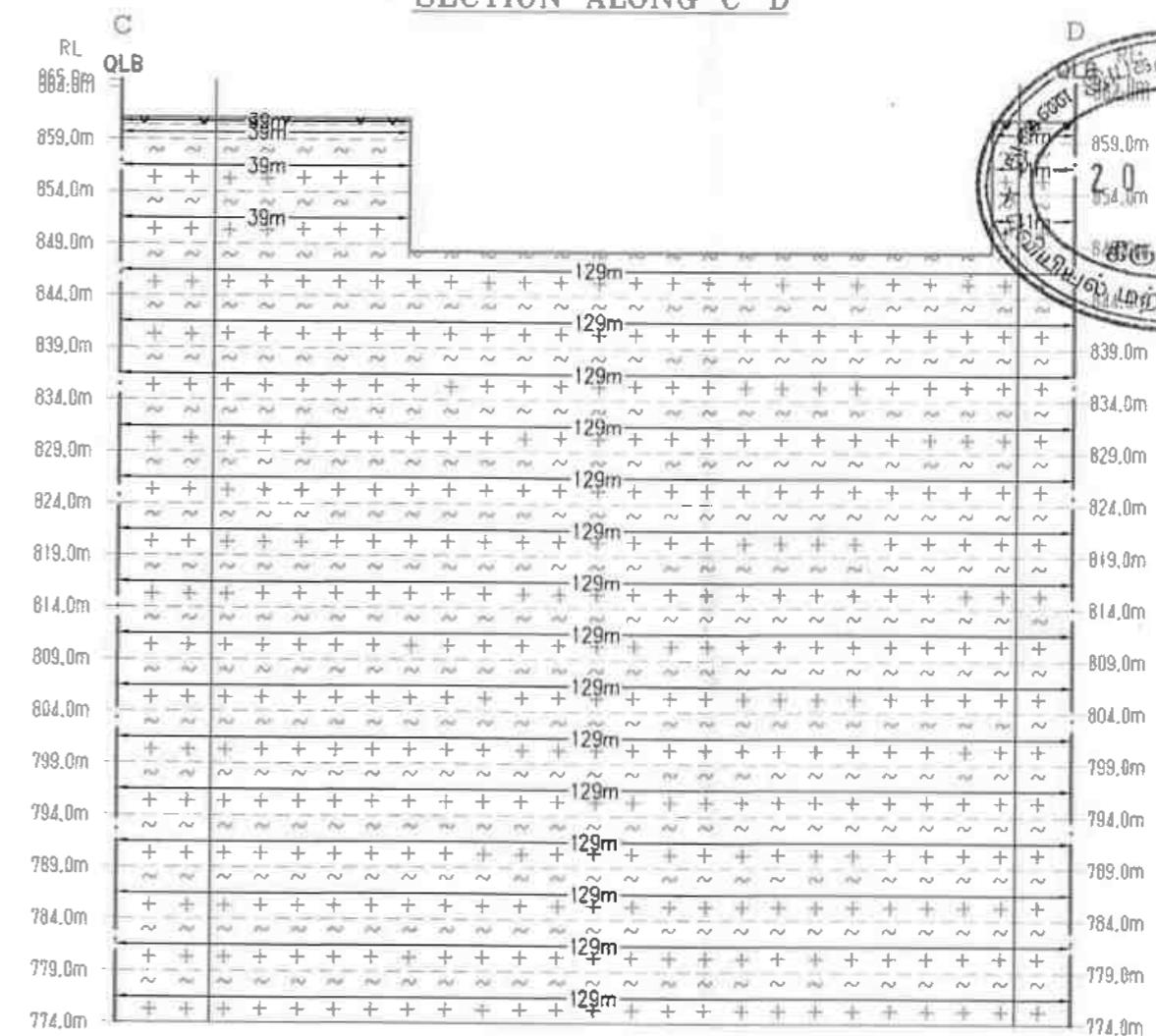
Prepared By:
 I DO HEREBY CERTIFY THAT THE PLATE
 HAS BEEN CHECKED BY ME AND IS CORRECT
 TO THE BEST OF MY KNOWLEDGE

S.DHANASEKAR, M.Sc.,
 RECOGNIZED QUALIFIED PERSON
 RQP/MAS/225/2011/A

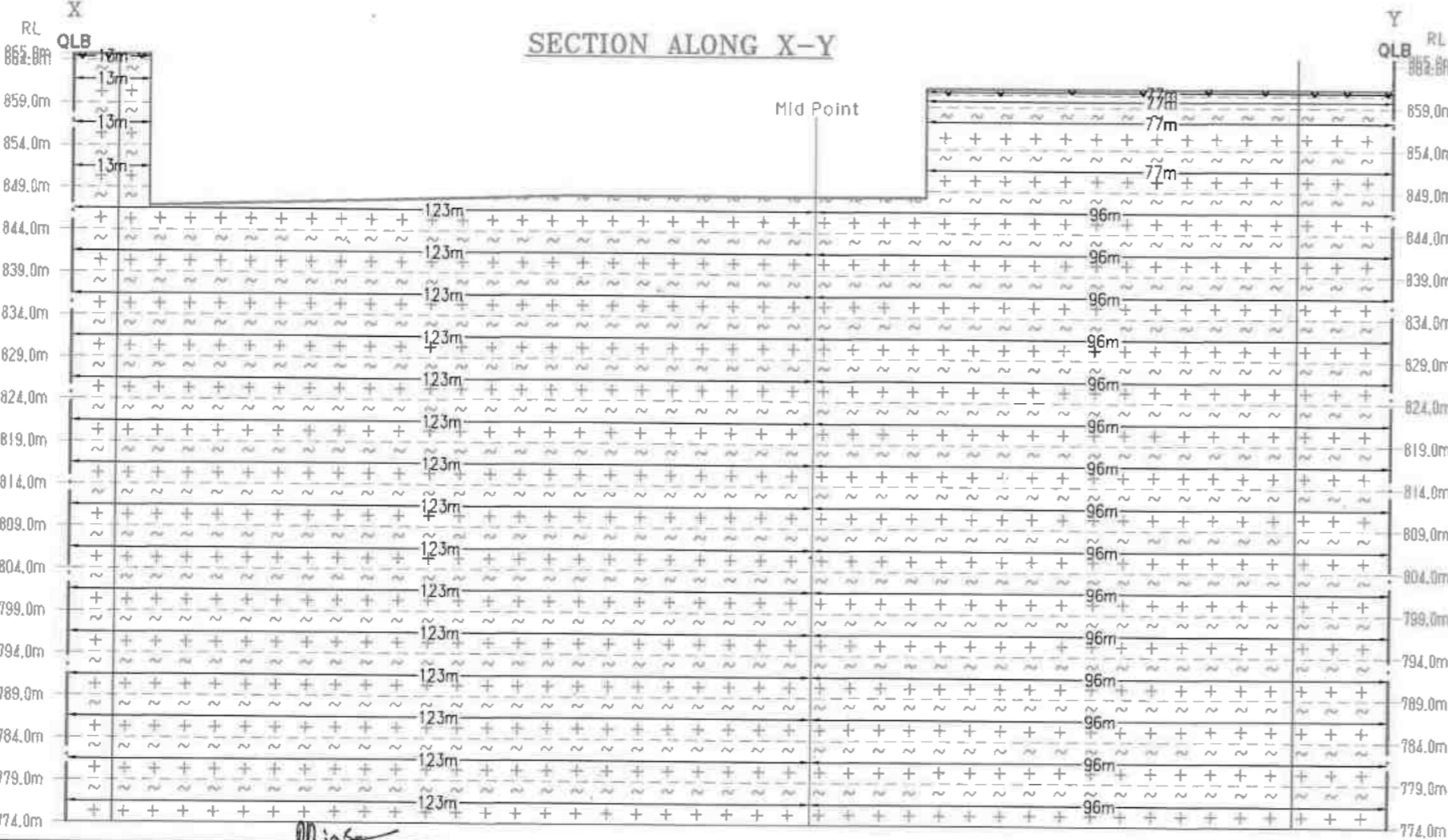
SECTION ALONG A-B



SECTION ALONG C-D



SECTION ALONG X-Y



TOTAL DEPTH = 91m
 ABOVE SURFACE GROUND LEVEL - 5m
 BELOW SURFACE GROUND LEVEL - 86m

PLATE NO-III-A

LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

INDEX

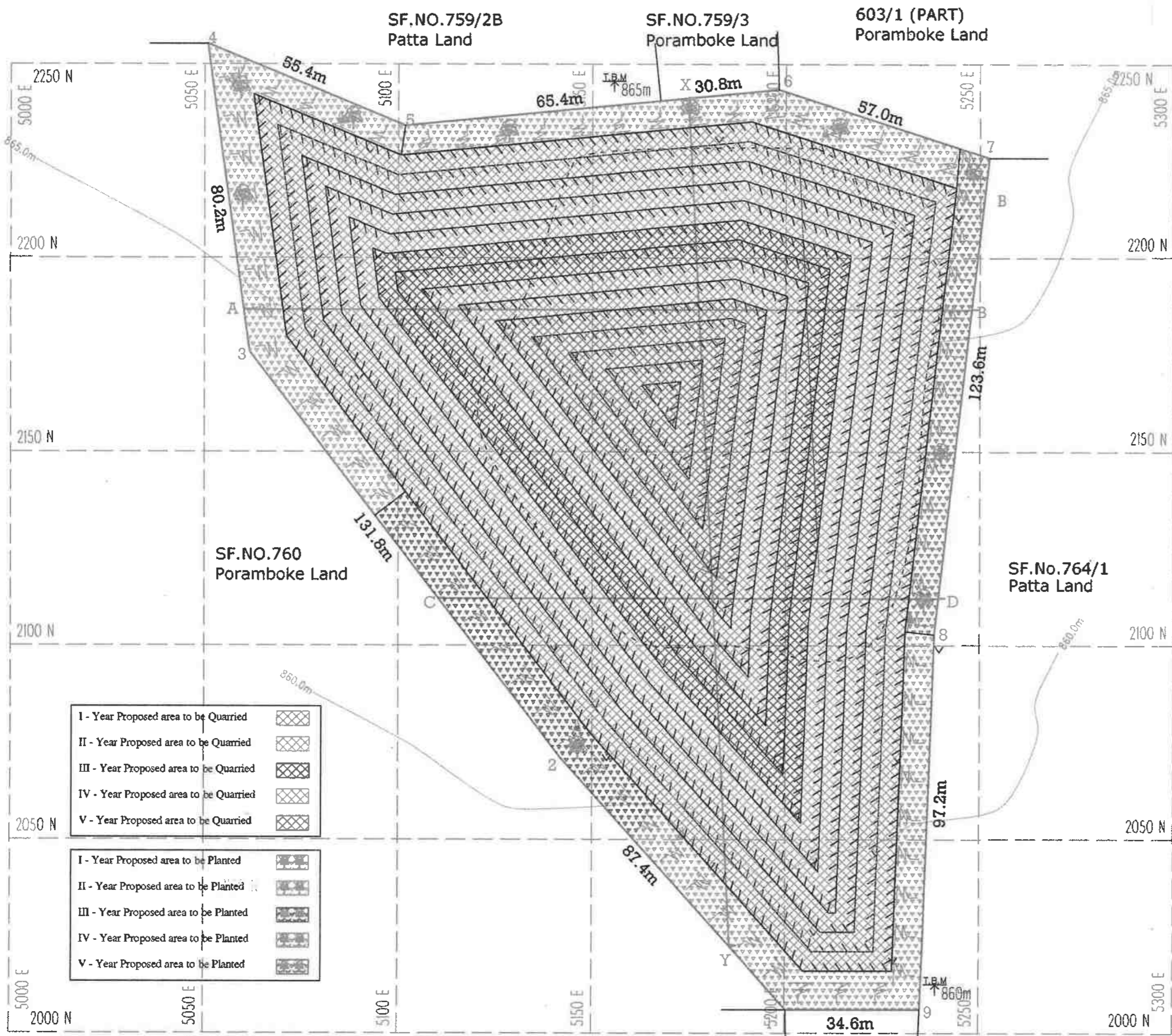
MINE LEASE BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
ROUGH STONE	
TOP SOIL	


GEOLOGICAL SECTIONS
 SCALE: 1:1000

APPLICANT:
 M/s.S.S.V. BLUE METALS,
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.

Prepared By:
 I DO HEREBY CERTIFY THAT THE PLATE
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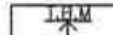









S.DHANASEKAR.M.Sc.,
 RECOGNIZED QUALIFIED PERSON
 RQP/MAS/225/2011/A





 Date of Survey: 21.3.2018
 20 AUG 2018
 PLATE NO-IV

APPLICANT:
 M/s.S.S.V. BLUE METALS,
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.

LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

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SHRUB	
TOP SOIL	
TOPOGRAPHICAL CONTOUR	
TREES	
PROPOSED TOP SOIL DUMP	

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.,
 RECOGNIZED QUALIFIED PERSON
 RQP/MAS/225/2011/A

TOP SOIL DUMP DETAILS
 Top Soil Dump = 8186 Cbm (6371 Sqm X 1.28m(H))

SF.NO.761 Poramboke Land
 SF.No.603/1 (PART-B) Poramboke Land

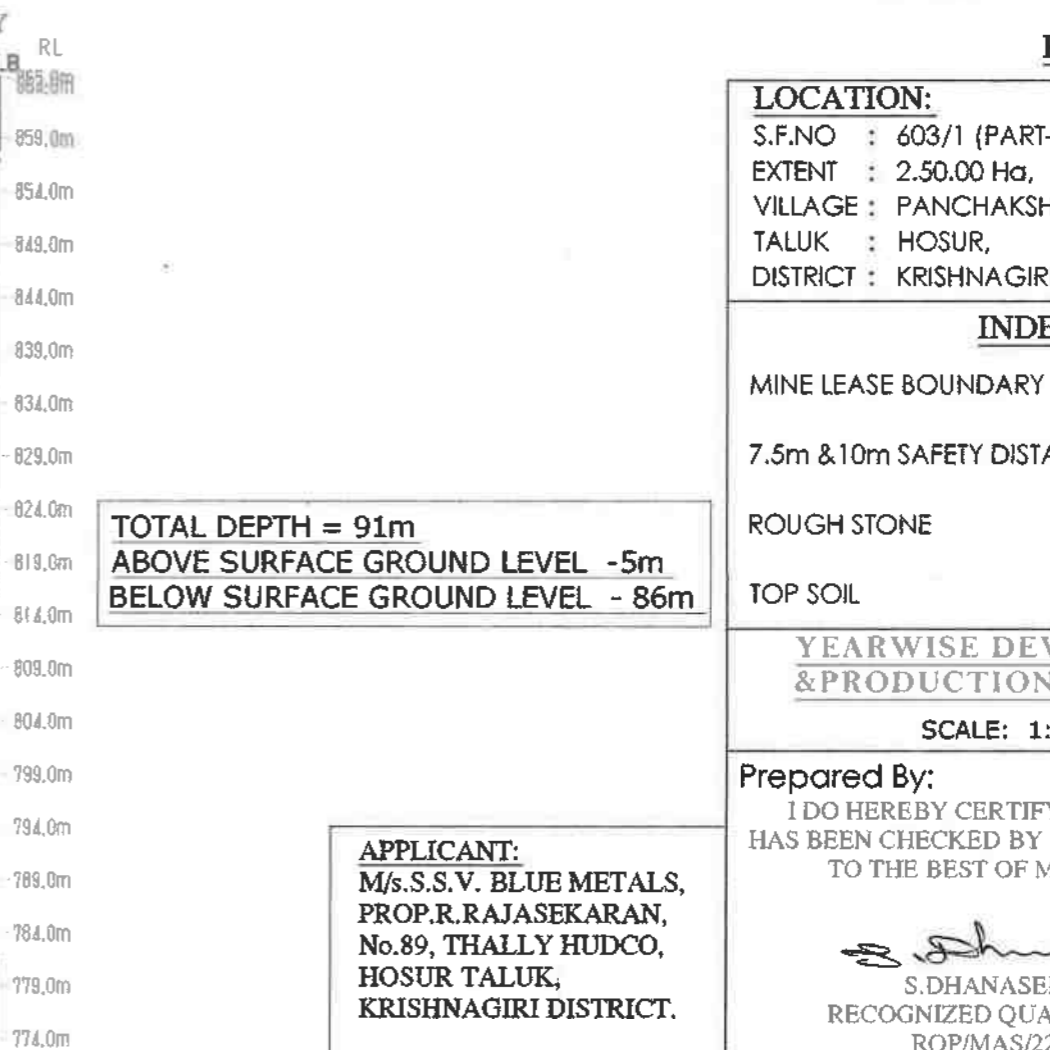
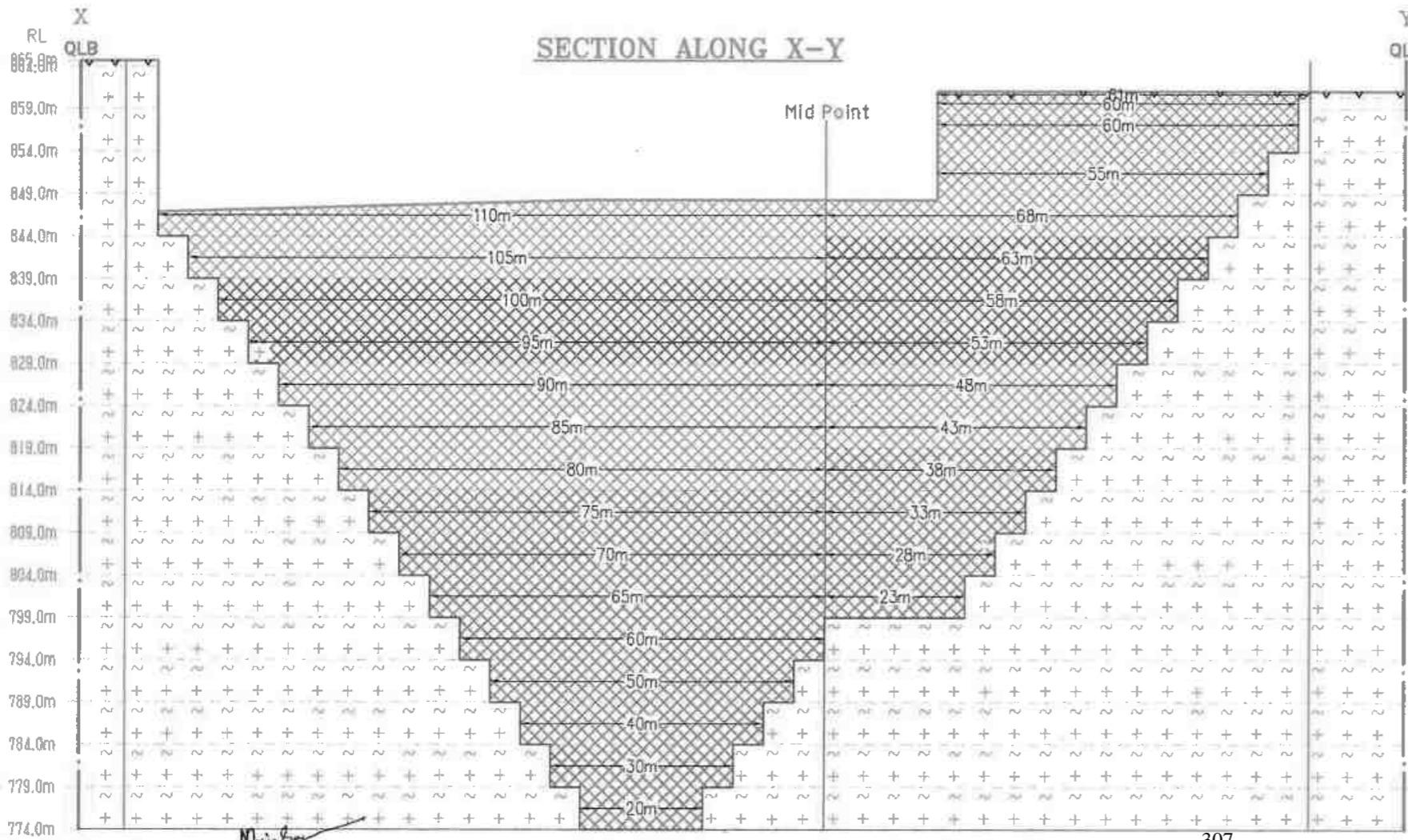
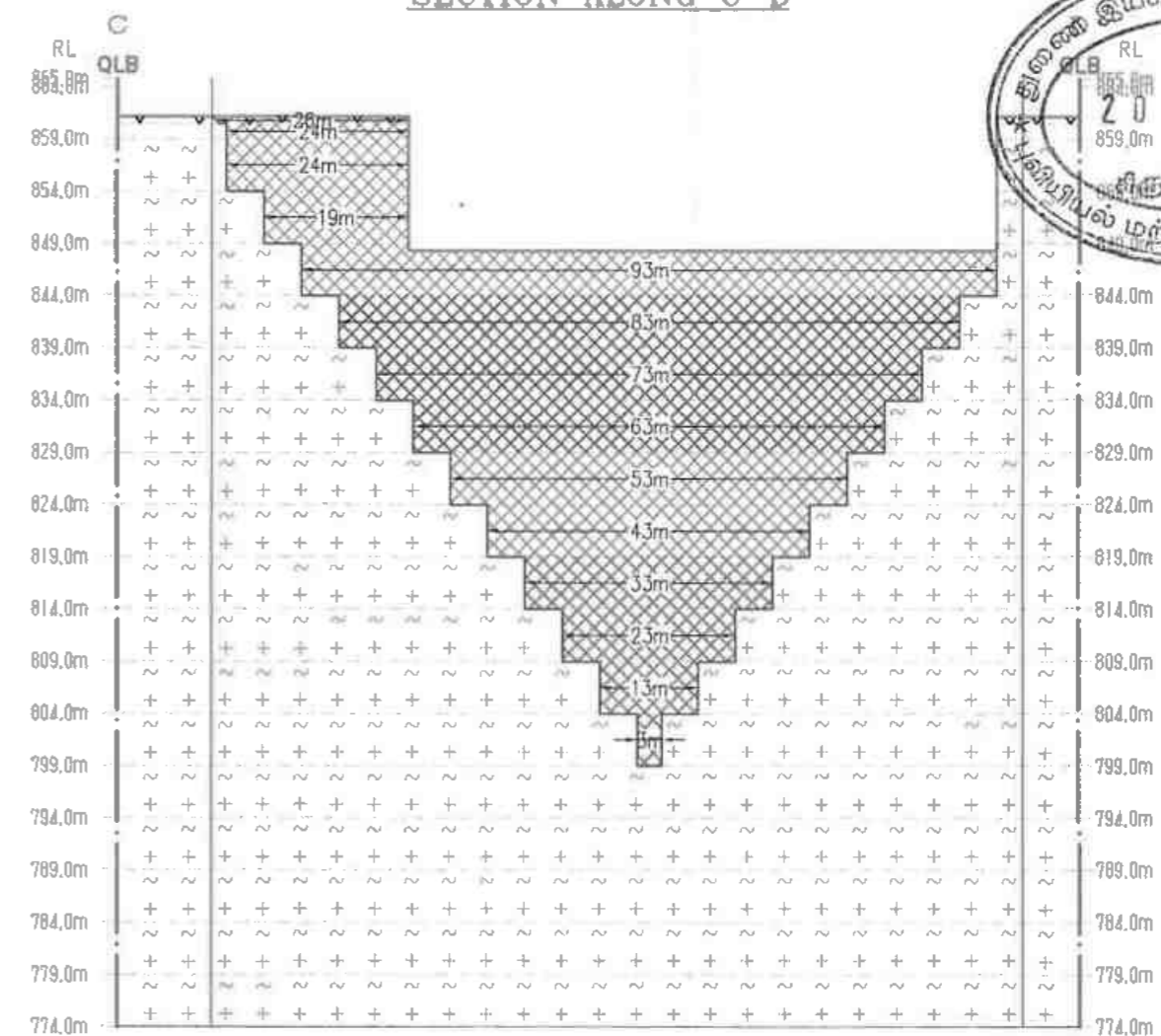
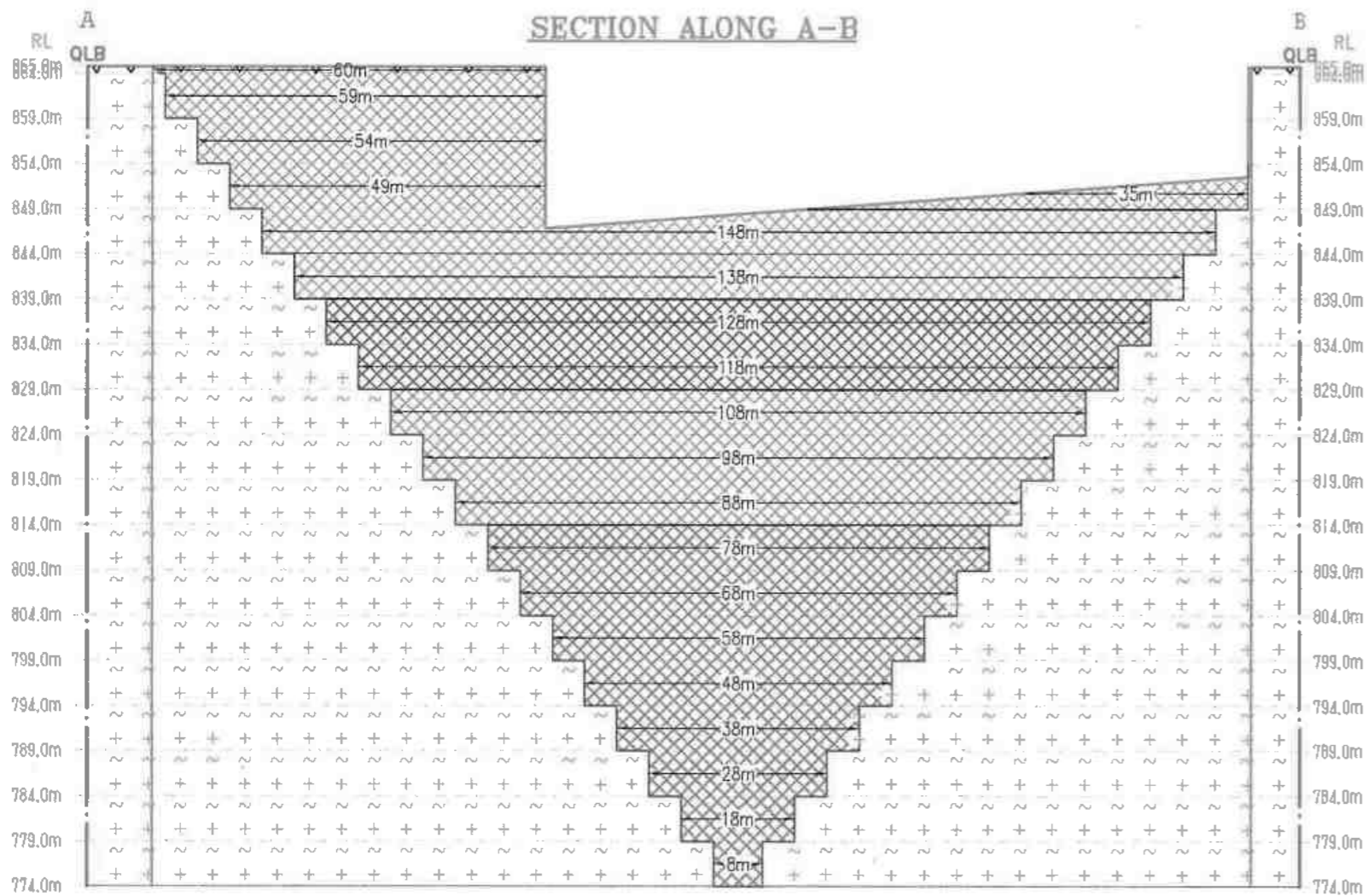


PLATE NO-IV-A

LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

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MINE LEASE BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
ROUGH STONE	
TOP SOIL	

TOTAL DEPTH = 91m
ABOVE SURFACE GROUND LEVEL - 5m
BELOW SURFACE GROUND LEVEL - 86m

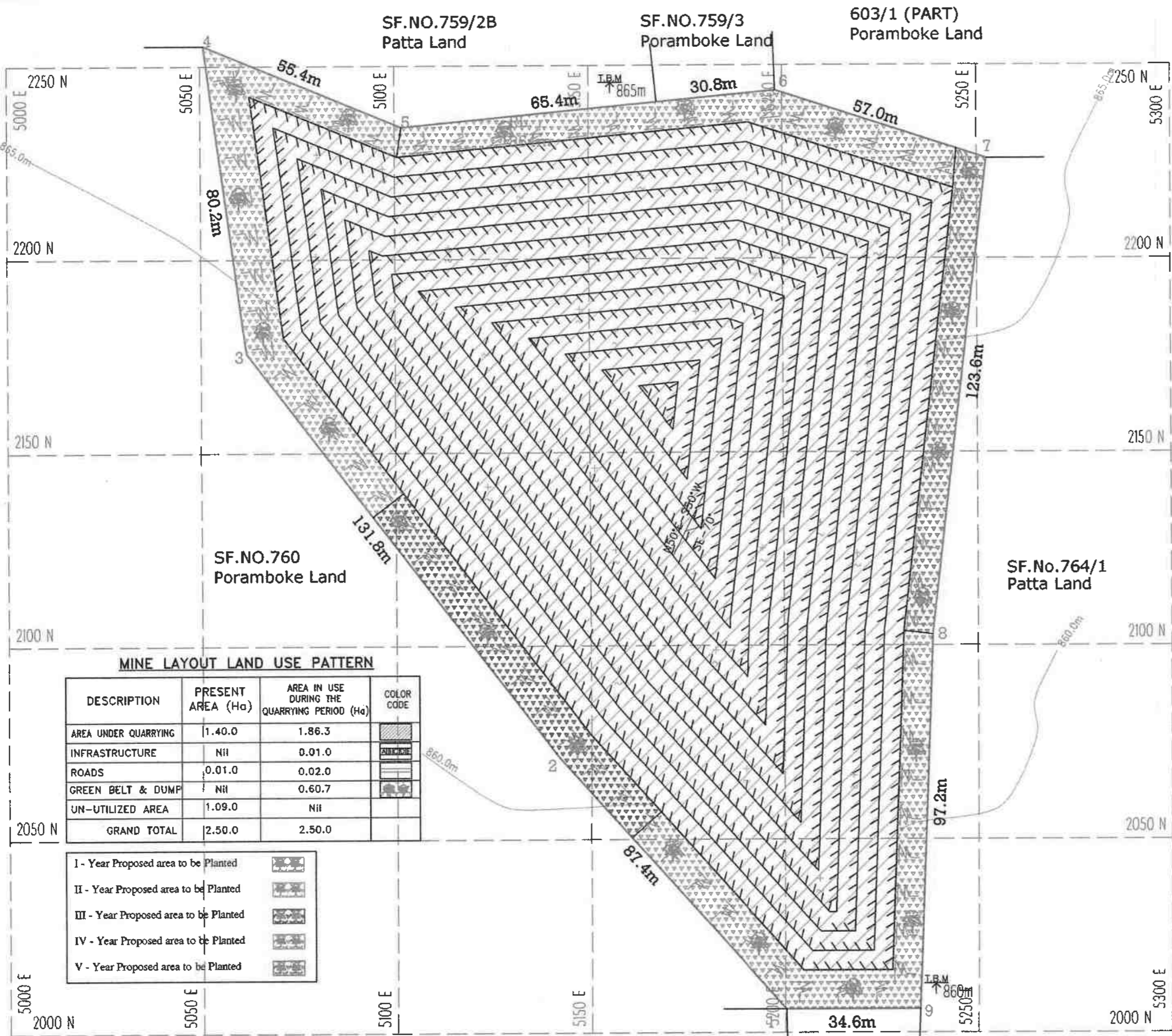
YEARWISE DEVELOPMENT & PRODUCTION SECTIONS

SCALE: 1:1000

APPLICANT:
 M/s.S.S.V. BLUE METALS,
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.

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
 RQP/MAS/225/2011/A

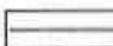







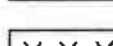

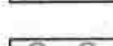
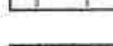


Date of Survey: 21.3.2018
 20 AUG 2018
 PLATE NO-V






APPLICANT:
 M/s.S.S.V: BLUE METALS
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.






LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

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- MINE LEASE BOUNDARY 
- 7.5m & 7.5m & 10m SAFETY DISTANCE 
- TEMPORARY BENCH MARK 
- APPROACH ROAD 
- STRIKE & DIP 
- WORKING PIT 
- ROUGH STONE 
- SHRUB 
- TOP SOIL 
- TOPOGRAPHICAL CONTOUR 
- TREES 
- MINE WASTE DUMP 

MINE LAYOUT LAND USE PATTERN

DESCRIPTION	PRESENT AREA (Ha)	AREA IN USE DURING THE QUARRYING PERIOD (Ha)	COLOR CODE
AREA UNDER QUARRYING	1.40.0	1.86.3	
INFRASTRUCTURE	NH	0.01.0	
ROADS	0.01.0	0.02.0	
GREEN BELT & DUMP	NH	0.60.7	
UN-UTILIZED AREA	1.09.0	NH	
GRAND TOTAL	2.50.0	2.50.0	

- 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 


TOP SOIL DUMP DETAILS
 Top Soil Dump = 8186 Cbm (6371 Sqm X 1.28m(H))

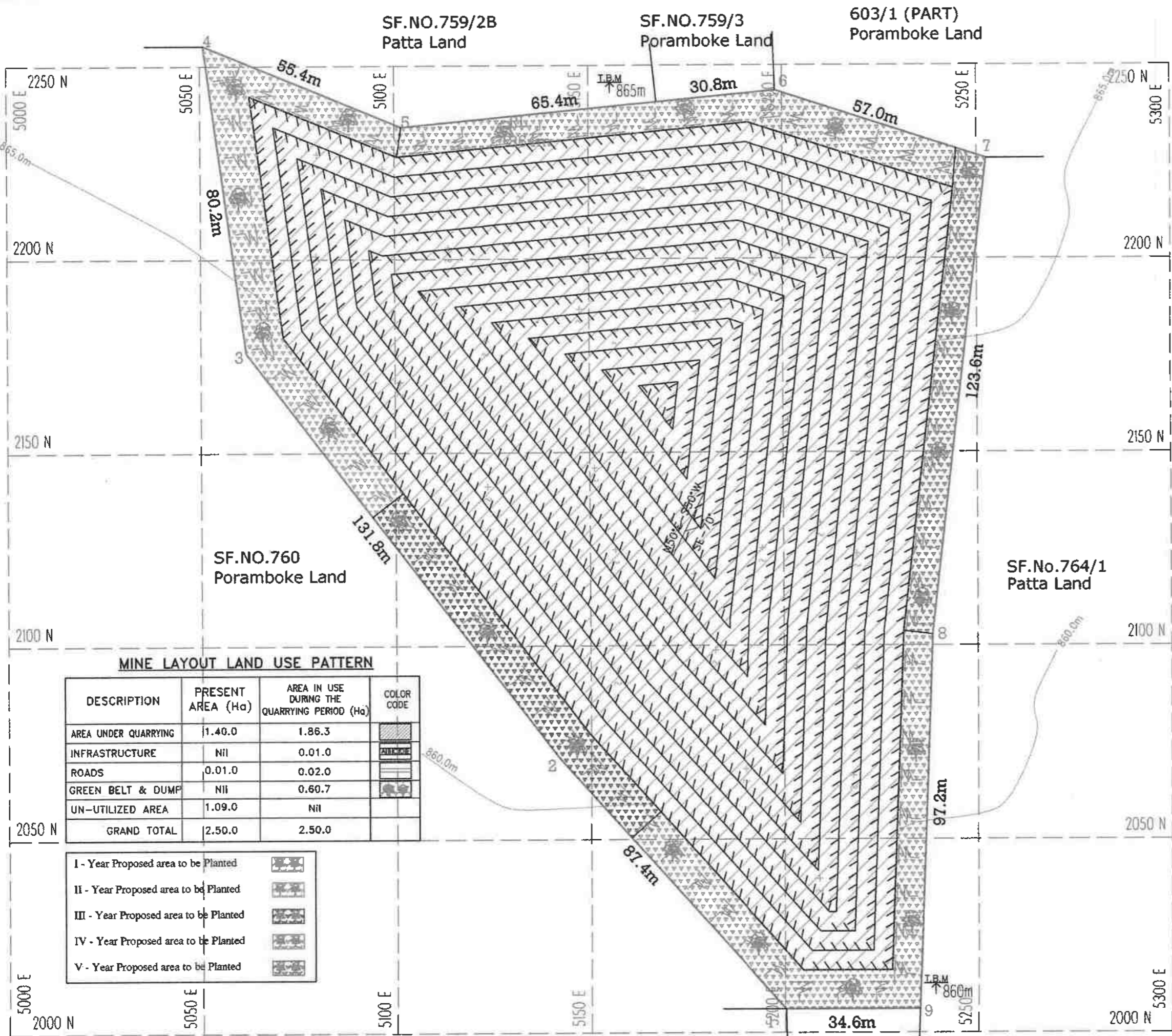
SF.NO.761
 Poramboke Land

SF.No.603/1 (PART-B)
 Poramboke Land

**MINE LAYOUT PLAN AND
 LAND USE PATTERN**
 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.,
 RECOGNIZED QUALIFIED PERSON
 RQP/MAS/225/2011/A



Date of Survey: 21.3.2018
 20 AUG 2018
 PLATE NO-V

APPLICANT:
 M/s.S.S.V. BLUE METALS
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.

LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

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- MINE LEASE BOUNDARY
- 7.5m & 7.5m & 10m SAFETY DISTANCE
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- APPROACH ROAD
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- WORKING PIT
- ROUGH STONE
- SHRUB
- TOP SOIL
- TOPOGRAPHICAL CONTOUR
- TREES
- MINE WASTE DUMP

MINE LAYOUT LAND USE PATTERN

DESCRIPTION	PRESENT AREA (Ha)	AREA IN USE DURING THE QUARRYING PERIOD (Ha)	COLOR CODE
AREA UNDER QUARRYING	1.40.0	1.86.3	
INFRASTRUCTURE	NII	0.01.0	
ROADS	0.01.0	0.02.0	
GREEN BELT & DUMP	NII	0.60.7	
UN-UTILIZED AREA	1.09.0	NII	
GRAND TOTAL	2.50.0	2.50.0	

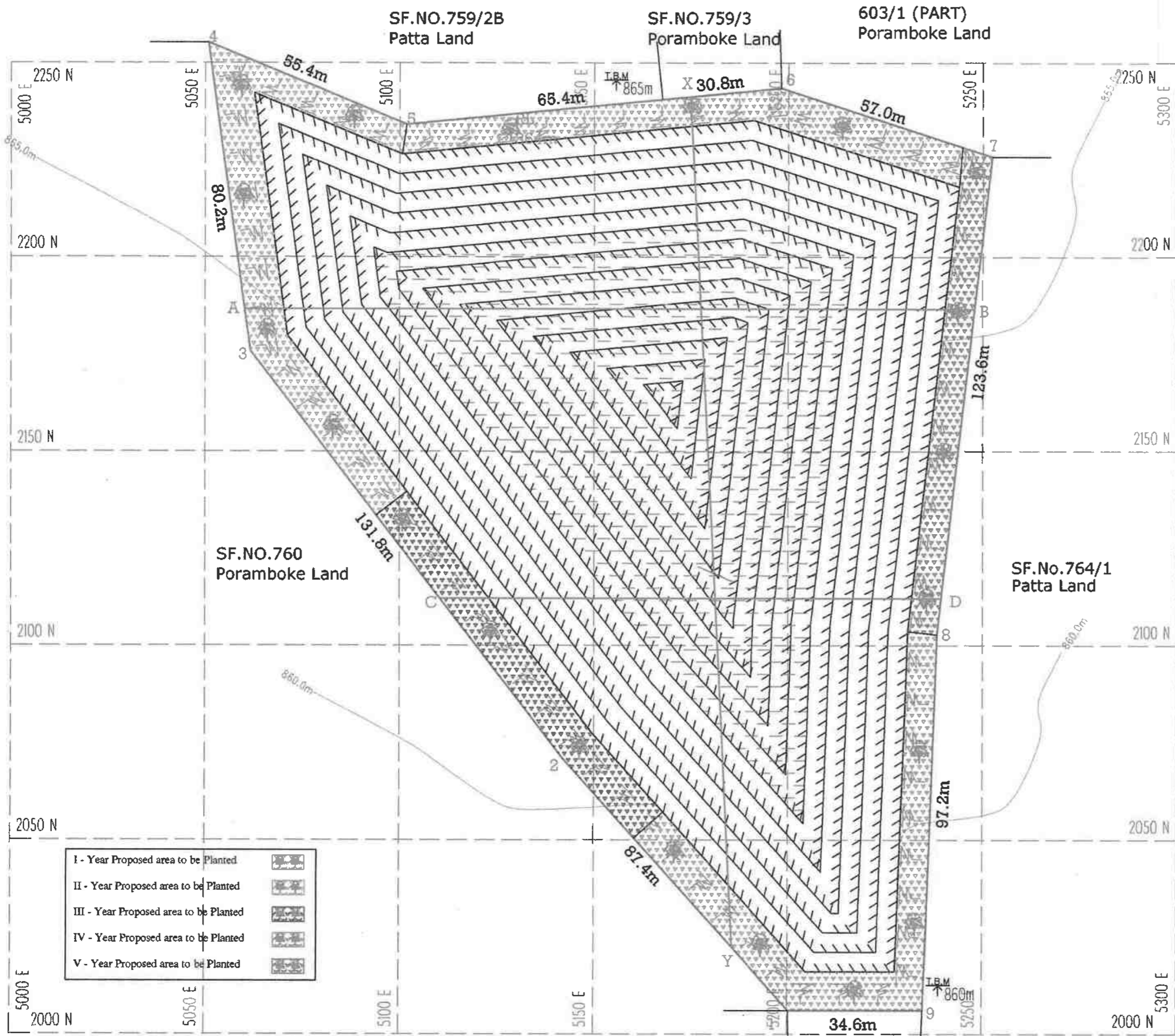
- I - Year Proposed area to be Planted
- II - Year Proposed area to be Planted
- III - Year Proposed area to be Planted
- IV - Year Proposed area to be Planted
- V - Year Proposed area to be Planted

TOP SOIL DUMP DETAILS
 Top Soil Dump = 8186 Cbm (6371 Sqm X 1.28m(H))

MINE LAYOUT PLAN AND LAND USE PATTERN
 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.,
 RECOGNIZED QUALIFIED PERSON
 RQP/MAS/225/2011/A



Date of Survey: 21.3.2018
PLATE NO-VI 20 AUG 2018
 APPLICANT:
 M/s.S.S.V. BLUE METALS,
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.

LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

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SHRUB	
TOP SOIL	
TOPOGRAPHICAL CONTOUR	
TREES	
PROPOSED TOP SOIL DUMP	

**CONCEPTUAL & FINAL
 MINE CLOSURE PLAN**
 SCALE: 1:1000

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

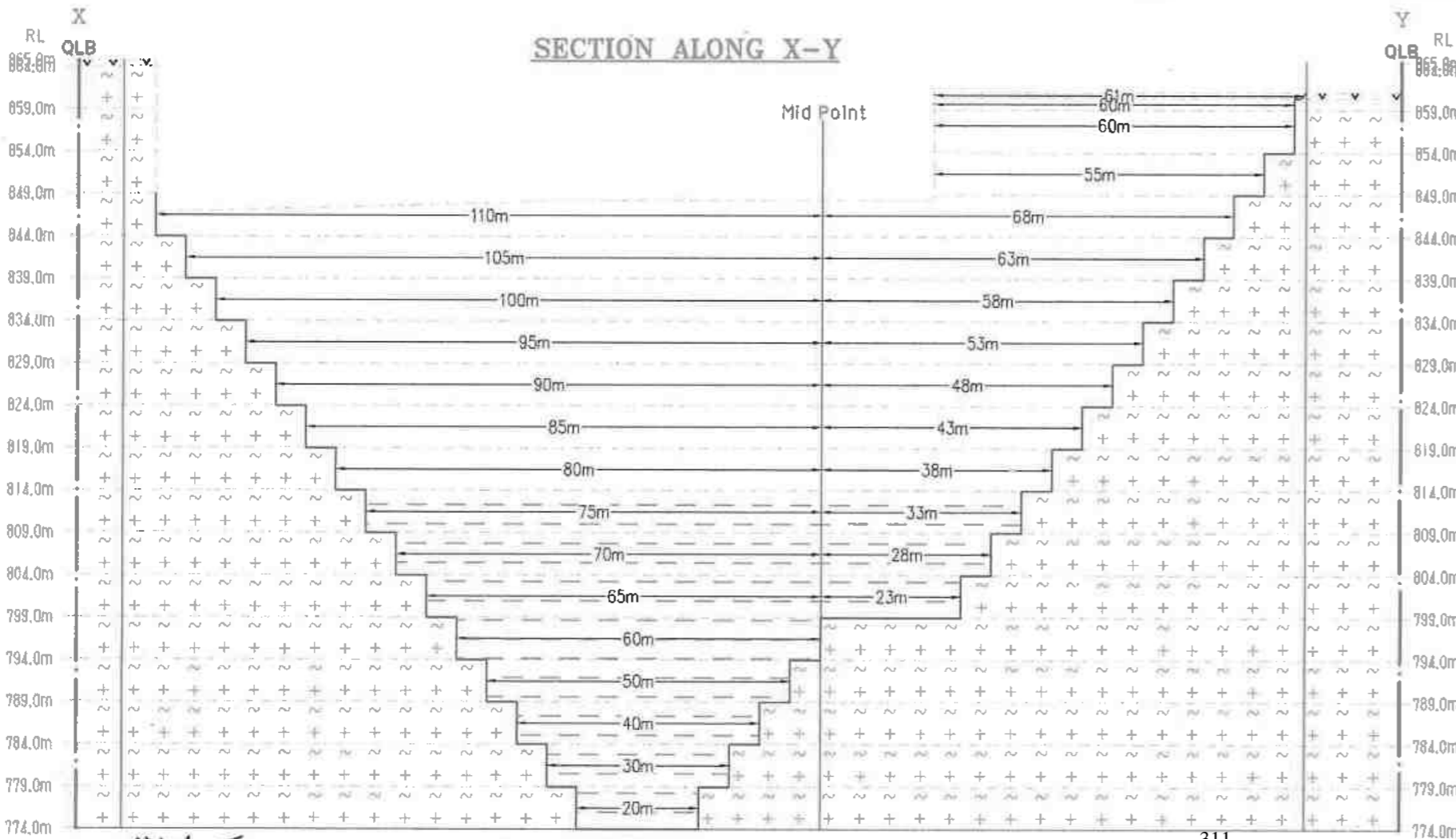
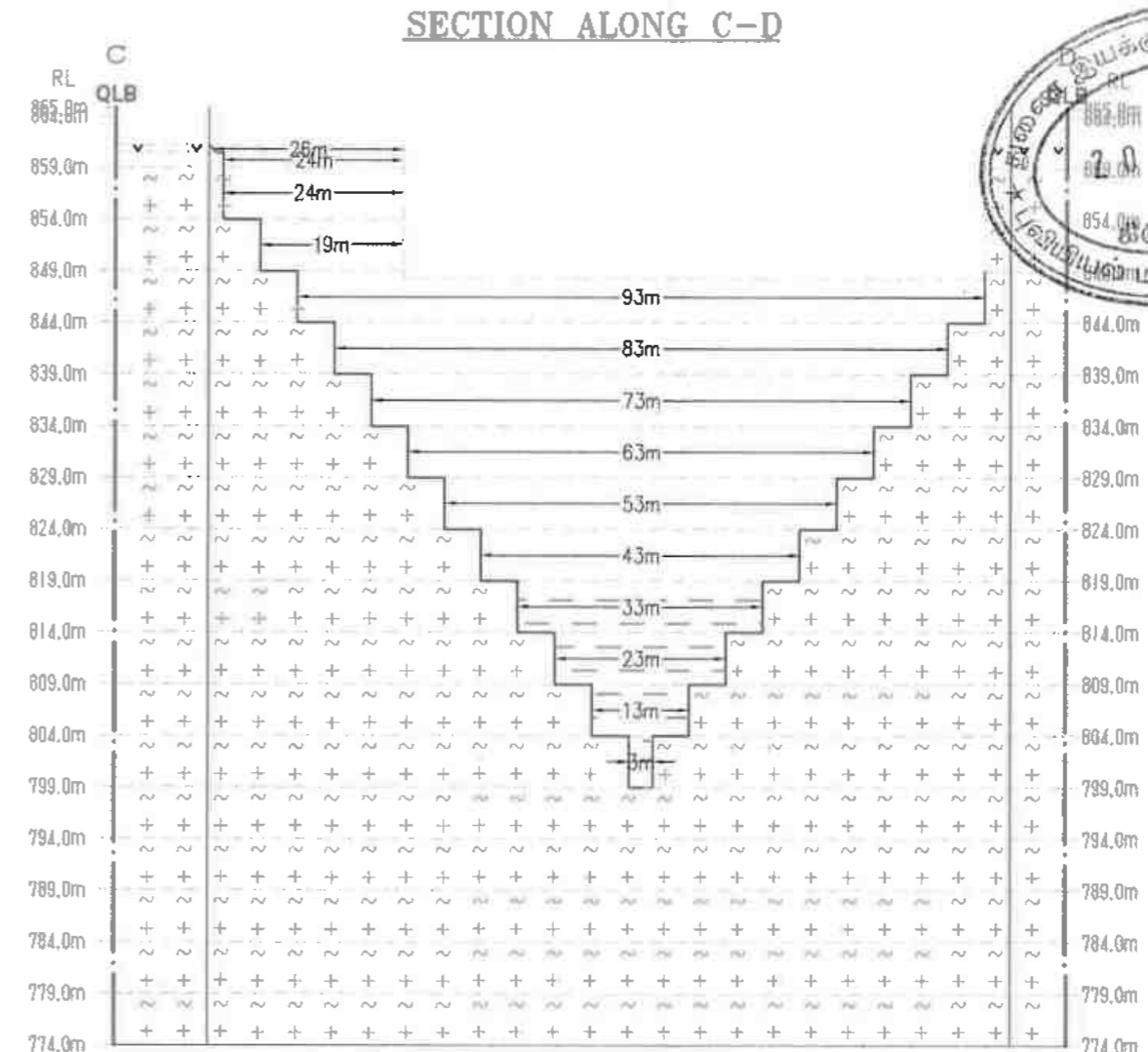
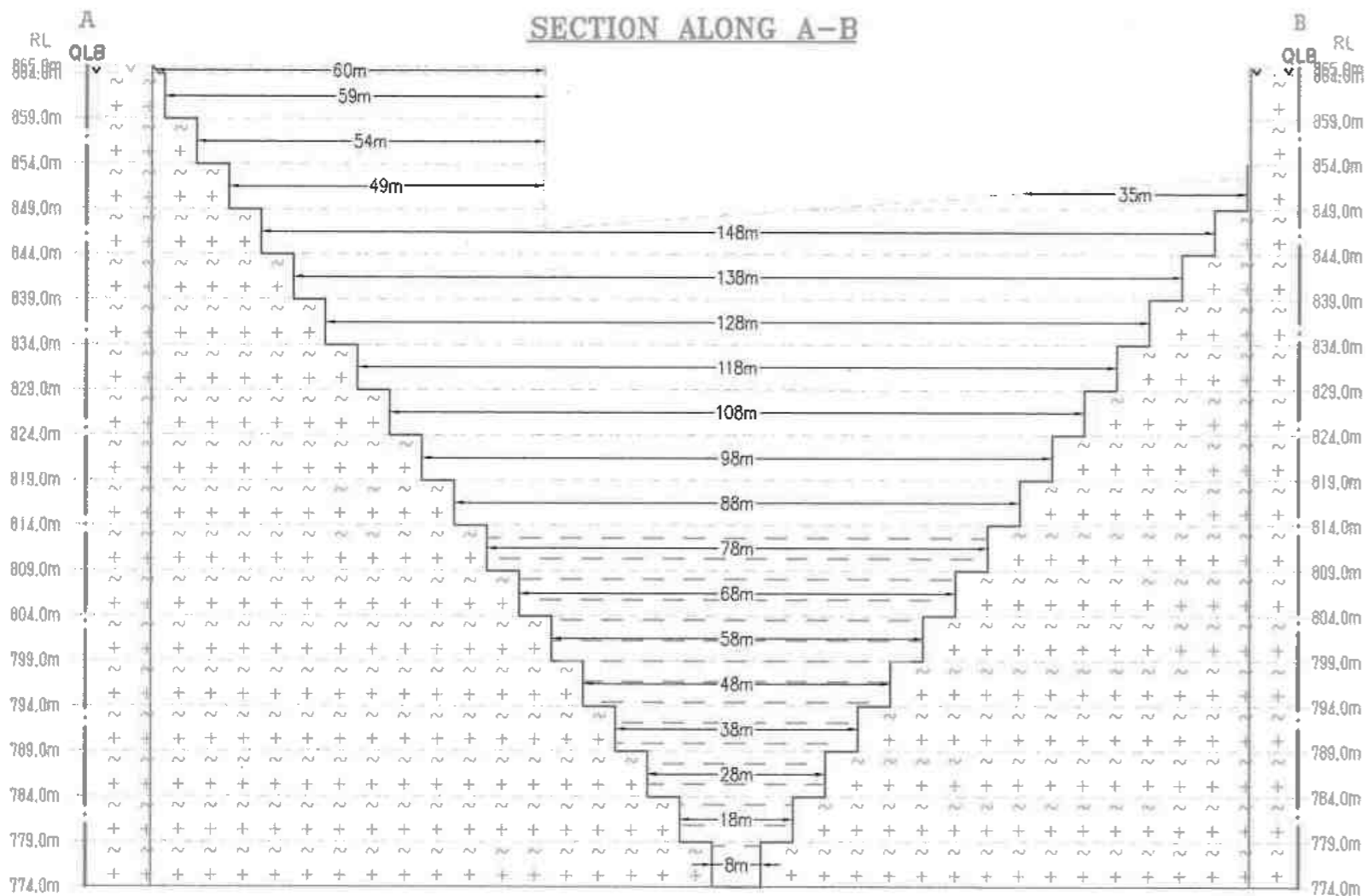
 S.DHANASEKAR, M.Sc.,
 RECOGNIZED QUALIFIED PERSON
 RQP/MAS/225/2011/A

TOP SOIL DUMP DETAILS	
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	

TOP SOIL DUMP DETAILS
 Top Soil Dump = 8186 Cbm (6371 Sqm X 1.28m(H))

SF.NO.761
 Poramboke Land

SF.No.603/1 (PART-B)
 Poramboke Land



TOTAL DEPTH = 91m
ABOVE SURFACE GROUND LEVEL - 5m
BELOW SURFACE GROUND LEVEL - 86m

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MINE LEASE BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
ROUGH STONE	
TOP SOIL	
ULTIMATE PIT SLOPE	
PROPOSED WATER STORAGE	

PLATE NO-VI-A

LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

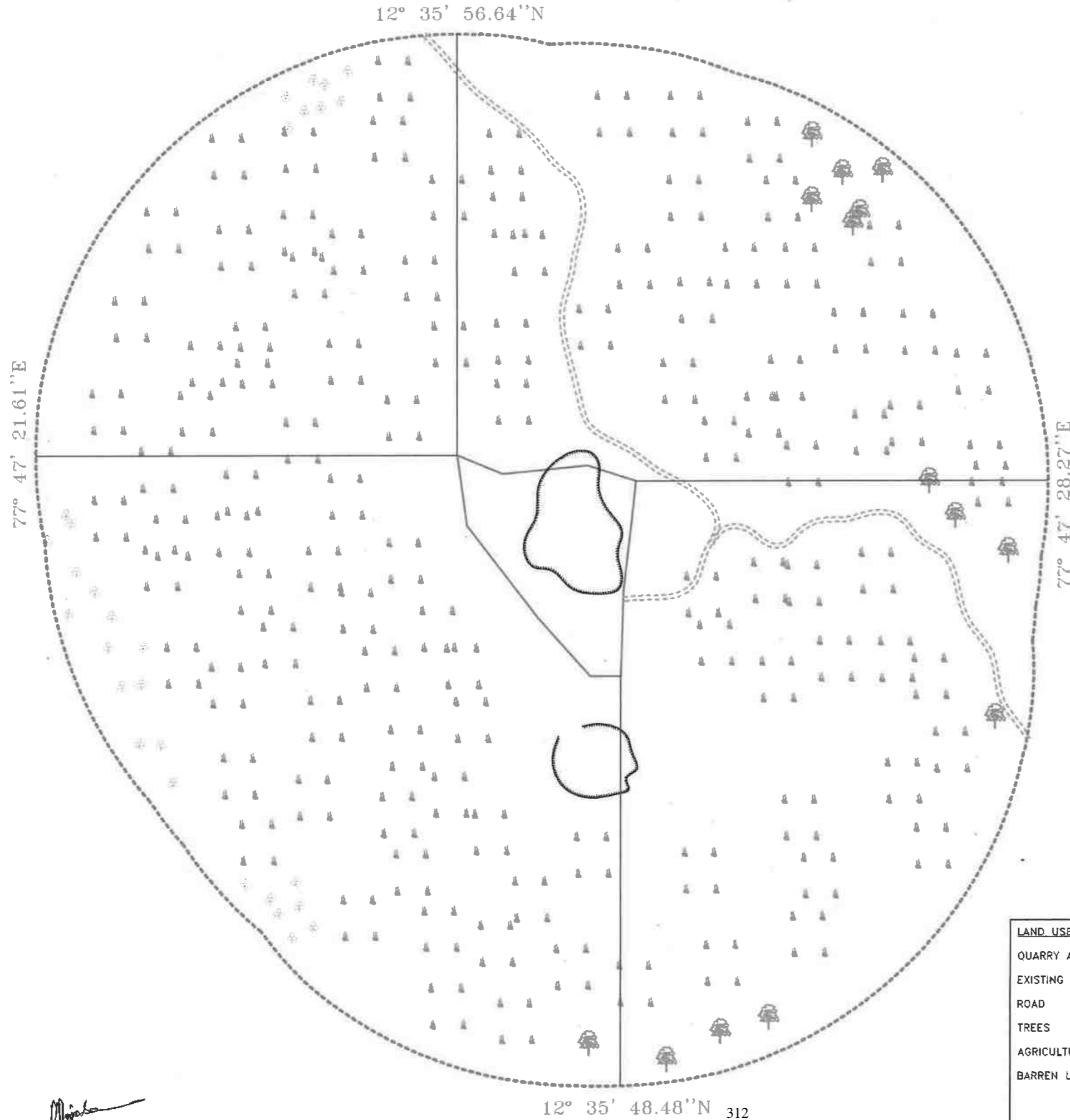
APPLICANT:
 M/s.S.S.V. BLUE METALS,
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.

CONCEPTUAL & FINAL
MINE CLOSURE SECTIONS

SCALE: 1:1000



Prepared By:
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S. Dhana
 S.DHANASEKAR.M.Sc.,
 RECOGNIZED QUALIFIED PERSON
 RQP/MAS/225/2011/A




 Date of Survey: 21.3.2018
20 AUG 2018
 PLATE NO-VII
 APPLICANT:
 M/s.S.S.V. BLUE METALS,
 PROP.R.RAJASEKARAN,
 No.89, THALLY HUDCO,
 HOSUR TALUK,
 KRISHNAGIRI DISTRICT.

LOCATION:
 S.F.NO : 603/1 (PART-A),
 EXTENT : 2.50.00 Ha,
 VILLAGE : PANCHAKSHIPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.


500M RADIUS : 
 MINE LEASE AREA : 
 TOPO SHEET NO. : 57 H/14
 LATITUDE : 12° 35' 48.48"N to 12° 35' 56.64"N
 LONGITUDE : 77° 47' 21.61"E to 77° 47' 28.27"E

INDEX

VILLAGE ROAD	
APPROACH ROAD	
APPLICANT INFRASTRUCTURES	
TREES	
AGRICULTURAL LAND	
BARREN LAND	
EXISTING PIT	

LAND USE PATTERN	PERCENTAGE%
QUARRY AREA	15%
EXISTING QUARRY	05%
ROAD	05%
TREES	10%
AGRICULTURAL LAND	20%
BARREN LAND	45%

ENVIRONMENTAL PLAN
SCALE- 1:5000

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

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

Mishra

ANNEXURE-VII
VAO CERTIFICATE

TOPOGRAPHICAL VIEW OF PANCHAKSHIPURAM

ROUGH STONE QUARRY LEASE AREA



Name Of The Lessee : **S.S.V BLUE METALS.**

Name Of The Proprietor : **R.Rajasekaran**

S/o.Ramasubbu

Address : No.C 89 Talli Hudco, Hosur,
Hosur Taluk, Krishnagiri District,
Tamil Nadu-635109.

LOCATION DETAILS:

Extent : 2.50.0 Hect

S.F.No : 603/1 (Part-A)

Village : Panchakshipuram

Taluk : Hosur

District : Krishnagiri

State : Tamil Nadu

Signature of the Lessee

SSV BLUE METALS
(Pro: R.Rajasekaran)

Village Administrative Officer
83, PANCHAKSHIPURAM
HOSUR TALUK

ANNEXURE-VIII BLASTING AGREEMENT



VISHNU EXPLOSIVES



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

Ref:

Date :

To

18.02.2022

M/s. S.S.V Blue Metals,
Prop.: Thiru. R. Rajasekaran,
No.89, Thally Hudco,
Hosur Taluk,
Krishnagiri District.

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(E3722) 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:603/1(Part-A) in Panchakshipuram Village, Hosur Taluk, Krishnagiri District over an extent of 2.50.0 hectares.

SERVING BEST AT ALL TIMES

Thanking you.

For VISHNU EXPLOSIVES,
For VISHNU EXPLOSIVES

R. Rajasekaran
Proprietor

Enclosure: Magazine License Copy.

अनुमति प्रारूप एल. ई - 3 LICENCE FORM EE-3

(विस्फोटक नियम, 2008 की अनुसूची 4 के भाग 1 के अनुबंध 5 के अंतर्गत) (See article 5(a) to (c) of Part I of Schedule IV of Explosives Rules, 2008)

यह अनुमति एक समस पर वर्ग 1, 2, 3, 4, 5 या वर्ग 7 के विस्फोटक या किसी भण्डार में वर्ग 6 के विस्फोटक रखने के लिए अनुमति Licence to possess (a) for use explosives of class 1, 2, 3, 4, 5 or 7 in a magazine

अनुमति सं (Licence No.): EHQ/TN/22/335(E64278)
वार्षिक फीस (Annual Fee Rs): 14000/-

Licence is hereby granted to

M/s Vishnu Explosives (अधिभोगी) / Occupier : Shri G.V.Sai Supramaniam, S/O V.G. Vishwanathan Plot No. 22-A Keel Pavalu, Pavalu Village Kaveripattinam P.O., Town/Village - Kaveripattinam, District-KRISHNAGIRI, State-Tamil Nadu, Pincode-615112



यह अनुमति अनुबंध की जाती है।

अनुमतिधारी की प्रकृति - Status of licensee - Proprietorship Firm

अनुमति निम्नलिखित प्रयोजनों के लिए विधिमार्ग है।
Licence is valid only for the following purpose

possess for use of Safety Fuse, Detonating Fuse, Nitrate mixture - Shells and Emulsion Explosives, Detonators. के उपयोग के लिए

अनुमति धारक को निम्नलिखित किसी प्रकार और मात्रा के लिए विधिमार्ग है।
Licence is valid for the following kinds and quantity of explosives -- (कि) (a)

क्र. सं.	नाम और विवरण Name and Description	वर्ग और प्रभाग Class & Division	उप-प्रभाग Sub-division	मात्रा किसी एक समय में Quantity at any one time
1	Nitrate mixture - Shells and Emulsion Explosives	6.0	0	7500 Kg
2	Detonators	6.2	0	4400 Nos
3	Safety Fuse	6.1	0	2500 Mtrs
4	Detonating Fuse	6.2	0	2000 Mtrs

यह किसी एक कलेक्टर कार्यालय में खरीदी जाने वाले विस्फोटक की मात्रा (अनुबंध 5 (क) और (ग) के अंतर्गत अनुमति के लिए) (a) quantity of explosives to be purchased in a collector's office applicable for licence under article 5(a) and (g)

निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुमति परिसर की पट्टी होती है।
The licensed premises shall conform to the following drawings

रेखाचित्र क्र. (Drawing No.) EHQ/TN/22/335(E64278)
दिनांक (Date) 11/10/2021

अनुमति परिसर निम्नलिखित पते पर स्थित है। (The licensed premises are situated at following address)
Survey No. 3443B ग्राम (Town/Village) Pavalu Village, Kaveripattinam

जिला (District) KRISHNAGIRI राज्य (State) Tamil Nadu
दूरभाष (Phone) 9842744073 ई-मेल (E-mail)

पोलिस थाना (Police Station) : Kaveripattinam
पिनकोड (Pincode) : 615112
फैक्स (Fax)

अनुमति परिसर में निम्नलिखित सुविधाएं अंतर्भूत हैं।
The licensed premises consist of following facilities

a main magazine room, lobby and a detonator storage room

अनुमति धारक इस पर सहायक विस्फोटक अधिनियम, 1884 और उसके अंतर्गत विस्फोटक नियम, 2008 के उपबंधों, शर्तों और अंतर्भूत शर्तों और अनुबंधों का पालन करने के लिए अनुबंध की जाती है।
The licensee is granted subject to the provision of explosives Act-1884 as amended from time to time and the Explosives Rules, 2008 framed there under and its conditions, additional conditions and the following Amendment

- 1. उपर्युक्त कम से 5 मीटर ऊपर कठित रखाविस (नवीन संशोधन विधियों और अन्य विवरण दर्शाते चरित्र चित्रों) (showing site, construction and other details) अंतर्भूत है। (above)
- 2. अनुमति धारक को वारंश हस्तांतरण के लिए अनुमति नहीं दी जाती और अंतर्भूत है।
(Conditions and Additional Conditions of use prescribed by the licensing authority)
- 3. दूरी नियम 1884 के अंतर्गत 100 मीटर।

यह अनुमति तारीख 31 मार्च 2015 तक विधिमार्ग होगी। (The licence shall remain valid till 31 March 2015)

यह अनुमति अधिनियम या उसके अधीन विहित नियमों के अनुबंधों के अंतर्गत के प्रति निर्दिष्ट है। (The licence is granted subject to the provision of explosives Act-1884 as amended from time to time and the Explosives Rules, 2008 framed there under and its conditions, additional conditions and the following Amendment)

तारीख (Date) 11/10/2021

मुख्य विस्फोटक नियंत्रक (Chief Controller of Explosives)

- Amendments :
 - 1. Change in Postal Address dated: 16/04/2017
 - 2. Amendment of Quantity of Explosives Monthly Purchase Limit dated: 02/05/2018
 - 3. Amendment of Quantity of Explosives Monthly Purchase Limit dated: 24/04/2019
 - 4. Amendment of Quantity of Explosives Monthly Purchase Limit dated: 11/10/2021
 - 5. Amendment in Drawings/Facilities/Premises dated: 11/10/2021
- 6. Change in Licensee Name/Address/Status dated: 08/10/2021

नवीनीकरण के पृष्ठान्त के लिए स्थान
Space for endorsement to be filled

नवीनीकरण की तारीख
Date of Renewal

समाप्ति की तारीख
Date of Expiry

अनुमति प्रार्थिकरता के हस्ताक्षर और नाम
Signature of licensee and name

28/07/2020

31/03/2025

मुख्य विस्फोटक नियंत्रक
Chief Controller of Explosives

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

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

**ANNEXURE-IX AFFIDAVIT AND CER
DETAILS**

भारतीय गैर न्यायिक

पचास
रुपये

रु.50

भारत

FIFTY
RUPEES

Rs.50

INDIA

INDIA NON JUDICIAL

தமிழ்நாடு தமில்நாடு TAMILNADU 19.3.2022/R-50-BD 280433

m/s. S.S.V. Blue metals

Prop: R. Rajasekaran

Krishnagiri

M. S. S. V. Blue Metals

முத்திரைத்தான் சிறப்புகையாளர்
உரிமம் எண். 1/2003
சுப்ரமணிய நகர் விரிவாக்கம்,
ஞாமங்கலம், சேலம்-5, தமிழ்நாடு

AFFIDAVIT TO SEIAA, TAMIL NADU

I, Tvi. S.S.V Blue Metals, Proprietor Thiru R. Rajasekaran, S/o Ramasubbu, office at No.89 Thaly Hudco, Hosur Taluk, Krishnagiri District 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 at Survey No.603/1 (Part-A) over an area of 2.50.0 Ha in Panchakshipuram village, Hosur Taluk, Krishnagiri District, Tamil Nadu.

1. I swear to state and confirm that within 10km area of the quarry site, I have applied for environmental clearance, none of the following is situated
 - a. Protected areas notified 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 site.



R. Rajasekaran

2. I will complete the following Corporate Environment Responsibility (CER) activities before commencement of the quarrying activities.

CER Activity	Project cost (Rs)	CER cost (Rs)
Carrying out various developmental works in the nearby region based on the need of the locals.	Rs.1,12,65,000/-	Rs.5,00,000/-
Total cost Allocation	Rs.1,12,65,000/-	Rs.5,00,000/-

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

1. Existing Quarries					
S.No	Name and address of the lessee	Village & SF.No.	Extent in Hectare	G.O No. & Date	Lease Period
1	Thiru. M.R Enterprises, Panchakshipuram,, Hosur Taluk, Krishnagiri District.	Panchakshipuram Village & 603/1 (Part-2)	3.00.0 Ha	Roc.No.92/2016/Mines/Dt 08.08.2016	17.08.2016 to 16.08.2021
2	Thiru. P.Kalaikovan, S/o M.Ponnusamy, 12/165 Thamson Pet, Kaveripattinam, Krishnagiri Taluk& District.	Panchakshipuram Village & 603/1 (Part-3)	3.25.0 Ha	Roc.No.93/2016/Mines/Dt 04.06.2018	13.06.2018 to 12.06.2028
3	Thiru. K.Gopinath, S/o Kothanda ramaiah,	Panchakshipuram Village & 603/1 (Part-B)	2.50.0 Ha	Roc.No.183/2018/Mines/ Dt 06.12.2016	06.12.2019 to 05.12.2029
4	Thiru. B.Arun Kumar,	Panchakshipuram Village & 603/1 (Part-4)	3.00.0 Ha	Roc.No.94/2016/Mines/Dt 19.12.2016	26.12.2016 to 25.12.2026
Total			11.75.0 Ha		



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2. Abandoned / Old Quarries					
S.No	Name and address of the lessee	Village & SF.No.	Extent in Hectare	G.O No. & Date	Lease Period
1	Thiru. R.Ramareddy,	Panchakshipuram Village & 545/1,2,3 & 628	2.15.5 Ha	Roc.No.245/2010/Mines	28.02.2011 to 27.02.2016 Lease Expired
2	Tvi.Veerabadraswamy Blue Metal	Panchakshipuram Village & 627	1.45.5 Ha	Roc.No.79/2012/Mines/Dt 26.04.2012 and 23.12.2013	03.01.2014 To 02.01.2019 Lease Expired
3	B.Gowdappa	Panchakshipuram Village & 603/1 (Part-1)	5.00.0 Ha	Roc.No.583/2005/Mines/ Dt. 18.06.2005	08.08.2005 To 07.08.2015 Lease Expired
		Total	8.61.0 Ha		

3. Proposed Quarries					
S.No	Name and address of the lessee	Village & SF.No.	Extent in Hectare	G.O No. & Date	Lease Period
1	Tvl. S.S.V Blue Metals, Prop.Thiru R. Rajasekaran, S/o Ramasubbu, No C-89 Thally Hudco, Hosur Taluk, Krishnagiri District.	Panchakshipuram Village & 603/1 (Part-A)	2.50.0 Ha.	Roc.No.182/2018/Mines /Dt 09.03.2018	Precise area given Instant Proposal
2	Thiru. S.G.Anandha Kumar,	Panchakshipuram Village & 738	3.96.5 Ha.	Roc.No.1077/2018/Mines/Dt 04.02.2019	Precise area given
		Total	6.46.5 Ha		



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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.



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.

