

March 2023

Application Form For Environmental Clearance (Public Hearing)

Application Form (Draft EIA Report)

For

Proposed Deivathal Rough Stone & Gravel Quarry –
3.55.5 Ha

at

S.F.No. 3/2A & 152/1(P) in Sukkampalayam &
Velampalayam Village, Palladam Taluk, Tiruppur
District, Tamilnadu State

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

Category of the Project: B1 Cluster Mining

Baseline Period: June 2022 – August 2022

*Environmental Consultant
& Laboratory details:*

Ecotech Labs Pvt Ltd,



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

Proponent details:

Tmt. P. Deivathal,

W/o. Palanisamy Gounder,

Naasuvan Kaattu Thottam,

Velampalayam Village,

Palladam Taluk,

Tiruppur District - 641 663.

500m Radius Cluster Mine

1) Existing other quarries:

S. No.	Name of the Owner	Village	S.F.Nos.	Extent in Hect.	Collector proceedings No. & Date	Lease Period
1.	P.Sumathi	Sukkampalayam	2	3.00.5	171/2015/Mines dated 06.03.2020 1198/2021/Mines dated 28.10.2021	06.03.2020 to 05.03.2025
2.	P.Viswanathan	Velampalayam	153/2A, 153/2C, 156/1B	1.77.0	R.C. 820/Mines/2016 dated 27.03.2018	27.03.2018 to 26.03.2023

2) Abandoned Quarries:

S. No.	Name of the Owner	Village & S.F.Nos.	Extent in Hect.	Collector proceedings No. & Date	Lease Period
1.	Nil				

3) Proposed Quarries

S. No.	Name of the Owner	Village & S.F.Nos.	Extent in Hect.	Collector proceedings No. & Date	Lease Period
1.	Tmt.P.Deivathal	Sukkampalayam & Velampalayam S.F.No. 3/2A, 152/1(Part)	3.55.5	-	Proposed Area

The Total extent of the Existing / Lease expired / Proposed quarries are 8.33.0 Ha

Date:

From

Tmt. P. Deivathal,
W/o. Palanisamy Gounder,
Naasuvan Kaattu Thottam,
Velampalayam Village,
Palladam Taluk,
Tiruppur District - 641 663.

To

Tamilnadu Pollution Control Board,
12A, Pollachi By-Pass Road, Palladam,
Tiruppur - 641 664.

Sir,

Sub: Request to conduct Public Hearing – Environmental Clearance for the Tmt. P. Deivathal Rough Stone and Gravel Quarry over a total extent of 3.55.5 Ha in Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District, Tamilnadu State – Regarding.

Ref: Letter No. SEIAA-TN/F. No. 9218/ ToR-1190/2022 Dated: 06.07.2022

Please find enclosed herewith the application of Draft EIA Report along with necessary enclosures towards seeking environmental clearance for Tmt. P. Deivathal Rough Stone and Gravel Quarry over a total extent of 3.55.5 Ha at S.F.No. 3/2A & 152/1(P) Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District, Tamilnadu State. In this regard, we had obtained the Terms of Reference from State Environmental Impact Assessment Authority (SEIAA) Tamil Nadu; vide reference mentioned above for conducting EIA studies. We wish to inform that the draft EIA report complying with all the conditions mentioned in the TOR has been prepared and the copies of the same are enclosed with this letter. With reference to the above, we kindly request the TNPCB to make the necessary arrangements for **conducting the public hearing for the Rough Stone Quarry**. With the above, we request the TNPCB to accept and process our application for conducting the Public Hearing at the earliest.

Thanking you

Yours Sincerely

Authorized Signatory

Enclosures: Draft EIA report

Tmt. P. Deivathal,
W/o. Palanisamy Gounder,
Naasuvan Kaattu Thottam,
Velampalayam Village,
Palladam Taluk,
Tiruppur District - 641 663.

UNDERTAKING

I, Tmt. P. Deivathal, undertaking that the Draft Environmental Impact Assessment (EIA) Report for Rough Stone and Gravel Quarry over an extent of 3.55.5 Ha at S.F.No. 3/2A & 152/1(P) Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur 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. 9218/ ToR-1190/2022 Dated: 06.07.2022.

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: Tiruppur

Date:

Yours faithfully

Tmt. P. Deivathal

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



Eco Tech Labs Pvt Ltd

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

UNDERTAKING

I, Dr. A. Dhamodharan, Managing Director confirms that this Draft EIA Report of Rough Stone and Gravel Quarry over an extent of 3.55.5 Ha at S.F.No. 3/2A & 152/1(P) Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District, Tamilnadu State has been prepared at M/s. Ecotech Labs Pvt. Ltd., Chennai.

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

Signature:

Name: Dr. A. Dhamodharan

Designation: Managing Director

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

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

Date: 01.03.2023

Place: Chennai

Declaration of Experts contributing to the EIA




Declaration by experts contributing to the EIA report for Rough Stone Quarry (minor mineral) mining project of Tmt. P. Deivathal Rough Stone and Gravel Quarry over a total extent of 3.55.5 Ha at S.F.No. 3/2A & 152/1(P) Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District, Tamilnadu State.


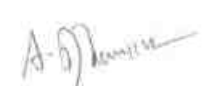


I, hereby certify that I was a part of the EIA team in the following capacity that developed the above EIA.

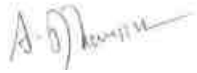

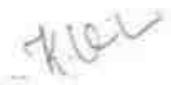

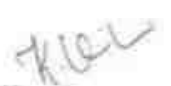
Project	Tmt. P. Deivathal Rough Stone and Gravel Quarry - 3.55.5 Ha
Type & Category	1 (a) Mining of Minerals
Project Proponent	Tmt. P. Deivathal
Environment Consultant with their Accreditation Status	M/s. Eco Tech Labs Pvt. Ltd., QCI Accredited
NABET Certificate No.	NABET/ EIA/2124/ SA 0147
EIA Coordinator Name Signature	Dr. A. Dhamodharan (Mining of Minerals)  
Period of Involvement	June 2022 to August 2022
Contact Information	M/s. Eco Tech Labs Pvt. Ltd. No. 48, 2nd Main Road, Ram Nagar South Extension Pallikaranai, Chennai - 600 100 Mobile: +91 9789906200 E-mail: dhamo@ecotechlabs.in

Functional Area Experts

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

S. No.	Functional areas	Name of the experts	Involvement (period and task)	Signature and date
1	AP	Mrs. K. Vijayalakshmi	<p>1. Selection of Baseline Monitoring stations based on the wind direction</p> <p>2. Interpretation of Baseline data by comparing it with standards prescribed by CPCB against the type of area</p> <p>3. Identification of sources of air pollution and suggesting mitigation measures to minimize impact</p> <p><i>Period: June 2022 – Till now</i></p>	
2	WP	Dr. A. Dhamodharan	<p>1. Selection of baseline Monitoring Locations for Ground water analysis and also identifying nearest surface water to be studied.</p> <p>2. Interpretation of baseline data collected</p> <p>3. Identification of impacts based on the baseline study conducted and also to the ground water and nearby surface water due to the proposed project</p> <p>4. Preparation of suitable and appropriate mitigation plan.</p> <p><i>Period: June 2022 – Till now</i></p>	
3	SHW	Dr. A. Dhamodharan	<p>1. Identification of nature of solid waste generated</p> <p>2. Categorization of the generated waste and estimating the quantity of waste to be generated based on the per capita basis. Identification of impacts of SHW on Environment</p> <p>3. Suggesting suitable mitigation measures by recommending appropriate disposal method for each category of waste generated</p>	

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

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

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

I, Dr. A. Dhamodharan, hereby confirm that the above-mentioned experts prepared the EIA report of mining project at S.F.No. 3/2A & 152/1(P) Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District, Tamilnadu State.

I also confirm that the consultant organization shall be fully accountable for any misleading information mentioned in this statement.

Signature:



Name: Dr.A.Dhamodharan

Designation: Managing Director

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

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

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Project Proponent	<i>Tmt. P. Deivathal</i>	
Project Location	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

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<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

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<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

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<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
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ABBREVIATION

LU –Land use

AP – Air Pollution monitoring, prevention and control

AQ- Meteorology, Air quality modeling and prediction

WP – Water pollution monitoring, prevention and control

EB- Ecology and Biodiversity

NV- Noise & Vibration

SE- Socio-economics

HG- Hydrology, ground water and water conservation

GEO –Geology

RH – Risk assessment and hazards management

SHW –Solid and Hazardous waste management

SC- Soil conservation

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EXECUTIVE SUMMARY

1. Project Background:

The Proposed project is in Patta Land having total extent area of 3.55.5 Ha, located at S.F.No. 3/2A & 152/1(P) of Sukkampalayam & Velampalayam Village of Palladam Taluk, Tiruppur District and Tamil Nadu. The category of project is B1, it is a new rough stone quarry in Sukkampalayam & Velampalayam village. The area is situated on plain terrain sloping towards Western covered with Rough Stone which does not sustain any type of vegetation.

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

The quarry operation is proposed up to depth for 38m below ground level (2.0m Gravel + 1m Weathered Rock+ 35.0m Rough Stone). The Total Geological reserve is about 12,29,095 m³ of rough stone and 70,234 m³ of Gravel. The Mineable Reserves is about 4,55,570 m³ of rough stone and 54,866 m³ of Gravel. Yearwise Production Schedule is of 4,55,570 m³ of rough stone and 54,866 m³ of Gravel for the period of five years.

Mining Plan was approved by The Deputy Director, Dept. of Geology & Mining, Tiruppur vide Rc No:348/2021/Mines dated 11.02.2022. 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 15 km.

2. Nature & Size of the Project

The Rough Stone Quarry over an extent of 3.55.5 Hectares land is located Sukkampalayam & Velampalayam Village of Palladam Taluk, Tiruppur District.

Mineral intends to quarry : Rough stone & gravel

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District : Tiruppur
Taluk : Palladam
Village : Sukkampalayam & Velampalayam
S. F. Nos. : 3/2A & 152/1(P)
Extent : 3.55.5 Hectares

Table 1: Brief Description of the Project

S. No	Particulars	Details
1	Latitude	11°02' 17.2275" N to 11°02' 14.0866" N
2	Longitude	77°15' 30.0902" E to 77°15' 23.0535" E
3	Site Elevation above MSL	378 m from MSL
4	Topography	plain
5	Land use of the site	Patta land
6	Extent of lease area	3.55.5 Ha
7	Nearest highway	SH 166 - Palladam to Punjai Puliampatti- 2.51 km, E
8	Nearest railway station	Somanur Railway station - 9.37 Km – NW
9	Nearest airport	Coimbatore International Airport – 23.75 Km - W
10	Nearest town / city	Town - Palladam - 5.47 Km -SE City - Palladam - 5.47 Km -SE District – Tiruppur – 11.95 Km – NE
11	Rivers / Canal	❖ Noyyal River – 7.56 km, NE ❖ Kousika River – 8.08 km, NE
12	Lake	❖ Kallam Palayam Lake – 2.58 km, SE ❖ Perumpali Lake – 4.02 km, SW ❖ PDM Pond – 5.65 km, SE ❖ Mangalam lake – 7.00 km, NE ❖ Samalapuram Lake – 7.38 km, NW ❖ Chinnandipalayam Kulam – 8.29 km, NE ❖ Karuvelam Pond – 8.44 km, SW ❖ Kuttai – 8.82 km, SW
13	Hills / valleys	Nil in 15 km radius
14	Archaeologically places	Nil in 15 km radius

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15	National parks / Wildlife Sanctuaries	Nil in 15 km radius
16	Reserved / Protected Forests	<ul style="list-style-type: none"> • Nil in 10 km radius
17	Seismicity	Proposed Lease area come under Seismic zone-II(low risk area)
18	Defence Installations	Nil in 15 Km radius

3. Need for the Project

- ❖ The mining activities as proposed are the backbone of all construction and infrastructure projects as the raw material for construction is available only from such mining. The Rough stone extracted will be transported to be Stone crusher of district Tiruppur.
- ❖ 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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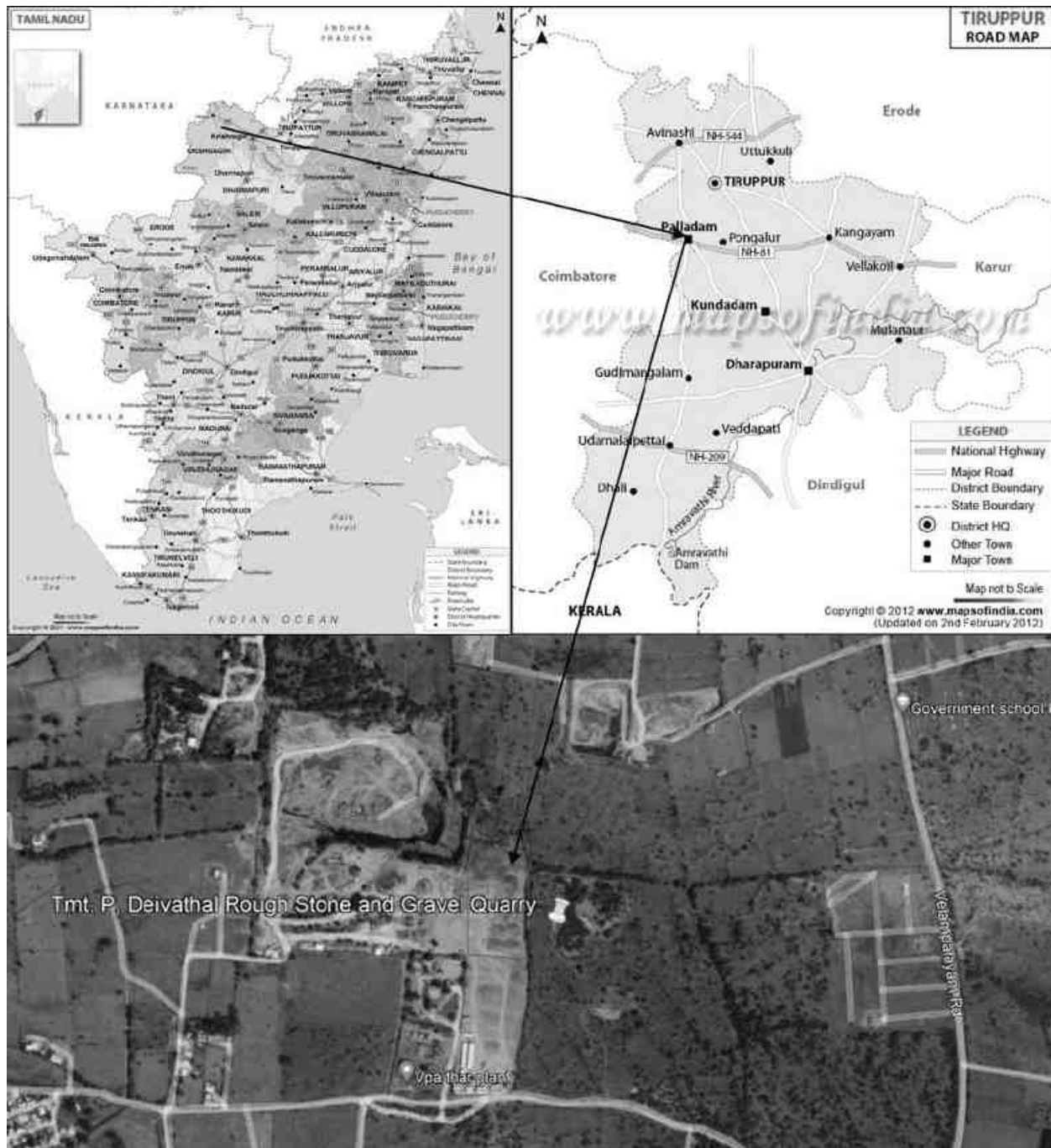


Figure 1: Location Map of the Project Site

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	



Figure 2: Google Image of the Project Site

4. Charnockite

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

5. Geological resources

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

Table 2. Geological resources

GEOLOGICAL RESERVES								
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Geological Reserves in m3 @ 100%	Weathered Rock in m3	Gravel in m3
XY-AB	I	81	77	2				12474
	II	81	77	1			6237	

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<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>							

	III	81	77	5	31185	31185		
	IV	81	77	5	31185	31185		
	V	81	77	5	31185	31185		
	VI	81	77	5	31185	31185		
	VII	81	77	5	31185	31185		
	VIII	81	77	5	31185	31185		
	IX	81	77	5	31185	31185		
	TOTAL					218295	218295	6237	12474
XY-CD	I	103	82	2				16892
	II	103	82	1			8446	
	III	103	82	5	42230	42230		
	IV	103	82	5	42230	42230		
	V	103	82	5	42230	42230		
	VI	103	82	5	42230	42230		
	VII	103	82	5	42230	42230		
	VIII	103	82	5	42230	42230		
	IX	103	82	5	42230	42230		
	TOTAL					295610	295610	8446	16892
X1Y1-EF	I	94	124	2				23312
	II	94	124	1			11656	
	III	94	124	5	58280	58280		
	IV	94	124	5	58280	58280		
	V	94	124	5	58280	58280		
	VI	94	124	5	58280	58280		
	VII	94	124	5	58280	58280		
	VIII	94	124	5	58280	58280		
	IX	94	124	5	58280	58280		
	TOTAL					407960	407960	11656	23312
X1Y1-GH	I	77	114	2				17556
	II	77	114	1			8778	
	III	77	114	5	43890	43890		
	IV	77	114	5	43890	43890		
	V	77	114	5	43890	43890		
	VI	77	114	5	43890	43890		
	VII	77	114	5	43890	43890		
	VIII	77	114	5	43890	43890		
	IX	77	114	5	43890	43890		
	TOTAL					307230	307230	8778	17556
GRAND TOTAL					1229095	1229095	35117	70234

Table 3. Mineable Reserves

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

MINEABLE RESERVES								
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Mineable Reserves in m3 @ 100%	Weathered Rock in m3	Gravel in m3
XY-AB	I	74	62	2				9176
	II	72	58	1			4176	
	III	71	56	5	19880	19880		
	IV	66	46	5	15180	15180		
	V	61	36	5	10980	10980		
	VI	56	26	5	7280	7280		
	VII	51	16	5	4080	4080		
	VIII	46	6	5	1380	1380		
	IX	41	1	5	205	205		
	TOTAL					58985	58985	4176	9176
XY-CD	I	96	67	2				12864
	II	94	63	1			5922	
	III	93	61	5	28365	28365		
	IV	88	51	5	22440	22440		
	V	83	41	5	17015	17015		
	VI	78	31	5	12090	12090		
	VII	73	21	5	7665	7665		
	VIII	68	11	5	3740	3740		
	IX	63	1	5	315	315		
	TOTAL					91630	91630	5922	12864
XIY1-EF	I	87	109	2				18966
	II	85	105	1			8925	
	III	84	103	5	43260	43260		
	IV	79	93	5	36735	36735		
	V	74	83	5	30710	30710		
	VI	69	73	5	25185	25185		
	VII	64	63	5	20160	20160		
	VIII	59	53	5	15635	15635		

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
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	IX	54	43	5	11610	11610		
	TOTAL				183295	183295	8925	18966
XIY1-GH	I	70	99	2				13860
	II	68	95	1			6460	
	III	67	93	5	31155	31155		
	IV	62	83	5	25730	25730		
	V	57	73	5	20805	20805		
	VI	52	63	5	16380	16380		
	VII	47	53	5	12455	12455		
	VIII	42	43	5	9030	9030		
	IX	37	33	5	6105	6105		
		TOTAL				121660	121660	6460	13860
GRAND TOTAL					455570	455570	25483	54866

Table 4. Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODUCTION									
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In m3	Recoverable Reserves in m3 @ 100%	Weath ered Rock in m3	Gravel in m3
I-YEAR	XY-AB	I	74	62	2				9176
		II	72	58	1			4176	
		III	71	56	5	19880	19880		
		IV	66	46	5	15180	15180		
	XY-CD	I	96	67	2				12864
		II	94	63	1			5922	
		III	93	61	5	28365	28365		
		IV	88	51	5	22440	22440		
TOTAL						85865	85865	10098	22040
II-YEAR	XY-AB	V	61	36	5	10980	10980		
		VI	56	26	5	7280	7280		
		VII	51	16	5	4080	4080		
		VIII	46	6	5	1380	1380		
		IX	41	1	5	205	205		
	XY-CD	V	83	41	5	17015	17015		
		VI	78	31	5	12090	12090		
		VII	73	21	5	7665	7665		

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		VIII	68	11	5	3740	3740				
		IX	63	1	5	315	315				
TOTAL						64750	64750				
III- YEAR	X1Y1- EF	I	87	109	2				18966		
		II	85	105	1			8925			
		III	84	103	5	43260	43260				
	X1Y1- GH	I	70	99	2				13860		
		II	68	95	1			6460			
		III	67	93	5	31155	31155				
TOTAL						74415	74415	15385	32826		
IV- YEAR	X1Y1- EF	IV	79	93	5	36735	36735				
		V	74	83	5	30710	30710				
	X1Y1- GH	IV	62	83	5	25730	25730				
		V	57	73	5	20805	20805				
TOTAL						113980	113980				
V-YEAR	X1Y1- EF	VI	69	73	5	25185	25185				
		VII	64	63	5	20160	20160				
		VIII	59	53	5	15635	15635				
		IX	54	43	5	11610	11610				
	X1Y1- GH	VI	52	63	5	16380	16380				
		VII	47	53	5	12455	12455				
		VIII	42	43	5	9030	9030				
		IX	37	33	5	6105	6105				
		TOTAL						116560	116560		
		GRAND TOTAL						455570	455570	25483	54866

6. Mining

Opencast mining

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

Process Description

- The reserves and resource are arrived based upon the Geological investigation
- Removal of Topsoil by Excavators and directly Loaded into Tippers.
- Removal of Rough Stone by Excavators by Drilling and Blasting.
- Shallow Drilling With Jackhammer of 25.5mm Dia.
- Minimum Blasting With Class 2 Explosives.

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- Loading of Rough Stone By Excavators Into Tippers.

7. Water Requirement

Total water requirement for the mining project is 1.81 KLD. Domestic water will be sourced from nearby Unjapalayam Village and other water will be source from nearby road tankers supply.

Table 5. Water Balance

Purpose	Quantity	Source
Drinking Water	0.81 KLD	Packaged Drinking water vendors available in Unjapalayam which is about 0.64 km from project area
Green belt	0.5 KLD	Other domestic activities through road tankers supply
Dust suppression	0.5 KLD	From road tankers supply
Total	1.81 KLD	

8. Manpower

Total manpower required for the project is approximately 18 persons. Workers will be from nearby villages.

Table 6. Man Power

1.	Skilled	Operator	2 No.
		Mechanic	1 No.
		Blaster/Mat	1 No.
2.	Semi – skilled	Driver	2 Nos
3.	Unskilled	Musdoor / Labors	7 Nos
		Cleaners	2 Nos
		Office Boy	1No
4.	Management & Supervisory staff		2 Nos
	Total =		18 Nos

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9. Solid Waste Management

Table 7 Solid Waste Management

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

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

Table 8 500m Radius Cluster Mine

1) Existing other quarries:

S. No.	Name of the Owner	Village	S.F.Nos.	Extent in Hect.	Collector proceedings No. & Date	Lease Period
1.	P.Sumathi	Sukkampalayam	2	3.00.5	171/2015/Mines dated 06.03.2020 1198/2021/Mines dated 28.10.2021	06.03.2020 to 05.03.2025
2.	P.Viswanathan	Velampalayam	153/2A, 153/2C, 156/1B	1.77.0	R.C. 820/Mines/2016 dated 27.03.2018	27.03.2018 to 26.03.2023

2) Abandoned Quarries:

S. No.	Name of the Owner	Village & S.F.Nos.	Extent in Hect.	Collector proceedings No. & Date	Lease Period
1.		Nil			

3) Proposed Quarries

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S. No.	Name of the Owner	Village & S.F.Nos.	Extent in Hect.	Collector proceedings No. & Date	Lease Period
1.	Tmt.P.Deivathal	Sukkampalayam & Velampalayam S.F.No. 3/2A, 152/1(Part)	3.55.5	-	Proposed Area

The Total extent of the Existing / Lease expired / Proposed quarries are 8.33.0 Ha

10. Land Requirement

The total extent area of the project is 3.55.5 Ha, Patta Land in Sukkampalayam & Velampalayam Village of Palladam Taluk, Tiruppur District.

Table 9 Land Use Breakup

Sl. No.	Description	Present Area (Ha.)	Area in use during the quarrying period (Ha.)
01.	Area under Quarrying	Nil	2.73.0
02.	Infrastructure	Nil	0.01.0
03.	Roads	Nil	0.01.0
04.	Green Belt	Nil	0.80.5
05.	Unutilized Area	3.55.5	Nil
	TOTAL	3.55.5Ha	3.55.5Ha

11. Human Settlement

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

Table 10 Habitation

S.No	Direction	Village	Distance in kms	Population
1	North	Velampalayam	2.5kms	980
2	East	Sedapalayam	4.0Kms	550

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3	South	Naranapuram	2.5Kms	320
4	West	Chiayampalayam	2.4Kms	180

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 excavator 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.

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

13.1 Micro – Meteorology

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

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

13.2 Air Environment

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<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

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 5 km. radius, air quality survey has been conducted at 5 locations. Major air pollutants like Particulate Matter (PM10), Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂) were monitored and the results are summarized below.

The baseline levels of PM10 (61-42 µg/m³), PM2.5 (30-17 µg/m³), SO₂ (13-3 µg/m³), NO₂ (27-8 µg/m³), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from June 2022 to August 2022.

13.3 Noise Environment

The maximum Day noise and Night noise were found to be 59 dB(A) and 48 dB(A) respectively in Aathi karuppan temple, Bharathpuram. The minimum Day Noise and Night noise were 45 dB(A) and 38 dB(A) respectively which was observed in project site and Government Arts and science college, Palladam.

13.4 Water Environment

- The average pH ranges from 7.73 – 8.42.
- TDS value varied from 85.3 mg/l to 2986 mg/l
- Hardness varied from 49 to 1867 mg/l
- Chloride varied from 21.8 to 1434 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 6.79 to 7.33 with organic matter 0.12 to 0.42 %. 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

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

- The overall land of the mine is Patta Land . There are 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 component of Environmental Management Plan, which will improve ecology, environment and quality of the surrounding area.
3. Local trees like Neem, Pungam, Naval etc will be planted along the lease boundary and avenues as well as over Non-active dumps at a rate of 340 trees per annum with interval 5m.
4. The rate of survival expected to be 80% in this area

Table.11 Plantation/ Afforestation Program

Name of species proposed	Survival	No of species
Neem, Pungam, Poovarasu, Naval, Mantharai, Arasa Maram, Magizham, Vilvam, vaagai, Marudha maram, Thandri, Poovarasu, Manjadi, Usil, Aathi, Panai, Uzha, Illuppai, Eachai, Vanni Maram	80%	1700
Total		1700

16. Anticipated Environmental Impacts

16.1 Air Environment and Mitigation Measures

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

16.2 Noise Environment and Mitigation Measures

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

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

17. Responsibilities for Environmental Management Cell (EMC)

The responsibilities of the EMC include the following:

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

18. Environmental Monitoring Program

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

19. Project Cost

The total project cost is **Rs 1,35,46,000** for deployment of machinery and creation of infrastructural facilities like approach road, mine office / Workers Shed, First Aid Room etc., including electrifications and water supply

Table .12 Project Cost details

S. No.	Description	Cost
1	Fixed Asset Cost	Rs.25,46,000/-
2	Operational and Fencing Cost	Rs. 30,00,000
3	EMP Cost	Rs. 80,00,000
	Total	Rs. 1,35,46,000

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

20. Corporate Environmental Responsibility

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

Table 12 CER Cost

S.No.	CER Activity	CER value (Rs)
1.	Provision of basic amenities such as safe drinking water, Hygienic toilet facilities, furniture's, Solar lights to Government High School - Naduvelampalayam. Providing Projectors with internet facilities for enabling the government school children at higher secondary level for online classes and smart classes	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.

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

1 Introduction

1.1 PREAMBLE

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

1.2 GENERAL INFORMATION ON MINING OF MINERALS

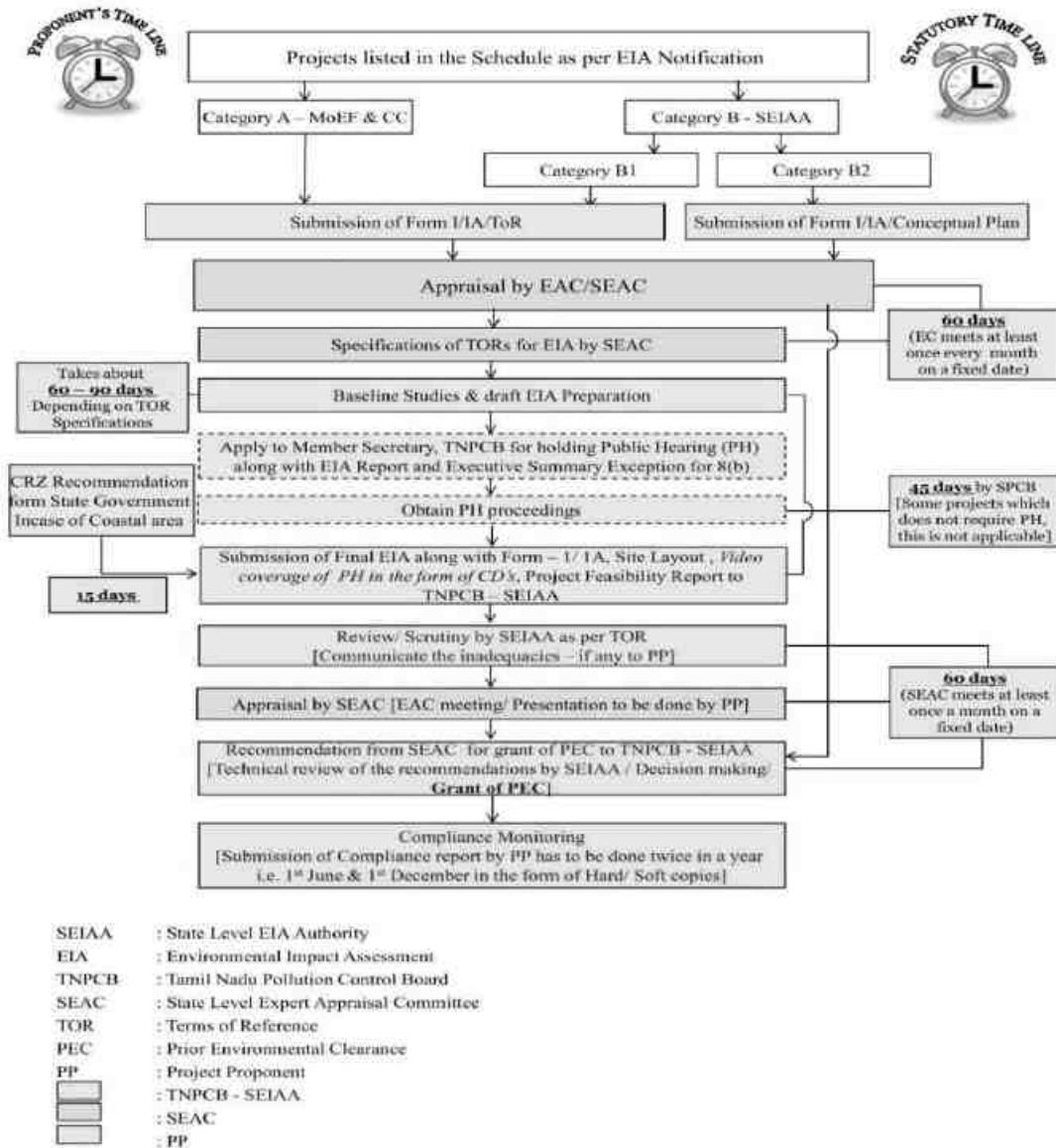
The Economic important mineral found in Tiruppur District are mainly Gypsum, Kankar, Magnesite, Dunite, Quartz, Feldspar, varieties of colour Granites (Dimensional stones), Rough stone (Aggregates) and Gravel/Earth. Mining activities based on these minerals are very less. However, numerous Rough Stone quarries are under operation for production of construction materials and earth fill (gravel) in Kodangipalayam, Morattupalayam, Madathukulam, Kiranur, Moolanur areas in the district. In addition to above, 'Dimensional Stones' (Granite) is also available in Avinashi, and Kangeyam Taluks.

1.3 ENVIRONMENTAL CLEARANCE

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

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

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	



1.4 TERMS OF REFERENCE (TOR)

The terms of Reference have been issued by SEAC TN vide Letter No. SEIAA-TN/F. No. 9218/ ToR-1190/2022 Dated: 06.07.2022. 67 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

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

1.5.1 Methodology adopted

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

Table 1-1: Post Environmental Clearance Monitoring

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

1.6 GENERIC STRUCTURE OF THE EIA DOCUMENT

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

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

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

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

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

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

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

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

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

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

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

Project Proponent : Tmt.P.Deivathal
Status of the Proponent : Government Tender Quarry
Proponent's Name & Address : W/o. Palanisamy Gounder,
Naasuvan Kaattu Thottam,
Velampalayam Village,
Palladam Taluk,
Tiruppur District - 641 663.

1.8 BRIEF DESCRIPTION OF THE PROJECT

1.8.1 Project Nature, Size & Location

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

Proposed proposal pertains to Rough stone mining project by mechanized open cast method on allotted mine lease area at Sukkampalayam & Velampalayam Village, Palladam Taluk of Tiruppur District, Tamil Nadu. It is an plain terrain. The total allotted mine lease for the proposed project is 3.55.5 Ha with their maximum production capacity i.e., 4,55,570 m³ of rough stone and 54,866 m³ of Gravel.

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

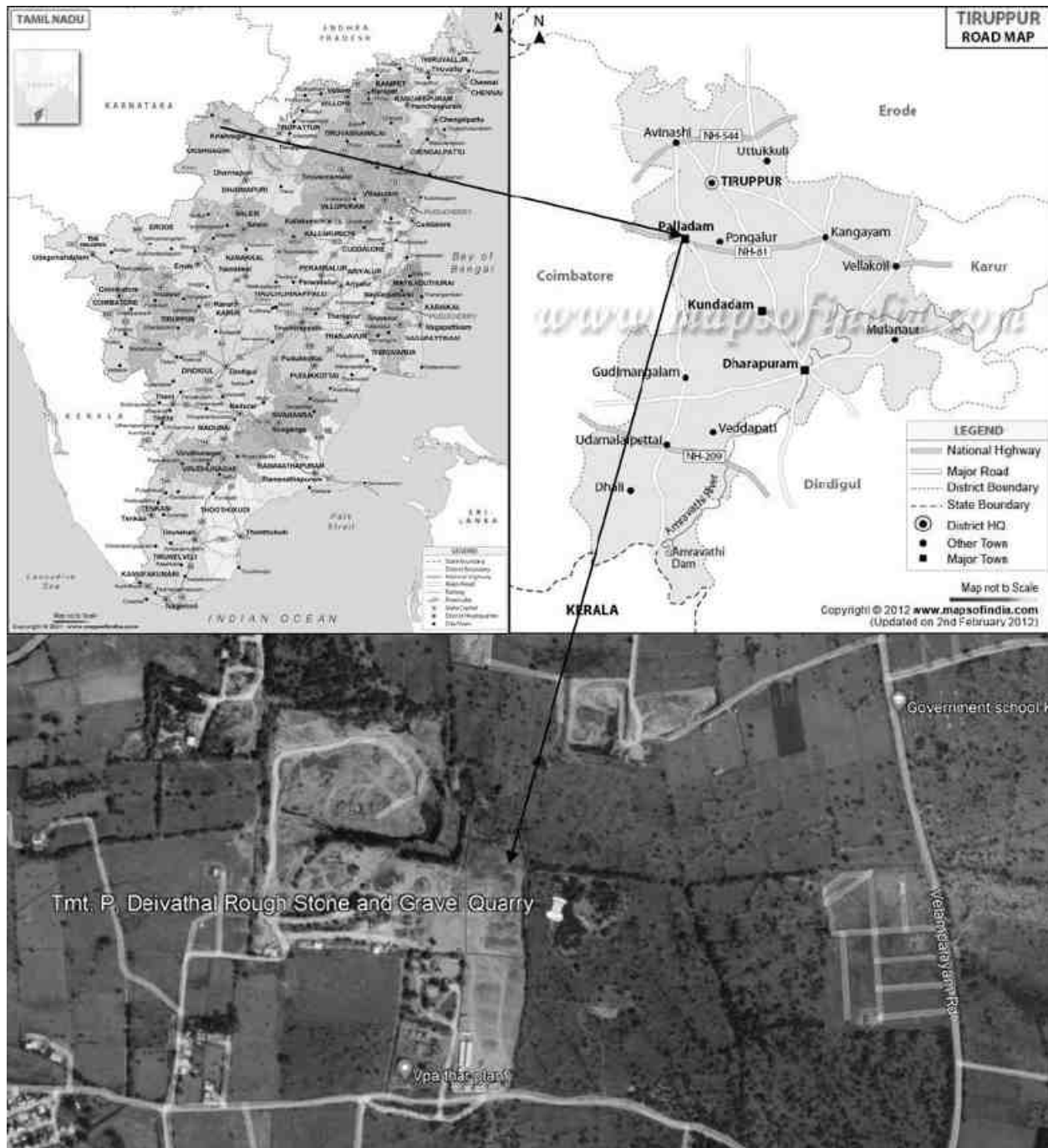


Figure 1.1: Location Map of the Project site

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

2 Project Description

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

2.1 GENERAL

Proposed proposal pertains to Rough stone mining project by open cast mechanized method on allotted mine lease area at Sukkampalayam & Velampalayam Village, Palladam Taluk of Tiruppur District, Tamil Nadu. It is a plain terrain. We have obtained fresh mining plan from Department of Geology and Mining, Tiruppur District for 3.55.5 Ha land area in the S.F.Nos. 3/2A & 152/1(P) for a proposed mining depth of 38m below ground level and five years production of 4,55,570 m³ of rough stone and 54,866 m³ of Gravel.

Type of the project:

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

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

Table 2-1: Quarry within 500m Radius

1) Existing other quarries:

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

S. No.	Name of the Owner	Village	S.F.Nos.	Extent in Hect.	Collector proceedings No. & Date	Lease Period
1.	P.Sumathi	Sukkampalayam	2	3.00.5	171/2015/Mines dated 06.03.2020 1198/2021/Mines dated 28.10.2021	06.03.2020 to 05.03.2025
2.	P.Viswanathan	Velampalayam	153/2A, 153/2C, 156/1B	1.77.0	R.C. 820/Mines/2016 dated 27.03.2018	27.03.2018 to 26.03.2023

2) Abandoned Quarries:

S. No.	Name of the Owner	Village & S.F.Nos.	Extent in Hect.	Collector proceedings No. & Date	Lease Period
1.		Nil			

3) Proposed Quarries

S. No.	Name of the Owner	Village & S.F.Nos.	Extent in Hect.	Collector proceedings No. & Date	Lease Period
1.	Tmt.P.Deivathal	Sukkampalayam & Velampalayam S.F.No. 3/2A, 152/1(Part)	3.55.5	-	Proposed Area

The Total extent of the Existing / Lease expired / Proposed quarries are 8.33.0 Ha

2.1.1 Need for the project:

Tiruppur District is predominantly occupied by hornblende Biotite gneisses of PGC (II) with enclaves of Magnetite Quartzite, Pyroxene Granulite and Charnockite. The area exposes several bands of

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

Pyroxene Granulite which is medium grained, medium to dark grey in colour and stand out prominently in the gneissic country generally parallel to regional foliation. Charnockite is coarse grained, massive, many places it is foliated, grey coloured and greasy and exposed as bouldery outcrops and small knolls. It is well exposed in Central, Western and Southern parts of the Tiruppur District. The general strike of foliation varies from ENE-WSW, E-W with dipping towards NW and N respectively.

Hornblende-Biotite gneiss is well foliated, medium to coarse grained, pale grey and exposed as sheets and small knolls. Pink Granite gneiss occurs as thin bands and lensoidal bodies. It is a medium grained rock composed of alternating bands of mafic (mainly of biotite and hornblende) and felsic (Feldspar and Quartz) minerals. It is well recognized in Avinashi area.

Basic intrusives such as pyroxinite/dunite occurs as Outcrop and lensoidal bodies in the country rock and mostly concordant to the regional foliation. Many basic intrusive are reported in south and south-east of Tiruppur town. The trend of these bodies is east-west.

Nepheline syenite is a leucocratic, coarse grained rock and composed mainly of Feldspar with Nepheline and shows pitted appearance due to removal of Nepleline. This alkaline rock is available in and around Sivanmalai area only.

Acid intrusives comprising pink granite, pegmatite and quartz veins are traversed country rocks in micro (cm wide-meter long) to meso-scale (few meter wide and several meter long) extend. Granite is exposed around 9 km SW of Avanashi. Small scale pegmatite and quartz veins are noticed almost in all the rock types.

Acid intrusives are overlain by sediments of Quaternary age, represented by Kankar and black cotton soil with Gypsum. Most of the area is covered by brown and red brown soil. Some part of the area covered with black cotton soil contains Gypsum as lumps. Black cotton soil covers south-western part of the district.

2.2 BRIEF DESCRIPTION OF THE PROJECT

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

Table 2-2 Salient Features of the Project

S. No.	Description	Details
1	Project Name	Rough Stone and Gravel Quarry-3.55.5 Ha
2	Proponent	Tmt.P.Deivathal
3	Mining Lease Area Extent	3.55.5Ha
4	Location	S.F.Nos. 3/2A & 152/1(P) Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District.
5	Latitude	11°02' 17.2275" N to 11°02' 14.0866" N
6	Longitude	77°15' 30.0902" E to 77°15' 23.0535" E
7	Topography	Plain terrain
8	Site Elevation above MSL	378 m from MSL
9	Topo sheet No.	58 E/18
10	Minerals of Mine	Rough Stone and Gravel Quarry
11	Proposed production of Mine	4,55,570 m ³ of Rough stone and 54,866 m ³ of Gravel
12	Ultimate depth of Mining	38 m below ground level
13	Method of Mining	Open cast, mechanized mining
14	Water demand	1.81 KLD
15	Source of water	Water will be supplied through tankers supply
16	Manpower	18 Nos.
17	Mining Lease	Precise area communication from The Deputy Director, Dept. of Geology & Mining, Tiruppur vide Rc No: 348/Mines/2021 dated 21.01.2022
18	Mining Plan Approval	Mining Plan was approved by The Deputy Director, Dept. of Geology & Mining, Tiruppur vide Rc No:348/2021/Mines dated 11.02.2022

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

19	Production details	Geological resources: 12,29,095 m ³ of Rough stone and 70,234 m ³ of Gravel Proposed year wise recoverable reserves: 4,55,570 m ³ of Rough stone and 54,866 m ³ of Gravel
20	Boundary Fencing	7.5 m barrier all along the boundary Fencing will be provided.
21	Disposal of overburden	The Gravel of the lease area is 54866m ³ . Gravel formation will be removed and transported to the needy end user, only after obtaining permission and paying necessary seigniorage fees to the Government
22	Ground water	The quarry operation is proposed up to a depth of 38 m below ground level. The water table is below 52 m from ground level which is observed from the nearby open wells and bore wells. Hence the ground water will not be affected in any manner due to the quarrying operation during the entire lease period.
23	Habitations within 300m radius of the Project Site	There is no Habitation within 300m radius of the project site.
24	Drinking water	Water will be supplied through tankers from Unjapalayam which is about 0.64 Km Southwest of the project area

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
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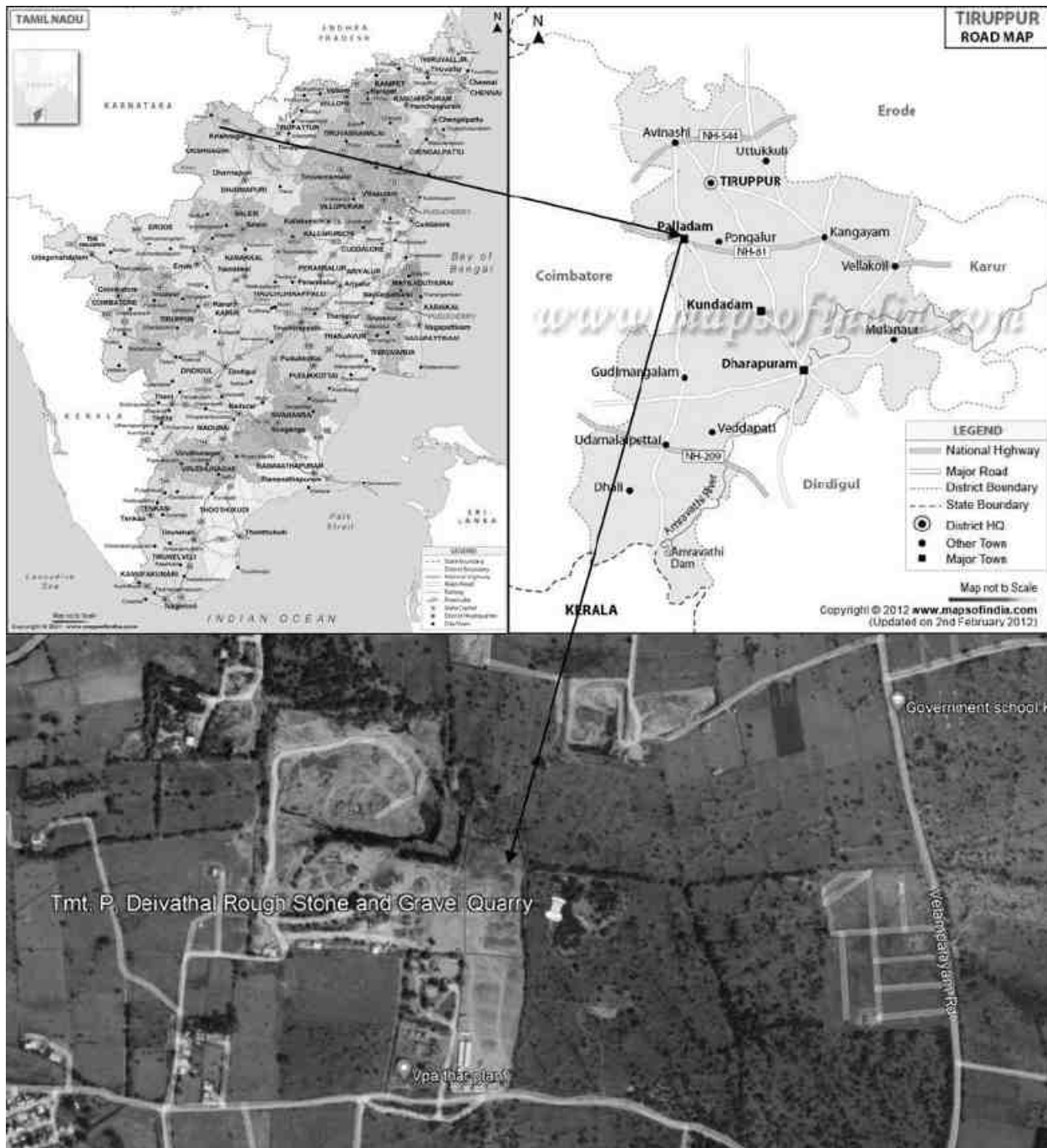


Figure 2.1: Location Map of the Project Site

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	



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

2.2.1 Site Connectivity:

The site is connected to MDR 882 (Palladam - Boomalur Road) – 0.84 km, W.

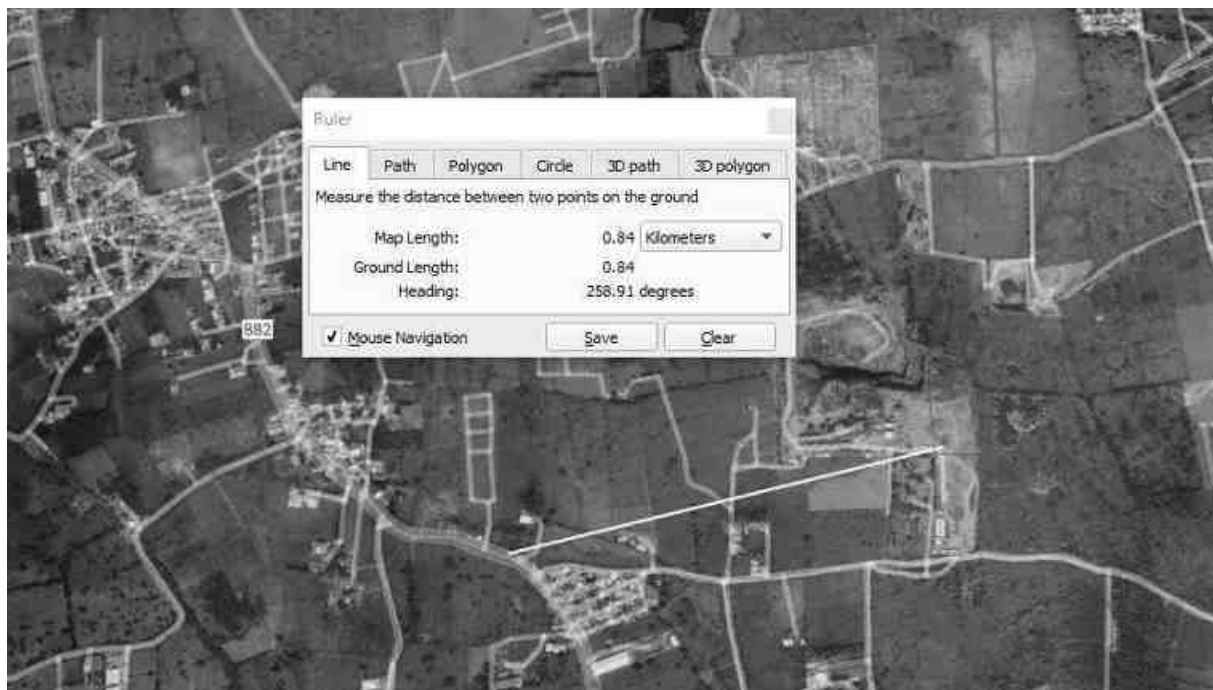


Figure 2.3: Site Connectivity

2.3 LOCATION DETAILS:

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

Table 2-3: Location Details

S. No	Particulars	Details
1.	Latitude	11°02' 17.2275" N to 11°02' 14.0866" N
2.	Longitude	77°15' 30.0902" E to 77°15' 23.0535" E
3.	Site Elevation above MSL	378 m from MSL
4.	Topography	Plain terrain
5.	Land use of the site	Patta Land
6.	Extent of lease area	3.55.5 Ha

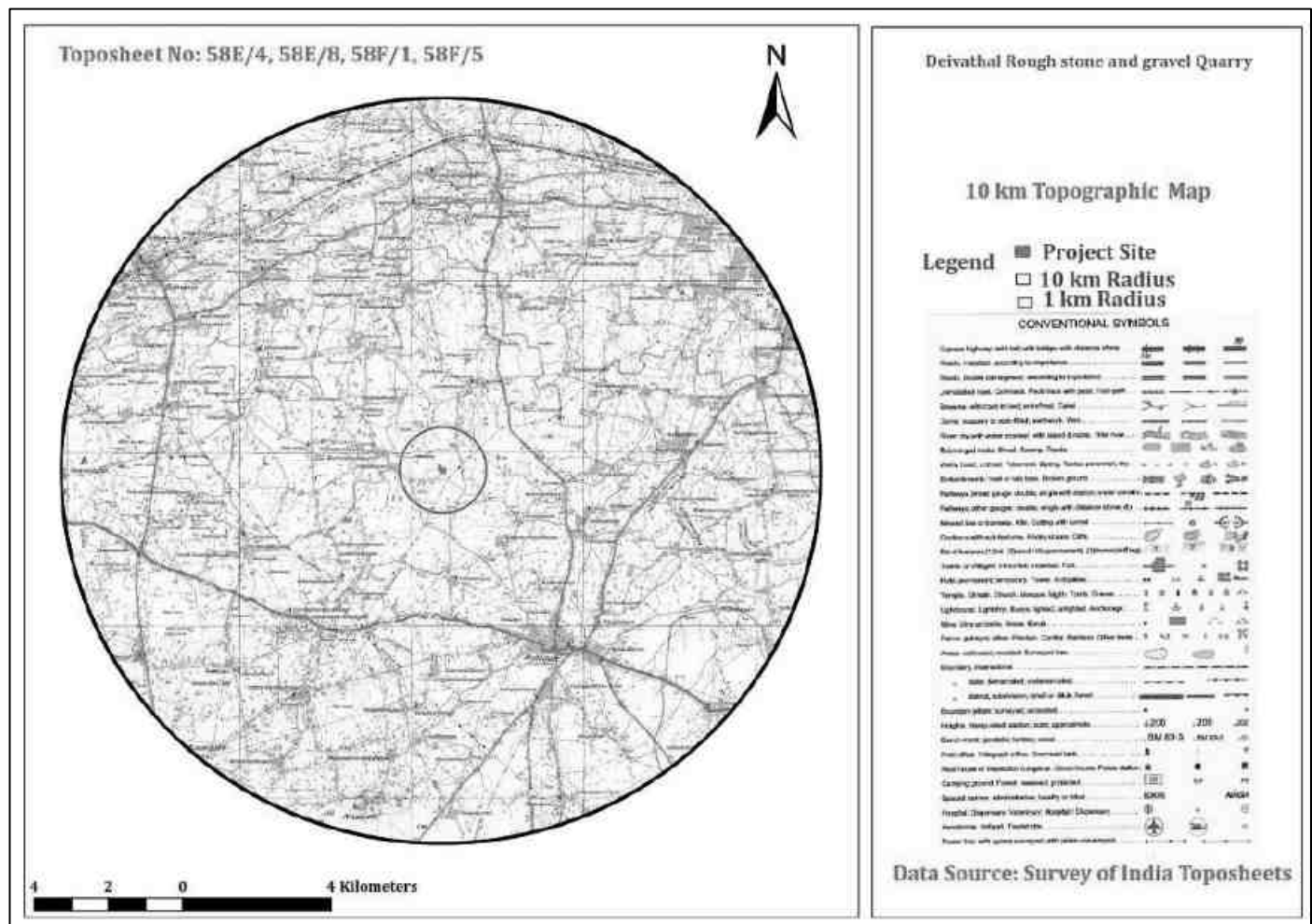


Figure 2.4: Topo Map of Project Site

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

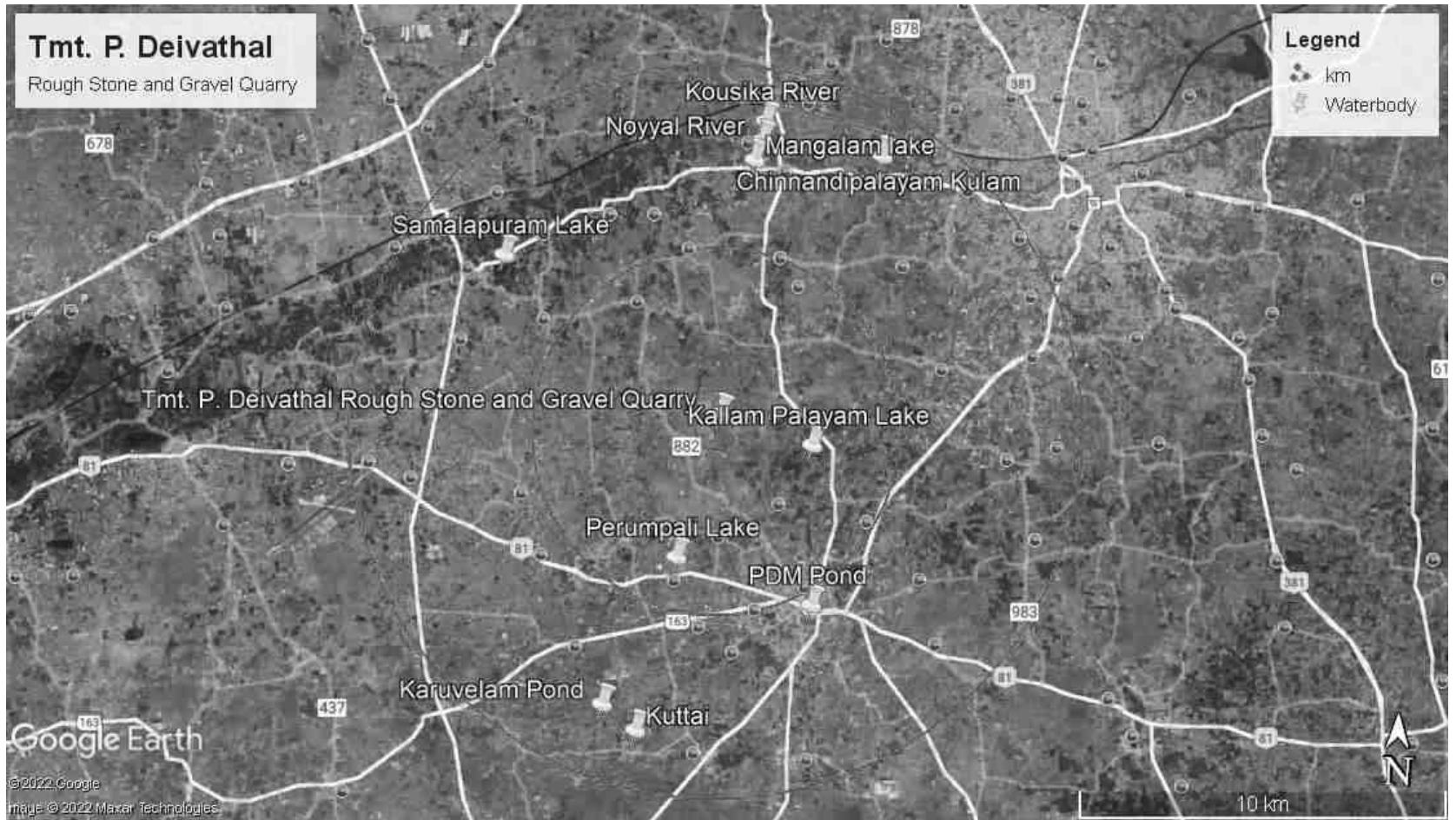


Figure 2.5: Environmental Sensitivity within 15km radius

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

2.3.1 Site Photographs

The site photographs of the project site are as follows

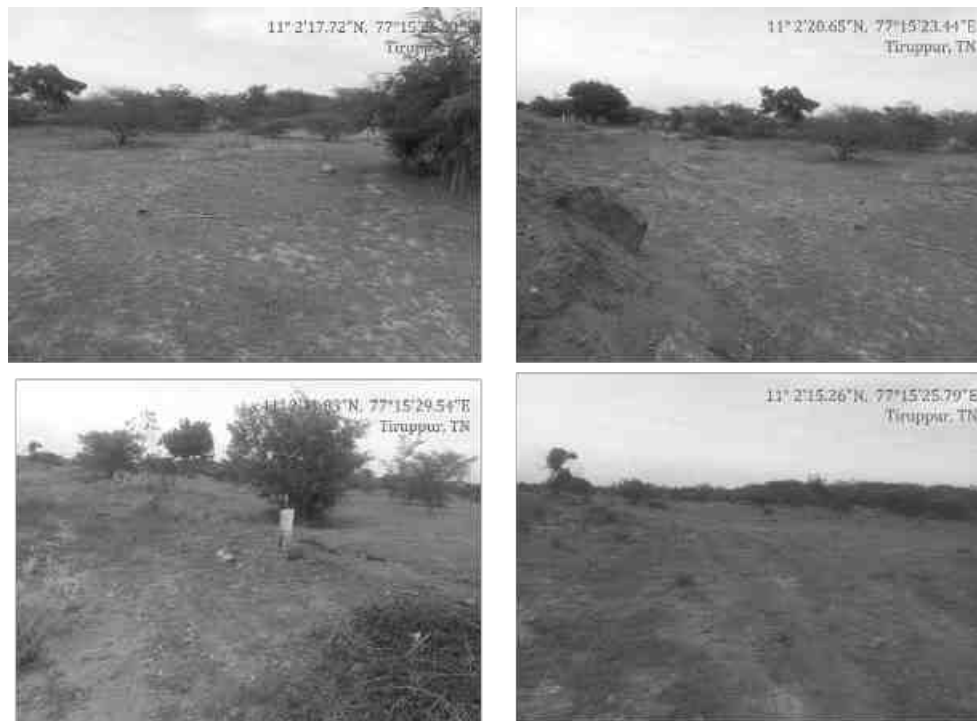


Figure 2.6: Site Photographs

2.3.2 Land Use Breakup of the Mine Lease Area

The Mine Lease area is Plain terrain . The land use pattern of the mine lease area as follows.

Table 2-4: Land use pattern

S.No	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1	Area under Quarrying	Nil	2.73.0
2	Infrastructure	Nil	0.01.0
3	Roads	Nil	0.01.0

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4	Green Belt & Dump	Nil	0.80.5
5	Unutilized area	3.55.5	Nil
	Total	3.55.5Ha	3.55.5Ha

2.3.3 Human Settlement

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

Table 2-5: Habitation

S.No	Direction	Village	Distance in kms	Population
1	North	Velampalayam	2.5kms	980
2	East	Sedapalayam	4.0Kms	550
3	South	Naranapuram	2.5Kms	320
4	West	Chiayampalayam	2.4Kms	180

2.4 LEASEHOLD AREA

The Rough Stone Quarry mine of 3.55.5 Ha is a Patta Land. The lease area falls in S.F No: 3/2A & 152/1(P) of Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District. There is no reserve forest or protected forest land within the lease area. There is neither human settlement within 300m radius from the lease area.

2.5 GEOLOGY

Tiruppur district of Tamil Nadu forms a part of southern Granulitic terrain and is predominantly occupied by crystalline rocks of Archaean to late Proterozoic age. Regionally, the rocks can be grouped under five categories namely

- i. Charnockite Group represented by Charnockite, Pyroxene Granulite and Magnetite Quartzite,
- ii. Peninsular Gneissic Complex (II) comprising hornblende-biotite gneiss,
- iii. Basic intrusive include Pyroxinite/Dunite
- iv. Younger intrusive comprising, Nepheline-Syenite, Pink Granite, Pegmatite and Quartz veins and
- v. Quaternary sediments of Kankar and soil.

Tiruppur District is predominantly occupied by hornblende Biotite gneisses of PGC (II) with enclaves of Magnetite Quartzite, Pyroxene Granulite and Charnockite. The area exposes several bands of

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Pyroxene Granulite which is medium grained, medium to dark grey in colour and stand out prominently in the gneissic country generally parallel to regional foliation. Charnockite is coarse grained, massive, many places it is foliated, grey coloured and greasy and exposed as bouldery outcrops and small knolls. It is well exposed in Central, Western and Southern parts of the Tiruppur District. The general strike of foliation varies from ENE-WSW,E-W with dipping towards NW and N respectively.

Hornblende-Biotite gneiss is well foliated, medium to coarse grained, pale grey and exposed as sheets and small knolls. Pink Granite gneiss occurs as thin bands and lensoidal bodies. It is a medium grained rock composed of alternating bands of mafic (mainly of biotite and hornblende) and felsic (Feldspar and Quartz) minerals. It is well recognized in Avinashi area.

Basic intrusives such as pyroxinite/dunite occurs as Outcrop and lensoidal bodies in the country rock and mostly concordant to the regional foliation. Many basic intrusive are reported in south and south-east of Tiruppur town. The trend of these bodies is east-west.

Nepheline syenite is a leucocratic, coarse grained rock and composed mainly of Feldspar with Nepheline and shows pitted appearance due to removal of Nepleline. This alkaline rock is available in and around Sivanmalai area only.

Acid intrusives comprising pink granite, pegmatite and quartz veins are traversed country rocks in micro (cm wide-meter long) to meso-scale (few meter wide and several meter long) extend. Granite is exposed around 9 km SW of Avanashi. Small scale pegmatite and quartz veins are noticed almost in all the rock types.

Acid intrusives are overlain by sediments of Quaternary age, represented by Kankar and black cotton soil with Gypsum. Most of the area is covered by brown and red brown soil. Some part of the area covered with black cotton soil contains Gypsum as lumps. Black cotton soil covers south-western part of the district.

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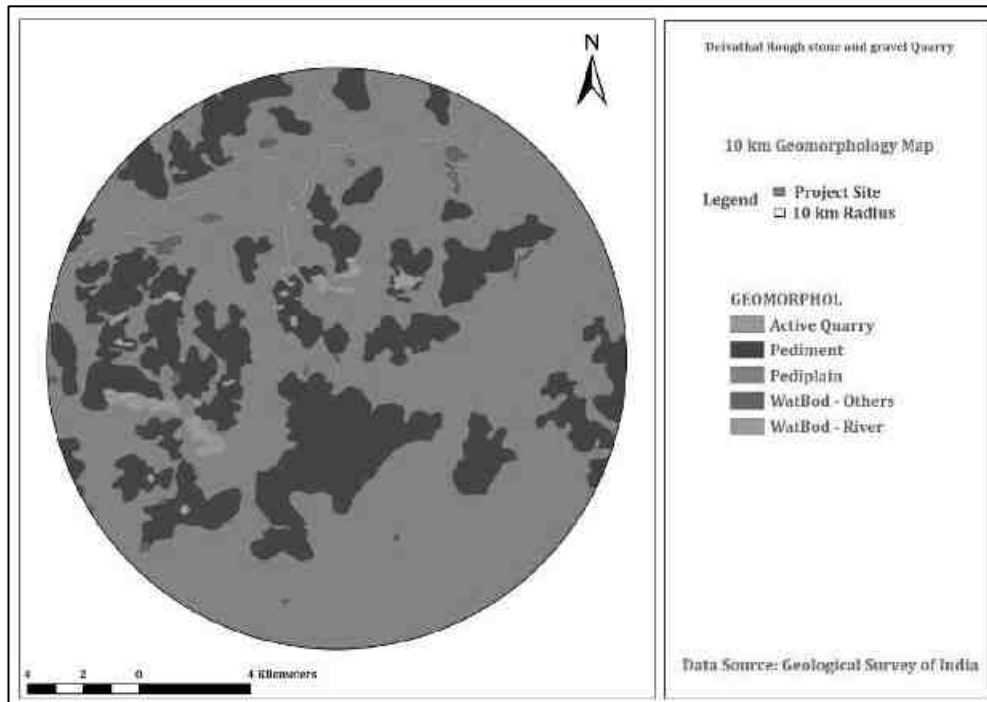


Figure 2.7: Geomorphology

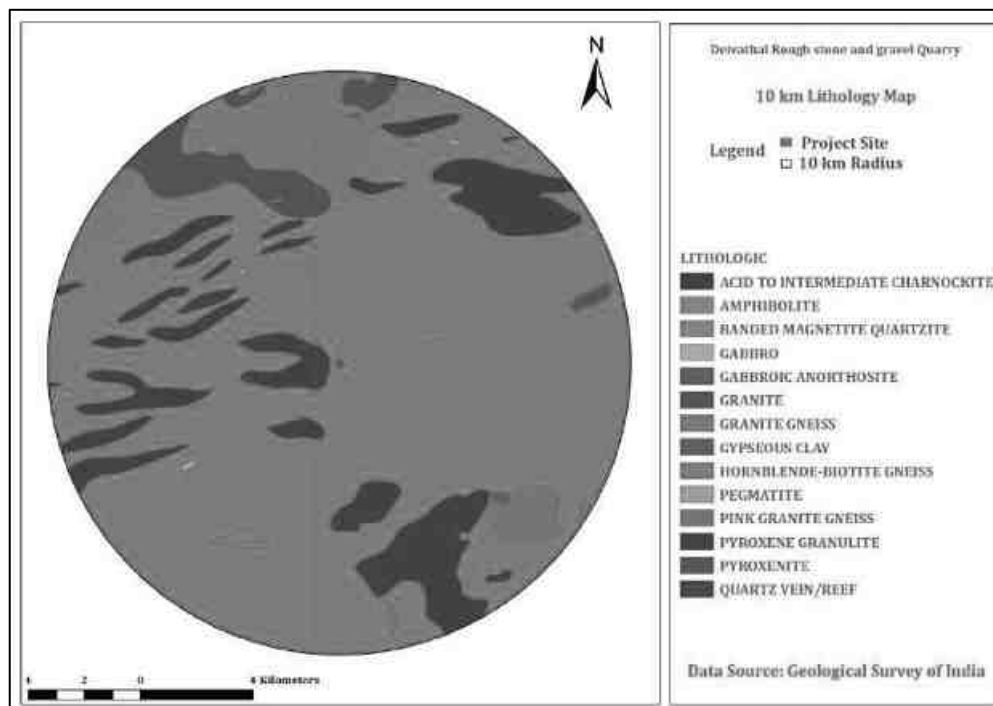


Figure 2.8 Lithology

2.6 QUALITY OF RESERVES:

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The mining lease area is of 3.55.5 Ha, with production capacity of 4,55,570 m³ of Rough stone and 54,866 m³ of Gravel. 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 2-6: Details of Mining

S. No	Particulars	Details
1	Method of Mining	Open Cast mechanized
2	Geological resources	12,29,095 m ³ of Rough stone and 70,234 m ³ of Gravel
3	Recoverable Reserves	4,55,570 m ³ of Rough stone and 54,866 m ³ of Gravel
4	Proposed Production	4,55,570 m ³ of Rough stone and 54,866 m ³ of Gravel
5	Elevation Range of the Mine Site	378 m MSL

2.6.1 Estimation of Reserves

The practical method of the systematic geological mapping and delineation of Rough stone (Charnockite) within the field was done and careful evaluation of body luster, physical properties, engineering properties, commercial aspects, etc. The Topographical, Geological plan and sections demarcated the commercial marketable Rough stone (Charnockite) deposit has been prepared in 1:1000 scale and the estimated balance Geological resources as 12,29,095 m³ of Rough stone and 70,234 m³ of Gravel.

2.6.2 Geological resources

Rough Stone:

Geological resources is estimated at 12,29,095 m³ of Rough stone and 70,234 m³ of Gravel up to a depth of 38.0 m(Max) below ground level.

Table 2-7: Geological resources

Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Geological Reserves in m3 @ 100%	Weathered Rock in m3	Gravel in m3

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XY-AB	I	81	77	2				12474
	II	81	77	1			6237	
	III	81	77	5	31185	31185		
	IV	81	77	5	31185	31185		
	V	81	77	5	31185	31185		
	VI	81	77	5	31185	31185		
	VII	81	77	5	31185	31185		
	VIII	81	77	5	31185	31185		
	IX	81	77	5	31185	31185		
	TOTAL				218295	218295	6237	12474
XY-CD	I	103	82	2				16892
	II	103	82	1			8446	
	III	103	82	5	42230	42230		
	IV	103	82	5	42230	42230		
	V	103	82	5	42230	42230		
	VI	103	82	5	42230	42230		
	VII	103	82	5	42230	42230		
	VIII	103	82	5	42230	42230		
	IX	103	82	5	42230	42230		
	TOTAL				295610	295610	8446	16892
X1Y1- EF	I	94	124	2				23312
	II	94	124	1			11656	
	III	94	124	5	58280	58280		
	IV	94	124	5	58280	58280		
	V	94	124	5	58280	58280		
	VI	94	124	5	58280	58280		
	VII	94	124	5	58280	58280		
	VIII	94	124	5	58280	58280		
	IX	94	124	5	58280	58280		
	TOTAL				407960	407960	11656	23312
X1Y1- GH	I	77	114	2				17556
	II	77	114	1			8778	
	III	77	114	5	43890	43890		
	IV	77	114	5	43890	43890		
	V	77	114	5	43890	43890		
	VI	77	114	5	43890	43890		
	VII	77	114	5	43890	43890		
	VIII	77	114	5	43890	43890		
	IX	77	114	5	43890	43890		
	TOTAL				307230	307230	8778	17556

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
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GRAND TOTAL	1229095	1229095	35117	70234
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2.6.3 Mineable Reserves

The available mineable reserves are calculated for the proposed lease period of 5 years based on the total mineable reserves calculated by deducting 7.5 m safety distances to the boundary.

Table 2-8: Mineable Reserves

Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Mineable Reserves in m3 @ 100%	Weathered Rock in m3	Gravel in m3
XY-AB	I	74	62	2				9176
	II	72	58	1			4176	
	III	71	56	5	19880	19880		
	IV	66	46	5	15180	15180		
	V	61	36	5	10980	10980		
	VI	56	26	5	7280	7280		
	VII	51	16	5	4080	4080		
	VIII	46	6	5	1380	1380		
	IX	41	1	5	205	205		
TOTAL					58985	58985	4176	9176
XY-CD	I	96	67	2				12864
	II	94	63	1			5922	
	III	93	61	5	28365	28365		
	IV	88	51	5	22440	22440		
	V	83	41	5	17015	17015		
	VI	78	31	5	12090	12090		
	VII	73	21	5	7665	7665		
	VIII	68	11	5	3740	3740		
	IX	63	1	5	315	315		
TOTAL					91630	91630	5922	12864
X1Y1-EF	I	87	109	2				18966
	II	85	105	1			8925	
	III	84	103	5	43260	43260		

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	IV	79	93	5	36735	36735		
	V	74	83	5	30710	30710		
	VI	69	73	5	25185	25185		
	VII	64	63	5	20160	20160		
	VIII	59	53	5	15635	15635		
	IX	54	43	5	11610	11610		
TOTAL					183295	183295	8925	18966
X1Y1-GH	I	70	99	2				13860
	II	68	95	1			6460	
	III	67	93	5	31155	31155		
	IV	62	83	5	25730	25730		
	V	57	73	5	20805	20805		
	VI	52	63	5	16380	16380		
	VII	47	53	5	12455	12455		
	VIII	42	43	5	9030	9030		
	IX	37	33	5	6105	6105		
TOTAL					121660	121660	6460	13860
GRAND TOTAL					455570	455570	25483	54866

2.6.4 Year wise Production Plan

The year wise production to be carry out 4,55,570 m³ of Rough stone and 54,866 m³ of Gravel for the period of five years.

Table 2-9: Year wise Production Plan

YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In m3	Recoverable Reserves in m3 @ 100%	Weathered Rock in m3	Gravel in m3
I-YEAR	XY-AB	I	74	62	2				9176
		II	72	58	1			4176	
		III	71	56	5	19880	19880		
		IV	66	46	5	15180	15180		
	XY-CD	I	96	67	2				12864
		II	94	63	1			5922	

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		III	93	61	5	28365	28365		
		IV	88	51	5	22440	22440		
TOTAL						85865	85865	10098	22040
II-YEAR	XY-AB	V	61	36	5	10980	10980		
		VI	56	26	5	7280	7280		
		VII	51	16	5	4080	4080		
		VIII	46	6	5	1380	1380		
		IX	41	1	5	205	205		
	XY-CD	V	83	41	5	17015	17015		
		VI	78	31	5	12090	12090		
		VII	73	21	5	7665	7665		
		VIII	68	11	5	3740	3740		
		IX	63	1	5	315	315		
TOTAL						64750	64750		
III-YEAR	X1Y1-EF	I	87	109	2				18966
		II	85	105	1			8925	
		III	84	103	5	43260	43260		
	X1Y1-GH	I	70	99	2				13860
		II	68	95	1			6460	
		III	67	93	5	31155	31155		
TOTAL						74415	74415	15385	32826
IV-YEAR	X1Y1-EF	IV	79	93	5	36735	36735		
		V	74	83	5	30710	30710		
	X1Y1-GH	IV	62	83	5	25730	25730		
		V	57	73	5	20805	20805		
TOTAL						113980	113980		
V-YEAR	X1Y1-EF	VI	69	73	5	25185	25185		
		VII	64	63	5	20160	20160		
		VIII	59	53	5	15635	15635		
		IX	54	43	5	11610	11610		
	X1Y1-GH	VI	52	63	5	16380	16380		
		VII	47	53	5	12455	12455		
		VIII	42	43	5	9030	9030		
		IX	37	33	5	6105	6105		
TOTAL						116560	116560		
GRAND TOTAL						455570	455570	25483	54866

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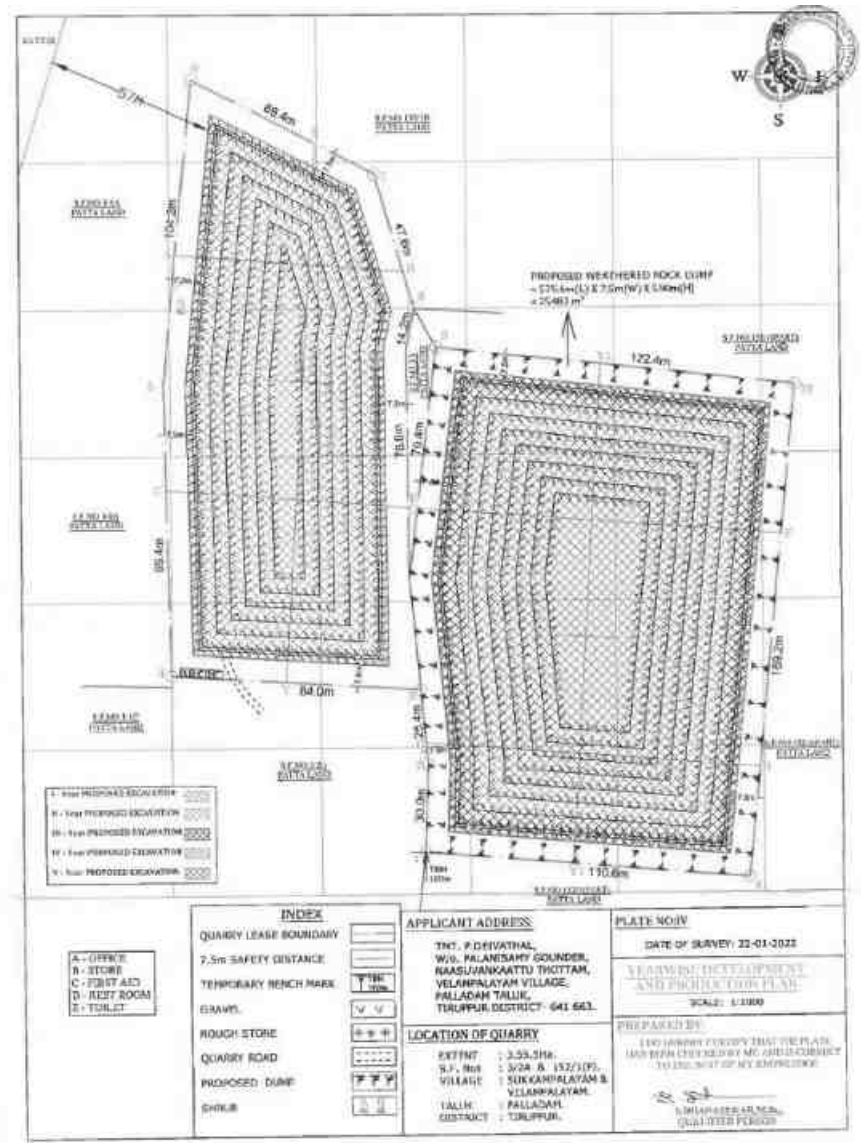


Figure 2.9 Year wise Production Plan

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2.7 TYPE OF MINING

The proposed project is an open cast mechanized mining with one 3.0 m bench for Top soil followed by 5.0m vertical bench with a bench width not less than the bench height. However, as far as the quarrying of Rough Stone is concerned, observance of the provisions of regulations 106(2) (b) as above is seldom possible due to various inherent petro genetic factors coupled with mining difficulties. Hence, it is proposed to obtain relaxation to the provisions of the above regulation from the Director of Mines Safety for which necessary provision is available with the Regulation 106(2) (b) of MMR-1961, under Mines Act- 1952.

2.7.1 Method of Working:

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

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

2.7.2 Overburden

The Gravel of the lease area is 54866m³. Gravel formation will be removed and transported to the needy end user, only after obtaining permission and paying necessary seigniorage fees to the Government.

2.7.3 Machineries to be used

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

Table 2-10: List of Machineries used

For Mining operation	Excavator of 0.9Cu.m bucket capacity Jack Hammer (25.5 mm dia) Tractor mounted compressor
Loading Equipment	Excavator of 0.9 Cu.m bucket capacity
Transportation	Tipper 2 Nos. of 10 M.T capacity

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2.7.4 *Blasting:*

2.7.4.1 **Blasting Pattern:**

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

2.7.4.2 **Drilling & Blasting:**

Drilling and Blasting Parameters are as follows

Table 2-11: Drilling and Blasting Parameters

Parameters	Details
Depth of each hole	1.0m to 1.5m
Diameter of hole	32-36mm
Spacing between holes	60 cms
Pattern of hole	Zigzag
Charge/Hole	D.Cord with water or 70 gms of gun powder or Gelatine.
Inclination of holes	70° from horizontal
Use of delay detonators	25 milli seconds delays
Detonating fuse	“Detonating” Cord

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

Small diameter of 25mm Slurry explosives are proposed to be used for shattering and heaving effect for removal and winning of Rough Stone. No deep hole drilling or primary blasting is proposed.

2.7.4.4 **Measures to minimize ground vibration due to blasting:**

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

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Table 2-12: Blasting Details

Parameters	Details
Diameter of holes	32-36mm
Spacing	60 cms
Powder factor	6 to 7 tons/kg of explosives
Pattern of hole	Zig Zag
Charge/hole	140 gms of 25 mm dia cartridge
Blasted at day time	12 to 12:30 pm (or whenever required)

2.7.4.5 Storage & Safety measures taken during blasting:

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

2.8 MAN POWER REQUIREMENTS

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

Table 2-13: Man Power Requirements

1.	Skilled	Operator	2 No.
		Mechanic	1 No.
		Blaster/Mat	1 No.
2.	Semi – skilled	Driver	2 Nos
3.	Unskilled	Musdoor / Labors	7 Nos
		Cleaners	2Nos
		Office Boy	1No
4.	Management & Supervisory staff		3 Nos
	Total =		18 Nos

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

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2.8.1 Water Requirement

Total water requirement for the mining project is 1.81 KLD. Domestic water will be sourced from nearby Unjapalayam village and other water will be source from nearby road tankers supply.

Table 2-14: Water Requirement

Purpose	Quantity	Sources
Drinking Water	0.81 KLD	Packaged Drinking water vendors available in Unjapalayam village.
Green belt	0.5 KLD	Other domestic activities through road tankers supply
Dust suppression	0.5 KLD	From road tankers supply
Total	1.81 KLD	

2.9 PROJECT IMPLEMENTATION SCHEDULE

The implementation schedule of the proposed Mine Lease of Tmt.P.Deivathal (3.55.5 Ha) is as follows.

Table 2-15: Mining Schedule

MINING SCHEDULE					
Activity	Dec-22	Dec-23	Dec-24	Dec-25	Dec-26
Site Clearance					
Excavation - Top Soil Removal/Overburden					
I Year Production – 85865 Cum - Rough Stone					
II Year Production – 64750 Cum - Rough Stone					
III Year Production – 74415 Cum - Rough Stone					
IV Year Production – 113980 Cum - Rough Stone					
V Year Production –116560 Cum - Rough Stone					

2.10 SOLID WASTE MANAGEMENT

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Table 2-15: Solid Waste Management

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

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

2.11 MINE DRAINAGE

The quarry operation is proposed up to a depth of 38 m below ground level. The water table is below 52 m from the ground level which is observed from the nearby bore wells and bore wells of this area. Hence the ground water will not be affected in any manner due to the quarrying operation during the entire lease period.

2.12 POWER REQUIREMENT

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

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

10 Litre diesel per hour for excavator for mining and loading for Gravel needed.

2.13 PROJECT COST

1	<u>A. Fixed Asset Cost:</u> 1. Land Cost 2. Labour Shed 3. Sanitary Facility 4. Refilling/Fencing cost Total=	: : : : : :	Rs.22,30,000/- (Amount for Patta Land) Rs. 1,50,000/- Rs. 80,000/- Rs.86,000/- Rs. 25,46,000/-
2	<u>B. Operational Cost:</u> <u>Machinery cost</u>	: :	Rs.30,00,000/-
3	<u>C. EMP Cost:</u> Display board in site; Monitoring-Air, Water, Noise; Dust Supression -Water sprinkling by own water tankers; Vehicle Tyres Wash; Green Belt	: : : : : : :	Rs. 80,00,000/-

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	Development; Road Development & Management; Occupational Health And Safety; Solid Waste Management; Strom Water; Renewable Energy, CCTV Installation, Salary for mines manager and blaster	:	
	Total Project Cost (A+B+C)	:	Rs. 1,35,46,000/-

2.14 GREENBELT

1. The development of greenbelt in the peripheral buffer zone of the mine area.
2. Green belt has been recommended as one of the major components of Environmental Management plan, which will improve ecology, environment and quality of the surrounding area.
3. Local trees like, Neem, Pungam, Naval etc will be planted along the lease boundary and avenues as well as over non-active dumps at a rate of 100 trees per annum with interval 5m.
4. The rate of survival expected to be 80% in this area

Table. 2-17 Plantation/ Afforestation Program

Name of species proposed	Survival	No of species
Neem, Pungam, Poovarasu, Naval, Mantharai, Arasa Maram, Magizham, Vilvam, vaagai, Marudha maram, Thandri, Poovarasu, Quaker buttons, Thethankottai maram, Manjadi, Usil, Aathi, Panai, Uzha, Illuppai, Eachai, Vanni Maram	80%	1700
Total		1700

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3 Description of the Environment

3.1 GENERAL:

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

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

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

3.1.1 Study Area:

The study area for the mining projects is as follows:

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

We have obtained Terms of Reference from SEIAA-TN vide Letter No. SEIAA-TN/F. No. 9218/ ToR-1190/2022 Dated: 06.07.2022. The baseline monitoring is carried out in June 2022 to August 2022 and

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the analysis is briefed in the EIA report. The proponent has engaged M/s. Ecotech labs Pvt. Ltd for carrying out the existing baseline study.

3.1.2 Instruments Used

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

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

3.1.3 Baseline Data Collection Period:

The baseline data is collected in accordance with the CPCB Guidelines. The Baseline study is carried out from June 2022 to August 2022.

3.1.4 Frequency of Monitoring

Table 3-1: Frequency of Sampling and Analysis

Attributes	Sampling	Frequency
Air environment – Meteorological (wind speed, wind direction, rainfall, humidity, temperature)	Project site	1 hourly continuous
Air environment – Pollutants PM 10 PM 2.5 SO ₂ NO _x	5 locations	24 hourly twice a week 4 hourly. Twice a week, One non-monsoon season 8 hourly, twice a week 24 hourly, twice a week
Noise	5 locations	24 hourly Once in 5 locations
Water (Ground water)	5 locations	Once in 5 locations

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pH, Temperature, Turbidity, Magnesium Hardness, Total Alkalinity, Chloride, Sulphate, Fluoride, Nitrate, Sodium, Potassium, Salinity, Total nitrogen, Total Coliforms, Fecal Coliforms		
Water (surface water) pH, Temperature, Turbidity, Magnesium Hardness, Total Alkalinity, Chloride, Sulphate, Fluoride, Nitrate, Sodium, Potassium, Salinity, Total nitrogen, Total Coliforms, Fecal Coliforms	Sample from nearby lakes/river	One-time Sampling
Soil (Organic matter, Texture, pH, Electrical Conductivity, Permeability, Water holding capacity, Porosity)	5 locations	Once in 5 locations
Ecology and biodiversity Study	Study area covering 10 km radius	One-time Sampling
Socio- Economic study (Population, Literacy Level, employment, Infrastructure like school, hospitals & commercial establishments)	Villages around 10 km radius	One-time Sampling

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3.1.5 Secondary data Collection

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

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

3.1.6 Study area details

Table 3-2 Study area details

S. No	Description	Details	Source
1.	Project Location	S.F.Nos. 3/2A & 152/1(P) Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District.	Field Study
2.	Latitude & Longitude	Latitude: 11°02' 17.2275" N to 11°02' 14.0866" N Longitude: 77°15' 30.0902" E to 77°15' 23.0535" E	Topo Sheet
3.	Topo Sheet No.	58 E/18	Survey of India Toposheet
4.	Mine Lease Area	3.55.5 Ha	--
Demography in the study area (as per Census 2011)			
5.	Total Population	7732	Census Survey of India
6.	Total Number of Households	2218	
7.	Maximum Temperature (°C)	34	IMD
8.	Minimum Temperature (°C)	18	

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9.	Ecological Sensitive Areas - Wetlands, watercourses or other waterbodies, coastal zone, biospheres, mountains, forests	<ul style="list-style-type: none"> • Kallam Palayam Lake – 2.58 km, SE • Perumpali Lake – 4.02 km, SW • PDM Pond – 5.65 km, SE • Mangalam lake – 7.00 km, NE • Samalapuram Lake – 7.38 km, NW • Noyyal River – 7.56 km, NE • Kousika River – 8.08 km, NE • Chinnandipalayam Kulam – 8.29 km, NE • Karuvelam Pond – 8.44 km, SW • Kuttai – 8.82 km, SW 	Google Earth/Field Study																											
10.	Densely Populated area	Palladam - 5.47 Km -SE																												
11.	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Places</th> <th>Dist. From Project Site</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">Schools & Colleges</td> </tr> <tr> <td>1</td> <td>Government High School - Naduvelampalayam</td> <td>1.80 km, NW</td> </tr> <tr> <td>2</td> <td>Government Elementary School Valayapalayam</td> <td>2.19 km, NW</td> </tr> <tr> <td>3</td> <td>Government School, Manickapuram</td> <td>2.47 km, SE</td> </tr> <tr> <td>4</td> <td>Government High School, Naranapuram</td> <td>2.90 km, SE</td> </tr> <tr> <td>5</td> <td>Jayanthi College of Eductaion</td> <td>6.14 km, NE</td> </tr> <tr> <td>6</td> <td>Park's College</td> <td>7.35 km, NE</td> </tr> <tr> <td>7</td> <td>IITT College of Fashion</td> <td>9.67 km, NE</td> </tr> </tbody> </table>	S. No.	Places	Dist. From Project Site	Schools & Colleges			1	Government High School - Naduvelampalayam	1.80 km, NW	2	Government Elementary School Valayapalayam	2.19 km, NW	3	Government School, Manickapuram	2.47 km, SE	4	Government High School, Naranapuram	2.90 km, SE	5	Jayanthi College of Eductaion	6.14 km, NE	6	Park's College	7.35 km, NE	7	IITT College of Fashion	9.67 km, NE	Google Earth/Field Study
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Hospitals		
1	Primary Health Centre, Semmipalayam	3.77 km, SW
2	Government Hospital, Semmipalayam	3.88 km, SW
3	Government medical Centre - Aarumuththampalayam	4.50 km, NE

3.1.7 Site Connectivity:

The site is connected to MDR 882 (Palladam - Boomalur Road) – 0.84 km, W.



Figure 3.1: Site Connectivity

3.2 LAND USE ANALYSIS

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3.2.1 *Land Use Classification*

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

3.2.2 *Methodology*

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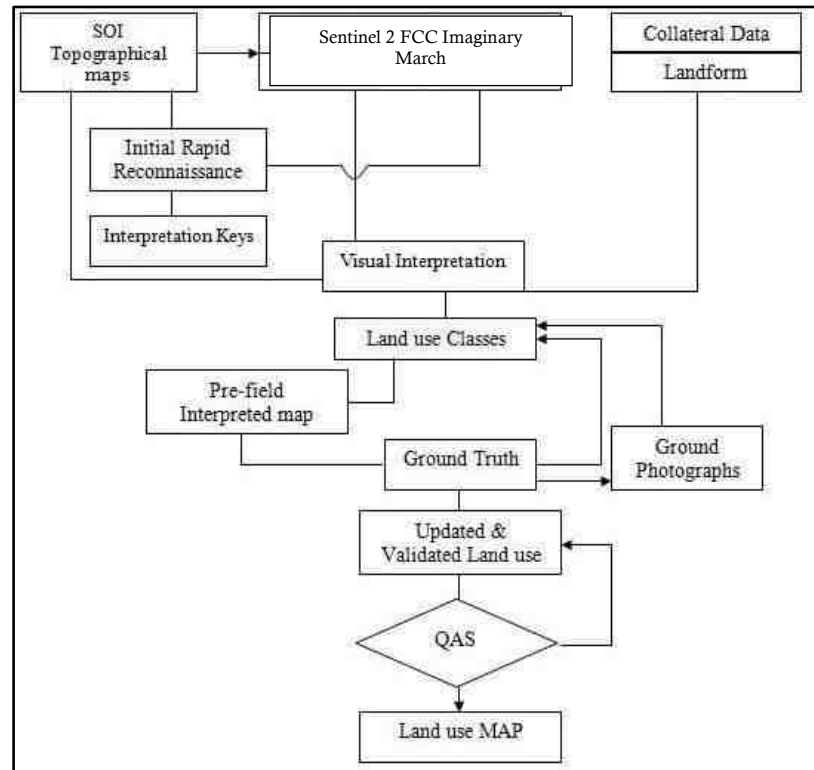


Figure 3.2 Flow Chart showing Methodology of Land use mapping

3.2.3 Satellite Data

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

3.2.4 Scale of mapping

Considering the user defined scale of mapping, 1:50000 Sentinal 2 data was used for Land use / Land cover mapping of 10 km radius for 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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3.2.5 Interpretation Technique

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

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

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

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

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3.2.6 Field Verification

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

3.2.7 Description of the Land Use / land cover classes

3.2.7.1 Water

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

3.2.7.2 Trees

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

3.2.7.3 Grass

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

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3.2.7.4 Flooded vegetation

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

3.2.7.5 Crops

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

3.2.7.6 Scrub/Shrub

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

3.2.7.7 Built Area

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

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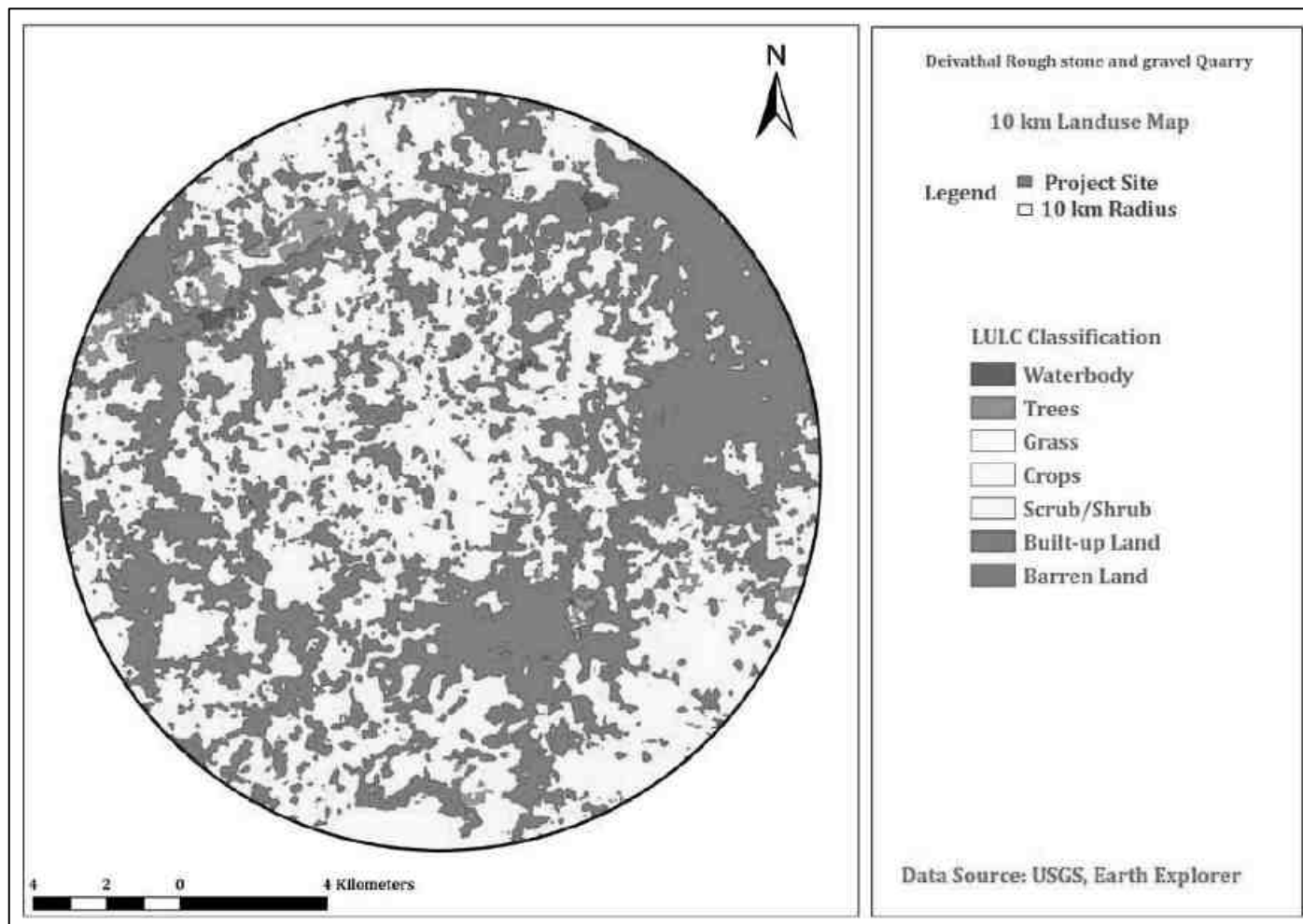


Figure 3.3 Land use classes around 10 km radius from the project site

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

Table 3-3 Land use pattern

Sl.No	Categories	Area in Sq.m	Percentage
1	Water Body	1.22	0.4
2	Trees	10.07	3.1
3	Grass	0.62	0.2
4	Crops	144.06	43.8
5	Scrub/Shrub	19.06	5.8

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6	Built-up Area	154.02	46.9
7	Barren Land	0.05	0.1

3.3 WATER ENVIRONMENT

3.3.1 *Contour & Drainage*

The project site is 378m AMSL. The drainage pattern within in the 10 km of the project site is dendritic.

The major rivers flowing through the district are Noyyal and Amaravathi, which come under the Cauvery basin. Chinnar and Tenar rivers are the main tributary of Amravati River, which is the main source of irrigation in the district. Nallar and Palar river are covered under the Parambikulam-Aliyar basin. Both Amaravathi dam and Thirumurthy dam are the prime source of irrigation in the district, whereas Uppaar dam is another dam which receives water from seasonal rains.

3.3.2 *Geomorphology*

The structures identified are plateau landforms, structural, denudational, residual hills of charnockite and gneisses, linear rides of basic dykes with undulating topography with gentle slope towards east except for the hilly terrain in the west. The prominent geomorphic units were identified through interpretation of satellite imagery with field check. The encountered geomorphic features are i) Pediment, ii) Shallow Pediments and iii) Deep Pediments. The shallow pediment observed along the stream courses joining to Noyyil River and the deep pediment is noticed along Noyyil river course from Sular to Tirupur. In other areas pediments are seen. Pediment forms outcrop with or without soil cover run off zone with poor groundwater potential. Shallow Pediment is intermediate between pediment and deep pediments; weathering thickness appreciable, moderate infiltration and recharge is influenced by hydrogeological features with moderate groundwater potential. Deep pediments are shallow depressed low relief areas with good drainage net works so infiltration is

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moderate to good, recharge by hydrogeological feature, storage complemented by secondary fractures with good groundwater potential.

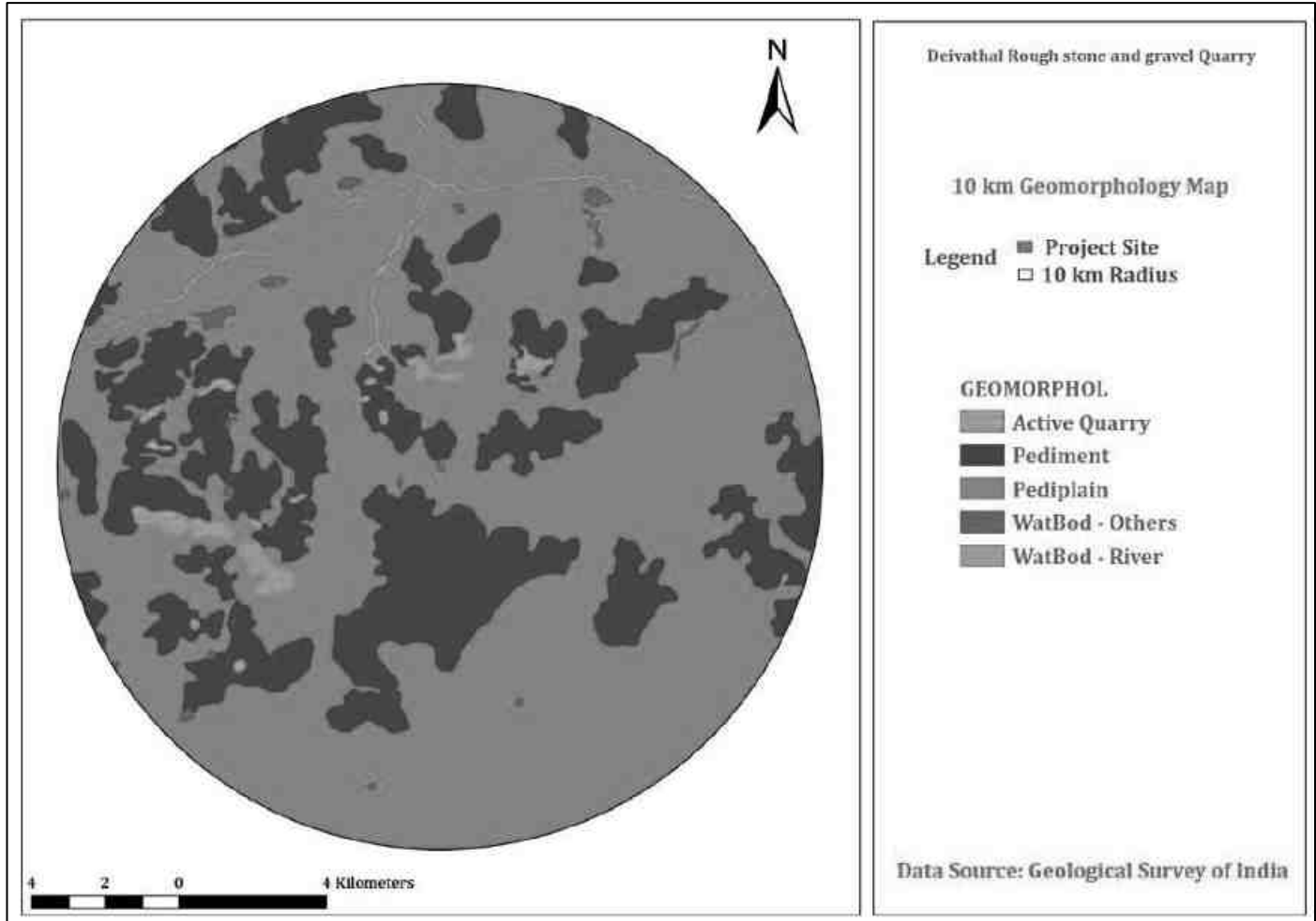


Figure 3.4 Geomorphology within 10km from the project site

3.3.3 Geology:

Tiruppur district of Tamil Nadu forms a part of southern Granulitic terrain and is predominantly occupied by crystalline rocks of Archaean to late Proterozoic age. Regionally, the rocks can be grouped under five categories namely

- i. Charnockite Group represented by Charnockite, Pyroxene Granulite and Magnetite Quartzite,
- ii. Peninsular Gneissic Complex (II) comprising hornblende-biotite gneiss,
- iii. Basic intrusive include Pyroxinite/Dunite

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- iv. Younger intrusive comprising, Nepheline-Syenite, Pink Granite, Pegmatite and Quartz veins and
- v. Quaternary sediments of Kankar and soil.

Tiruppur District is predominantly occupied by hornblende Biotite gneisses of PGC (II) with enclaves of Magnetite Quartzite, Pyroxene Granulite and Charnockite. The area exposes several bands of Pyroxene Granulite which is medium grained, medium to dark grey in colour and stand out prominently in the gneissic country generally parallel to regional foliation. Charnockite is coarse grained, massive, many places it is foliated, grey coloured and greasy and exposed as bouldery outcrops and small knolls. It is well exposed in Central, Western and Southern parts of the Tiruppur District. The general strike of foliation varies from ENE-WSW, E-W with dipping towards NW and N respectively.

Hornblende-Biotite gneiss is well foliated, medium to coarse grained, pale grey and exposed as sheets and small knolls. Pink Granite gneiss occurs as thin bands and lensoidal bodies. It is a medium grained rock composed of alternating bands of mafic (mainly of biotite and hornblende) and felsic (Feldspar and Quartz) minerals. It is well recognized in Avinashi area.

Basic intrusives such as pyroxinite/dunite occurs as Outcrop and lensoidal bodies in the country rock and mostly concordant to the regional foliation. Many basic intrusive are reported in south and south-east of Tiruppur town. The trend of these bodies is east-west.

Nepheline syenite is a leucocratic, coarse grained rock and composed mainly of Feldspar with Nepheline and shows pitted appearance due to removal of Nepheline. This alkaline rock is available in and around Sivanmalai area only.

Acid intrusives comprising pink granite, pegmatite and quartz veins are traversed country rocks in micro (cm wide-meter long) to meso-scale (few meter wide and several meter long) extend. Granite is exposed around 9 km SW of Avinashi. Small scale pegmatite and quartz veins are noticed almost in all the rock types.

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Acid intrusives are overlain by sediments of Quaternary age, represented by Kankar and black cotton soil with Gypsum. Most of the area is covered by brown and red brown soil. Some part of the area covered with black cotton soil contains Gypsum as lumps. Black cotton soil covers south-western part of the district.

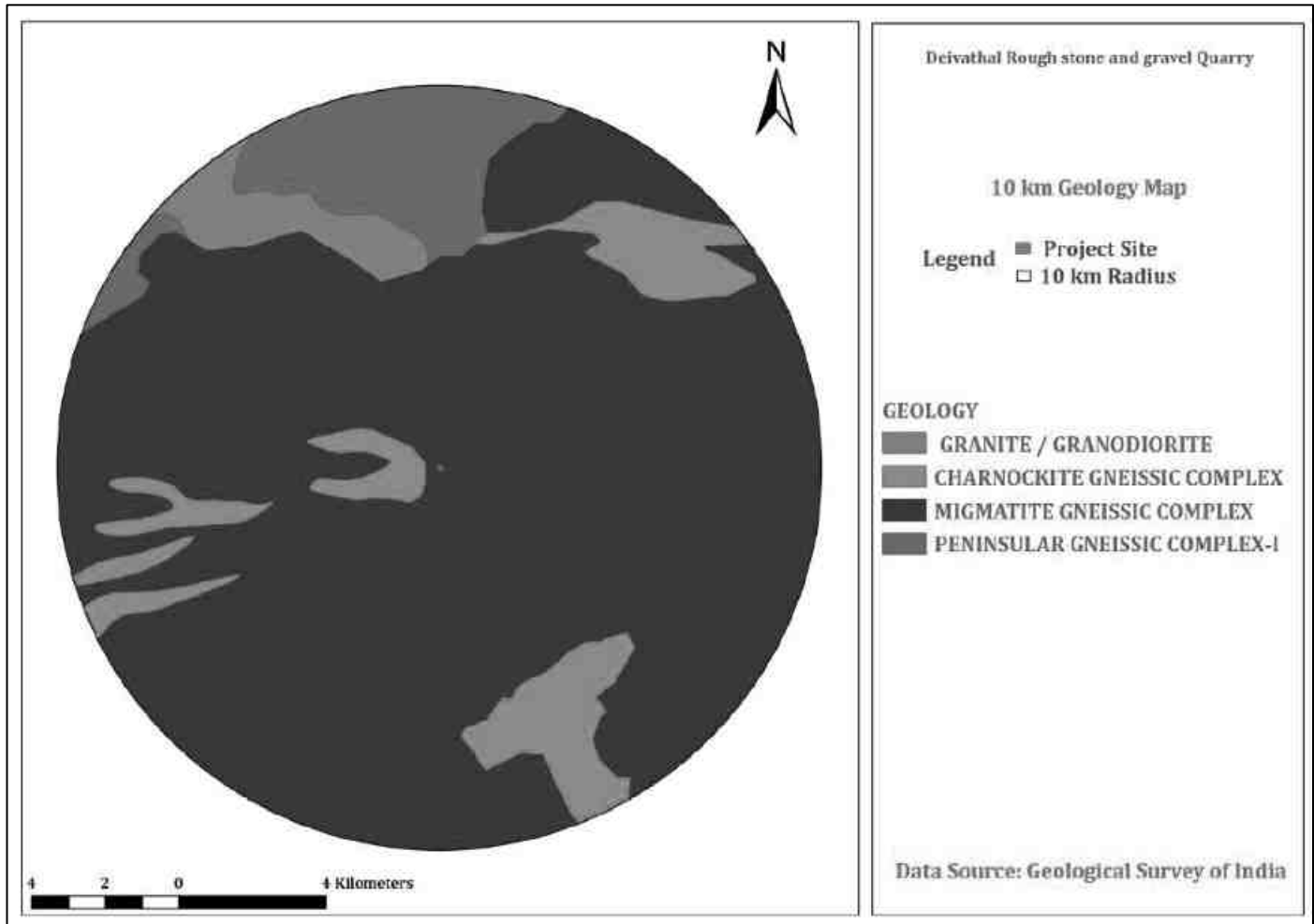


Figure 3.5 Geology within 10km from the project site

3.3.4 Hydrogeology

(i) Major Geological formations: Tiruppur 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

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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 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 Tiruppur 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.

(ii) 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

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<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

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 Tiruppur 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 brackish 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.

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

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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.

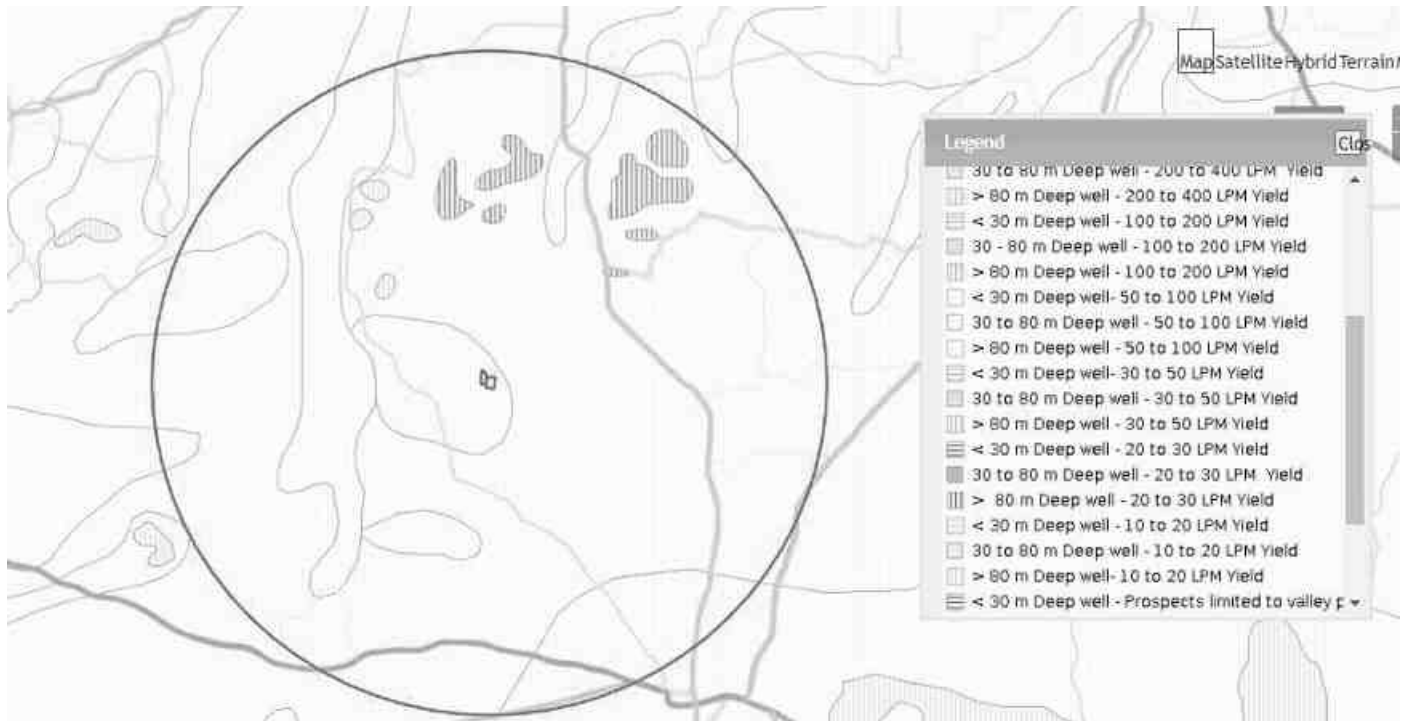


Figure 3.6 Ground water prospects within 5 km radius of the project site

3.3.5 Ground water quality monitoring

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

Table 3-4 Ground water Quality Analysis

Environmental Parameters: Ground water Quality Analysis	
Monitoring Period	June 2022 to August 2022
Design Criteria	Based on the Environmental settings in the study area
Monitoring Locations	<ol style="list-style-type: none"> 1. Project Site – GW 1 2. Temple, Sukkampalayam – GW2 3. Aathi karuppan temple, Bharathpuram – GW3

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

	4. St. Ann's Hospital, Pallapalayam – GW4 5. Government Arts and science college, Palladam – GW5
Methodology	Water Samples were collected in 5 Litre fresh cans as per IS 3025 Part I and transported to the laboratory in Iceboxes
Frequency of Monitoring	Once in a season

3.3.5.1 Sampling Procedure

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

Table 3-5: Standard Procedure

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

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17	Sodium as Na	IS:3025(P -45):1993 RA: 2014
18	Potassium as K	IS:3025(P -45):1993 RA: 2014
19	Coliform	IS:1622:1981:RA:2014
20	E.coli	IS:1622:1981:RA:2014

Table 3-6 Ground water sampling results

S. No	Parameters	Units	Project Site	Temple, Sukkampalayam	Aathi karuppan temple, Bharathpuram	St. Ann's Hospital, Pallapalayam	Government Arts and science college, Palladam
1	pH (at 25°C)	-	7.93	8.06	8.42	7.73	8.18
2	Electrical Conductivity	µS/cm	1343	5430	125	756	2220
3	Colour	Hazen Unit	4	2	2	3	5
4	Turbidity	NTU	BQL(LOQ:1)	BQL(LOQ:1)	BQL(LOQ:1)	BQL(LOQ:1)	BQL(LOQ:1)
5	Total Dissolved Solids	mg/L	739	2986	85.3	416	1221
6	Total Suspended Solids	mg/L	BQL(LOQ:2)	BQL(LOQ:2)	BQL(LOQ:2)	BQL(LOQ:2)	BQL(LOQ:2)
7	Total Hardness as CaCO ₃	mg/L	498	1867	49	238	805
8	Calcium as Ca	mg/L	114	335	9.81	53.1	127
9	Magnesium as Mg	mg/L	51.5	251	5.95	25.6	119
10	Chloride as Cl	mg/L	156	1434	21.8	82.9	352
11	Sulphate as SO ₄	mg/L	22.6	864	7.42	44.2	91.8

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Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

12	Total Alkalinity as CaCO ₃	mg/L	338	212	26	190	358
13	Iron as Fe	mg/L	BQL(LOQ:0.1)	BQL(LOQ:0.1)	BQL(LOQ:0.1)	BQL(LOQ:0.1)	BQL(LOQ:0.1)
14	Silica as SiO ₂	mg/L	29.6	44.5	2.9	17.2	47.2
15	Sodium as Na	mg/L	86.5	143	12.5	69.5	270
16	Potassium as K	mg/L	12.5	42	1.52	10.12	64.6

3.3.6 Interpretation of results:

3.3.6.1 Physical parameters of water:

The basic physical parameters of water include

Colour:

Value observed in Project Site (True/Apparent Color): 4 Hazen unit.

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

Odour & Taste:

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

pH:

Value observed in the Project Site: 7.93

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

Turbidity:

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<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

Value observed in the Project Site: less than 1

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

Total Dissolved Solids:

Value observed in the Project Site: 739 mg/L.

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

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

3.3.6.2 Chemical parameters of water:

The chemical parameters of the drinking water include,

Calcium:

Value observed in the Project Site: 114 mg/L.

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

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

Magnesium:

Value observed in the Project Site: 51.5 mg/L.

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

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

Chloride

Value observed in the project site: 156 mg/L.

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

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

Total Alkalinity as CaCO₃:

Value observed in the project site: 338 mg/L.

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

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

Hardness:

Value observed in the Project Site: 498 mg/L.

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

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

3.3.7 Surface Water Analysis

Surface water samples were taken from Kallam Palayam Lake. The results are summarized below.

Table 3-7 Surface Water Sample Results

S. No	Parameters	Units	Kallam Palayam Lake
1	pH (at 25°C)	-	8.67
2	Electrical Conductivity	µS/cm	1821
3	Colour	Hazen Unit	Greenish
4	Turbidity	NTU	51.2
5	Total Dissolved Solids	mg/L	1202
6	Total Suspended Solids	mg/L	95
7	Total Hardness as CaCO ₃	mg/L	351
8	Calcium as Ca	mg/L	73.6
9	Magnesium as Mg	mg/L	40.7
10	Chloride as Cl	mg/L	307

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Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

11	Sulphate as SO ₄	mg/L	83.4
12	Total Alkalinity as CaCO ₃	mg/L	318
13	Iron as Fe	mg/L	BQL(LOQ:0.1)
14	Silica as SiO ₂	mg/L	22.7
15	Sodium as Na	mg/L	243
16	Potassium as K	mg/L	25.9

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

3.3.8 *Climatology & Meteorology:*

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

The year may broadly be divided into four seasons:

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

i) **Climate**

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

ii) **Temperature**

The maximum temperature is around 38⁰C and minimum temperature is 18⁰C.

iii) **Rainfall:**

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Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

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

This district gets maximum rainfall in November (253.8mm).

TIRUPPUR DISTRICT -NORMAL AND ACTUAL RAINFALL

Unit in mm.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	R/F	R/F	R/F	R/F	R/F	R/F	R/F	R/F	R/F	R/F	R/F	R/F
2016	0	0	0	12.5	112.5	26.8	20	15.6	18.7	142.8	33.2	29.2
2017	7.6	0	23.8	31.2	51.2	13.6	9.4	77.7	209.7	123.2	75.2	57.2
2018	0.8	18.5	27.2	2.7	219.4	7.9	10.9	26.9	119.9	174.8	101.6	5.6
2019	2.8	0	0.3	0	26.5	49.4	5.9	62.7	63.7	141.8	72.4	62.7
2020	0.2	0	4.8	53.2	39.2	25	128.9	25.7	145.5	21.4	253.8	57.3

Source: IMD

Metrological Data

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

vi) Wind Rose Diagram

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

The wind speed & wind direction data are taken and wind rose is plotted for June 2022 to August 2022.

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Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

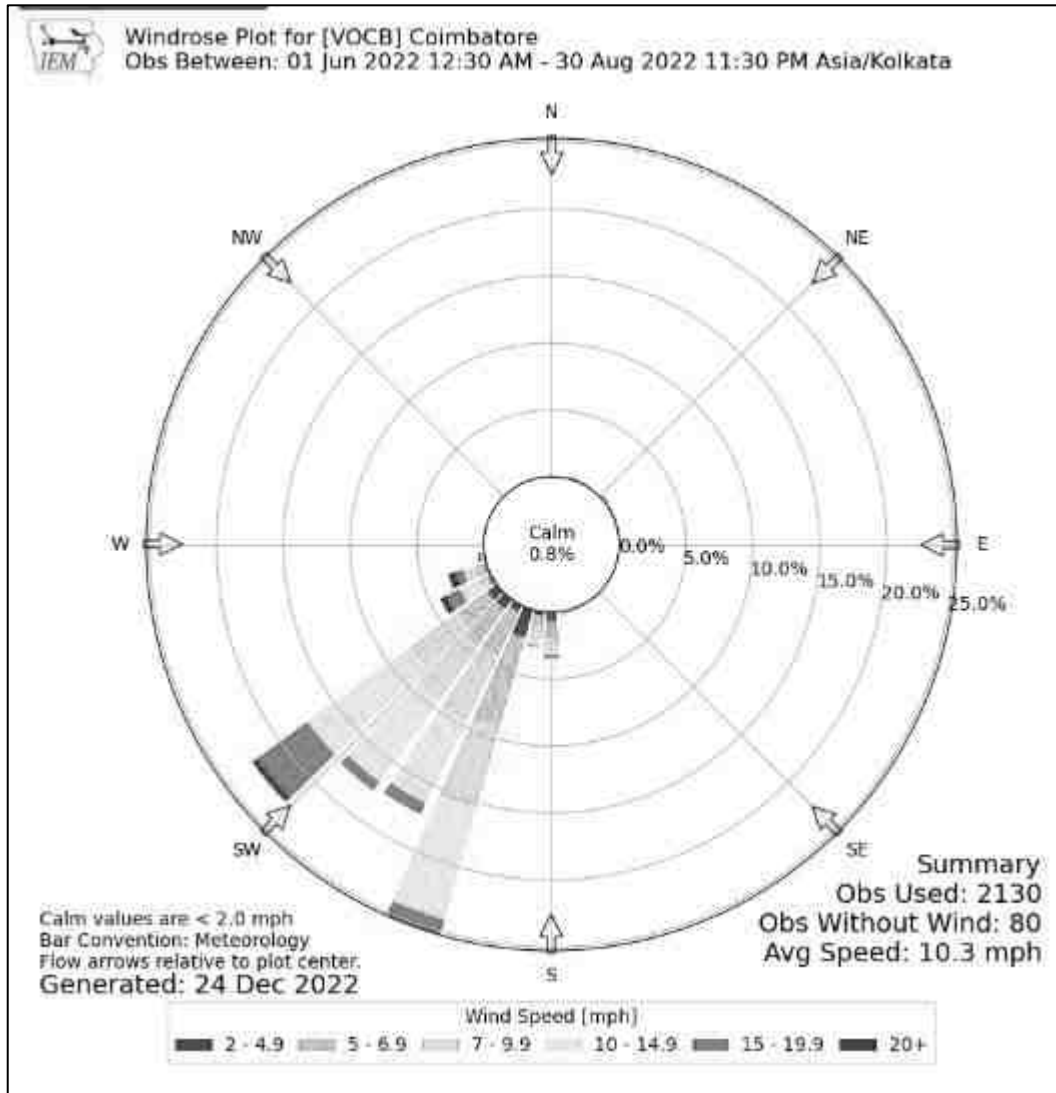


Figure 3.7 Wind rose

3.3.9 Selection of Sampling Locations:

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

3.4 AMBIENT AIR QUALITY

Table 3-8: Selection of Sampling Location

Environmental Parameters: <i>Ambient Air</i>	
Monitoring Period	June 2022 to August 2022

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

Design Criteria	The monitoring stations are selected based on factors like topography/terrain, prevailing meteorological conditions like predominant wind direction (June 2022 to August 2022), etc, play a vital role in the selection of air sampling stations. Based on these criteria, 5 air sampling station were selected in the area as shown below.	
Monitoring Locations	Location & Code	Distance (km) & Direction
	Project Site	--
	Temple, Sukkampalayam	3.42 km, SW
	Aathi karuppan temple, Bharathpuram	3.94 km, NE
	St. Ann's Hospital, Pallapalayam	6.92 km, NW
	Government Arts and science college, Palladam	5.12 km, SE
Methodology	Respirable Particulate Matter (PM10) - Gravimetric (IS 5182: Part 23:2006) Particulate Matter PM2.5 - Gravimetric (Fine particulate matter) Sulphur Dioxide - Calorimetric (West & Gaeke Method) (IS 5182: Part 02: 2001) Nitrogen Dioxide - Calorimetric (Modified Jacob & Hocheiser Method) (IS 5182: Part 06:2006)	
Frequency of Monitoring	2 days in a week, 4 weeks in a month for 3 months in a season.	

3.4.1 *Ambient Air Quality: Results & Discussion*

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

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

Table 3-9 Ambient Air Quality

Code	Location	PM 10 ($\mu\text{g}/\text{m}^3$)				PM 2.5 ($\mu\text{g}/\text{m}^3$)				SO ₂ ($\mu\text{g}/\text{m}^3$)				NO _x ($\mu\text{g}/\text{m}^3$)			
		Min	Max	Avg	98 percentile	Min	Max	Avg	98 percentile	Min	Max	Avg	98 percentile	Min	Max	Avg	98 percentile
AAQ	Project Site	42	56	49.0	54	17	24	21.0	24	5	8	6.3	8	9	18	13.5	18
AAQ	Temple, Sukkampalayam	44	54	49.7	54	19	26	22.8	26	3	11	6.6	10	8	25	15.1	23
AAQ	Aathi karuppan temple, Bharathpuram	50	58	53.6	58	20	29	24.1	29	6	13	8.5	12	12	27	18.7	26
AAQ	St. Ann's Hospital, Pallapalayam	46	54	51.4	54	20	26	22.5	26	5	10	7.4	9	12	22	17.0	22
AAQ	Government Arts and science college, Palladam	51	61	55.5	60	23	30	25.8	29	6	12	8.9	12	16	27	19.9	26
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 ($\mu\text{g}/\text{m}^3$)			

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

3.4.2 Interpretation of ambient air quality:

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

Observation:

The Maximum value of PM10 (61($\mu\text{g}/\text{m}^3$), PM 2.5(30($\mu\text{g}/\text{m}^3$), SOx (13($\mu\text{g}/\text{m}^3$), NOx (27($\mu\text{g}/\text{m}^3$) is observed in different places.

Inference:

The monitoring results for PM10, PM2.5, NOx was found to be high in Government Arts and science college, Palladam and Sox was found to be high in Aathi karuppan temple, Bharathpuram which is due to high movement of vehicles. The observed values are all well within the Standards prescribed by NAAQ.

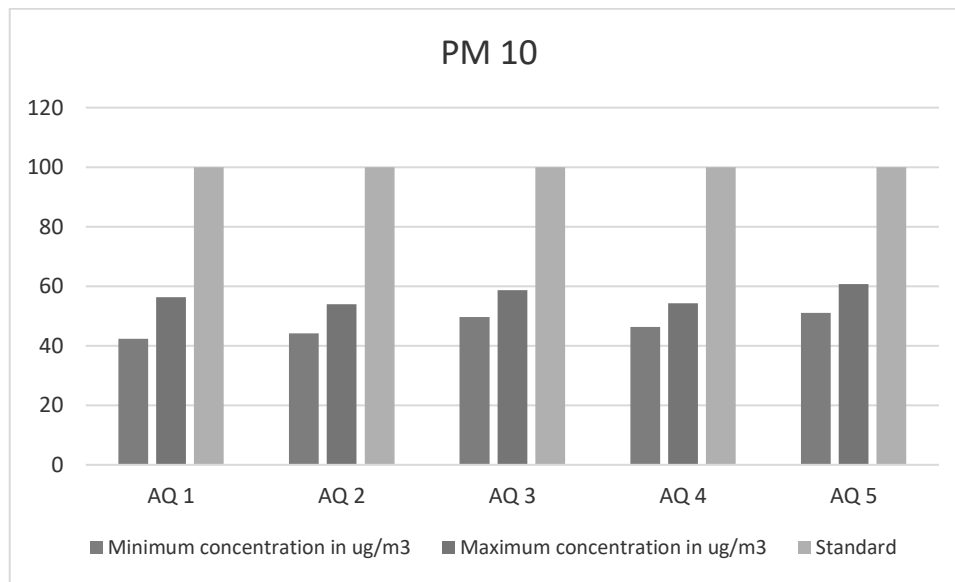


Figure 3.8 Concentration of PM10 ($\mu\text{g}/\text{m}^3$) in Study Area

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

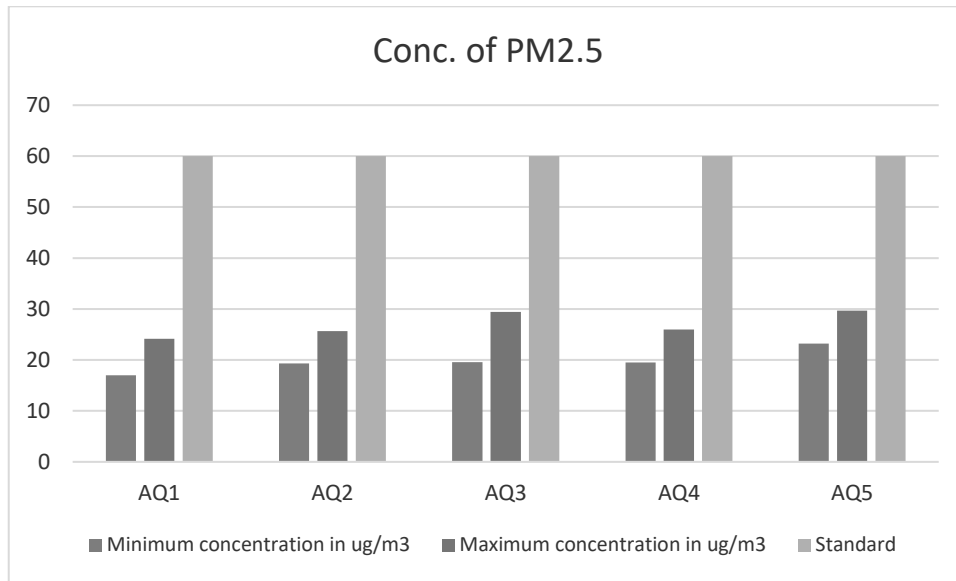


Figure 3.9 Concentration of PM2.5 ($\mu\text{g}/\text{m}^3$) in Study Area

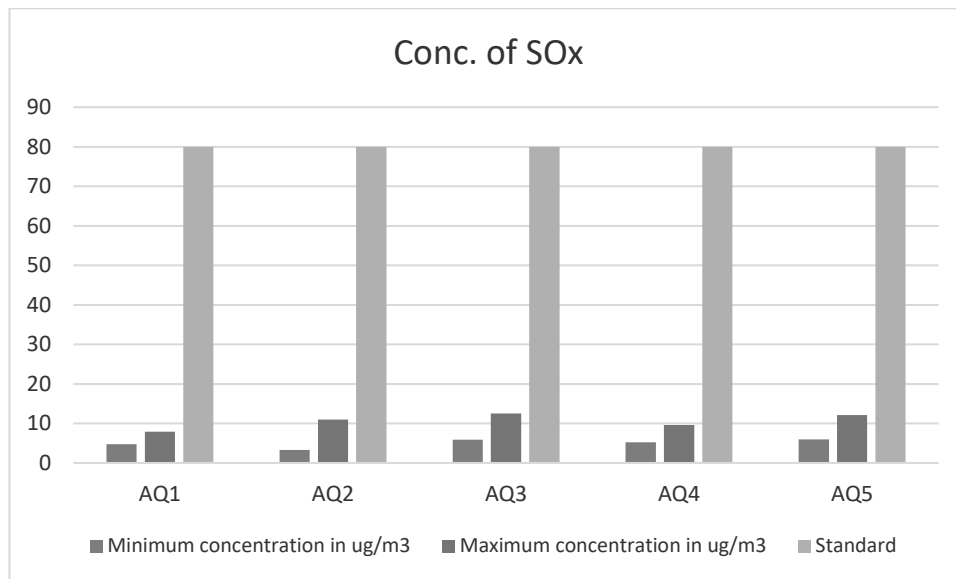


Figure 3.10 Concentration of SOx ($\mu\text{g}/\text{m}^3$) in Study Area

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

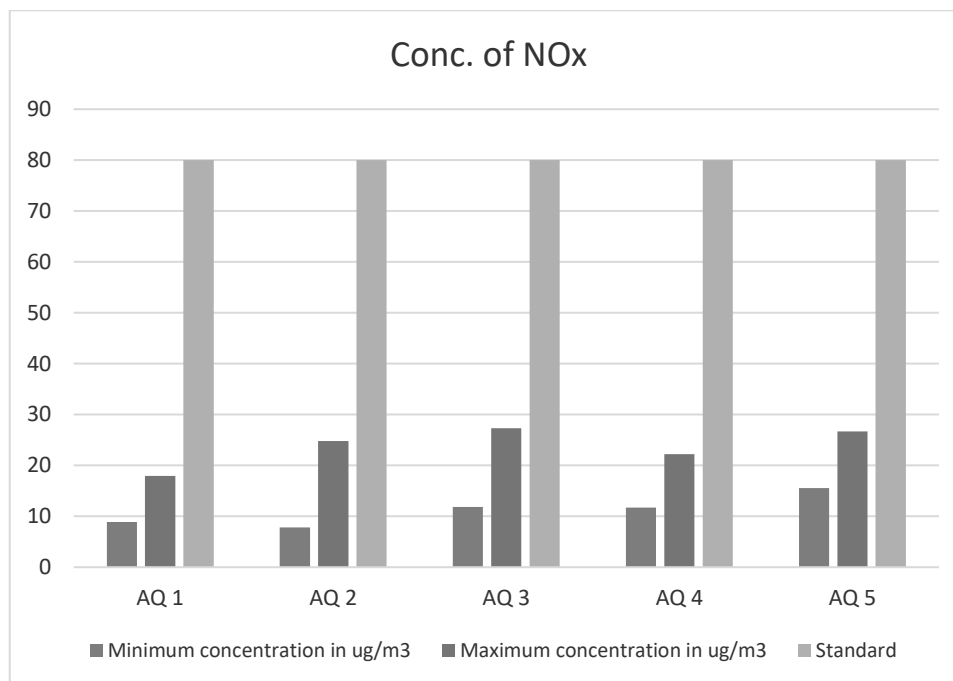


Figure 3.11 Concentration of NOx (ug/m3) in Study Area

3.5 NOISE ENVIRONMENT:

Table 3-10 Noise Analysis

Environmental Parameters: <i>Noise Analysis</i>	
Monitoring Period	June 2022 to August 2022
Design Criteria	Based on the Sensitivity of the area
Monitoring Locations	<ol style="list-style-type: none"> 1. Project Site – N 1 2. Temple, Sukkampalayam – N2 3. Aathi karuppan temple, Bharathpuram – N3 4. St.Ann’s Hospital, Pallapalayam – N4 5. Government Arts and science college, Palladam – N5
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

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

Frequency of Monitoring	Noise samples were collected from 5 locations - Once in a season
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Ambient Noise Levels are monitored in the chosen 5 Locations including the project Site and the monitoring results are summarized below

3.5.1 Day Noise Level (Leq day)

Table 3-11 Day Noise Level (Leq day)

Location	Leq day in dB(A)		
	Max	Min	Average
Project Site	54	45	50
Temple, Sukkampalayam	57	46	53
Aathi karuppan temple, Bharathpuram	59	49	55
St. Ann's Hospital, Pallapalayam	55	45	51
Government Arts and science college, Palladam	57	49	54

3.5.2 Night Noise Level (Leq Night)

Table 3-12 Night Noise Level (Leq Night)

Location	Leq Night in dB(A)		
	Max	Min	Average
Project Site	44	39	41
Temple, Sukkampalayam	46	41	43
Aathi karuppan temple, Bharathpuram	48	40	44
St. Ann's Hospital, Pallapalayam	42	35	39
Government Arts and science college, Palladam	45	38	42

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

Observation:

The maximum Day noise and Night noise were found to be 59 dB(A) and 48 dB(A) respectively in Aathi karuppan temple, Bharathpuram. The minimum Day Noise and Night noise were 45 dB(A) and 38 dB(A) respectively which was observed in project site and Government Arts and science college, Palladam. The observed values are all well within the Standards prescribed by CPCB.

3.6 SOIL ENVIRONMENT

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

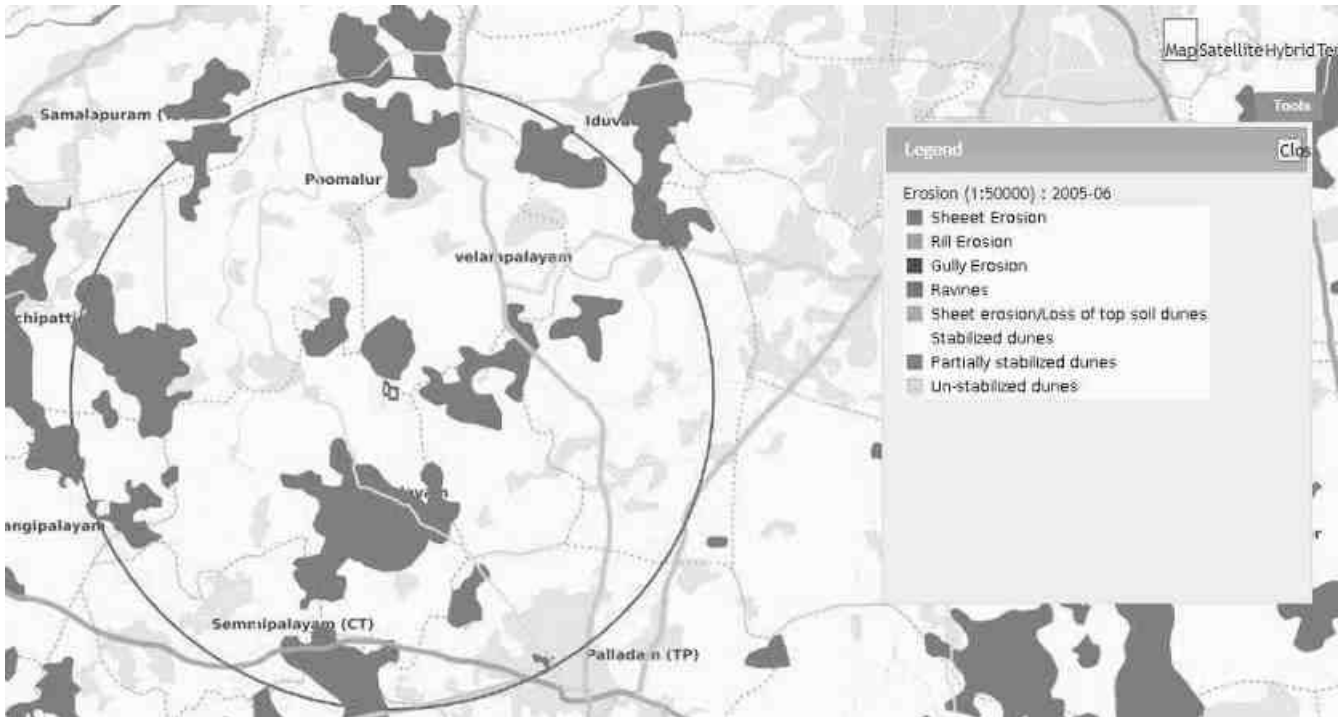


Figure 3.12 Soil Erosion pattern within 5 km radius of the project site

3.6.1 Baseline Data:

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

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

Table 3-13 Soil Quality Analysis

Environmental Parameters: Soil Quality Analysis	
Monitoring Period	June 2022 to August 2022
Design Criteria	Based on the environmental settings of the study area
Monitoring Locations	<ol style="list-style-type: none"> 1. Project Site – SQ 1 2. Temple, Sukkampalayam –SQ2 3. Aathi karuppan temple, Bharathpuram –SQ3 4. St.Ann’s Hospital, Pallapalayam – SQ4 5. Government Arts and science college, Palladam – SQ5
Methodology	Composite soil samples using sampling augers and field capacity apparatus
Frequency of Monitoring	Soil samples were collected from 5 locations Once in a season

To assess the soil quality of the study area, 5 monitoring stations were selected and the results are summarized below.

Table 3-14 Soil Quality Analysis

Parameters	Unit	Project Site	Temple, Sukkampa layam	Aathi karuppan temple, Bharathpura m	St.Ann’s Hospital, Pallapalaya m	Government Arts and science college, Palladam
pH (at 25°C)	-	7.25	6.89	6.79	7.33	6.89

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Specific Electrical Conductivity	mS/cm	0.31	0.06	0.41	0.35	0.16
Water Holding Capacity	ml/l	1.82	1.8	1.60	1.8	1.92
Chloride	g/cm ³	181	153	196	210	183
Soluble Calcium	mg/kg	28	129	29	99	67
Soluble Sodium	mg/kg	21	18	109	59	41
Soluble Potassium	mg/kg	20	14	97	56	19
Organic matter	%	0.35	0.42	0.41	0.31	0.12
Soluble Magnesium	mg/kg	33	90	35	73	120
Total Soluble Sulphates	%	253	82	182	89	81
Cation Exchange Capacity	mg/kg	11.4	12.6	12.9	9.8	9.7
Total Nitrogen	%	0.21	0.32	0.12	0.29	0.27
Bulk Density	meq/100g	1.5	1.52	1.62	1.25	1.26
Phosphorous	meq/kg	134	146	128	152	154
Sand	%	56.6	55.5	55.5	54.9	58.2
Clay	mg/kg	4.0	4.1	4.1	4.1	3.8
Silt	mg/kg	39.5	40.5	40.5	41.0	38.0
SAR	mg/kg	7.5	9.5	8.6	15.2	9.1
Silicon	%	0.91	0.00	0.15	0.00	0.00

3.6.1.1 Physical Properties:

Regular cultivation practices increase the bulk density of soils thus inducing compaction. This results in reduction in water percolation rate and penetration of roots through soils. The soils with low

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bulk density have favorable physical conditions whereas those with high bulk density exhibit poor physical conditions for agriculture crops. The bulk density of the soil in the study area ranged between 1.25 to 1.62 meq/100g which indicates favorable physical condition for plant growth. The water holding capacity was found in the range of 1.6 ml/1 to 1.92ml/1.

3.6.1.2 Chemical Properties:

Chemical characteristics of soils include pH, exchangeable cations and fertility status in the form of NPK values and organic matter. The value of the pH ranges from 6.79 to 7.33, which it indicates majority of pH of the soil is slightly alkaline. The soil in the project site is sodic in nature, which challenges because they tend to have very poor structure which limits or prevents water infiltration and drainage. The organic matter varies from 0.12 to 0.41 %, which indicates the soil is slightly unfertile.

3.7 ECOLOGY AND BIODIVERSITY

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

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

3.7.1 *Methods available for floral analysis:*

3.7.1.1 Plot Sampling Methods

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

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3.7.1.2 Plot less Sampling Methods

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

3.7.2 *Field study & Methodology adopted:*

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

3.7.3 *Study outcome:*

Phyto-sociological parameters, such as *Density, Frequency, Basal Area, Abundance and Importance Value Index* of individual species (Trees) were determined in randomly placed 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 3-15 Calculation of Density, Frequency (%), Dominance, Relative Density, Relative Frequency, Relative Dominance & Important Value Index

Parameters	Formula
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Project	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
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Density	Total No. of individuals of species/ Total No. of Quadrats used in sampling
Frequency (%)	(Total No. of Quadrats in which species occur/ Total No. of Quadrats studied) * 100
Dominance	Total Basal Area /Total area sampled
Abundance	Total No. of individuals of species/ No. of Quadrats in which they occur
Relative Density	(Total No. of individuals of species/Sum of all individuals of all species) * 100
Relative Frequency	(Total No. of Quadrats in which species occur/ Total No. of Quadrats occupied by all species) * 100
Relative Dominance	Dominance of a given species/Total Dominance of all species
Important Value Index	Relative Density + Relative Frequency + Relative Dominance

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Table 3-16 Tree Species in the core Zone

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Dominance	Relative Density	Relative Frequency	Relative Dominance	IVI	IUCN Conservation Status
1	Ficus Carica	Athi Maram	2	2	6	0.33	33.33	1	0.28	1.68	2.17	4.45	8.31	Least Concern
2	Cocos nucifera	Thennai	10	6	6	1.67	100.0	1.67	0.15	8.40	6.52	2.39	17.32	Not assessed
3	Azadirachta indica	Veppam	17	6	6	2.83	100.0	2.83	0.13	14.29	6.52	1.98	22.79	Not assessed
4	Tamarindus indica	Puli	10	6	6	1.67	100.0	1.66	0.20	8.40	6.52	3.09	18.02	Not assessed
5	Mangifera indica	Mamaram	7	6	6	1.17	100.0	1.16	0.07	5.88	6.52	1.11	13.52	Data insufficient
6	Morinda pubescens	Nuna	6	6	6	1.00	100.0	1	0.24	5.04	6.52	3.74	15.31	Not assessed
7	Couroupita guianensis	Nagalingam	5	3	6	0.83	50.00	1.67	0.14	4.20	3.26	2.18	9.64	Not assessed
8	Bombax ceiba	Sittan	4	4	6	0.67	66.67	1	0.08	3.36	4.35	1.27	8.98	Not assessed
9	Acacia nilotica	Karuvelai	4	4	6	0.67	66.67	1	0.28	3.36	4.35	4.45	12.16	Least Concern
10	Bambusa vulgaris	Moongil	4	4	6	0.67	66.67	1	0.50	3.36	4.35	7.92	15.63	Not assessed
11	Syzygium cumini	naval	5	1	6	0.83	16.67	5	0.11	4.20	1.09	1.79	7.07	Not assessed
12	Carica papaya	Papaya	3	3	6	0.50	50.00	1	0.09	2.52	3.26	1.43	7.21	Not assessed
13	Psidium guajava	Guava	3	3	6	0.50	50.00	1	0.23	2.52	3.26	3.61	9.39	Not assessed
14	Cassia siamea	ManjalKonrai	3	2	6	0.50	33.33	1.5	0.07	2.52	2.17	1.11	5.81	Least Concern
15	Ficus religiosa	Arasa maram	3	3	6	0.50	50.00	1	0.09	2.52	3.26	1.35	7.13	Not assessed

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

Table 3-17 Shrubs in the Core Zone

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Relative Density	Relative Frequency	IUCN	Conservation Status
1	Jatropagossypifolia	Kaatamanaku	32	17	24	1.17	0.71	1.65	14.43	17.17		Not Assessed

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2	Calotropis gigantea	Erukam	16	12	24	0.58	0.50	1.17	7.22	12.12	Not Assessed
3	Tabernaemontanadivaricata	Crepe Jasmine	4	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
4	Catharanthus roseus	Nithyakalyani	4	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
5	Datura metal	Ummattangani	7	4	24	0.21	0.17	1.25	2.58	4.04	Not Assessed
6	Robiniapseudoacacia	Black locust	15	5	24	0.71	0.21	3.4	8.76	5.05	Least Concern
7	Acalypha indica	Kuppaimeni	18	8	24	0.83	0.33	2.5	10.31	8.08	Not Assessed
8	Stachytarphearturcifolia	Rat tail	13	9	24	0.63	0.38	1.67	7.73	9.09	Not Assessed
9	Woodfordiafruiticosa	Velakkai	4	3	24	0.13	0.13	1	1.55	3.03	Least Concern
10	Hibiscus rosa sinensis	Sembaruthi	3	2	24	0.13	0.08	1.5	1.55	2.02	Not Assessed
11	Lantana camara	Unnichedi	8	6	24	0.38	0.25	1.5	4.64	6.06	Not Assessed
12	Parthenium hysterophorous	Vishapoond	45	13	24	2.08	0.54	3.85	25.77	13.13	Not Assessed
13	Euphorbia geniculata	Amman Pacharisi	5	3	24	0.13	0.13	1	1.55	3.03	Not Assessed

Table 3-18 Herbs & Grasses in the core zone

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

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6	Plumbago zeylanica	Chittiramoolam	12	3	30	0.10	0.10	1	1.19	3.23	Not assessed
7	Scrophularia nodosa	Sarakkothini	18	7	30	0.50	0.23	2.14	5.95	7.53	Not assessed
8	Viburnum dentatum	Viburnum	7	5	30	0.17	0.17	1	1.98	5.38	Least concern
9	Cynodondactylon	Arugu	15	6	30	0.40	0.20	2	4.76	6.45	Not assessed
10	Euphorbia hirta	Amman Pacharisi	7	4	30	0.17	0.13	1.25	1.98	4.30	Not assessed
11	Sida cordifolia	Maanikham	50	4	30	1.50	0.13	11.25	17.86	4.30	Not assessed
12	Sida acuta	Malaidangi	12	3	30	0.33	0.10	3.33	3.97	3.23	Not assessed
13	Laportea canadensis	Peruganchori	28	20	30	1.00	0.67	1.5	11.90	21.51	Not assessed
14	Sporobolus fertilis	Giant Parramatta Grass	10	4	30	0.30	0.13	2.25	3.57	4.30	Not assessed
15	Tephrosia purpurea	Kavali	23	4	30	0.67	0.13	5	7.94	4.30	Not assessed

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

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

Table 3-19 Calculation of species diversity

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

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

i. Species Diversity

Scientific Name	Common Name	No. of Species	Pi	ln (Pi)	Pi x ln (Pi)
Ficus Carica	Athi Maram	2	0.018182	-4.00733	-0.07286
Cocos nucifera	Thennai	10	0.090909	-2.3979	-0.21799
Azadirachta indica	Veppam	17	0.154545	-1.86727	-0.28858
Tamarindus indica	Puli	10	0.090909	-2.3979	-0.21799
Mangifera indica	Mamaram	7	0.063636	-2.75457	-0.17529
Morinda pubescens	Nuna	6	0.054545	-2.90872	-0.15866

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Couroupita guianensis	Nagalingam	5	0.045455	-3.09104	-0.1405
Bombax ceiba	Sittan	4	0.036364	-3.31419	-0.12052
Acacia nilotica	Karuvelai	4	0.036364	-3.31419	-0.12052
Bambusa vulgaris	Moongil	4	0.036364	-3.31419	-0.12052
Syzygium cumini	naval	5	0.045455	-3.09104	-0.1405
Carica papaya	Papaya	3	0.027273	-3.60187	-0.09823
Psidium guajava	Guava	3	0.027273	-3.60187	-0.09823
Cassia siamea	ManjalKonrai	3	0.027273	-3.60187	-0.09823
Ficus religiosa	Arasa maram	3	0.027273	-3.60187	-0.09823
Musa paradise	Vaazhai	3	0.027273	-3.60187	-0.09823
Prosopis juliflora	Vaelikaruvai	3	0.027273	-3.60187	-0.09823
Tectona grandis	Thekku	3	0.027273	-3.60187	-0.09823
Thespesia populnea	Poovarasam	3	0.027273	-3.60187	-0.09823
Causuarina equisetifolia	Savukku	2	0.018182	-4.00733	-0.07286
Alstonia scholaris	Elilaipalai	2	0.018182	-4.00733	-0.07286
Anacardium occidentale	Cashew	1	0.009091	-4.70048	-0.04273
Artocarpus heterophyllus	Palaa	2	0.018182	-4.00733	-0.07286
Aegle marmelos	Vilvam	1	0.009091	-4.70048	-0.04273
Delonix elata	Perungondrai	1	0.009091	-4.70048	-0.04273
Pithecellobium dulce	Kodukapuli	1	0.009091	-4.70048	-0.04273
Citrus medica	Elumichai	2	0.018182	-4.00733	-0.07286
Total		110			-3.02215005

H (Shannon Diversity Index) =3.02

Shrubs

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

H (Shannon Diversity Index) =2.22

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Herbs

Scientific Name	Common Name	No. of Species	Pi	ln (Pi)	Pi x ln (Pi)
Helicteresisora	Valampuri	4	0.015385	-4.17439	-0.06422
Tridax procumbens	Vettukaayathalai	7	0.026923	-3.61477	-0.09732
Heraculem spondylium	Hog Weed	19	0.073077	-2.61624	-0.19119
Tridax procumbens	Cuminipachai	18	0.069231	-2.67031	-0.18487
Senna occidentalis	Nattamsakarai	30	0.115385	-2.15948	-0.24917
Plumbago zeylanica	Chittiramoolam	12	0.046154	-3.07577	-0.14196
Scrophularia nodosa	Sarakkothini	18	0.069231	-2.67031	-0.18487
Viburnum dentatum	Viburnum	7	0.026923	-3.61477	-0.09732
Cynodondactylon	Arugu	15	0.057692	-2.85263	-0.16457
Euphorbia hirta	Amman Pacharisi	7	0.026923	-3.61477	-0.09732
Sida cordifolia	Maanikham	50	0.192308	-1.64866	-0.31705
Sida acuta	Malaidangi	12	0.046154	-3.07577	-0.14196
Laportea canadensis	Peruganchori	28	0.107692	-2.22848	-0.23999
Sporobolus fertilis	Giant Parramatta Grass	10	0.038462	-3.2581	-0.12531
Tephrosia purpurea	Kavali	23	0.088462	-2.42519	-0.21454
Total		260			-2.51

H (Shannon Diversity Index) =2.51

i. Species diversity calculation

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

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

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3.7.6 *Floral study in the Buffer Zone:*

Economically important Flora of the study area

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

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

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

3.7.7 *Faunal Communities*

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

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

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

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

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

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

Methodology Adopted:

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

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Study in the core zone:

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

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

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

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

Table 3-20 List of fauna species

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

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Bubalus bubalis	Buffalo	I	Not listed
Sus scrofa domesticus	Domestic pig	Not listed	Not listed
Birds			
Milvus migrans	Black kite	IV	Least concern
Saxicoloides fulicatus	Indian Robin	IV	Least concern
Pycnonotus cafer	Red vented Bulbul	IV	Least concern
Phragmaticola aedon	Thick billed warbler	IV	Least concern
Pericrocotus cinnamomeus	Small Minivet	IV	Least concern
Eudynamys scolopaceus	Koel	IV	Least concern
Psittacula krameni	Rose ringed parakeet	IV	Least concern
Dicrurus marcocercus	Black drongo	IV	Least concern
Columba livia	Rock pigeon	IV	Least concern
Corvus splendens	House crow	IV	Least concern
Alcedo atthis	Small blue kingfisher	IV	Least concern
Cuculus canorus	Common Cukoo	IV	Least concern
Reptiles & Amphibians			
Chameleon zeylanicum	Chameleon	IV	Not listed
Calotes versicolor	Common garden lizard	II	Not listed
Bungarus caeruleus	Common krait	IV	Not listed
Ophisops leschenaultia	Snake eyed lizard	--	Not listed
Bufo melanostictus	Toad	IV	Least concern
Ptyas mucosa	Rat snakes	IV	Least concern
Hemidactylus sp.	House lizard	--	Not listed
Butterflies			
Danaus chrysippus	Plain Tiger	--	Not listed
Papilio demoleus	Common lime	--	Not listed
Euploea core	Common crow	--	Least concern

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Danaus genutia	Common tiger	--	Not listed
Eurema brigitta	Small grass yellow	--	Least concern

3.8 DEMOGRAPHY AND SOCIO ECONOMICS

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

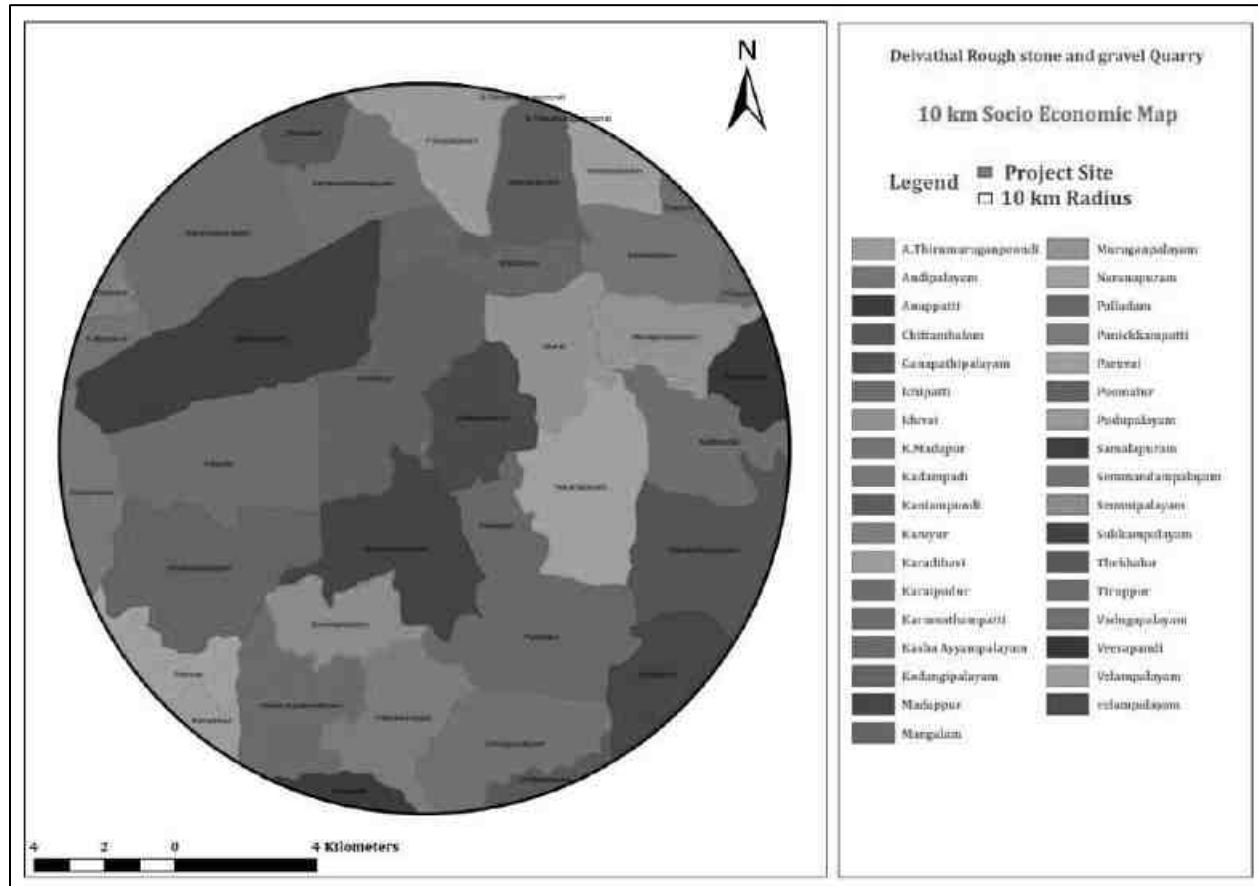


Figure 3.13 Socio Economic map surrounding the project site.

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

Table 3-21: Demography Survey Study

Source: Census of India, 2011

Villages	Household	Population	Sex Ratio		Literacy Rate		SC	ST
			Male	Female	Male	Female		

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Thekkalur	3031	12688	6076	6612	4592	4471	2793	29
Kaniampundi	753	2888	1476	1412	1163	945	598	0
Thirumuruganpoondi (TP)	8789	31528	15949	15579	12592	10756	1972	52
Mangalam (CT)	4782	17699	8847	8852	6907	6063	2666	4
Andipalayam (CT)	7010	25539	12773	12766	9818	8864	2588	17
Iduvai (CT)	2183	8006	3984	4022	2837	2375	2243	11
Muruganpalayam (CT)	7475	26349	13438	12911	10071	8295	2949	127
Veerapandi (CT)	13957	50301	25600	24701	20325	17579	4205	343
Palladam	30268	106162	53665	52497	41724	35337	14790	67
Madappur	1609	5496	2770	2726	1955	1485	1342	3
Poomalur	2209	7605	3829	3776	2614	1988	1797	10
velampalayam	971	3512	1789	1723	1212	889	497	6
Naranapuram	3862	14018	7047	6971	5456	4661	2010	4
Ganapathipalayam	4023	14022	7104	6918	5333	4349	2423	0
Sukkampalayam	1247	4420	2238	2182	1665	1282	1136	0
Ichipatti	2754	9527	4892	4635	3577	2738	1426	16
Kodangipalayam	1961	6987	3494	3493	2568	2046	1207	0
Panickkampatti	1196	3982	1968	2014	1410	1166	1218	0
Vadugapalayam	1569	5595	2733	2862	2077	1835	1427	0
Chittambalam	885	3648	1715	1933	1257	1400	829	0
Anuppatti	606	2018	1006	1012	760	576	354	0
Kasba Ayyampalayam	1024	3430	1728	1702	1358	1093	826	0
Karadibavi	1040	3647	1809	1838	1327	1152	958	0
Paruvai	1098	3778	1909	1869	1470	1212	856	0
Samalapuram (TP)	5938	20691	10404	10287	7879	6453	3201	44
Karaipudur (CT)	8157	28602	14808	13794	11416	9294	3125	14
Semmipalayam (CT)	2380	8429	4285	4144	3467	2946	1216	0
Pudupalayam	840	2715	1318	1397	877	711	1312	0
Kaniyur (TP)	1802	6180	3008	3172	2426	2159	1802	0

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3.9 TRAFFIC IMPACT ASSESSMENT

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

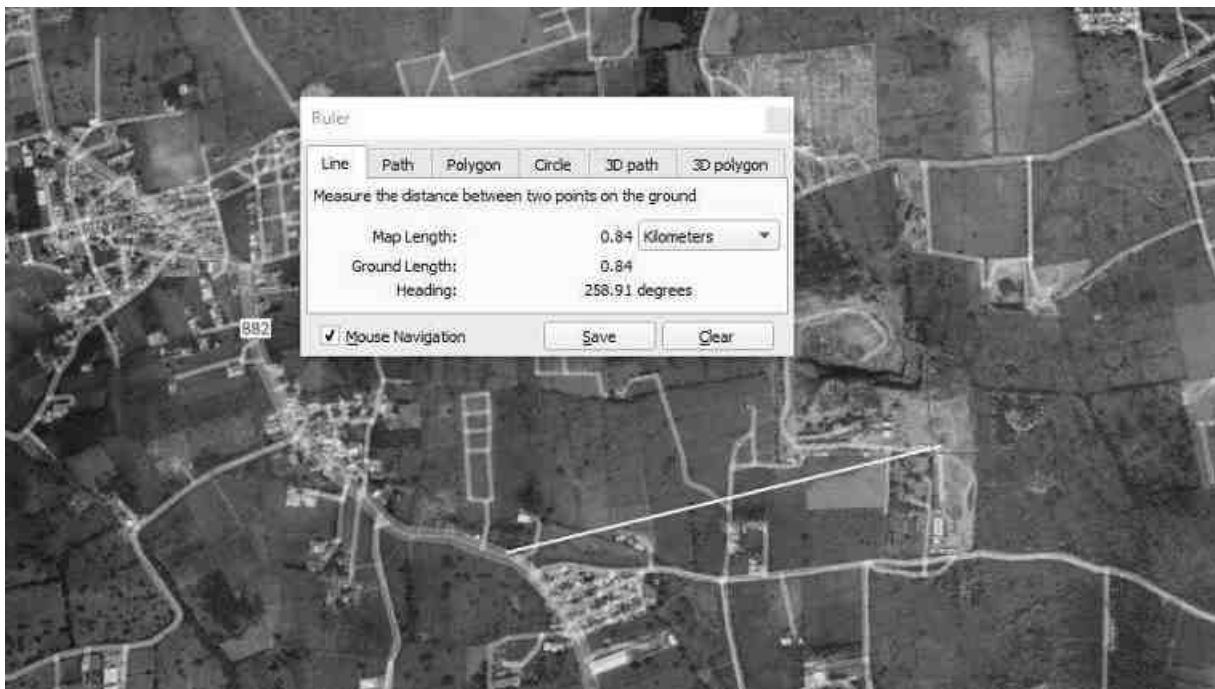


Figure 3.14: Site Connectivity

Table 3-22: No. of Vehicles per Day

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

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5	Three wheelers	409	1.5	613.5
Total		2920	-	3820

Table 3-23: Existing Traffic Scenario and LOS

Road	V (Volume in PCU/hr)	C (Capacity in PCU/hr)	Existing V/C Ratio	LOS
MDR-882	3820/24=159	413	0.38	B

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

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

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4 Anticipated Environmental Impacts & Mitigation Measures

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

4.1 INTRODUCTION

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

Environmental Impacts can be group into Primary impacts & Secondary Impacts

Primary Impacts: These impacts are directly attributed by the project

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

Assessment of impacts is done for the following Environmental Parameters:

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

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4.2 LAND ENVIRONMENT:

Aspect	Impact	Mitigation Measures			
<i>Mining of rough stone</i>	<p>The proposed 3.55.5 Ha mine located in Sukkampalayam & Velampalayam Village having 4,55,570 m³ of Rough stone and 54,866 m³ of Gravel respectively. The quarry operation is proposed to carry out with conventional open cast semi mechanized mining with 5.0 meter vertical bench and bench width of 5.0 meter. At the end of 5 years, mining lease area will be converted into ultimate pit.</p> <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;">Block-I=170.0m(L) x 64.0m(W)Avg x 38.0m(D)</td> </tr> <tr> <td style="text-align: center;">Block-II=157.0m(L) x 104.0m(W)Avg x 38.0m(D)</td> </tr> </table> <p>The main impact of open cast mining on land-use is land degradation. The land is bound to be excavated for mining of Rough Stone Quarry.</p> <p>Impact on soil of the study area will be minimal as there are no wastewater generated, heavy metal infusion, stack emissions.</p>	ULTIMATE PIT DIMENSION	Block-I=170.0m(L) x 64.0m(W)Avg x 38.0m(D)	Block-II=157.0m(L) x 104.0m(W)Avg x 38.0m(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 1700 Nos of local tree species (Neem, Magizham, Tamarind, Elandhai and Vilvam) along the roads, outer periphery of the mining area which enhances the binding property of the soil.</p> <p>It is proposed to improve the affected land wherever possible for better land use, so as to support vegetation and creation of water reservoir in the ultimate pit after quarrying.</p> <p>The overburden is in the form of Gravel and weathered rock mass. After the excavation weathered rock mass will be preserved all along the boundary barrier. If there is any rise in the market, the same will be loaded into tipper for needy customers on payment of necessary Seigniorage Fees to Government. The excavated Rough stone will be directly loaded into tipper to the needy buyers for road</p>
ULTIMATE PIT DIMENSION					
Block-I=170.0m(L) x 64.0m(W)Avg x 38.0m(D)					
Block-II=157.0m(L) x 104.0m(W)Avg x 38.0m(D)					

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	<p>Impact due to transformation of terrain characteristics over the large area results in soil degradation.</p> <p>Solid waste will be generated from the mining activity as there will be refuse also generation of domestic waste. If it is not properly managed, may cause odor and health problem to the workers.</p>	<p>projects and construction works and for filling and leveling of low-lying areas.</p> <p>The source of dust generation is majorly due to drilling, blasting, loading & unloading of the mined-out mineral, the impact will be mitigated by water sprinkling regularly once in 3hrs.</p> <p>The proposed mining activity is carried out in almost Plain terrain where the contour level difference is above 378 m.</p> <p>After removal of minerals, undulating portion will be created. Excavated area or ultimate pit at the end of the mine period will be converted into water reservoir. Two tier tree belts will be planted along the safety distance.</p> <p>The 100% recovery is achieved by extracting the entire mineable reserve. Hence there will be no refuse generation due to the mining activity. Apart from that, a very meagre quantity of domestic waste will be generated in the project, which will be handed over to the local body on daily basis.</p>
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4.3 WATER ENVIRONMENT:

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Aspect	Impact	Mitigation Measures
<i>Drilling, Blasting, Loading and unloading, Transportation of the excavated mineral.</i>	<p>The mining in the area may cause ground water contamination due to intersection of the water table and mine runoff.</p> <p>The ground water depletion may occur due to mining activity</p> <p>Chemicals consisting of nitrate used for blasting may pollute the surface run off.</p>	<p>The water table will not be intersected during mining, as the ultimate depth is limited upto 38 m below ground level, whereas the ground water table is at 68m below the ground level. The municipal wastewater will be disposed into septic tanks of 5 cum and soak pit. No chemicals consisting of toxic elements will be used for carrying out mining activity.</p> <p>The ground water table is at a depth of 52m BGL, the mining operation will not affect the aquifer. The ultimate pit at the end of the mining operation will be used for rain water storage, the stored water will be used for green belt development and further the stored water will be used for domestic purposes (other than drinking) after proper treatment.</p> <p>Further, the run-off water will be stored in sumps and after proper treatment; water will be used in the mining operation for dust suppression.</p>

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	Improper management of Domestic wastewater in the Mine lease may create unhygienic conditions in the site thereby causing health impacts to the labours.	Provision of urinals/Latrines along with septic tank followed by soak pit arrangement will be provided in the Mine Lease area for the proper management of wastewater
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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. 2 No of Tipper will be used for loading and unloading, 1 No of Excavator (0.9 m³ bucket capacity (with rock breaker attachment) will be used for excavation of the mineral which contributes to the generation of fugitive dust. In addition, blasting will be done using explosives leading to the generation of dust.</p>	<p><i>Mitigation Measures during Operation Phase</i></p> <p>It is proposed to plant 1700 Nos of local species (with 340 Nos each year) along the haul roads, outer periphery within the lease area to prevent the impact of dust in consultation with Forest department for the plantation of trees (Neem, Magizham, Tamarind, Elandhai and Vilvam) in two tier to combat air pollution and with herbs (Nerium) in between the tree species.</p> <p>Planning transportation routes of the mined out mineral, so as to reach the nearest paved roads (an approach road) by shortest route connecting to MDR 422.</p> <p>Alternatively, gravelled road may be</p>

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

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

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

4.4.1 Source Characterization

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

The emission Sources from the proposed operation are

Point Sources:

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

1. Hydraulic excavator –0.9 Cum Bucket Capacity (with Rock Breaker Attachment)
2. Jack Hammer 25.5 mm Dia
3. Tipper
4. Tractor Mounted - Compressor
5. Drilling and excavation with Accessories

Road Sources:

A road network was developed to depict the anticipated haul truck routes and truck discharge locations during the mine operations. The anticipated emissions from the road sources and corresponding anticipated impact during the monitoring period of March to May 2022 emissions were estimated. Emissions due to haul road and general plant traffic on the unpaved road network were modelled as volume

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

The parameters considered for the hauling operation include the following,

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

Other fugitive particulate emission sources:

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

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

Post Project Scenario

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

Predicted maximum ground level concentrations considering micro meteorological data of March to May 2022 are superimposed on the maximum baseline concentrations obtained during the study period to estimate the post project scenario, which would prevail at

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

Table 4-1 Emission Factors for uncontrolled mining

Activity	Emission Factor		References	
Topsoil handling	Scraper	0.029 Kg TSPM/ average time between spray application	USEPA (2008) Jose I. Huertas & Dumar A. Camacho & Maria E. Huertas, Standardized emissions inventory methodology for open-pit mining areas, Environmental Science Pollution Research, 2012.	
	Bulldozing	15.048 kg PM10/ Hr excavation		USEPA (2008)
	Loading	2.3237E-04 kg PM10/ average time between spray application		USEPA (2006a)
	Haulage	0.69718 kg PM10/VKT		USEPA (2006a) Cowherd (1988)
Rough stone mining	Wet drilling	8.00E-5 lbs PM10/ Ton produce	EPA. August, 2004. Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing. In: Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition, AP-42. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. Research Triangle Park, North Carolina.	
	Loading	1.00E-4 lbs PM10/ Ton produce		

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4.5 NOISE ENVIRONMENT:

Aspect	Impact	Mitigation Measures
<i>Drilling, Blasting, Loading and unloading, Transportation of the excavated mineral.</i>	<p>Usage of Equipments (Excavator, Tipper, Jack Hammer), Machinery and trucks used for transportation will generate noise.</p> <p>Noise from the machinery can cause hypertension, high stress level, hearing loss, sleep disturbance etc due to prolonged exposure.</p> <p>Number of vehicles will be increased due to the proposed mining activity hence vehicle may collide which may result in unwanted sound and can also cause impact on human health like breathing and respiratory system, damage to lung tissue, influenza or asthma.</p>	<ul style="list-style-type: none"> • The machinery will be maintained in good running condition so that noise will be reduced to minimum possible level. • Awareness will be imparted to the workers once in six months about the permissible noise level and effect of maximum exposure to those levels. Adequate silencers will be provided in all the diesel engines of vehicles. • It will be ensured that all transportation vehicles carry a valid PUC Certificates. • Speed of trucks entering or leaving the mine will be limited to moderate speed (20km/hr) to prevent undue noise from empty vehicles. <p>The noise generated by the machinery will be reduced by proper lubrication of the machinery and other equipments.</p> <ul style="list-style-type: none"> • It is proposed to plant 1700 Nos. of local species (Neem, Mandharai, Athi, Tamarind, Ashoka, Casuarinas and Villam) to reduce the

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		<p>impact of noise in the study area. The development of green belts around the periphery of the mine will be implemented to attenuate noise.</p> <ul style="list-style-type: none"> • The trucks will be diverted on two roads viz. MDR 882 and a District Road to avoid traffic congestion. • Health check-up camps will be organized once in six month. • Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas. • Provision of quiet areas, where employees can get relief from workplace noise.
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4.6 BIOLOGICAL ENVIRONMENT:

Aspect	Impacts	Mitigation Measures
Site Clearance	Loss of habitat due to site clearance which may lead to ecological disturbance.	The proposed mining lease is already a dry land hence no site clearance is required. Only few shrubs and herbs like parthenium sp., prosopis juliflora were present.

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Planting of trees	Development of afforestation in the mine lease area will have a positive impact as the land was initially a barren.	10 m safety distance will be provided all along the boundary of the mine lease area and safety. Around 0.51.0 Ha of land is utilized for greenbelt development (1700 Nos – 5 years). This will attract avifauna thus enhancing the existing ecological environment.
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4.7 SOCIO ECONOMIC ENVIRONMENT:

Aspect	Impact	Mitigation Measures
Proposed implementation of Mining activity	Land acquisition for the implementation of the project may result in loss of assets, which in return will make the PAP to shift, losing their normal routine and livelihood	The proposed project is a Patta Land and the land is vacant where there are no human settlement within 300m radius. Hence the project does not involve Rehabilitation and resettlement
Drilling, Blasting, Loading and Transportation of the mined out mineral	The mining activities may cause dust emission, noise pollution thereby causing disturbance to the local habitat	No human activity is envisaged near the project site. The nearest human settlement is observed in Unjapalayam which is about 0.64 Km Southwest from site
Grazing and Rearing activities in the nearby villages	The Grazing and rearing of local animals like Sheep, Goat and cows is observed in the nearby villages, which may be affected due to the project as the	It is proposed to use gravelled road and nearest paved road and preferred not to use unpaved roads. In addition to that, the speed of trucks will be limited to 20km/hr to avoid any accidents.

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	movement of the vehicles may affect/injure the animals	
Employment opportunity	The project will improve the livelihood of the local people	After the development of the proposed mine, it will improve the livelihood of local people and also provide the direct and indirect employment opportunities. The rough stone for the infrastructural development in the area will be made available from the local markets at reasonably lower price.
Corporate Environmental Responsibility	The proposed project will help in natural resource augmentation & Community resource development.	As a part of CER i.e, 5 Lakhs will be allocated. Developing sports facilities, providing toilet, Water filter facilities to Government High School - Naduvelampalayam.

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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.	Blasting	Injury to the labours due to the blasting activity	Alarm system in the form of Siren will be engaged in the project site to caution the blasting activity. In addition to that, the blasting activity will be scheduled at particular time – 12 P.M to 12:30 P.M (or whenever required) so that the employees will be aware of the activity. Smoking will be banned in the site and sign boards will be displayed in various places at site.
3.	Screening of Labors	Labors will be checked for health condition before employing them in mining activity	All the labors will be checked and screened for health before employing them. After employing them, periodical medical checkups will be held once in every six months.

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5 Analysis Of Alternatives

5.1 GENERAL

Analysis of alternative is a significant aspect in planning and designing any project. Cost benefit analysis should be work out along with other parameters while choosing an alternative in such a way that the production is maximum and the mining operation is environment friendly and cost effective. The mine plan and mine closure plan has been approved by the Deputy Director, Department of Mining and Geology, Tiruppur District prior to submission of the Form-1 and PFR. ToR issued by the SEIAA-TN vide Letter No. SEIAA-TN/F. No. 9218/ ToR-1190/2022 Dated: 06.07.2022. The study for alternative analysis involves in-depth examination of site and technology.

5.1.1 Analysis for Alternative Sites and Mining Technology

5.1.1.1 Alternative Site

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

5.1.1.2 Alternative Technology

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

Table 5-1: Alternative for Technology and other Parameters

S. No.	Particular	Alternative Option 1	Alternative Option 2	Remarks
1.	Technology	Opencast semi mechanized mining	Opencast mechanized mining	Opencast mechanized Involving drilling and blasting are preferred. Benefits: Material is hard so to make it

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2.	Employment	Local employment.	Outsource employment	Local employment is preferred Benefits: Provides employment to local people along with financial benefits No residential building/housing is required.
3.	Labour transportation	Public transport	Private transport	Local labours will be deployed from Unjapalayam village so they will either reach mine site by bicycle or by foot. Benefits: Cost of transportation of labors will be negligible
4.	Material transportation	Public transport	Private transport	Material will be transported through trucks/trolleys on the contract basis Benefits: It will give indirect employment.
5.	Water	Tanker supplier	Ground water/	Tanker supply will be preferred. Water will be sourced from Unjapalayam village which is 0.64 km from site.

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6 Environmental Monitoring Program

6.1 GENERAL:

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

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

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

Therefore, 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 24 hourly, twice a week	6. Project Site 7. Temple, Sukkampalaya m

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NO _x Lead in PM			8. Aathi karuppan temple, Bharathpuram 9. St. Ann's Hospital, Pallapalayam 10. Government Arts and science college, Palladam
Noise	5 locations	24 hourly Once in 5 locations	1. Project Site 2. Temple, Sukkampalayam 3. Aathi karuppan temple, Bharathpuram 4. St. Ann's Hospital, Pallapalayam 5. Government Arts and science college, Palladam
Water (Ground water) <ul style="list-style-type: none"> • pH • Temperature • Turbidity • Magnesium Hardness 	5 locations	Once in 5 locations	1. Project Site 2. Temple, Sukkampalayam

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<ul style="list-style-type: none"> • Total Alkalinity • Chloride • Sulphate • Fluoride • Nitrate • Sodium • Potassium • Salinity • Total nitrogen • Total Coliforms • Fecal Coliforms 			<ol style="list-style-type: none"> 3. Aathi karuppan temple, Bharathpuram 4. St. Ann's Hospital, Pallapalayam 5. Government Arts and science college, Palladam
<p>Water (surface water)</p> <ul style="list-style-type: none"> • pH • Temperature • Turbidity • Magnesium Hardness • Total Alkalinity • Chloride • Sulphate • Fluoride • Nitrate • Sodium • Potassium • Salinity • Total nitrogen • Total Coliforms • Fecal Coliforms 	Sample from nearby lakes/river	One time Sampling	Kallam Palayam Lake – 2.58 km, SE
Soil (Organic matter, Texture, pH, Electrical Conductivity,	5 locations	Once in 5 locations	<ol style="list-style-type: none"> 1. Project Site 2. Temple, Sukkampalayam

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Permeability, Water holding capacity, Porosity)			3. Aathi karuppan temple, Bharathpuram 4. St. Ann's Hospital, Pallapalayam 5. Government Arts and science college, Palladam
Ecology and biodiversity Study	Study area covering 5 km radius	One time Sampling	
Socio- Economic study (Population, Literacy Level, employment, Infrastructure like school, hospitals & commercial establishments)	Villages around 5 km radius	One time Sampling	

Table 6-2: Monitoring Schedule during Mining

S. No.	Attributes	Parameters	Frequency	Location
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

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2.	Ground water Quality	Drinking Water Parameters, As per IS - 10500: 2012	Half yearly	Project Site
3.	Surface Water Quality	Class will be assessed as per the CPCB Guidelines	Half yearly	Project Site
4.	Soil Quality	(Organic matter, Texture, pH, Electrical Conductivity, Permeability, Water holding capacity, Porosity)	Half yearly	Project Site
5.	Noise Level Monitoring	Noise level in dB(A) Quarterly/half yearly	Half yearly	Project Site

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7 Additional Studies

7.1 GENERAL

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

7.1.1 Public Hearing:

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

Existing Quarries-

1. P.Sumathi – 3.00.5 Ha
2. P.Viswanathan – 1.77.0 Ha

Abandoned Quarries: -

Proposed Quarries – Tmt.P.Deivathal– 3.55.5 Ha

The Total extent of the Existing / Proposed quarries are 8.33.0 Ha

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

7.1.2 Risk assessment:

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

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7.1.3 Identification of Hazard

7.1.3.1 Blasting Pattern:

The quarrying operation will be carried out by Opencast Mechanized method in conjunction with conventional method of mining using Jack Hammer drilling and blasting for shattering effect and loosen the Rough Stone.

7.1.3.2 Drilling and Blasting:

Drilling and Blasting parameters are as follows:

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

a. Types of explosives to be used:

Small dia of 25mm Slurry explosives are proposed to be used for shattering and heaving effect for removal and winning of Rough Stone. No deep hole drilling or Primary blasting is proposed.

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

The quarry is situated more than 0.64 km from the nearby villages. Controlled blasting measures will be adopted for minimizing ground vibration and fly of rock. Shallow depths jackhammer drilling & blasting is proposed to be carried out with minimum use of explosive mainly to give the shattering effect in rough stone for easy excavation and to control fly of rocks.

Diameter of Holes	=	32-36mm
Powder factor	=	6 to 7 Tons/Kg of explosives
Depth	=	1 to 1.5 m

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Charge/Hole = 140 gms of 25mm dia cartridge

Blasted at day time = 12 to 12:30 PM (or whenever required)

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

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

- For Mining – Excavator of 0.9 Cum Bucket capacity (with Rock Breaker attachment), Jack Hammers (25.5 mm Dia) of 2 Nos.
- Loading Equipment – Excavator of 0.9 Cum Bucket Capacity (with Bucket attachment)
- Transportation (includes within the mine and mine to destination) – Tipper 2 Nos. of 10 M.T capacity (from quarry to needy peoples and local crushers)

a. Risk:

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

b. Mitigation measures to minimize the risk

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

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

- In order to take care of above hazard/disaster, the following control measures will be adopted:

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- All safety precautions and provisions of Mine Act, 1952, Metalliferous Mines Regulation, 1961 and Mines Rules, 1955 will be strictly followed during all mining operations;
- Entry of unauthorized persons will be prohibited;
- Firefighting and first-aid provisions in the ECC and mining area;
- Provisions of all the safety appliances such as safety boot, helmets, goggles etc. will be made available to the workers (18 Nos.) and regular inspection for their use;
- In case of eventuality, first aid will be given by the senior safety 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 (common for 3 mines within 500m radius) will be responsible for coordination between management district authorities/DGMS etc. Regarding general safety as per Rule-181 of MMR 1961, “No person shall negligently or 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 footwear and safety helmets;
- Cleaning of mine faces will be regularly done;
- Handling of explosives, charging and blasting will be carried out by highly skilled laborers only;
- Regular maintenance and testing of all mining equipment as per manufacturer’s guidelines;
- Suppression of dust by sprinkling water on the haulage roads;

7.1.5 Safety Team:

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

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7.1.6 *Emergency Control Centre*

The emergency control center will be provided to handle the emergency. The site main controller, key personnel and the senior officers of the fire and police services will attend it. The center will be equipped to receive and transmit information and directions from and to the incident controller and other areas of the works, as well as outside. The emergency control center will be sited in an area of minimum risk. This common Emergency control centre will be used for the mines around the 500m radius

7.2 DISASTER MANAGEMENT

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

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

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

Major objectives of this onsite – offsite emergency plan are:

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

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:

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

7.2.1 *Onsite off-site emergency Plan:*

1- Emergency on account of:

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

2- Disaster due to natural calamities like:

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

7.2.2 *Emergency Plan:*

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

7.2.3 *Emergency Control:*

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

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<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

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

7.3 NATURAL RESOURCE CONSERVATION

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

7.4 RESETTLEMENT AND REHABILITATION:

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

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8 Project Benefits

8.1 GENERAL

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

8.1.1 Physical Benefits

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

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

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

Enhancement of Green Cover & Green Belt Development: As a part of reclamation plan, native tree species will be planted along the safety boundary of the mine lease area. A suitable combination of trees that can grow fast and also have good leaf cover will be adopted to develop the green belt. It is proposed to plant 1700 numbers of native species along with some fruit bearing and medicinal trees during the mining plan period.

8.2 SOCIAL BENEFITS

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

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

Developing Sports facilities and providing Toilet, Water Filter Facilities to Government High School - Naduvelampalayam.

8.3 PROJECT COST / INVESTMENT DETAILS

Project	Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal	Draft EIA Report
Project Proponent	Tmt. P. Deivathal	
Project Location	Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District	

1	<u>A. Fixed Asset Cost:</u> 1. Land Cost : Rs.22,30,000/- (Amount for Patta Land) 2. Labour Shed : Rs. 1,50,000/- 3. Sanitary Facility : Rs. 80,000/- 4. Refilling/Fencing cost : Rs.86,000/- Total= : Rs. 25,46,000/-
2	<u>B. Operational Cost:</u> <u>Machinery cost</u> : Rs.30,00,000/-
3	<u>C. EMP Cost:</u> Display board in site; : Rs. 80,00,000/- Monitoring-Air, Water, : Noise; Dust Supression : -Water sprinkling by : own water tankers; : Vehicle Tyres Wash; : Green Belt : Development; Road : Development & : Management; : Occupational Health : And Safety; Solid : Waste Management; : Strom Water; : Renewable Energy, : CCTV Installation, : Salary for mines : manager and blaster :
	Total Project Cost : Rs. 1,35,46,000/- (A+B+C)

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Deivathal</i>	
<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

9 Environmental Management Plan

9.1 INTRODUCTION

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

9.2 SUBSIDENCE

Mining will be carried out by opencast mechanized mining method with drilling & blasting as per mining plan approved by Department of Mining and Geology, Tiruppur. 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 7m. The individual bench slope has been proposed to be kept at 60° from horizontal. Moreover, all safety standards/ safeguards will be implemented as per guidelines prescribed by Director General of Mines Safety.

9.3 MINE DRAINAGE

9.3.1 Storm water Management

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

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

9.3.2 Drainage

Local workers will be deployed for the project. But, urinals and Latrines will be provided and the same will be connected to septic tank followed by soak pit arrangement. No domestic waste will be deposited into the nearby area. Regular checking will be carried out to find any

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

9.3.3 Administrative and Technical Setup

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

To carry out the above activities, Tmt.P.Deivathal will work in association with M/s. Ecotech Labs Pvt Ltd.

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Table 9-1: Impacts and mitigation measures

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

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				<ul style="list-style-type: none"> ✓ By complying with the safety procedures, norms and guidelines (as applicable) as outlined in the National Building Code of India, Bureau of Indian Standards. ✓ Provide adequate number of decentralized latrines and urinals ✓ Providing Septic tank along with Soak pit arrangement ✓ Providing First Aid room, conducting frequent health checkups to labor and conducting free medical camps ✓ Providing safety helmet, Gloves, Jacket & Boots ✓ Providing measures to prevent fires. 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	<ul style="list-style-type: none"> • Use of locally available construction materials.

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<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

			resources & increase in carbon footprint.	
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Table 9-2: Budgetary Allocation for EMP during Mining

Year	Description	Cost (Rs)
5 Years	Display board in site; Monitoring-Air, Water, Noise; Dust Supression -Water sprinkling by own water tankers; Vehicle Tyres Wash; Green Belt Development; Road Development & Management; Occupational Health And Safety; Solid Waste Management; Strom Water; Renewable Energy, CCTV Installation, Salary for mines manager and blaster	80,00,000

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10 Summary & Conclusion

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

10.1 INTRODUCTION

Tmt.P.Deivathal site is a cluster of five mining project. The individual mine lease area is 3.55.5 Ha of Rough Stone and Gravel Quarry located at S.F.Nos. 3/2A & 152/1(P) of Sukkampalayam & Velampalayam Village, Palladam Taluk in Tiruppur District.

10.2 PROJECT OVERVIEW

Table 10-1: Project Overview

S. No.	Description	Details
1	Project Name	Rough Stone and Gravel Quarry-3.55.5 Ha
2	Proponent	Tmt.P.Deivathal
3	Mining Lease Area Extent	3.55.5Ha
4	Location	S.F.Nos. 3/2A & 152/1(P) Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District.
5	Latitude	11°02' 17.2275" N to 11°02' 14.0866" N
6	Longitude	77°15' 30.0902" E to 77°15' 23.0535" E
7	Topography	Plain terrain
8	Site Elevation above MSL	378 m from MSL
9	Topo sheet No.	58 E/18
10	Minerals of Mine	Rough Stone and Gravel Quarry
11	Proposed production of Mine	4,55,570 m ³ of Rough stone and 54,866 m ³ of Gravel
12	Ultimate depth of Mining	38 m below ground level
13	Method of Mining	Open cast, mechanized mining
14	Water demand	1.81 KLD

<i>Project</i>	<i>Rough stone and Gravel Quarry- 3.55.5 Ha by Tmt. P. Deivathal</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District</i>	

15	Source of water	Water will be supplied through tankers supply
16	Manpower	18 Nos.
17	Mining Lease	Precise area communication from The Deputy Director, Dept. of Geology & Mining, Tiruppur vide Rc No: 348/Mines/2021 dated 21.01.2022
18	Mining Plan Approval	Mining Plan was approved by The Deputy Director, Dept. of Geology & Mining, Tiruppur vide Rc No:348/2021/Mines dated 11.02.2022
19	Production details	Geological resources: 12,29,095 m ³ of Rough stone and 70,234 m ³ of Gravel Proposed year wise recoverable reserves: 4,55,570 m ³ of Rough stone and 54,866 m ³ of Gravel
20	Boundary Fencing	7.5 m barrier all along the boundary Fencing will be provided.
21	Disposal of overburden	The Gravel of the lease area is 54866m ³ . Gravel formation will be removed and transported to the needy end user, only after obtaining permission and paying necessary seigniorage fees to the Government
22	Ground water	The quarry operation is proposed up to a depth of 38 m below ground level. The water table is below 52 m from ground level which is observed from the nearby open wells and bore wells. Hence the ground water will not be affected in any manner due to the quarrying operation during the entire lease period.
23	Habitations within 300m radius of the Project Site	There is no Habitation within 300m radius of the project site.

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24	Drinking water	Water will be supplied through tankers from Unjapalayam which is about 0.64 Km Southwest of the project area
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10.3 JUSTIFICATION OF THE PROPOSED PROJECT

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

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

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

Table 10-2: Anticipate Impacts & Appropriate Mitigation Measures

S. No.	Potential Impact	Mitigation Measure
1	The main impact in the air environment is dust emission during various mining activities such drilling, blasting, excavation, loading and transportation. The dust	Proper mitigation measures like water sprinkling on haul roads will be adopted to control dust emissions.

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	emission may affect the quality of ambient air in the and around the mine area. The increased emission may cause respiratory & Cardiovascular problems in human health	To control the emissions regular preventive maintenance of equipments will be carried out on contractual basis. Plantation will be carried out along approach roads & mine premises.
2	Waste water will be generated due to mining activity and from other domestic activities. These may contaminate the ground water leading to ground water. The mining activity may affect the ground water table	No waste water will be generated from the mining activity of minor minerals as the project only involves lifting of over burden from mine site. The wastewater generated from the domestic activity will be disposed off safely through the proposed septic tank. Mining will not intersect ground water table. Hence the water table will not be impacted due to the proposed project
3	Noise will be generated in the mine area during various mining activities such as blasting, drilling, excavation. During transportation of the mined out mineral, there may be noise generation due to the movement of vehicles. This may impact the health condition of the workers by creating headache	Periodical monitoring of noise will be done. No other equipments except the transportation vehicles and Excavator (as & when required) for loading will be allowed at site. 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.

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4	Solid waste will be generated from the mining activity as there will be refuse after 95% recovery and also generation of domestic waste	The 100% recovery is achieved by extracting the entire mineable reserve. Hence there will be no refuse generation due to the mining activity. Apart from that, a very meagre quantity of domestic waste will be generated in the project, which will be handed over to the local body on daily basis.
5	During mining activities, there are chances of workers getting health issues or may be prone to accidents	Dust masks will be provided as additional personal protection equipment to the workers working in the dust prone area. Periodical trainings will be conducted to create awareness about the occupational health hazards due to activities like blasting, drilling, excavation Workers health related problem if any, will be properly addressed.

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11 Disclosure of Consultant

11.1 INTRODUCTION

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

11.2 ECO TECH LABS PVT. LTD – ENVIRONMENT CONSULTANT

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

The Quality policy

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

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Declaration by Experts contributing to the EIA of Rough Stone Quarry- 3.55.5 Ha by Tmt.P.Deivathal at S.F.No. 3/2A & 152/1(P), Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur 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: 01.06.2022 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: June 2022 – Till now</i>	




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2	WP	Dr. A. Dhamodharan	<p>1. Selection of baseline Monitoring Locations for Ground water analysis and also identifying nearest surface water to be studied.</p> <p>2. Interpretation of baseline data collected</p> <p>3. Identification of impacts based on the baseline study conducted and also to the ground water and nearby surface water due to the proposed project</p> <p>4. Preparation of suitable and appropriate mitigation plan.</p> <p>Period: June 2022 – Till now</p>	
3	SHW	Dr. A. Dhamodharan	<p>1. Identification of nature of solid waste generated</p> <p>2. Categorization of the generated waste and estimating the quantity of waste to be generated based on the per capita basis. Identification of impacts of SHW on Environment</p> <p>3. Suggesting suitable mitigation measures by recommending appropriate disposal method for each category of waste generated</p> <p>4. Top soil and refuse management</p> <p>Period: June 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: June 2022 – Till now</p> <p>*Involves Public Hearing</p>	
5	EB	Dr. A. Dhamodharan	<p>1. Primary data collection through field survey and sheet observation for ecology and biodiversity</p> <p>2. Secondary Collection through various authenticated sources</p>	

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			3.Prediction of anticipated impacts and suggesting appropriate mitigation measures. <i>Period: June 2022 – Till now</i>	
6	HG	Dr. T. P. Natesan	1. Study of existing surface drainage arrangements in the core and buffer zone, impact due to mining on these drainage courses and suggestion of mitigative measures 2. Determination of groundwater use pattern, development of rainwater harvesting program. Storm water management through garland drainage system. <i>Period: June 2022 – Till now</i>	
7	GEO	Dr. T. P. Natesan	1. Field survey for assessing regional and local geology, aquifer distribution, Determination of groundwater use pattern, development of rainwater harvesting program. <i>Period: June 2022 – Till now</i>	
8	SC	Dr. A. Dhamodharan	1. Interpretation of baseline report 2. Identification of possible impacts on soil, prediction of soil conservation and suggesting suitable mitigation measures. <i>Period: June 2022 – Till now</i>	
9	AQ	Mrs. K. Vijayalakshmi	1. Collection of Meteorological data for the baseline study period 2. Plotting wind rose plot and thereby selecting the monitoring locations based on the wind pattern 3. Estimation of sources of air emissions and air quality modeling is done 4. Interpretation of the results obtained 5. Identification of the impacts and suggesting suitable mitigation measures. <i>Period: June 2022 – Till now</i>	

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

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

I, Dr. A. Dhamodharan, hereby, confirm that the above-mentioned experts prepared the EIA report of mining project at Survey Numbers. 3/2A & 152/1(P) Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District. I also confirm that the consultant organization shall be fully accountable for any misleading information mentioned in this statement.

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Signature:



Name: Dr. A. Dhamodharan

Designation: Managing Director

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

NABET Certificate No. & Issue Date: NABET/EIA/2124/SA 0147

ANNEXURE-I

**STANDARD TOR CONDITIONS WITH
ADDITIONAL TOR POINTS**



सत्यमेव जयते

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

**STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY-TAMILNADU**

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TERMS OF REFERENCE (ToR)

Lr No.SEIAA-TN/F.No.9128/SEAC/ToR-1190/2022 Dated :06.07.2022

To

Tmt.P.Deivathal

W/o.Palanisamy Gounder

Naasuvan Kaattu Thottam

Velampalayam Village

Palladam Taluk

Tiruppur - 641 663


Sir / Madam,

Sub: SEIAA, Tamil Nadu – Terms of Reference with Public Hearing (ToR) for the Proposed Rough Stone and Gravel quarry lease over an extent of 3.55.5 Ha at S.F.No. 3/2A&152/1(P), Sukkampalayam &Velampalayam village, Palladam Taluk,

Tiruppur District , Tamil Nadu by Tmt.P.Deivathal - 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/73816/2022, dated: 17.03.2022
 2. Your application seeking Terms of Reference submitted on: 28.03.2022
 3. Minutes of the 284th Meeting of SEAC held on 10.06.2022
 4. Minutes of the 529th Meeting of SEIAA held 05.07.2022.

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


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The project proponent, Tmt.P.Deivathal has submitted application seeking ToR for B1 category project in Form-I, for the Proposed Rough Stone and Gravel quarry lease over an extent of 3.55.5 Ha at S.F.No. 3/2A&152/1(P), Sukkampalayam & Velampalayam village, Palladam Taluk, Tiruppur District, Tamil Nadu and has furnished Pre-feasibility report.

Discussion by SEAC and the Remarks:-

Proposed Rough Stone quarry lease over an extent of 3.55.5 Ha at S.F.No. 3/2A & 152/1(P), Sukkampalayam & Velampalayam village, Palladam Taluk, Tiruppur District, Tamil Nadu by Tmt.P.Deivathal for Terms of Reference (SIA/TN/MIN/73816/2022, dated 17.03.2022)

The proposal was placed in this 284th Meeting of SEAC held on 10.06.2022. 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, Tmt.P.Deivathal has applied for Terms of Reference for the proposed Rough Stone & Gravel quarry lease over an extent of 3.55.5 Ha at S.F.No. 3/2A&152/1(P), Sukkampalayam & Velampalayam village, Palladam Taluk, Tiruppur District, Tamil Nadu.
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 4,55,570 cu.m. of Rough Stone, 25483 Cu.m of Weathered Rock and 54,866 cu.m. of Gravel. The annual peak production 116560 cu.m. of Rough Stone(5thyear), 15385 Cu.m of Weathered Rock (3rd year) and 32846 cu.m. of Gravel(3rd year). The ultimate depth - 38 m BGL.

Based on the presentation made by the proponent and considering safety point of view, SEAC recommended to remove the last bench in XY-AB section & XY-CD. Accordingly grant of Terms of Reference (TOR) with Public Hearing is issued for the production of 4,53,670 m³ of rough stone, 25483 Cu.m of Weathered Rock and 54,866 cu.m. of Gravel in 5 years with ultimate depth 38m, 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:


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1. The PP shall include the letter received from DFO concerned stating the proximity details of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., upto a radius of 25 km from the proposed site.
2. Registered lease document shall be included in EIA Report.
3. PP shall conduct a survey regarding details of structures located within 200m from the project site and the same shall be included in EIA Report.
4. 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.
5. The Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, as the depth of the working is extended beyond 30 m below ground level.
6. 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.
7. 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.
8. 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,
9. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
 - a. Quantity of minerals mined out.
 - b. Highest production achieved in any one year
 - c. Detail of approved depth of mining.
 - d. Actual depth of the mining achieved earlier.
 - e. Name of the person already mined in that leases area.
 - f. If EC and CTO already obtained, the copy of the same shall be submitted.


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- g. Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
10. 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).
 11. The PP shall carry out Drone video survey covering the cluster, Green belt , fencing etc.,
 12. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.
 13. 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.
 14. 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.
 15. 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.
 16. 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.
 17. 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 air pollution, water pollution, & health impacts. Accordingly, the Environment Management


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- plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.
18. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
 19. Issues relating to Mine Safety, including slope geometry in case of Granite quarrying, blasting parameters etc. should be detailed. The proposed safeguard measures in each case should also be provided.
 20. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
 21. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.
 22. Since non-saleable waste /OB / intermediate waste etc. is huge in the granite quarry, the Proponent shall provide the details pertaining to management of the above material with year wise utilization and average moving inventory be submitted.
 23. 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.
 24. 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.
 25. Impact on local transport infrastructure due to the Project should be indicated.
 26. 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.
 27. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.


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28. 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.
29. The Public hearing advertisement shall be published in one major National daily and one most circulated vernacular daily.
30. The PP shall produce/display the EIA report, Executive summary and other related information with respect to public hearing in Tamil Language also.
31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.
32. The recommendation for the issue of "Terms of Reference" is subjected to the outcome of the Hon'ble NGT, Principal Bench, New Delhi in O.A No.186 of 2016 (M.A.No.350/2016) and O.A. No.200/2016 and O.A.No.580/2016 (M.A.No.1182/2016) and O.A.No.102/2017 and O.A.No.404/2016 (M.A.No. 758/2016, M.A.No.920/2016, M.A.No.1122/2016, M.A.No.12/2017 & M.A. No. 843/2017) and O.A.No.405/2016 and O.A.No.520 of 2016 (M.A.No. 981/2016, M.A.No.982/2016 & M.A.No.384/2017).
33. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the **appendix-I** in consultation with the DFO, State Agriculture University and local school/college authorities. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
34. 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.
35. A Disaster management Plan shall be prepared and included in the EIA/EMP Report.



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36. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report.
37. 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.
38. 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.
39. 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.
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. 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.
42. 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.
43. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.

Appendix -I

List of Native Trees Suggested for Planting

1. *Aeglemarmelos*-Vilvam
2. *Adenaantherapavonina*-Manjadi
3. *Albizialebeck*-Vaagai
4. *Albiziaamara*-Usil
5. *Bauhinia purpurea* - Mantharai


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6. *Bauhinia racemosa* - Aathi
7. *Bauhinia tomentosa* - Iruvathi
8. *Buchananiaaillaris* - Kattuma
9. *Borassusflabellifer* - Panai
10. *Buteamonosperma* - Murukkamaram
11. *Bobaxceiba* - Ilavu, Sevvilavu
12. *Calophylluminophyllum* - Punnai
13. *Cassia fistula* - Sarakondrai
14. *Cassia roxburghii* - Sengondrai
15. *Chloroxylonsweitenia* - Purasamaram
16. *Cochlospermumreligiosum* - Kongu, Manjallavu
17. *Cordiadichotoma* - Mookuchalimaram
18. *Cretevaadansonii* - Mavalingum
19. *Dilleniaindica* - Uva, Uzha
20. *Dilleniapentagyna* - SiruUva, Sitruzha
21. *Diospyrosebenum* - Karungali
22. *Diospyroschloroxylon* - Vaganai
23. *Ficusamplissima* - Kalltchi
24. *Hibiscus tiliaceous* - Aatrupoovarasu
25. *Hardwickiabinata* - Aacha
26. *Holopteliaintegrifolia* - Aayili
27. *Lanneacoromandolica* - Odhiam
28. *Lagerstroemia speciosa* - Poo Marudhu
29. *Lepisanthustetraphylla* - Neikottaimaram
30. *Limoniaacidissima* - Vila maram
31. *Litseaglutinosa* - Pisinpattai
32. *Madhucalongifolia* - Illuppai
33. *Manilkarahexandra* - UlakkaiPaalai
34. *Mimusopselengi* - Magizhamaram
35. *Mitragynaparvifolia* - Kadambu
36. *Morindapubescens* - Nuna
37. *Morindacitrifolia* - VellaiNuna
38. *Phoenix sylvestre* - Eachai
39. *Pongamiapinnata* - Pungam
40. *Premnamollissima* - Munnai
41. *Premnaserratifolia* - Narumunnai
42. *Premnatomentosa* - PurangaiNaari, PudangaNaari
43. *Prosopiscinerea* - Vannimaram
44. *Pterocarpusmarsupium* - Vengai
45. *Pterospermumcanescens* - Vennangu, Tada
46. *Pterospermumxylocarpum* - Polavu


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

Discussion by SEIAA and the Remarks:-

The proposal was placed in the 529th Authority meeting held on 05.07.2022. 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 for a mining period of 5 years subject to the ToR as recommended by SEAC & standard ToR in addition to the following ToR:

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. 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.
3. 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.
4. 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.


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


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

- 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


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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 Report.
- 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
- 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine /


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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 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.



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- 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.
- 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


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EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.

- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.


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


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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.
 - h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I


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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 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


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animals.

30. Reserve funds should be earmarked for proper closure plan.


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

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

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

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COMPLIANCE OF TOR CONDITIONS

Point wise compliance of TOR points issued by SEIAA, TN vide letter No. SEIAA-TN/F. No. 9218/ ToR-1190/2022 Dated: 06.07.2022 for Mining of Minor Minerals in the Mine of “Proposed Rough Stone and Gravel Quarry over an Extent of 3.55.5 Ha in S.F.No. 3/2A & 152/1(P) of Sukkampalayam & Velampalayam Village of Palladam Taluk, Tiruppur District and Tamil Nadu State.

Additional ToR Compliance

S.No.	Condition	Compliance
1.	The PP shall furnish DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., upto a radius of 25 km from the proposed site.	DFO Letter is enclosed as Annexure XI, Page No. 365
2.	Registered lease document shall be included in EIA report	Lease document is attached as Annexure V, Page No.233
3.	PP shall conduct a survey regarding details of structures located within 200m from the project site and the same shall be included in EIA Report.	The Socio-Economic details is discussed in Chapter 3, Section 3.8, Pg No. 108
4.	In the case of proposed lease in an existing (or old) quarry where the benches are non existent (or) partially formed critical of the bench geometry approved in the Mining Plan. the Project Proponent (PP) shall prepare and submit an 'Action Plan' for carrying out the realignment of the 'high wall' benches in the existing quarried pit and the proposed pit indicating	Agreed to comply.

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	the possible stabilizing measures to ensure slope stability as the depth of the planned working is extended beyond 30 m below ground level which shall be submitted as a part of the revised Mining Plan. during the time of appraisal for obtaining the EC.	
5.	The Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, as the depth of the working is extended beyond 30 m below ground level.	Slope Stability Plan will be submitted in final EIA report
6.	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.
7.	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.	Complied. The photographs are attached in EIA report.
8.	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	It is a fresh quarry.
9.	What was the period of the operation and stoppage of the earlier mines with last work	It is a fresh quarry.

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	<p>permit issued by the AD/DD mines?</p> <p>a) Quantity of minerals mined out.</p> <p>b) Highest production achieved in any one year</p> <p>c) Detail of approved depth of mining.</p> <p>d) Actual depth of the mining achieved earlier.</p> <p>e) Name of the person already mined in that leases area.</p> <p>f) If EC and CTO already obtained, the copy of the same shall be submitted.</p> <p>h) Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.</p>	
10.	<p>All corner coordinates of the mine lease area, superimposed on High Resolution Imagery/ Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).</p>	<p>All maps have been provided in chapter 2 and chapter 3 of Draft EIA report.</p> <p>Lithology – Pg No. 46</p> <p>Geomorphology – Pg No. 46</p> <p>Geology – Pg No.74</p> <p>Topo - Pg No. 41</p>
11.	<p>The Proponent shall carry out Drone video survey covering the Cluster, Green Belt, Fencing etc.,</p>	<p>Noted. The drone video to cover the cluster area clearly showing the extent of operation and the surrounding environment will be submitted along with the final EIA report.</p>
12.	<p>The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.</p>	<p>It is a fresh quarry.</p>

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13.	<p>The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same.</p>	<p>The geological reserves, mineable reserves and Year wise production details has been discussed in Chapter 2, Pg No. 47</p> <p>The anticipated impacts due to mining operations carried out in the quarry cluster and its mitigation measures have been discussed in Chapter 4 of Draft EIA Report, Pg No.112.</p>
14.	<p>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.</p>	<p>The Organization chart has been discussed in Chapter 2, Pg No.56</p>
15.	<p>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 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</p>	<p>The hydro-geological study will be conducted and submitted in final EIA report.</p>

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	regard may be provided.	
16.	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 baseline data for the environmental and ecological parameters about surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study have been incorporated in Chapter 3, Pg No. 59
17.	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 air pollution, water pollution, & 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.
18.	Rainwater harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	Noted. Agree to comply.
19.	Issues relating to Mine Safety, including slope geometry in case of Granite quarrying, blasting parameters etc. should be detailed. The proposed safeguard measures in each case should also be provided.	Noted. Agree to comply.
20.	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features	Current land use of the study area has attached in EIA report chapter 3, Pg No.70. Operational and post operational land use will be submitted.

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	<p>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.</p>	
21.	<p>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.</p>	<p>The Gravel of the lease area is 54866m³. Gravel formation will be removed and transported to the needy end user, only after obtaining permission and paying necessary seigniorage fees to the Government</p>
22.	<p>Since non-saleable waste /OB / intermediate waste etc. is huge in the granite quarry, the Proponent shall provide the details pertaining to management of the above material with year wise utilization and average moving inventory be submitted.</p>	<p>Noted</p>
23.	<p>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.</p>	<p>Noted</p>
24.	<p>Description of water conservation measures proposed to be adopted in the Project should</p>	<p>The ultimate pit at the end of the mining operation will be used for rainwater</p>

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	be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	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.
25.	Impact on local transport infrastructure due to the Project should be indicated	Traffic impact assessment has given in EIA report chapter 3, Pg No.110.
26.	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.	No tree species were found inside the project site. only few shrubs and thorny bushes were present. Tree survey study details given in EIA report chapter 3, Pg No. 102 – 104.
27.	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Noted. The mine plan and mine closure plan has been approved by the Assistant Director, Department of Mining and Geology, Tirupur District
28.	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.	Noted and will be complied in Final EIA report.
29.	The Public hearing advertisement shall be published in one major National daily and one most circulated Tamil daily.	The Public hearing advertisement will be published in one major National daily and one most circulated vernacular daily.
30.	The Project Proponent shall produce/display the EIA Report, Executive Summary and other	Noted.

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	related with respect to Public Hearing should be in Tamil Language also.	
31.	As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study. wherever possible.	Noted. Agree to comply
32.	The recommendation for the issue of "Terms of Reference" is subjected to the outcome of the Hon'ble NGT, Principal Bench, New Delhi in O.A No.186 of 2016 (M.A.No.350/2016) and O.A. No.200/2016 and O.A.No.580/2016 (M.A.No.1182/2016) and O.A.No.102/2017 and O.A.No.404/2016 (M.A.No.758/2016, M.A.No.920/2016, M.A.No.1122/2016, M.A.No:12/2017 & M.A. No. 843/2017) and O.A.No.405/2016 and O.A.No.520 of 2016 (M.A.No.981/2016, M.A.No.982/2016 & M.A.No.384/2017).	Noted
33.	The purpose of green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University and local school/college authorities. The plant species with dense/moderate canopy of native origin should be chosen. Species of	Around 1700 trees will be planted around the site. The list of trees to be planted are given below: Neem, Pungam, Poovarasu, Naval, Mantharai, Arasa Maram, Magizham, Vilvam, vaagai, Marudha maram, Thandri, Poovarasu, Quaker buttons, Thethankottai maram, Manjadi, Usil, Aathi, Panai, Uzha, Illuppai, Eachai,

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	small/medium/tall trees alternating with shrubs should be planted in a mixed manner	Vanni Maram.
34.	Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted in proper espacement as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall carmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner.	The green belt plan is enclosed along with mining plates in Annexure VI, Pg No. 261.
35.	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	A Disaster management Plan will be prepared and included in the Chapter 7, Pg No.137
36.	A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report.	A Risk Assessment and management Plan will be prepared and included in Chapter 7, Pg No.133
37.	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Occupational Health impacts of the project has prepared and incorporated in Environmental management plan
38.	Public health implications of the Project and related activities for the population in the	Suitable measure will be adopted to minimize occupational health impacts of

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	impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations	the project.
39.	The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	The socio-economic study has been discussed in chapter 3, Pg No. 108.
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.	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, Pg No.140
42.	If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.	It is a fresh quarry
43.	Concealing any factual information or	Noted.

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	submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Reference besides attracting penal provisions in the Environment (Protection) Act, 1986.	
Additional ToR by SEIAA		
1.	Detailed study shall be carried out regard to impact of mining around the proposed mine lease area on the nearby villages, Water-bodies/Rivers, & any ecological fragile areas.	The detailed study is carried out and same details are furnished in Chapter 4, Pg No.112
2.	As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.	Noted and public hearing details will be included along with final EIA report.
3.	The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks, and temperature reduction including control of other emission and climate mitigation activities.	Noted and will be complied in Final EIA report.
4.	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	The biodiversity has been studied and discussed in chapter 3, Pg No.95.
5.	Action should specifically suggest for	It is a new Rough Stone and Gravel

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	sustainable management of the area and restoration of ecosystem for flow of goods and services.	<p>Quarry with a proposed depth of 38m only and hence, no need of mitigation and restoration / reclamation of the applied lease area.</p> <p>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.</p>
6.	The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.	There is no water body within 1km surrounding the project site. Hence there won't be much impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.
7.	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	<p>The soil erosion map 5km surrounding the project site has been given in chapter 3, Pg No. 92</p> <p>The soil samples have been collected surrounding the project site and physical, chemical components and microbial components study has been carried out and the results are tabulated in chapter 3, Pg No.93</p>
8.	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	The biological environment impacts, and its mitigation measures has been given in Chapter 4, Pg No.95.
9.	The Environmental Impact Assessment should	There is no existing trees in the project

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	study impact on standing trees and the existing trees should be numbered and action suggested for protection.	site and surrounding the project site. Only thorny shrubs were present.
10.	The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.	The water environment impacts and its mitigation measures has been given in Chapter 4, Pg No.114.
11.	The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.	The EMP details has been given in Chapter 8, Pg No.142
12.	The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.	Noted and will be complied in Final EIA report.
13.	The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	<p>There is no Reserve Forest within 15 km radius of the Project Site. Hence our project will not cause any damage to reserve forest. Also, we will get letter from DFO indicating the nearest reserve forest and submit along final EIA report.</p> <p>There is no protected areas, National Parks, Corridors and Wildlife pathways near project site.</p>
14.	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.	There is no plantation surrounding 500m from project site. Hence there won't be any impact in adjoining patta lands, Horticulture, Agriculture and livestock.
15.	The project proponent shall study and furnish the details on potential fragmentation impact of	Noted and will be complied in Final EIA report.

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	natural environment, by the activities.	
16.	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.	There is no water body within 1km surrounding the project site. Hence there won't be much impact on aquatic plant and animals. There is no caves, heritage sites and archaeological sites near the project site.
17.	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 the water systems due to activities aquatic environment and freshwater systems due to activities, contemplated during mining may be investigated and reported.	There will not be any plastic and microplastic pollution due to mining activity. Also, we ensure that we won't use any single use plastics in the project site.
18.	The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.	There is no Reserve Forest within 15 km radius of the Project Site . Also, we will get letter from DFO indicating the nearest reserve forest and submit along final EIA report.
19.	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 & Biodiversity. b. Climate Change leading to Droughts, Floods etc. c. Pollution leading to release of Greenhouse	The biodiversity has been studied and discussed in chapter 3, Pg No. 95. The soil erosion map 5km surrounding the project site has been given in chapter 3, Pg No. 93

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	<p>gases (GHG), rise in Temperature & livelihood of the local people.</p> <p>d.Possibilities of water contamination and impact on aquatic ecosystem health.</p> <p>e.Agriculture, Forestry & Traditional practices.</p> <p>f. Hydrothermal/Geothermal effect due to destruction in the Environment.</p> <p>g.Bio-geochemical processes and its footprints including environmental stress.</p> <p>h.Sediment geochemistry in the surface streams.</p>	
<p>20.</p>	<p>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. withing 1 km (radius) 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.</p>	<p>The hydro-geological study will be conducted and submitted in final EIA report.</p>
<p>21.</p>	<p>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</p>	<p>Disaster Management and Risk Assessment has been incorporated in Chapter-7, Pg No.137.</p>

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	entire mine lease period as per precise area communication order issued.	
22.	To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of mining.	A Risk Assessment and management Plan has been incorporated in Chapter-7, Pg No.133.
23.	Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.	Mine closure plan has been attached along with mining plates as Annexure VI.
24.	Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.	The EMP details has been given in Chapter 8, Pg No.142.

Standard ToR:

S.No	Standard ToR	Compliance
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 proposed Rough Stone and gravel Quarry</p> <p>Precise area communication letter received from The Deputy Director, Dept. of Geology & Mining, Tiruppur vide Rc No: 348/Mines/2021 dated 21.01.2022.</p> <p>Proposed Production of Rough Stone and Gravel for five years is proposed in the EIA/EMP in chapter no-2, Table No.2.9, Page No. 50</p>

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2.	A copy of document in support of the fact that the Proponent is the rightful lessee of the mine should be given.	The mine lease area of 3.55.5 hectare in Sukkampalayam & Velampalayam Village for Rough Stone and Gravel Quarry approved by The Deputy Director, Dept. of Geology & Mining, Tiruppur vide Rc No:348/2021/Mines dated 11.02.2022 and attached in Annexure III, Page No.223
3.	All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.	All the documents i.e., Mining Plan, EIA and public hearing are compatible with each other in terms of ML area production levels, waste generation and its management and mining technology are compatible with one another. The mining plan of the project site has been submitted to The Deputy Director, Dept. of Geology & Mining, Tiruppur and attached in Annexure III, Page No.223.
4.	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	Details of coordinates of all corner of proposed mining lease area have been incorporated in Chapter-2, Fig no. 2.2, Page No.40.
5.	Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological	Topo map as attached in Chapter-2, Fig no. 2.4, Page No.41

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	map 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 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 in Chapter 2, Page No. 43.
7.	<p>It should be clearly stated whether the proponent company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions?</p> <p>The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of</p>	Noted.

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	environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large may also be detailed in the EIA report.	
8.	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.	It is an open cast mining project. Blasting details are incorporated in Chapter-2, Page No.54
9.	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.	Study area comprises of 10 km radius from the mine lease boundary. Key Plan showing core zone (ML area) and attached in Chapter-2, Fig no. 2.5, Page No.42.
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	Land Use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, National park, migratory routes of fauna, water bodies, human settlements and other ecological features has been prepared and incorporated in Chapter-2, Table no. 2.2, Page No.37.

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	<p>encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.</p>	<p>There is no wildlife sanctuary and national park, migratory routes of fauna in the study area.</p>
11.	<p>Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.</p>	<p>The Gravel of the lease area is 54866m³. Gravel formation will be removed and transported to the needy end user, only after obtaining permission and paying necessary seigniorage fees to the Government and attached in Chapter-2, Table no. 2.2, 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 issued. In all such cases, it would be desirable for</p>	<p>The proposed mining lease area is not falling under forest land.</p>

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	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, Page No. 95
16.	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required, should be worked out with cost implications	There is a relatively poor sighting of animals in the core and buffer areas of the mining lease. No significant impact is anticipated.

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	and submitted.	
17.	<p>Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, 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 State Wildlife Obtained from the Standing Committee of National Board of Wildlife 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</p>	<p>Detail biological study (flora & fauna) within 10 km radius of the project site have been incorporated in Chapter-3 of EIA/ EMP Report, Page No. 95.</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>

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	found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.	
19.	Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.	The proposed mining lease area is not falling under forest land.
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	There is no Coastal Zone within 15km radius of the project site.

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	<p>w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).</p>	
<p>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.</p> <p>The issues relating to shifting of Village including their R&R</p>	<p>There is no Rehabilitation and resettlement is involved. Land classified as Consent Patta land.</p>

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	and socio-economic aspects should be discussed in the report.	
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 500 m 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 June to August 2022 has been incorporated in EIA/EMP report.</p> <p>The key plan of monitoring station has been discussed in Chapter-3. Locations of the monitoring stations have been selected keeping in view the pre-dominant downwind direction and location of the sensitive receptors and also that they represent whole of the study area.</p>
23.	Air quality modeling should be Carried out for prediction of	Air quality modeling will be incorporated in Final EIA Report.

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	<p>impact of the project on the air quality of the area.</p> <p>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.</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>Impact of Air quality incorporated in chapter-4, Page No.116.</p> <p>Transportation of mineral during operation of mines will be done by road & SH-36 through dumpers and the impact of movement of vehicles are incorporated in Draft EIA/EMP report.</p> <p>Air quality modelling & Impact of Air quality will be incorporated in the 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: 1.81 KLD</p> <p>Dust Suppression: 0.5 KLD</p> <p>Domestic Purpose: 0.5 KLD</p> <p>Plantation : 0.81 KLD</p> <p>Domestic Water will be sourced from nearby Unjapalayam village and other water will be source from nearby road tankers supply attached in Chapter-2, Page No. 56.</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</p> <p>Water will be taken from nearby villages.</p>
26.	<p>Description of water conservation</p>	<p>At the last stage of mining operation, almost</p>

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	measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	complete area will be worked to restore the land to its optimum reclamation for future use as water reservoir.
27.	Impact of the project on the water quality, both surface and groundwater should be assessed and necessary safeguard measures, if any required, should be provided.	Impact of the project on the water quality & its mitigation measures has been incorporated in Chapter-4 of EIA/EMP report, Page No.112.
28.	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.	<p>Maximum working depth: 38m BGL</p> <p>The ground water table is reported as 52 m below surface ground level in nearby wells of this area. Now, the present quarry shall be proposed above the water table and hence, quarrying may not affect the ground water So mine working will not be intersecting the ground water table and the details incorporated in Chapter-2, Page No.57.</p>
29.	Details of any stream, seasonal	There is no any stream crossing in the new

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	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.	quarry
30.	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.	Highest elevation: 378 m AMSL Ultimate Depth of mining :38 BGL Ground Water Table : 52 m BGL The details has been incorporated in Chapter-2, Table no. 2.2, Page No.37.
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	Green Belt Development plan is proved given in Chapter 2, Page No.58.

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	<p>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.</p>	
32.	<p>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.</p>	<p>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 Chapter-3 of Draft EIA/EMP report, Page No.110.</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>

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34.	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.	Conceptual post mining land use and Reclamation and restoration sectional plates are given in Mining Plan followed by Scheme of mining and the plates has been incorporated in Annexure 6, Page No.261.
35.	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre- placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project in the mining area may be detailed.	Suitable measure will be adopted to minimize occupational health impacts of the project. The project shall have positive impact on local environment. Details are given in chapter-7 of Draft EIA/EMP, Page No.343.
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. Details are given in chapter-7 of EIA/EMP, Page No. 136.
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	CER is discussed in Chapter 8, Page No.140.

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	possible, quantitative dimensions may be given with time frames for implementation.																
38.	Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.	Environment Management Plan has been described in detail in Chapter-9 of the Draft EIA/EMP Report, Page No.142.															
39.	Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and incorporated in the final EIA/EMP Report of the Project.	Public Hearing proceedings will be furnished in Final EIA report															
40.	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.	Not applicable No. litigation is pending against the project in any court.															
41.	The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.	<table border="1"> <thead> <tr> <th>S.No.</th> <th>Description</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Project Cost</td> <td>25,46,000</td> </tr> <tr> <td>2</td> <td>Expenditure Cost</td> <td>30,00,000</td> </tr> <tr> <td>3</td> <td>EMP Cost</td> <td>80,00,000</td> </tr> <tr> <td></td> <td>Total</td> <td>1,35,46,000</td> </tr> </tbody> </table>	S.No.	Description	Cost	1	Project Cost	25,46,000	2	Expenditure Cost	30,00,000	3	EMP Cost	80,00,000		Total	1,35,46,000
S.No.	Description	Cost															
1	Project Cost	25,46,000															
2	Expenditure Cost	30,00,000															
3	EMP Cost	80,00,000															
	Total	1,35,46,000															

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42.	A Disaster Management Plan shall be prepared and included in the EIA/EMP Report.	Disaster Management and Risk Assessment has been incorporated in Chapter-7, Page No.137
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 in Chapter 8 of draft EIA report, Page No.140.
44.		
(a)	Executive Summary of the EIA/EMP report	Complied
(b)	All documents to be properly referenced with index and continuous page numbering.	Complied
(c)	Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.	Complied
(d)	Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the project.	Complied
(e)	Where the documents provided are in a language other than	Complied

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	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.	The complete questionnaire has been prepared.
(g)	While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M.No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should also be followed.	The EIA report has been prepared and complying with the circular issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009.
(h)	Changes, if any made in the 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	As per the recommendation of the committee, there are changes in production capacity and depth of pit in mining plan and There are no changes in prepared EIA as per submitted Form-1 & PFR.

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	revised documentation.	
(i)	As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified 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 and sections (iii) sections of mine pit and external dumps, if any clearly showing the features of the adjoining area.	All Sectional Plates of Quarry is enclosed in Mining Plan.

ANNEXURE-II
PRECISE AREA COMMUNICATION LETTER

நாள்: 21.01.2022.

குறிப்பாணை

பொருள் : கனிமங்களும் சுரங்கங்களும் - சிறு கனிமம் - திருப்பூர் மாவட்டம் - பல்லடம் வட்டம் - சுக்கம்பாளையம் கிராமம் - புல எண். 3/2A (1.53.0) மற்றும் வேலம்பாளையம் கிராமம் - புல எண். 152/1 (பகுதி) (2.02.5) ஆகியவற்றில் மொத்தம் 3.55.5 ஹெக்டர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் மண் குவாரி குத்தகை உரிமம் கோரி திருமதி. P. தெய்வாத்தாள், க/பெ. பழனிசாமி கவுண்டர் என்பவர் விண்ணப்பம் அளித்தது - புலத்தணிக்கை அறிக்கை சமர்ப்பிக்கப்பட்டது - தகுதியான நிலப்பரப்பாக கருதி ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய இசைவினை பெற்று சமர்ப்பிக்கக் கோருதல் - தொடர்பாக.

- பார்வை :
1. திருமதி. P. தெய்வாத்தாள், க/பெ. பழனிசாமி கவுண்டர், நாசவன் காட்டுத் தோட்டம், வேலம்பாளையம் கிராமம், பல்லடம் வட்டம் என்பவரின் விண்ணப்பம் நாள்: 18.02.2021.
 2. இவ்வலுவலக கடிதம் நாள்: 09.03.2021.
 3. இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை ந.க. 1870/எம்.எம்.1/2020 நாள்: 10.08.2020 கடிதத்துடன் அரசாணை (பல்வகை) எண். 169, தொழில் (எம்.எம்.சி-1) துறை நாள்: 04.08.2020 இணைத்து வரப்பெற்றுள்ளது. (தமிழ்நாடு அரசிதழ் சிறப்பு வெளியீடு எண். 315 நாள்: 04.08.2020).
 4. வட்டார வளர்ச்சி அலுவலர் (வ.ஊ), பல்லடம் கடிதம் ந.க. 888/2020/அ2 நாள்: 03.05.2021 (இவ்வலுவலகத்தில் பெறப்பட்ட நாள்: 11.08.2021).
 5. வட்டாட்சியர், பல்லடம் கடிதம் ந.க. 1188/2021/அ4 நாள்: 30.07.2021.
 6. வருவாய் கோட்டாட்சியர், திருப்பூர் கடிதம் ந.க. 1292/2021/ஈ1 நாள்: 03.08.2021 (இவ்வலுவலகத்தில் பெறப்பட்ட நாள்: 11.08.2021)
 7. உதவிப் புவியியலாளர் (கனிமம்), திருப்பூர் புலத்தணிக்கை அறிக்கை நாள்: 12.01.2022.
 8. சுக்கம்பாளையம் மற்றும் வேலம்பாளையம் கிராம நிர்வாக அலுவலர்கள் சான்று 20.01.2022.
 9. மற்றும் உரிய ஆவணங்கள்

திருப்பூர் மாவட்டம், பல்லடம் வட்டம், சுக்கம்பாளையம் கிராமம், புல எண். 3/2A (1.53.0) மற்றும் வேலம்பாளையம் கிராமம், புல எண். 152/1 (பகுதி) (2.02.5) ஆகியவற்றில் மொத்தம் 3.55.5 ஹெக்டர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் குவாரிக் குத்தகை

உரிமம் வழங்க கோரி திருமதி. P. தெய்வாத்தாள், க/பெ. பழனிசாமி கவுண்டர் என்பவர் பார்வை 1-ல் கண்டுள்ளபடி உரிய ஆவணங்களுடன் விண்ணப்பம் அளித்துள்ளார்.



2. மேற்படி விண்ணப்பங்கள் தொடர்பாக, வட்டார வளர்ச்சி அலுவலர், பல்லடம், வட்டாட்சியர், பல்லடம், வருவாய் கோட்டாட்சியர், திருப்பூர் மற்றும் உதவிப் புவியியலாளர் (கனிமம்), திருப்பூர் ஆகியோர் புலத்தணிக்கை மேற்கொண்டு திருப்பூர் மாவட்டம், பல்லடம் வட்டம், சுக்கம்பாளையம் கிராமம், புல எண். 3/2A (1.53.0) மற்றும் வேலம்பாளையம் கிராமம், புல எண். 152/1 (பகுதி) (2.02.5) ஆகியவற்றில் மொத்தம் 3.55.5 ஹெக்டர் பரப்பில் திருமதி. P. தெய்வாத்தாள், க/பெ. பழனிசாமி கவுண்டர் என்பவருக்கு சாதாரண கற்கள் மற்றும் கிராவல் மண் குவாரி உரிமம் வழங்க கீழ்க்கண்ட நிபந்தனைகளுக்குட்பட்டு அனுமதி வழங்கலாம் என பரிந்துரை செய்துள்ளனர்.

நிபந்தனைகள்:

1. திருப்பூர் மாவட்டம், பல்லடம் வட்டம், சுக்கம்பாளையம் கிராமம், புல எண் 3/2A(1.53.0) மற்றும் பல்லடம் வட்டம், வேலம்பாளையம் கிராமம் புல எண் 152/1(பகுதி)(2.02.5)-இல் மொத்தம் 3.55.5 ஹெக்டர் பரப்பளவுள்ள பூமியிலிருந்து சாதாரண கற்கள் மட்டும் வெட்டி எடுக்க குவாரி குத்தகை உரிமம் வழங்குவது தொடர்பாக ஏற்பளிக்கப்பட்ட சுரங்கத் திட்டம் மற்றும் சுற்றுச் சூழல் ஒப்புதல் ஆகியன பெற்றளிக்கப்பட வேண்டும்.
2. விண்ணப்ப புலங்களை சுற்றியுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.
3. சுக்கம்பாளையம் கிராமம், புல எண்.02-ல் விண்ணப்பப் புலத்திற்கு வடமேற்கே அமைந்துள்ள குட்டைக்கு 50 மீட்டர் பாதுகாப்பு இடைவெளி பராமரிக்கப்பட வேண்டும்.

3. எனவே, வட்டார வளர்ச்சி அலுவலர், பல்லடம், வட்டாட்சியர், பல்லடம், வருவாய் கோட்டாட்சியர், திருப்பூர் மற்றும் உதவிப் புவியியலாளர் (கனிமம்), திருப்பூர் ஆகியோரின் பரிந்துரை மற்றும் நிபந்தனைகளின் அடிப்படையில், திருப்பூர் மாவட்டம், பல்லடம் வட்டம், சுக்கம்பாளையம் கிராமம், புல எண். 3/2A (1.53.0) மற்றும் வேலம்பாளையம் கிராமம், புல எண். 152/1 (பகுதி) (2.02.5) ஆகியவற்றில் மொத்தம் 3.55.5 ஹெக்டர் பரப்பில் 1959ம் வருட தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.19 (1)-ன் படி மேற்கண்ட நிபந்தனைகளுக்குட்பட்டு 5 (ஐந்து) வருட காலத்திற்கு திருமதி. P. தெய்வாத்தாள், க/பெ. பழனிசாமி கவுண்டர் என்பவருக்கு சாதாரண கற்கள் மற்றும் கிராவல் மண் குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதப்படுகிறது.



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

[Handwritten Signature]
21/1/2022
துணை இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
திருப்பூர்.

பெறுநர்:

திருமதி. P. தெய்வாத்தாள்,
க/பெ. பழனிசாமி கவுண்டர்,
நாசுவன் காட்டுத் தோட்டம்,
வேலம்பாளையம் கிராமம்,
பல்லடம் வட்டம்

[Handwritten Signature]
21/1/22

[Handwritten Signature]
S. DHANASEKAR
Qualified Person

ANNEXURE-III
MINING PLAN APPROVED LETTER

From

Thiru. K. Ramesh, M.Sc.,
Deputy Director,
Dept. of Geology and Mining,
Tiruppur.

To

Thiru. P. Deivathal,
W/o. Palanisamy Gounder,
Naasuvan Kaattu Thottam
Velampalayam village,
Palladam Taluk.

R.c. No. 348/2021/Mines Dated : 11 .02.2022.

Sub: Mines and Minerals – Minor Mineral – Rough Stone and Gravel – Tiruppur District – Palladam Taluk – Sukkampalayam village – S.F. No. 3/2A (1.53.0 Hect) and Velampalayam village – S.F. No. 152/1 (Part) – 2.02.5 – over an extent of 3.55.5 Hectares – Quarry lease application preferred by Tmt. P. Deivathal, W/o. Palanisamy Gounder - Precise area communicated - Draft mining plan submitted – Approval of mining plan – Regarding

- Ref: 1. Tmt. P. Deivathal, W/o. Palanisamy Gounder, Nasuvan Kattu thottam, Velampalayam village, Palladam Taluk quarry lease application dated: 18.02.2021.
2. The Deputy Director, Geology and Mining, Tiruppur letter R.C. No. 348/Mines/2021 dated 21.01.2022
3. Mining Plan submitted by Tmt. P. Deivathal, W/o. Palanisamy Gounder in letter dated 02.02.2022.

1. Tmt. P. Deivathal, W/o. Palanisamy Gounder, Nasuvan Kattu thottam, Velampalayam village, Palladam Taluk has preferred application for the grant of Rough Stone Gravel quarry lease in Patta lands over an extent of 3.55.5 Hect. in S.F.No. 3/2A (1.53.0 hect) in Sukkampalayam village, S.F. No. 152/1 (Part) (2.02.5 hect) in Velampalayam Village of Palladam Taluk of Tiruppur District.

2. Based on recommendations of the Block Development Officer, Palladam, Tahsildar, Palladam, Revenue Divisional Officer, Tiruppur and the Assistant Geologist (Mines), Tiruppur and records available, precise area has been communicated to the applicant with a direction to submit mining plan

and also to submit environmental clearance as stipulated under rule 41 and 42 of Tamil Nadu Minor Mineral Concession Rules, 1959 vide memo dated 21.01.2022.

3. Accordingly, Tmt. P. Deivathal, W/o. Palanisamy Gounder submitted the Draft Mining Plan and the same has been examined in detail and it is found correct. Therefore, in exercise of the powers delegated under Rule 42 of Tamil Nadu Minor Mineral Concession Rules, 1959, and as per the guidelines / instructions issued by the Commissioner of Geology and Mining, Chennai vide letter Roc.No.3868/LC/2012 dated 19.11.2012, the mining plan submitted by Tmt. P. Deivathal, W/o. Palanisamy Gounder in respect of the subject area is hereby approved subject to the following conditions:

- (i). That the mining plan is approved without prejudice to any other Law applicable to the quarry lease from time to time whether such Laws are made by the Central Government, State Government or any other authority.
- (ii). This approval of the mining plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Act, 1957, or any other connected laws including Forest (Conservation) Act, 1980, Forest Conservation Rules, 1981, Environment Protection Act, 1980, Indian Explosives Act, 1884(Central Act IV of 1884) and the rules made there under the Tamil Nadu Minor Mineral Concession Rules, 1959.
- (iii). That the mining plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
- (iv). Quarrying shall be done as per the approved Mining Plan and that the mining plan is approved without prejudice to any other law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.
- (v). If anything is found to be concealed as required by the Mines Act in the contents of the Mining Plan and the proposal for rectification has not been made, the approval shall be deemed to have been withdrawn with immediate effect.

- (vi). Safety distances mentioned in the precise area has to be maintained for the entire duration of the lease period.
- (vii). Waste material should be dumped within the lease granted area as earmarked in the Mining Plan.
- (viii). Necessary Environmental Clearance has to be obtained by the applicant from the competent authority before the grant of quarry lease as per the rules.
- (ix). Quarrying operations and production shall be carried out as per the approved Mining Plan and the applicant shall be liable to pay the cost of mineral if there is any deviation in the quantum indicated in the approved year wise quantum of production and any such cases as on date are to be dealt with as per Court direction.
- (x). If any violation is found during quarrying operation, the penal provisions of Tamil Nadu Minor Mineral Concession Rules shall attract.
- (xi). The applicant should strictly adhere to the statutory and safety requirements.

Encl: Approved Mining Plan.

KRM 11/12/2022
Deputy Director,
Geology and Mining,
Tiruppur.

Copy to

- 11/12/22*
1. The Director,
Department of Geology and Mining,
Guindy, Chennai - 600 032.
 2. The Chairman ,
State Level Environment Impact Assessment Authority,
Panagal park Building, Saidapet, Chennai -600 015.
 3. Thiru. S. Dhanasekar, M.SC., RQP
5/30-7B, Avvai Nagar, Ponkumar Mines road,
Jagir Amma palayam, Salem District

ANNEXURE-IV
500M Radius letter

From

Thiru. K. Ramesh, M.Sc.,
Deputy Director,
Dept. of Geology and Mining,
Tiruppur.

To

Tmt. P. Deivathal,
W/o. Palanisamy Gounder,
Naasuvan Kaattu Thottam
Velampalayam village,
Palladam Taluk.

R.c. No. 348/2021/Mines Dated : 02.02.2022.

Sub: Mines and Minerals – Minor Mineral – Rough Stone and Gravel – Tiruppur District – Palladam Taluk – Sukkampalayam village – S.F. No. 3/2A (1.53.0 Hect) and Velampalayam village – S.F. No. 152/1 (Part) – 2.02.5 - over an extent of 3.55.5 Hectares – Quarry lease application preferred by Tmt. P. Deivathal, W/o. Palanisamy Gounder - Precise area communicated - Draft mining plan submitted – Approved – Other quarries situated in 500m radius details - Requested - Regarding.

- Ref: 1. Tmt. P. Deivathal, W/o. Palanisamy Gounder, Nasuvan Kattu thottam, Velampalayam village, Palladam Taluk quarry lease application dated: 18.02.2021.
2. The Deputy Director, Geology and Mining, Tiruppur letter R.C. No. 348/Mines/2021 dated 21.01.2022
3. Mining Plan submitted by Tmt. P. Deivathal, W/o. Palanisamy Gounder in letter dated 02.02.2022.
4. The Deputy Director, Geology and Mining, Tiruppur letter R.C. No. 348/Mines/2021 dated 11.02.2022.
5. Tmt. P. Deivathal, W/o. Palanisamy Gounder letter dated 23.02.2022.

As requested by the applicant, the details of quarry leases located within 500 meter radius from the proposed Rough Stone and Gravel quarry lease in S S.F.No. 3/2A (1.53.0 hect) in Sukkampalayam village, S.F. No. 152/1 (Part) (2.02.5 hect) in Velampalayam Village of Palladam Taluk of Tiruppur District is given as follows.

a. Existing quarries

S. No	Name of the lessee	Village	S.F. No	Extent Hect.	Collector's proceedings No. & Date	Lease period
1	P. Sumathi,	Sukkam palayam	2	3.00.5	171/2015/MINES dated 06.03.2020 1198/2021/Mines dated 28.10.2021.	06.03.2020 - 05.03.2025
2	P. Viswa Nathan	Velam palayam	153/2A, 153/2C, 156/1B	1.77.0	R.C. 820 / MINES / 2016 dated 27.3.2018	27.3.2018 - 26.3.2023

b. Abandoned / expired quarries

S. No	Name of the lessee	Village	S.F. No	Extent Hect.	Collector's proceedings No. & Date	Lease period
---- Nil ----						

c. Present proposed quarries

S. No	Name of the lessee	Village	S.F. No	Extent Hect.	Collector's proceedings No. & Date	Lease period
1.	P. Deivathal	Sukkam palayam Velam palayam	3/2A 152/1 (P)	3.55.5	--	Proposed area.

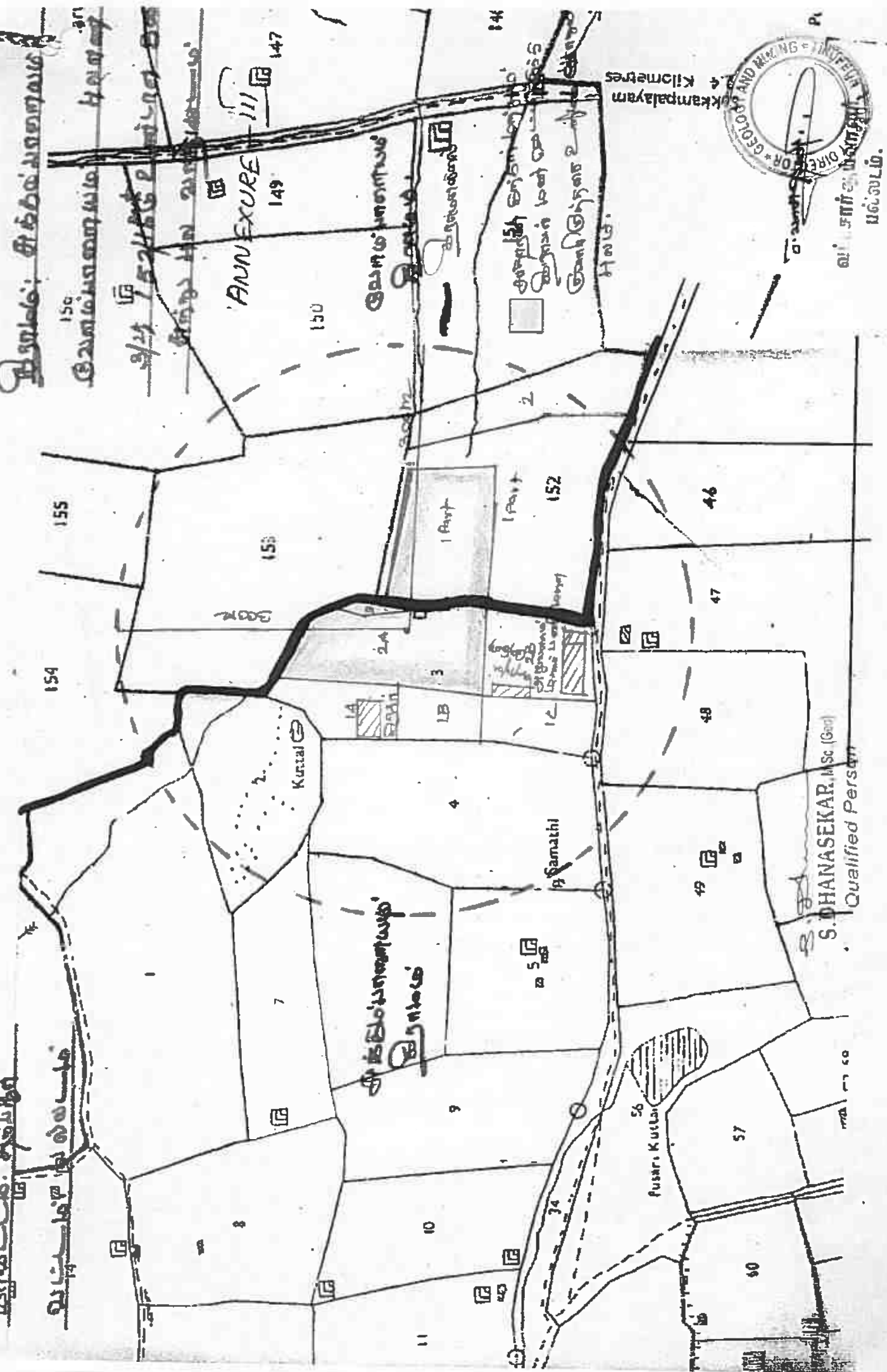
[Signature]
Deputy Director,
Geology and Mining,
Tiruppur.

Copy to

The Chairman, State Level Environment Impact,
Assessment Authority, Tamil Nadu,
3rd Floor, PanagalMaaligai, No.1 Jeenis Road,
Saidapet, Chennai-15.

ANNEXURE-V
FMB, A REGISTER, VILLAGE MAP AND
DEED OF AGREEMENT

1. കുറ്റി
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 100. കുറ്റി





ANNEXURE IV



தமிழக அரசு

வருவாய்த் துறை

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

வட்டம் : பல்லடம்

மாவட்டம் : திருப்பூர்

பட்டா எண் : 36

வருவாய் கிராமம் : சுக்கம்பாளையம்

உரிமையாளர்கள் பெயர்

தெய்வத்தாள்

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
3	2A	1 - 53.00	3.06	--	--	--	--	R06/3214--- -- 19-09-2006
		1 - 53.00	3.06					

குறிப்பு2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 32/03/005/00036/50599 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
2. இத் தகவல்கள் 04-02-2021 அன்று 03:20:36 PM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



தமிழக அரசு

வருவாய்த் துறை

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

மாவட்டம் : திருப்பூர்

வட்டம் : பல்லடம்

வருவாய் கிராமம் : வேலம்பாளையம்

பட்டா எண் : 347

உரிமையாளர்கள் பெயர்

- | | | | |
|----|----------------------|-------|----------------|
| 1. | பழனிச்சாமிக்கவுண்டர் | தந்தை | முத்துக்குமார் |
| 2. | பழனிச்சாமிக்கவுண்டர் | கணவன் | தெய்வத்தாள் |
| 3. | பழனிச்சாமிக்கவுண்டர் | தந்தை | நடராஜன் |

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
152	1	6 - 46.00	12.94	--	--	--	--	R06/1659--- -- 19-06-2006
		6 - 46.00	12.94					

குறிப்பு2 :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 32/03/004/00347/50404 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 04-02-2021 அன்று 03:19:59 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



பெயர் - தலைப்புகள்		பெயர் - தலைப்புகள்		பெயர் - தலைப்புகள்		பெயர் - தலைப்புகள்		பெயர் - தலைப்புகள்		பெயர் - தலைப்புகள்		பெயர் - தலைப்புகள்		பெயர் - தலைப்புகள்		பெயர் - தலைப்புகள்		பெயர் - தலைப்புகள்	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
150
<p>செய்தல்: 1) பண்புலாயகம், சென்னை. 2) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 3) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 4) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 5) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 6) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 7) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 8) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 9) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 10) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 11) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 12) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 13) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 14) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 15) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 16) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 17) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 18) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 19) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை. 20) தமிழ்நாடு அரசு ஆய்வுக் கழகம், சென்னை.</p>																			

200/43-K.T. III A-10-23, 86-800 Cpa. DP. Muu. 7-2016.



ச. எண். 60 கல்வாய்க்கணம்

1	2	3	4	5	6	7	8	9	10	11	
1	5	1-5	ர	4	...	8-3	5	2 00	3 24.0	6 50	1 ர. அம்மாலை யம்மாள்.
									9 68.5	18 44	
2	...	2	ர	4	...	8-3	5	2 00	3 00.5	6 06	176 ப. சுப்பைய கவுண்டர்.
3	1A	3-1பா	ர	4	...	8-3	5	2 00	0 98.0	1 96	267 ப. பழனி.
	1B	-1பா	ர	4	...	8-3	5	2 00	0 64.0	1 28	177 க. சுப்பைய கவுண்டர்.
	1C	-1பா	ர	4	...	8-3	5	2 00	1 57.0	3 14	506 க. சாமாத் தாள் (1), இளவர் பரமசிவம் (2) காப்பாளர் தரமாத் தாள்.
	2A	-2பா	ர	4	...	8-3	5	2 00	1 53.0	3 06	36 த. கருப்ப கவுண்டர்.
	2B	-2பா	ர	4	...	8-3	5	2 00	1 62.0	3 25	415 மா. சாமசாமிக் கவுண்டர்.
	3	-3	ர	4	...	8-3	5	2 00	0 04.0	0 06	416 ர. சாமாள்.
									6 38.0	12 75	
4	①	4-1	ர	4	...	8-3	5	2 00	3 58.0	7 19	507 ரா. முத்துசாமிக் கவுண்டர் (1), இளவர் நரசாயண சாமி (2) காப்பாளர் சுகப்பனார் முத்துசாமி கவுண்டர்.
	2	-2	ர	4	...	8-3	5	2 00	1 44.0	2 87	417 க. சாமசாமிக் கவுண்டர்.
									5 02.0	10 06	
									1 48.0	2 94	178 ப. சுப்பைய கவுண்டர்.
									0 68.0	1 34	268 க. பழனி.

Handwritten signatures and official stamps at the bottom left of the page, including the name 'சுப்பைய கவுண்டர்' and other illegible text.



1	2	3	4	5	6	7	8	9	10	11		
147	2	147-பா	ர	பு	...	8-3	5	2 00	4 11.5	8 25	152 கொ.மாரிமுத்த கவுண்டர்.	கிணறு.
	3	-பா	ர	பு	...	8-3	5	2 00	0 69.0	1 38	204 க. ராமசாமி கவுண்டர்.	
									4 89.5	9 81		
148	...	148	அ	பு	...	...	...	...	1 29 5	...	...	வண்டிப் பாதை.
149	1	149-பா	ர	பு	...	8-3	5	2 00	1 39.0	2 78	45 மா. சுந்தராமிக் கவுண்டர்.	கிணறு.
146	2	-பா	ர	பு	...	8-3	5	2 00	1 60.5	3 22	84 சி. சுப்பே கவுண்டர்.	
									2 99.5	6 00		
150	1A	150-1 பா	ர	பு	...	8-3	5	2 00	1 73.5	3 46	434 மா. நடராஜன் மற்றும் ஏழு பேர்களும்.	
	1B	-1பா	ர	பு	...	8-3	5	2 00	0 27.0	0 54	45 மா. சுந்தராமிக் கவுண்டர்.	
	2	-2	ர	பு	...	8-3	5	2 00	3 19.5	6 44	90 க. சென்னி மலைக் கவுண்டர்.	
									5 20.0	10 44		
151	1	151-1	ர	பு	...	8-3	5	2 00	3 16.5	6 38	285 ந. ராக்ரியாக் கவுண்டர் (1), ந. கருப்பக் கவுண்டர் (2),	
	2	-2	ர	பு	...	8-3	5	2 00	3 15.0	6 31	204 க. ராமசாமிக் கவுண்டர்.	கிணறு
									6 31.5	12 69		
152	1	152-1	ர	பு	...	8-3	5	2 00	6 46.0	12 94	347 ர. ராயன் (1), சி. ராமாத் தான் (2), அ. பழனியம் மான் (3),	

கிராம நிர்வாக அலுவலர் மற்றும் விவரப்பட்டியலைப் பார்க்கவும்.

பிறப்பு இறப்பு பதிவுகள்

4. வேலம்பாளையம் கிராமம்,

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



செய்த நாள்
 எண் 531
 நாள் 19-1-98

Rs 5,000

சுமார் பிள்ளைகள்
 கிராமம் - சேலம் மாவட்டம்
 கிராமம் - சேலம் மாவட்டம்
 கிராமம் - சேலம் மாவட்டம்

சுமார் பிள்ளைகள்
 63 வேலம்பாளையம்

சுமார் ரூபாய் 58,500.00

19.1.1998 ஆயிரத்த தொளாயிரத்த தொழிலாளர் நிதி எட்டாம் வருடம் ஜனவரி மாதம் 19-ந் தேதிக்கு, கோயமுத்தூர் மாவட்டம், பல்லடம் எட்டம், 63 வேலம்பாளையம் கிராமம் கல்பா 63 வேலம்பாளையத்தில் நாகவலி தோட்டத்தில் வசிக்கும் பழனிச்சாமிக்கவுட்டர் மனைவி தெய்வாத்தாள் ஆகிய தம்பிக்கு.

1. மாவட்டம், கல்வட்டம், சாமளபுரம் கிராமம் மனரா வேலாயுதம்பாளையத்தில் வசிக்கும் காலஞ்சென்ற கருப்பகவுட்டர் மனைவி கருப்பாத்தாள் -1. 2. காலஞ்சென்ற கருப்பகவுட்டர் பெண்மகளும், சோமனா மாதப்பூரல் வசிக்கும் செவ்வியப்பகவுட்டர் மனைவியுமான தெய்வாத்தாள் -2. 3. காலஞ்சென்ற கருப்பகவுட்டர் மனைவி விநாயகமூர்த்தி -3. பழனிச்சாமி -4.

1.-கீரல் கருப்பாத்தாள்,
 இ.பெ.ரே.

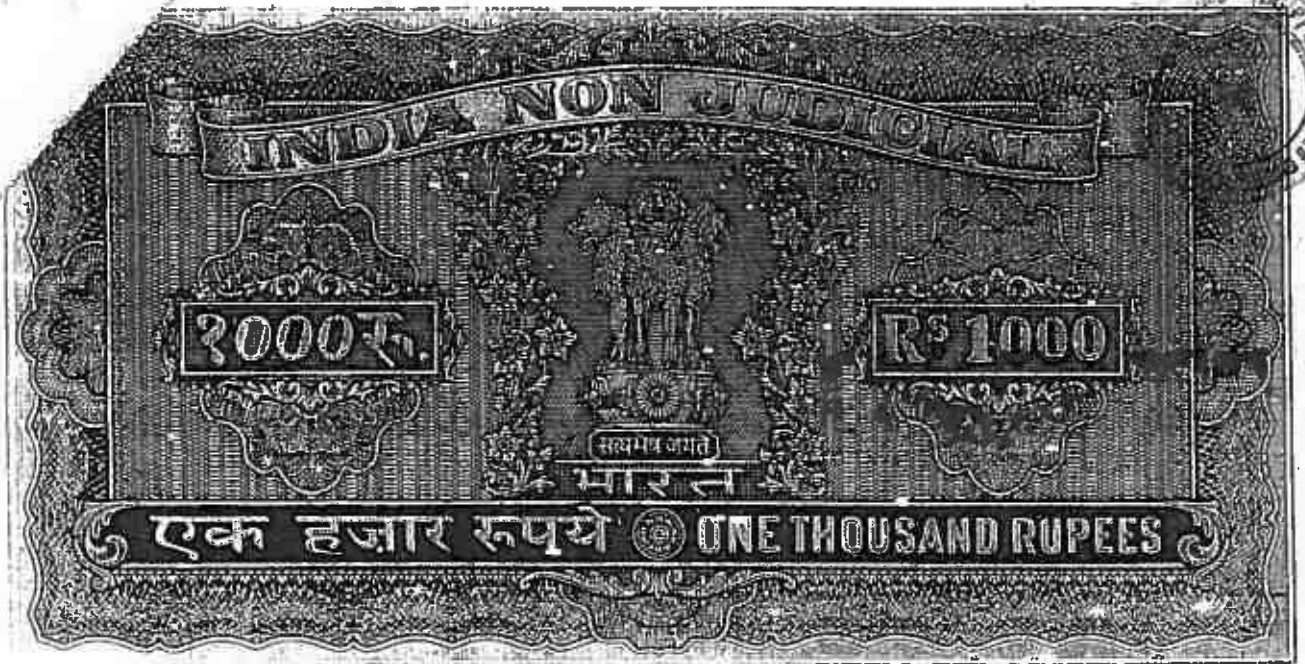
4. சுமார் பிள்ளைகள்

2.-கீரல் தெய்வாத்தாள்,
 இ.பெ.ரே.

5. சுமார் பிள்ளைகள்

3. சுமார் பிள்ளைகள்

6. சுமார் பிள்ளைகள்



வரிமுறை

எண் 533

நாள் 19.1.98

பாண்டிச்சேரி கி.பி.பி.
பித்திரைத் தாள்
விற்பனைபாளர், பல்லடம்
உரிமம் எண். 12/1992

செய்த அளவு

63.6000 மீட்டர்கள்

₹ 1000



..3..

சுகல, சரிவ சதநீரகங்களுடன் ஆண்டு அனுபவித்த வந்த, கையார் காலமாகி விட்டபடியால் கீழ்க்கண்ட சொத்து எங்களுக்கு பிற்றாஜிக வகையிலும், அனுபவப் படியும், வாரிசுகளிடமிருந்தும் பாத்தியப்பட்டு எங்களுடைய சுவாதீன அனுபவக்கீழில் உள்ள கீழ்க்கண்ட சொத்தை நாட்கள் நாளது தேதியில் தங்களுக்கு கிரயம் ரூ.58,500.00-க்கு கிரயத்தக்கு கொடுத்த கிரயத் தொகை ரூபாய் ஐம்பத்தி எட்டாயிரத்த ஐநூறும், தங்களால் நாட்கள் நாளது தேதியில் கீழ்க்கண்ட சாட்சிகள் முன்னிலையில் கிரயத் தொகை ரூ.58,500.00-ம் ரொக்கமாய் பெற்றுக்கொண்டபடியால் கீழ்க்கண்ட சொத்தை நாளது தேதிமுதல் தங்களுடைய சுவாதீனத்திலும் அனுபவக்கீழில் விடங்குகிறோம்.

1. - கீரல் கருப்பாத்தாள்,
இ.பெ.ரே.

4. K. பழனிசாமி

2. - கீரல் தெழுவாத்தாள்,
இ.பெ.ரே.

5. N. சண்முகம்

3. K. சண்முகம்

6. S. சாதுமணி



RS 20



குறிப்புகள்
 எண் 534
 நாள் 19-1-1992

செயல்பாட்டு
 63.6556 மாதிரி

செயல்பாட்டு
 கா. ப. அ. மதுரை காவல்
 அலுவலகம், மதுரை
 திகதி: ஏன் 19 1992

..4..

கீழ்க்கண்ட சொத்தை நானது தேதிமுதலி நாட்களே சகல, சமீப
 கதந்திரங்களுட்கி ஆண்டு அனுபவித்தேக் கொள்ளவேண்டியது.

கீழ்க்கண்ட சொத்தை நாட்கள் எளிவித விவிலங்க விவகாரங்களுக்கு
 உட்படுத்தவில்லையென்ற தங்களை நம்பும்படி உவிமயாகவும், உறுதியாகவும்
 சொல்லுகிறோம்.

அப்படி ஏதாவது விவிலங்க விவகாரங்கள் இருந்து வெளிவந்தால்
 நாட்களே முடிவிற்கு எடுக்கப்படும் இது சொத்துக்களைக் கொண்டு எடுக்கப்படும்
 சொந்தக் செலவிலும், சொந்தப் பொறுப்பிலும் தீர்த்துக் கொடுப்போமாகவும்.

1. - கீரடி கருப்பாத்தாடி,
 இ.பெ.ரே.



4. K. பழனிசாமி

2. - கீரடி தெய்வாத்தாடி,
 இ.பெ.ரே.



5. K. பழனிசாமி

3. K. பழனிசாமி

6. K. பழனிசாமி



16.11.21-4-11 5000/-

Handwritten text in Malayalam script, including a date and a signature.

21.4.1997

ശീതഗമ്യൻ രൂപമാർ 2,10,500.00

21.4.1997 മുഖിരീയ മെറ്റാബോളിക് മെറ്റാബോളിക് നീറ്റി ബോധൻ
 ബോധൻ ബോധൻ മാർഗ്ഗം 21-നു മേൽ, മെറ്റാബോളിക് മെറ്റാബോളിക്, പരിപാടി
 നെ, 63 മെറ്റാബോളിക് മെറ്റാബോളിക്, മെറ്റാബോളിക് 63 മെറ്റാബോളിക്
 മെറ്റാബോളിക് മെറ്റാബോളിക് മെറ്റാബോളിക് മെറ്റാബോളിക് മെറ്റാബോളിക്
 മെറ്റാബോളിക് മെറ്റാബോളിക് മെറ്റാബോളിക്

ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം
 ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം
 ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം
 ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം, ഈ മാർഗ്ഗം



T64 21-4-97 ரூ. 5000/-

பிழைப்பு எண் நாள்

ச. சிவசுப்பிரமணியன்
முதலியவர்கள் கிழப்பையாளர் குலார்.
உரிமம் எண் 9 / திருப்பூர் / 1993

செய்தியளிப்பினர்
63. வேலப்பாளையம்



..2..

கீழ்க்கண்ட சொத்து எங்களில் 1 லக்கமிட்டவருக்கு பல்லடம் சார்பதவாளர் அலுவலகத்தின் பதிவு எண் 1 புத்தகம் 1034 தொகுதி 281 முதல் 283 வரை பக்கங்களில் 1973-ம் வருடத்திய 125 நெம்பராக பதிவாகியுள்ள கிரைய சாசனப் பத்திரப்படிக்கும், பின்பும் கீழ்க்கண்ட சொத்து எங்களில் 2 லக்கமிட்டவருக்கு பல்லடம் சார்பதவாளர் அலுவலகத்தின் பதிவு எண் 1 புத்தகம் 1190 தொகுதி 447, 448 பக்கங்களில் 1982-ம் வருடத்திய 489 நெம்பராக பதிவாகியுள்ள கிரைய சாசனப் பத்திரப்படிக்கும், எங்களுக்கு சுயமாகப் பாத்தியப்பட்டு எங்களுடைய சுவர்தீன அனுபோகத்தில் உள்ள கீழ்க்கண்ட சொத்தை நாங்கள் நாளை தேதியில் தங்களுக்கு கிரையம் ரூ. 2,18,500.00-க்கு கிரையத்துக்கு கொடுத்த கிரையத் தொகை ரூபாய் இரண்டு லட்சத்து பதினெட்டாயிரத்து ஐதாயம், தங்களால் நாளை தேதியில் கீழ்க்கண்ட சாட்சிகள் முன்னிலையில்

1. ராயன்
2. உதகியம்பலம்



765 21-4-97

5000/-

நாடு எண் நகர்

ச. அருள்மீரகாஷ்,
முத்திரைநாள் அறிப்பனையாளர்
குழார்.
உரியம் எண் 9 / திருப்பூர் / 1993

செய்யுண்டித்தரன்
63. செவல்பாளையம்



..3..

கிரையத் தொகை ரூ. 2,18,500.00.-ய் ரொக்கமாய் பெற்றுக்கொண்ட
படியால் கழீகண்ட சொத்தை நாளை தேதிமுதல் தங்குகூடைய சுளாதீனத்தினம்,
அவபோகத்தினம் விட்டிருக்கிறோம்.

கழீகண்ட சொத்தை நாளை தேதிமுதல் தாங்களே சகல, சர்வ
சுதந்திரங்களுடன் ஆண்டு அனுபவித்துக் கொள்ளவேண்டியது.

கழீகண்ட சொத்தை நாட்கள் எல்லித வில்லங்க வினகாரங்குக்கும்
உட்படுத்தவில்லையென்ற தங்குகளை நம்பும்படி உன்மையாகவும், உறுதியாகவும்
சொல்லுகிறோம்.

1. ராயன்

2. அதுவியம்மாள்

5000 Rs.



சமீபநாள் எண் நாள்
767 21-4-97

₹5000/-

சு. சி. சுவாமிநாதன்
சு. சி. சுவாமிநாதன்
முத்தியைந்தான் வற்புண்டையாளர்
குலார்.
உரிமம் எண் 9 / திருப்பூர் / 1993

செய்யலாங்குளம்
63. வேலம் புகழையர்



..5..

சொக்த விபரம்

திருப்பூர் பதிவு மாவட்டம், பல்லடம் சார்பதிவு வட்டம், பல்லடம் வட்டம், பல்லடம் பஞ்சாயத்தின் யூனியன்க்குச் சேர்ந்த சுதேசப்பாளையம் கிராம பஞ்சாயத்திற் போரிடு எல்லைக்குட்பட்ட சுதேசப்பாளையம் கிராமத்தில்: க.ச.3/3 நெ காலை(மூன்ற உப்பினிடி மூன்ற)பு.கா.எ.0.10க்கு க.ந.0.06 பைசா இந்த பயி பராவும்.

1. ராபுரன்

2. அழகியன்



பதிற்சாட்டு எண் நாள்
 768 21-4-97 91000/-

சு. அ. சுவாமிநாதன்,
 முத்திரைதாள் விற்பனையாளர்
 குளூர்.
 உரிமம் எண் 9/திருப்பூர்/1993

செயல்வாங்கியாக
 63 வேலம்பாளையம்

..6..

பின்வரும் கீழ்க்கண்ட திருப்பரி பதிவு, மாவட்டம், பல்லடம் சார்பதவு வட்டம், பல்லடம் வட்டம், பல்லடம் பஞ்சாயத்து ஆணையத்துக்குச் சேர்ந்த 63 வேலம்பாளையம் கிராம பஞ்சாயத்துப் போர்டு எல்லைக்குட்பட்ட 63 வேலம்பாளையம் கிராமத்தில்:

க.ச. 152/1 நெ காவல பு.கா. ஏ.15.95க்கு த.ந.12.94 பைசா இடம், தென்வடல் பொய்யாக மேல்புரம் செல்லக்காள் பங்கு பரிக்கும் மேற்கு, கிறமேல் இட்டோரிக்கும் வடக்கு

புசாரி மாரப்பகவுண்டர் வகையரா பரிக்கும் கிறக்கு,

கட்டுக்கார கருப்பகவுண்டர் பரிக்கும் தெற்கு

இதன் மத்தியில் பு.கா. ஏ.10.82க்கு த.ந.12.81 பைசா இந்த பரியும்.

1. ராயன்

2. அழகியன்

100RS



769 24-4-97

ச. அருண் பிரகாஷ்,
முத்திரைகள் விற்பனையாளர்
குளர்.
உலகம் எண் 9 / திருப்பூர் / 1993

செய்தவர்க்கு
63. திருவாய்மொழி



...7..

இவ்வூறு கிராமிய சேரிக்கு ஒட்டு ஏ.10.92க்கு த.ந.8.87 கபசா
மீதம் புகள் பராமம்.

1. ராஜகாரி

2. உதவி கி.ய. 2020 9 மீ



770 21-4-97
வரிநாடு எண் நாள்

₹ 100/-



சென்னை
பி. சிவசுப்பிரமணியன்,
முத்திரைநாள் விற்பனையாளர்
குஜர்.
உரிமம் எண் 9 / திருப்பூர் / 1993

பெயர்
63. வேளாங்கண்ணம்

...8..

ஊர் புகழ்க்குரிய மாமூல் வழிநடை பாத்தியம் சலிதம்.

ஊர் சொத்தின் தற்கால மதிப்பு ரூ. 2,18,500.00

1. ராய்மன்

2. உதகரியம்

சாட்சிகள் :-
1. K. N. சிவசுப்பிரமணியன், சிவசுப்பிரமணியன்
2. B. Chi. Kannan, சிவசுப்பிரமணியன்

ஆவணம் வரைவு செய்தவர் : [Signature]
ஆவணம் தடப் செய்தவர் : [Signature] 10/2/92. P. Vasanthalingam
[Signature] 10/2/92. P. Vasanthalingam



77) 21-4-97 20/-

தமிழ்நாடு எண் நாள்

பி. சமுதிரகாண்டி,
முத்திரைதான் விற்பனையாளர்
குணர்.
உரிமம் எண் 9 / மிகுப்பூர் / 1993

செயல்பாட்டாளர்
63. வேலம்பாளையம்



..9..

1968-ம் வருடத்திய பத்திரங்களின் மதிப்புக் குறைவைத் தடுக்கும் மதரால் ஸ்டாம்புச் சட்டம் விதி 3(1)-ஊபடி பட்டியல்:

வ.எண். சரிவே எண் விவரம் பரிசின் இடை எழுதிக்கொடுப்பவர்களின் திரையைப்படி, தற்கால மாரிக்கட் மதிப்பு.

சுடிகம்பாளையம் கிராமம்			
1.	க.ச. 3/3	0.10	பு.கா.மதிப்பு ரூ. 2,000.00
63 வேலம்பாளையம் கிராமம்			
2.	க.ச. 152/1	10.82	" ரூ. 2,16,400.00
3.	தடபாத்திய		மதிப்பு ரூ. 100.00
			மொத்த மதிப்பு ரூ. 2,18,500.00

எழுதிக்கொடுப்பவர்களின் கையொப்பம்,

1. முய்யாண்டி

2. ப. சமுதிரகாண்டி

भारतीय गैर न्यायिक

बीस रुपये

Rs. 20

₹. 20

TWENTY RUPEES

INDIA

INDIA NON JUDICIAL

தமிழ்நாடு தமிழ்நாடு TAMIL NADU

88AB 193160

25 JAN 2021

[Handwritten signature]

T. சர்ப்ரமணியன்
Jr. SRO IV Vendor
ROC No. 6645 B1/85
10-A, D.E. ஸ்டாடு
சுந்தரராஜபுரம், மதுரை-625 01

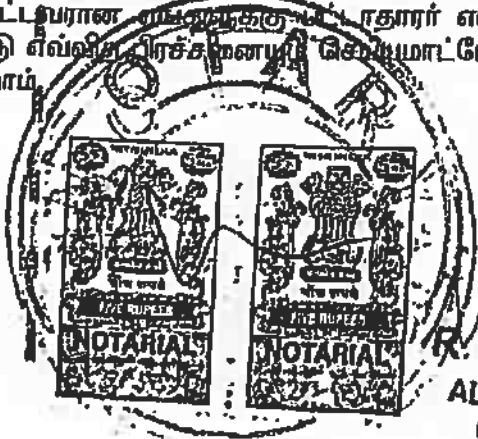


ஆட்சேபணையின்மைக் கடிதம்

திருப்பூர் மாவட்டம், பல்லடம் வட்டம், வேலம்பாளையம் கிராமம், நாசுவன்காட்டு தோட்டம் முகவரியில் வசிக்கும் பழனிச்சாமி கவுண்டர் மகன் முத்துக்குமார் (1), நடராஜன் (2) ஆகிய நாங்கள் (1) திருப்பூர் மாவட்டம், பல்லடம் வட்டம், வேலம்பாளையம் கிராமம், நாசுவன்காட்டு தோட்டம் என்ற முகவரியில் வசிக்கும் பழனிச்சாமி கவுண்டர் மனைவி தெய்வத்தாள் (3) ஆகிய உங்களுக்கு எழுதிக்கொடுக்கும் சம்மதக் கடிதம் என்னவென்றால்,

திருப்பூர் மாவட்டம், பல்லடம் வட்டம், வேலம்பாளையம் கிராமம், புல எண். 152/1-ல் 6.46.0 ஹெக்டர் பூமிபானது பட்டா எண். 347-ன்படி நம்மில் (1) முதல் (3) வரை இலக்கமிட்டவர் பெயரில் கூட்டுப்பட்டாவாக தாக்கலாகியுள்ளது.

மேற்படி புலத்தில் நம்மில் (3) இலக்கமிட்ட திருமதி. தெய்வத்தாள் என்பவர் பெயரில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் வழங்கக் கோரி விண்ணப்பம் செய்து, துணை இயக்குநர் (கனிமம்) அவர்களால் அனுமதி வழங்கும் நாளிலிருந்து பத்து ஆண்டுகளுக்கு குவாரி குத்தகை உரிமம் பெற்று சாதாரண கற்கள் மற்றும் கிராவல் குவாரி நடத்த நம்மில் (1) மற்றும் (2) இலக்கமிட்டவரான ராஜசேகரன் மற்றும் தாதாரர் என்ற முறையில் எவ்விதமான ஆட்சேபணையும் இல்லை. பின்னிட்டு எவ்வித பிரச்சனையும் செய்யமாட்டோம். முழுமனதுடன் சம்மதம் அளிக்கிறேன் என உறுதி கூறுகிறோம்.



[Handwritten signatures]

R. Suguna Devi-M.A.BL.,
ADVOCATE & NOTARY PUBLIC
Commissioner Of Oaths
No.6, Court Street, Tirupur-1
Cell - 9843172666

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



ANNEXURE - VI



இந்திய அடையாள அமைப்பு அதிகாரம்
Unique Identification Authority of India

முகவரி:
கணவர் பெயர்: பழனிச்சாமி,
7, நாலிதன்
காட்டுத்தோட்டம், பல்லடம்,
வேலம்பாளையம், திருப்பூர்,
தமிழ் நாடு - 641663

Address:
W/O: Palarisamy, 7, NAVITHAN,
KATTUTH THOTTAM,
PALLADAM, velampalayam,
Tiruppur,
Tamil Nadu - 641663

4406 8898 4744



help@uidai.gov.in



www.uidai.gov.in



இந்திய அரசாங்கம்
Government of India



தெய்வத்தாய்
Dervathai
பிறந்த நாள்/ DOB 09/06/1947
பாலினம் / FEMALE



4406 8898 4744

எனது ஆதார், எனது அடையாளம்


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

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

MINING PLAN

FOR

GRANT OF ROUGH STONE & GRAVEL QUARRY LEASE IN PATTALAND
PROPOSED PERIOD OF MINING 5 YEARS

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

LOCATION OF THE APPLIED AREA

EXTENT : 3.55.5Ha.
S.F. Nos : 3/2A & 152/1(P).
VILLAGE : SUKKAMPALAYAM & VELAMPALAYAM.
TALUK : PALLADAM.
DISTRICT : TIRUPPUR.
STATE : TAMIL NADU.

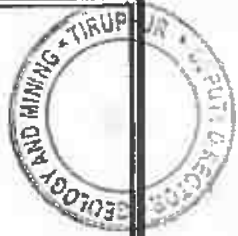
APPLICANT

TMT. P. DEIVATHAL,
W/o. PALANISAMY GOUNDER,
NAASUVAN KAATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TIRUPPUR DISTRICT - 641 663.

PREPARED BY:

S. DHANASEKAR, M.Sc.(Geol),M.M.E.A.I.,

QUALIFIED PERSON,
NO. 5/30-7 B, AVVAI NAGAR,
PONKUMAR MINES ROAD,
JAGIR AMMAPALAYAM,
SALEM DISTRICT - 636 302.
Email: geodhana@yahoo.co.in
CELL : 98946-28970 & 73733-74702.





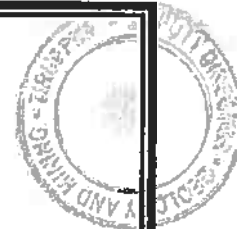
CONTENTS

SL. NO.	DESCRIPTION	PAGE NO.
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2.0	EXECUTIVE SUMMARY	10
3.0	GENERAL INFORMATION	10
4.0	LOCATION	11
5.0	GEOLOGY AND MINERAL RESERVES	12
6.0	MINING	17
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8.0	MINE DRAINAGE	22
9.0	OTHER PERMANENT STRUCTURES	23
10.0	EMPLOYMENT POTENTIALS & WELFARE MEASURES	24
11.0	ENVIRONMENT MANAGEMENT PLAN	25
12.0	MINE CLOSURE PLAN	29
13.0	ANY OTHER DETAILS INTEND TO FURNISH BY THE APPLICANT	30



ANNEXURES

SL. NO.	DESCRIPTION	ANNEXURE NO.
1.	COPY OF PRECISE AREA COMMUNICATION LETTER	I
2.	COPY OF FMB	II-A & B
3.	COPY OF COMBINED SKETCH	III
4.	COPY OF PATTa, ADANGAL & 'A' REGISTER	IV
5.	COPY OF LAND REGISTRATION & CONSENT DOCUMENTS	V
6.	COPY OF ID PROOF	VI
7.	COPY OF QUALIFICATION CERTIFICATE	VII
8.	COPY OF EXPERIENCE CERTIFICATE	VIII
9.	COPY OF PROPOSED LEASE AREA PHOTOS	IX



LIST OF PLATES

SL. NO.	DESCRIPTION	PLATE NO.	SCALE
1.	LOCATION PLAN	I	Not to Scale
2.	KEY MAP	IA	Not to Scale
3.	TOPO SHEET MAP OF THE LEASE AREA	IB	Not to Scale
4.	SATELLITE IMAGE (LEASE AREA)	IC	1:2000
5.	SATELLITE IMAGE(500m RADIUS)	ID	1:5000
6.	MINE LEASE PLAN	II	1:1000
7.	SURFACE & GEOLOGICAL PLAN	III	1:1000
8.	GEOLOGICAL SECTIONS	III-A & B	HOR 1:1000 VER 1: 500
9.	YEARWISE DEVELOPMENT AND PRODUCTION PLAN	IV	1:1000
10.	YEAR WISE DEVELOPMENT AND PRODUCTION SECTIONS	IV- A & B	HOR 1:1000 VER 1: 500
11.	MINE LAYOUT, LAND USE PATTERN & AFFORESTATION PLAN	V	1:1000
12.	ENVIRONMENT PLAN	VI	1:5000
13.	CONCEPTUAL & FINAL MINE CLOSURE PLAN	VII	1:1000
14.	CONCEPTUAL & FINAL MINE CLOSURE SECTIONS	VII- A & B	HOR 1:1000 VER 1: 500
15.	PROGRESSIVE MINE CLOSURE PLAN	VIII	1:1000

P. DEIVATHAL ,
W/o. PALANISAMY GOUNDER,
NAASUVAN KAATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TIRUPPUR DISTRICT - 641 663.



CONSENT LETTER FROM THE APPLICANT

I hereby give my consent for preparing the Mining Plan in respect of **Rough Stone & Gravel** quarry over an extent of **3.55.5 Hectares** of **Patta Land** in **S.F.Nos. 3/2A (1.53.0) & 152/1(P) (2.02.5)** of **Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District, Tamilnadu State** by **Shri. S. Dhanasekar, M.Sc.,** Qualified Person.

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

S.DHANASEKAR, M.Sc.,

Qualified Person

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

Ponkumar Mines Road,

Jagir Ammapalayam,

Salem District - 636 302.

E-Mail: geodhana@yahoo.co.in

Cell: 98946-28970

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

(P. DEIVATHAL)
Signature of the Applicant

Place: Tiruppur.

Date:

P. DEIVATHAL ,
W/o. PALANISAMY GOUNDER,
NAASUVAN KAATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TIRUPPUR DISTRICT - 641 663.



DECLARATION

I hereby declare that the Mining Plan in respect of Rough Stone & Gravel quarry over an extent 3.55.5 Hectares of Patta Land in S.F.Nos. 3/2A (1.53.0) & 152/1(P) (2.02.5) of Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District, and Tamilnadu State has been prepared with my consultation and I have understood the contents and agree to implement the same in accordance with the Mining Laws.

(P. DEIVATHAL)
Signature of the Applicant

Place: Tiruppur.

Date:



KRK MEMORIAL MINING SERVICES

S.DHANASEKAR
M.Sc. (Geol. M.M.E.A.)
Senior Geologist /
Recognized Qualified Person



Off
86680 20217

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

GST: 33ALIPD6733A1Z0



CERTIFICATE

This is to certify that, the provisions of Minor Minerals Conservation and Development Rules, 2010 (MMCDR) have been observed in the Mining Plan for the grant of **Rough Stone & Gravel** quarry lease over an extent of **3.55.5 Hectares** of **Patta Land** in **S.F.Nos. 3/2A (1.53.0) & 152/1(P) (2.02.5)** of **Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District, Tamilnadu State** obtained by **Tmt.P. DEIVATHAL**, for applied quarry lease.


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


Certified


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

Place: SALEM

Date:


11°41'29.45" N
78°07'13.58" E


98946 28970
73733 74702


krkmemorialminingservices
@gmail.com
geodhana@yahoo.co.in


Branch
8/3, Kullappan Street.
Opp. Indian Bank Line,
Omatur, Salem - 636 455.



KRK MEMORIAL MINING SERVICES

S.DHANASEKAR
M.Sc. (Geo), M.M.E.A.I
Senior Geologist /
Recognized Qualified Person

Off
86680 20217

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

GST: 33ALIPD6733A1Z0



CERTIFICATE

This is to certify that during preparation of Mining Plan for **Rough Stone & Gravel** quarry over an extent of **3.55.5 Hectares** of **Patta Land** in **S.F.Nos. 3/2A (1.53.0) & 152/1(P) (2.02.5)** of **Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District, Tamilnadu State** for **Tmt. P. DEIVATHAL** covers all the provisions of **Mines Act, Rules, and Regulations etc** made there under and whenever specific permission are required, the Applicant will approach the **Director General of Mines Safety, Chennai**. The standards prescribed by **DGMS** in respect of **Mines Health** will be strictly implemented.

Certified


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

Place: SALEM

Date:

11°41'29.45" N
78°07'13.58" E

98946 28970
73733 74702

krkmemorialminingservices
@gmail.com
geodhana@yahoo.co.in

Branch
8/3, Kullappan Street.
Opp. Indian Bank Line,
Omatur, Salem - 636 455.

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



Over an extent 3.55.5 Hectares of Patta Land in S.F.Nos. 3/2A (1.53.0) & 152/1(P) (2.02.5) of Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District, and TAMILNADU State.

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

1.0 INTRODUCTION :

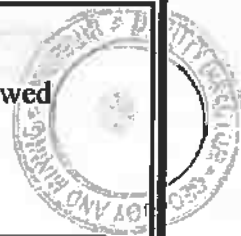
1. **Tmt. P. DEIVATHAL**, W/o. Palanisamy Gounder residing at Naasuvan Kaattu Thottam, Velampalayam Village, Palladam Taluk, Tiruppur District- 641 663 has applied quarry lease for **Rough Stone & Gravel** over an extent of **3.55.5 Hectares** of Patta Land in S.F.Nos. 3/2A (1.53.0) & 152/1(P) (2.02.5) of Sukkampalayam & Velampalayam Village, Palladam Taluk, Tiruppur District of Tamilnadu State for a period of Five years.
2. The **DEPUTY** Director (G&M), TIRUPPUR in his letter Rc. No.348/Mines/2021 dated 21.01.2022 has directed the applicant to produce approved Mining Plan and Environmental Clearance certificate from the State Environment Impact Assessment Authority (SEIAA) for the grant of quarry lease for the applied area.
3. Accordingly, Mining Plan is prepared under Rules 41 & 42 as amended in Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating the conditions imposed in the precise area communication letter and by incorporating all the details proposed in the letter to obtain environment clearance from State Environment Impact Assessment Authority.
4. In the above circumstances **TMT. P. Deivathal** is hereby preparing the Mining Plan for approval for Applied Rough Stone & Gravel Quarry. And subsequent submission of Form-I and Pre-Feasibility report to obtain environmental clearance from the SEIAA of Tamil Nadu.
5. This Mining Plan is prepared for the Applied **Rough Stone & Gravel** for a period of **Five Years**.
6. This Mining Plan is prepared by considering the TNMMCR 1959, and as per the EIA Notification 2006 and subsequent amendments and judgments.


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



7. The Geological Reserves available in the lease period is 1229095M³ and Mineable & recoverable Reserves is estimated as 455570M³ of Rough Stone after leaving necessary safety distance from the lease boundary as indicated while granting the quarry lease Proceedings and relevant mining laws in force.
8. The proposed production scheduled for the five years about 455570m³ of Rough stone and 54866m³ of Gravel. The proposed average annual production of Rough stone is about 91114m³.
9. Environmental parameters,
 - i) There is no interstate boundary around 10Kms radius.
 - ii) There is no wild life animal sanctuary within 10Kms radius form the project site area under the Wildlife (Protection) Act, 1972. Therefore the project seeks clearance only from State Environment Impact Assessment Authority (SEIAA), under B2 Category.
10. Environmental measures already adopted are,
 - i) Dust Control at source while drilling and blasting,
 - ii) Dust suppression at loading point and transport haul roads,
 - iii) Noise Control in blasting, control of fly rock missiles and vibration by doing peak particle velocity with in standard as prescribed by the DGMS and MoEF.
 - iv) Unnecessary land degradation should be avoided or damaged land should be reclaimed or rehabilitated.
 - v) Uneven rat hole mining is avoided and follow scientific and systematic mining by safe bench system of open cast mining.
 - vi) Mining near major fracture zones already avoided to control ground water fluctuation in the adjacent agricultural lands.
 - vii) Emission test of vehicles should be in stack maintain minimum emission level of flue gases.
 - viii) Noise level should not exceed 80db and the vehicles 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 will be followed to protect the environment.



2.0 EXECUTIVE SUMMARY:

a.	Name of the Village	:	SUKKAMPALAYAM & VELAMPALAYAM
b.	Name of the Panchayat / Union	:	Sukkampalayam & Velampalayam / Palladam
c.	The proposed total Mineable Reserves	:	455570M³
d.	The proposed quantity of reserves (level of production)) Rough Stone & Gravel	:	455570M³ of Rough Stone 54866m³ of Gravel
e.	Total extent of the area	:	3.55.5Ha
f.	Proposed Period of mining	:	Five Years
g.	Proposed Depth of mining	:	38m
h.	Existing Pit Dimension	:	Nil
i.	Average Production Per Year Rough Stone & Gravel	:	91114M³ of Rough stone 16289m³ of Gravel
j.	Method of mining / level of mechanization	:	Opencast, Semi-mechanized Mining with a bench height of 5m and bench width of 5m is proposed.
k.	Types of Machineries used in the quarry	:	i) Compressor with jack hammer. ii) Excavator of 0.90Cbm bucket Capacity.
l.	Cost of the Project a. Fixed Cost b. Operational Cost c. EMP Cost	:	Rs. 25,46,000/- Rs. 30,00,000/- Rs. 3,50,000/-
m.	The Applied lease area is bounded by four corners and the coordinates are Latitude Longitude North East South East North West South West	:	Toposheet No. 58 – E/18 : 11° 02' 17.2275" N to 11° 02' 14.0866" N : 77° 15' 30.0902" E to 77° 15' 23.0535" E : 11° 02' 17.2275" N 77° 15' 30.0902"E : 11° 02' 11.7390" N 77° 15' 29.5323"E : 11° 02' 20.7626" N 77° 15' 23.3843"E : 11° 02' 14.0866" N 77° 15' 23.0535"E

3.0. GENERAL INFORMATION:

3.1	a.	Name of the Applicant	:	TMT. P. Deivathal,
	b.	Address of the Applicant with phone No and e-mail id if any	:	W/o. Palanisamy Gounder, Naasuvan Kaattu Thottam, Velampalayam Village, Palladam Taluk, Tiruppur District - 641 663.

	c.	Status of the Applicant	:	Individual
3.2	a.	Mineral Which the Applicant intends to mine	:	Rough Stone & Gravel
	b.	Precise area letter	:	Re. No.348/Mines/2021 dated 21.01.2022
	c.	Period of permission	:	5 Years
	d.	Name and Address of the Qualified Person preparing Mining Plan	:	S.Dhanasekar, M.Sc., Qualified Person No.5/30-7B, Avvai Nagar, Ponkumar Mines Road, Jagir Ammapalayam, Salem District - 636 302. E-Mail: geodhana@yahoo.co.in Cell: 98946-28970 & 73733-74702

4.0 LOCATION: DETAILS AREA:

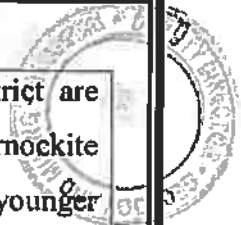
STATE	DISTRICT	PANCHAYAT / UNION	TALUK	VILLAGE	S.F.NOS	EXTENT IN HECTARE
Tamilnadu	Tiruppur	Sukkampalayam & Velampalayam / Palldam	Palladam	Sukkampalayam	3/2A	1.53.0
				Velampalayam	152/1(P)	2.02.5
TOTAL =						3.55.5
b.	Classification of the Area (Ryotwari / Poramboke / others)		:	It is a Patta Land, which is not fit for vegetation/cultivation.		
c.	Ownership / Occupancy of the Applied Lease area (Surface rights)		:	It is a Patta Land in S.F.Nos. 3/2A registered in the name of Tmt. P. Deivathal, W/o.Palanisamy Gounder vide Patta No.36 and S.F.No.152/1(P) registered in the name of Tmt. P. Deivathal, Mr. Natarajan & Mr. Muthukumar vide patta No.347. Pattadhars Mr. Natarajan & Mr. Muthukumar, S/o. Palanisamy Gounder gave consent to the applicant Tmt. P. Deivathal. Hence applicant has surface right over the area.		
d.	Toposheet No. with Latitude and Longitude		:	Toposheet No. 58 – E/8 : 11° 02' 17.2275" N to 11° 02' 14.0866" N : 77° 15' 30.0902" E to 77° 15' 23.0535" E		

e.	Existence of Public Road / Railway line if any nearby the area and approximate distance	:	Tiruppur – Arulpuram = 8.0 Kms. Arulpuram – Sedapalayam = 2.5kms. Quarry site is located in Western side at a distance of 4.0kms from Sedapalayam village.
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PART - A

5.0 GEOLOGY AND MINERAL RESERVES:

5.1	a.	Topography	:	<ol style="list-style-type: none"> 1. The applied lease area is plain topography and sloping towards Southeast side covered with Rough Stone which does not sustain any type of vegetation. 2. No major river is found nearby the lease area. 3. Water table is noticed at a depth of 52m from below the surface in the adjacent open well and bore well. 4. Temperature of the area is reported to be 22⁰C to a maximum of 35⁰C during summer. 5. Rainfall of this area is about 700mm to 800 mm during the monsoons in a year.
	b.	Infrastructures nearby the Applied Lease area. <ol style="list-style-type: none"> 1. Post Office 2. Police Station 3. G.H 4. Fire service 5. Railway Station 6. School 7. Airport 8. Seaport 	:	Kaalivelampatti – 4.0 kms Palladam – 6.5 kms Palladam – 6.5 kms Palladam – 6.5 kms Tiruppur – 17.0 kms Naranapuram – 3.5 kms Coimbatore – 36.0kms Tuticorin – 334.0 kms
	c.	Regional Geology	:	TIRUPPUR 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.

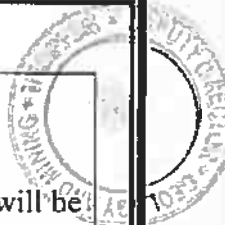


			<p>The geological formations found in the District are Archaean rocks like Gneisses, Granites, Charnockite basic granulites and calc-gneisses. The younger formations are Quartz veins and pegmatite.</p> <p>The generalized stratigraphic succession of the geological formations met within this District is 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	<p>1. The area is mainly composed of Archaean crystalline metamorphic complex.</p> <p>2. The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals.</p> <p>3. The Charnockite is part of peninsular Gneisses, a high grade metamorphic rock.</p> <p>4. The general trend of formation is NE- SW and Dip SE 80°.</p> <p>The general geological succession of the area is given under</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>Charnockites</td> </tr> <tr> <td>3.</td> <td>Archaean</td> <td>Peninsular Gneiss, and Calc Gneiss</td> </tr> </tbody> </table>		Age	Rock Formation	1.	Recent to Sub recent	Soil, Alluvium	2.	Archaean	Charnockites	3.	Archaean	Peninsular Gneiss, and Calc Gneiss
	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	<p>Since the Rough Stone & Gravel is seen from the Surface itself, No needed to exploration. However, the area was personally examined by the Geologist who prepared the Mining Plan.</p>
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5.3	a.	Already excavated in pit dimensions	Nil
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b. Geological Reserves:

Gravel :

The Thickness of Gravel in this area is 2.0m and the total volume of Gravel will be **70234m³**.

Rough Stone :

The Available Geological Reserve is estimated as **1229095m³** respectively.

Total Depth-38m (2m Gravel + 1m Weathered Rock + 35m Rough Stone).

GEOLOGICAL RESERVES								
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Geological Reserves in m3 @ 100%	Weathered Rock in m3	Gravel in m3
XY-AB	I	81	77	2				12474
	II	81	77	1			6237	
	III	81	77	5	31185	31185		
	IV	81	77	5	31185	31185		
	V	81	77	5	31185	31185		
	VI	81	77	5	31185	31185		
	VII	81	77	5	31185	31185		
	VIII	81	77	5	31185	31185		
	IX	81	77	5	31185	31185		
	TOTAL					218295	218295	6237	12474
XY-CD	I	103	82	2				16892
	II	103	82	1			8446	
	III	103	82	5	42230	42230		
	IV	103	82	5	42230	42230		
	V	103	82	5	42230	42230		
	VI	103	82	5	42230	42230		
	VII	103	82	5	42230	42230		
	VIII	103	82	5	42230	42230		
	IX	103	82	5	42230	42230		
	TOTAL					295610	295610	8446	16892
X1Y1-EF	I	94	124	2				23312
	II	94	124	1			11656	
	III	94	124	5	58280	58280		
	IV	94	124	5	58280	58280		
	V	94	124	5	58280	58280		
	VI	94	124	5	58280	58280		
	VII	94	124	5	58280	58280		
	VIII	94	124	5	58280	58280		
	IX	94	124	5	58280	58280		
	TOTAL					407960	407960	11656	23312

XIYI-GH	I	77	114	2				17556
	II	77	114	1			8778	
	III	77	114	5	43890	43890		
	IV	77	114	5	43890	43890		
	V	77	114	5	43890	43890		
	VI	77	114	5	43890	43890		
	VII	77	114	5	43890	43890		
	VIII	77	114	5	43890	43890		
	IX	77	114	5	43890	43890		
	TOTAL				307230	307230	8778	17556
GRAND TOTAL				1229095	1229095	35117	70234	

c. **Mineable Reserves:**

The Mineable reserves are calculated by deducting 7.5m Safety distance to the patta land and bench loss.

Gravel:

The Thickness of Gravel in this area is 2.0m and the total volume of Gravel will be **54866m³**.

Rough Stone :

The mineable reserves and the Recoverable Reserves are **455570m³** respectively, at the rate of 100% recovery upto the permissible depth. **Total Depth-38m (2m Gravel + 1m Weathered Rock + 35m Rough Stone).**

MINEABLE RESERVES								
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Mineable Reserves in m3 @ 100%	Weathered Rock in m3	Gravel in m3
XY-AB	I	74	62	2				9176
	II	72	58	1			4176	
	III	71	56	5	19880	19880		
	IV	66	46	5	15180	15180		
	V	61	36	5	10980	10980		
	VI	56	26	5	7280	7280		
	VII	51	16	5	4080	4080		
	VIII	46	6	5	1380	1380		
	IX	41	1	5	205	205		
	TOTAL				58985	58985	4176	9176

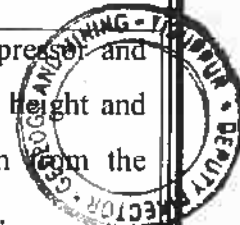
XY-CD	I	96	67	2				12864
	II	94	63	1			5922	
	III	93	61	5	28365	28365		
	IV	88	51	5	22440	22440		
	V	83	41	5	17015	17015		
	VI	78	31	5	12090	12090		
	VII	73	21	5	7665	7665		
	VIII	68	11	5	3740	3740		
	IX	63	1	5	315	315		
	TOTAL				91630	91630	5922	12864
XIY1-EF	I	87	109	2				18966
	II	85	105	1			8925	
	III	84	103	5	43260	43260		
	IV	79	93	5	36735	36735		
	V	74	83	5	30710	30710		
	VI	69	73	5	25185	25185		
	VII	64	63	5	20160	20160		
	VIII	59	53	5	15635	15635		
	IX	54	43	5	11610	11610		
	TOTAL				183295	183295	8925	18966
XIY1-GH	I	70	99	2				13860
	II	68	95	1			6460	
	III	67	93	5	31155	31155		
	IV	62	83	5	25730	25730		
	V	57	73	5	20805	20805		
	VI	52	63	5	16380	16380		
	VII	47	53	5	12455	12455		
	VIII	42	43	5	9030	9030		
	IX	37	33	5	6105	6105		
	TOTAL				121660	121660	6460	13860
GRAND TOTAL				455570	455570	25483	54866	

6.0 MINING:

6.1	Method of Mining	: 1. Opencast method of semi mechanized mining is being adopted to extract Gravel & Rough Stone of required size. 2. Machineries like Tractor mounted compressor attached with Jack hammers is used for drilling and blasting. Excavators are used for quarrying of Rough Stone & Gravel and Tippers / Lorries are used for the transportation of Rough Stone & Gravel to the destination.
6.2	Mode of Working	: It is a semi mechanized quarrying operation using shot hole drilling with the help of compressor and jack hammers and smooth blasting. Rough Stone are removed using Hydraulic excavator and loaded directly to the tippers and transported to the needy end users.
6.3	Proposed bench height & Width	: Bench height = 5mts. Bench width = 5mts.
6.4	Details of Gravel / Mineral Production proposed for five years.	: Gravel / Overburden production details follows: This area is covered 2.0m Gravel in this mine area 54866m³ . Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.
<p>Year wise reserves calculations :</p> <p>Rough stone & Gravel production details as follows:</p> <p>The proposed rate of production of Rough Stone is about 455570m³ & Gravel is about 54866m³ for Five Years. The average proposed rate of production of Rough Stone is about 91114m³ per year at the rate of 100% recovery upto the permissible depth. Total Depth-38m (2m Gravel+ 1m Weathered Rock + 35m Rough Stone).</p>		



YEARWISE DEVELOPMENT AND PRODUCTION									
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In m3	Recoverable Reserves in m3 @ 100%	Weathered Rock in m3	Gravel in m3
I-YEAR	XY-AB	I	74	62	2				9176
		II	72	58	1			4176	
		III	71	56	5	19880	19880		
		IV	66	46	5	15180	15180		
	XY-CD	I	96	67	2				12864
		II	94	63	1			5922	
		III	93	61	5	28365	28365		
		IV	88	51	5	22440	22440		
TOTAL						85865	85865	10098	22040
II-YEAR	XY-AB	V	61	36	5	10980	10980		
		VI	56	26	5	7280	7280		
		VII	51	16	5	4080	4080		
		VIII	46	6	5	1380	1380		
		IX	41	1	5	205	205		
	XY-CD	V	83	41	5	17015	17015		
		VI	78	31	5	12090	12090		
		VII	73	21	5	7665	7665		
		VIII	68	11	5	3740	3740		
		IX	63	1	5	315	315		
TOTAL						64750	64750		
III-YEAR	X1Y1-EF	I	87	109	2				18966
		II	85	105	1			8925	
		III	84	103	5	43260	43260		
	X1Y1-GH	I	70	99	2				13860
		II	68	95	1			6460	
		III	67	93	5	31155	31155		
TOTAL						74415	74415	15385	32826
IV-YEAR	X1Y1-EF	IV	79	93	5	36735	36735		
		V	74	83	5	30710	30710		
	X1Y1-GH	IV	62	83	5	25730	25730		
		V	57	73	5	20805	20805		
TOTAL						113980	113980		
V-YEAR	X1Y1-EF	VI	69	73	5	25185	25185		
		VII	64	63	5	20160	20160		
		VIII	59	53	5	15635	15635		
		IX	54	43	5	11610	11610		
	X1Y1-GH	VI	52	63	5	16380	16380		
		VII	47	53	5	12455	12455		
		VIII	42	43	5	9030	9030		
		IX	37	33	5	6105	6105		
TOTAL						116560	116560		
GRAND TOTAL						455570	455570	25483	54866



6.5	a.	Mining	<p>: 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.</p> <table border="1" data-bbox="598 336 1460 526"> <thead> <tr> <th>Type</th> <th>Nos</th> <th>Dia of hole</th> <th>Size / Capacity</th> <th>Make</th> <th>Motive power</th> <th>H.P</th> </tr> </thead> <tbody> <tr> <td>Jack Hammer</td> <td>6</td> <td>25.5 mm</td> <td>Hand held</td> <td>Atlas copco</td> <td>Diesel</td> <td>60</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>2Nos</td> <td></td> <td></td> </tr> </tbody> </table>	Type	Nos	Dia of hole	Size / Capacity	Make	Motive power	H.P	Jack Hammer	6	25.5 mm	Hand held	Atlas copco	Diesel	60					2Nos		
Type	Nos	Dia of hole	Size / Capacity	Make	Motive power	H.P																		
Jack Hammer	6	25.5 mm	Hand held	Atlas copco	Diesel	60																		
				2Nos																				
	b.	Loading	<p>: Loading of waste and Rough stone & Gravel is being carried out by Excavator into 10 tonne capacity tippers from the working place periodically. Details of loading equipment are given as under.</p> <table border="1" data-bbox="598 772 1460 929"> <thead> <tr> <th>Type</th> <th>Nos</th> <th>Bucket Capacity(MT)</th> <th>Make</th> <th>Motive power</th> <th>H.P</th> </tr> </thead> <tbody> <tr> <td>Hydraulic excavator</td> <td>1</td> <td>1.2 M³</td> <td>L&T or Ex200</td> <td>Diesel</td> <td>120</td> </tr> </tbody> </table>	Type	Nos	Bucket Capacity(MT)	Make	Motive power	H.P	Hydraulic excavator	1	1.2 M ³	L&T or Ex200	Diesel	120									
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	<p>: Transport of raw materials and waste shall be done by 10 tonnes tipper</p> <table border="1" data-bbox="598 1052 1460 1176"> <thead> <tr> <th>Type</th> <th>Nos</th> <th>Size / Capacity</th> <th>Make</th> <th>Motive power</th> <th>H.P.</th> </tr> </thead> <tbody> <tr> <td>Tipper</td> <td>2</td> <td>10 M.T</td> <td>Ashok Leyland</td> <td>Diesel</td> <td>110</td> </tr> </tbody> </table>	Type	Nos	Size / Capacity	Make	Motive power	H.P.	Tipper	2	10 M.T	Ashok Leyland	Diesel	110									
Type	Nos	Size / Capacity	Make	Motive power	H.P.																			
Tipper	2	10 M.T	Ashok Leyland	Diesel	110																			
6.6	a.	Disposal of Overburden/ Gravel	<p>: The Gravel of the lease area is 54866m³. Gravel formation will be removed and transported to the needy end user, only after obtaining permission and paying necessary seigniorage fees to the Government.</p>																					
6.7	a.	Brief Note on Conceptual Mining Plan for the entire lease period	<p>: Conceptual Mining Plan is prepared with an object of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, etc., Average Ultimate Pit dimension in given as Under,</p> <table border="1" data-bbox="670 1601 1380 1758"> <thead> <tr> <th colspan="2">ULTIMATE PIT DIMENSION</th> </tr> </thead> <tbody> <tr> <td>Block-I=</td> <td>170.0m(L) x 64.0m(W)Avg x 38.0m(D)</td> </tr> <tr> <td>Block-II=</td> <td>157.0m(L) x 104.0m(W)Avg x 38.0m(D)</td> </tr> </tbody> </table> <p>Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Afforestation has been proposed on the boundary barrier by planting trees.</p> <p>All the baseline information studies like Air Quality monitoring,</p>	ULTIMATE PIT DIMENSION		Block-I=	170.0m(L) x 64.0m(W)Avg x 38.0m(D)	Block-II=	157.0m(L) x 104.0m(W)Avg x 38.0m(D)															
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Noise and Vibration monitoring, Water Analysis studies are being carried out every year as per the MOEF norms.

b. **Energy:**
 Electricity for mines and lights only at nights (working is restricted on day time only between 8Am to 4Pm). Diesel (HSD) will be used for quarrying machines around **373604 liters** for the entire project life. Diesel will be brought from nearby diesel pumps. No power is required for the project. Lightings on the night is taken from nearby electric poles after obtaining permission from concerned authorities.

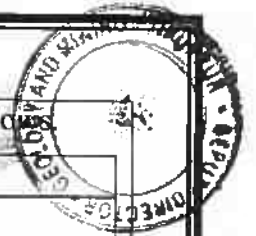
For Gravel:
 Per hour excavator will consume = 10 liters / hour
 Per hour excavator will excavate = 60m³ of Gravel
 For 54866m³ = 54866/ 60 = 914 hours
 Diesel consumption 914 working hours = 914 x 10 liters
 Total diesel consumption = **9140 liters of HSD will be utilized for Gravel.**

For Rough stone:
 Per hour excavator will consume = 16 liters / hour
 Per hour excavator will excavate = 20m³ of rough stone
 For 455570m³ = 455570 / 20 = 22779 hours
 Diesel consume 22779 working hours = 22779 hours x 16 liters
Total diesel consumption = 364464 liters of HSD will be utilized for Rough stone

Total diesel consumption is around = 373604 liters of HSD for the entire period of life.

7.0 BLASTING:

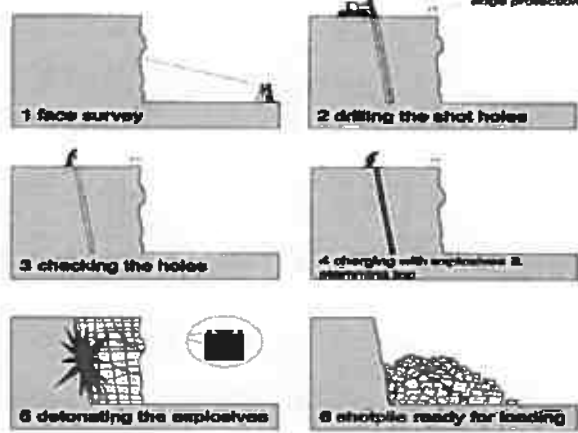
7.1	Proposed Control Blasting Pattern	:	The massive formation shall be broken into pieces of portable size by drilling and Proposed Control Blasting using jack hammers and shot hole Blasting. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 tonnes per K.g of explosives.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

Diameter of the hole	: 32-36 mm
Spacing	: 60 Cms
Depth	: 1 to 1.5m
Charge / Hole	: D.Cord with water or 70 gms of gun powder or Gelatine.
Pattern of hole	: Zig Zag
Inclination of hole	: 70 ⁰ from the horizontal.
Quantity of rock broken	: 0.45 MT x 2.6 = 1.17 MT
Control Blasting efficiency @90%	: 1.17 x 90% = 1.05MT / hole
Charge per hole	: 140 gms of 25mm dia cartridge
Quantity of rock broken per day	: 303.7M ³ .

ROCK BLASTING



7.2 Types of Explosives

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

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

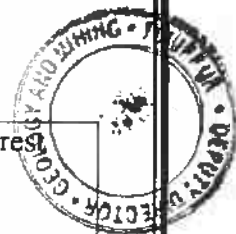


7.3	Measures proposed to minimize ground vibration due to blasting	:	<p>The following steps are being adopted to control ground vibration due to blasting.</p> <ol style="list-style-type: none"> 1. The minimum recommended delay time of 8ms was introduced to minimize ground vibration to avoid constructive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

8.0 MINE DRAINAGE:

8.1	Depth of Water table	:	<p>The ground water table is reported as 52m below ground level in nearby open wells and bore wells of this area. Mining depth taken as 38m. Now, proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water.</p>
8.2	Arrangement and Places where the mine water is finally proposed to be discharged	:	<p>The ground water may not rise immediately in this type of mining. However, the rain water percolation and collection of water from the seepage shall be less than 300 lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5 H.P. Motor. The quality of water is potable and it is not contaminated with any hazardous things.</p>

9.0 OTHER PERMANENT STRUCTURES:

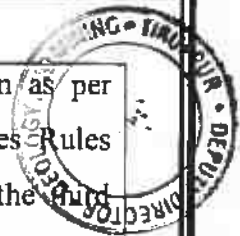


9.1	Habitations / Village	:	<p>There are no villages within a radius of 500m. The nearest habitations with the population is given as under,</p> <table border="1" data-bbox="598 324 1412 593"> <thead> <tr> <th>Direction</th> <th>Village</th> <th>Distance in kms</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>North</td> <td>Velampalayam</td> <td>2.5kms</td> <td>980</td> </tr> <tr> <td>East</td> <td>Sedapalayam</td> <td>4.0Kms</td> <td>550</td> </tr> <tr> <td>South</td> <td>Naranapuram</td> <td>2.5Kms</td> <td>320</td> </tr> <tr> <td>West</td> <td>Chiayampalayam</td> <td>2.4Kms</td> <td>180</td> </tr> </tbody> </table>	Direction	Village	Distance in kms	Population	North	Velampalayam	2.5kms	980	East	Sedapalayam	4.0Kms	550	South	Naranapuram	2.5Kms	320	West	Chiayampalayam	2.4Kms	180
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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)	:	The safety distance of 50m should be maintained to the Kuttai in S.F.No.2 situated on the North Western side of the applied area. There is no other Water bodies (River, Pond, Lake, etc) is located in this area.																				
9.4	Archeological / Historical Monuments	:	There are no Archeological / Historical Monuments within a radius of 500m.																				
9.5	Road (NH, SH, Village Road etc)	:	<p>Tiruppur – Arulpuram = 8.0 Kms. Arulpuram – Sedapalayam = 2.5kms. Quarry site is located in Western side at a distance of 4.0kms from Sedapalayam village.</p>																				
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 within a radius of 10km. There are no Wild Life Sanctuary within a radius of 10km.																				
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.																				
9.9	Any Other Structures	:	Nil.																				

10.0 EMPLOYMENT POTENTIAL & WELFARE MEASURES:



10.1	<p>Employment Potential (Management & Supervisory personal)</p>	:	<p>1. As per Mines safety under the provisions of MMR, 1961 under the Mines Act, 1952, whenever the workers are employed more than 10, it is preferred to have a qualified Mining Mate to keep all the production workers directly under his control and supervision.</p> <p>2. The following man power is proposed for quarrying Rough Stone & Gravel during the five years period to achieve the proposed production and to comply the provisions of the Government norms.</p> <table border="1" data-bbox="782 817 1380 1288"> <tr> <td>1.</td> <td>Skilled</td> <td>Operator</td> <td>2 No.</td> </tr> <tr> <td></td> <td></td> <td>Mechanic</td> <td>1 No.</td> </tr> <tr> <td></td> <td></td> <td>Blaster/Mat</td> <td>1 No.</td> </tr> <tr> <td>2.</td> <td>Semi – skilled</td> <td>Driver</td> <td>2 Nos</td> </tr> <tr> <td>3.</td> <td>Unskilled</td> <td>Musdoor / Labors</td> <td>7 Nos</td> </tr> <tr> <td></td> <td></td> <td>Cleaners</td> <td>2Nos</td> </tr> <tr> <td></td> <td></td> <td>Office Boy</td> <td>1No</td> </tr> <tr> <td>4.</td> <td colspan="2">Management & Supervisory staff</td> <td>2No.</td> </tr> <tr> <td></td> <td colspan="2">Total =</td> <td>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 / Labors	7 Nos			Cleaners	2Nos			Office Boy	1No	4.	Management & Supervisory staff		2No.		Total =		18Nos
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10.2	<p>Welfare Measures</p>																																						
	a.	<p>Drinking Water</p>	:	<p>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.</p>																																			
	b.	<p>Sanitary facilities</p>	:	<p>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.</p>																																			



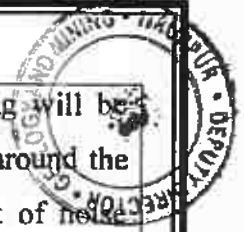
c.	First Aid Facility	:	Being a small mine First Aid station as per provisions under Rule (44) of the Mines Rules 1960 is provided with facilities as per the schedule as prescribed. Qualified First Aid personnel should be appointed or nominated to attend emergency first aid treatment.
d.	Labor Health	:	As per Mines Rule, Periodic medical examination has been arranged for occupational health once in a year in addition to attending medical treatment of occupational injuries under the Rule 45 (A), MR, 1960.
e.	Precautionary safety measures to the Laborers	:	<p>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.</p> <p>Necessary training will be conducted once in a year to all the employees with the help of qualified and experienced officers to train about the safe and system at quarrying operation.</p>

PART - B

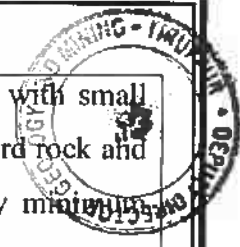
11.0 ENVIRONMENTAL MANAGEMENT PLAN:

11.1	Area Land Use Pattern	:	The applied land use pattern is given as under.			
			SL. NO.	LAND USE	PRESENT AREA (HECT)	AREA IN USE DURING THE QUARRYING PERIOD (HECT)
			1.	Area under Quarrying	Nil	2.73.0
			2.	Infrastructure	Nil	0.01.0
			3.	Roads	Nil	0.01.0
			4.	Green Belt	Nil	0.80.5
			5.	Unutilized Area	3.55.5	Nil
			Grand Total =		3.55.5Ha	3.55.5Ha

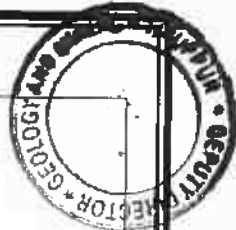
11.2	Water Regime	: Water table in this area is noticed at a depth of 52m below the surface ground level and presently, the quarrying of Rough Stone & Gravel is proposed up to a depth of 38m. Hence, it will not affect the ground water depletion of this area.																								
11.3	Flora and Fauna	: Except acacia bushes, no other valuable trees are noticed in the Applied Lease area. Further, neither flora of botanical interest nor fauna of zoological interest is noticed in this area.																								
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 700mm to 800mm and the temperature ranges from 22 ⁰ C during winter and to a maximum of 35 ⁰ C during the summer.																								
11.5	Human Settlement	: <table border="1" data-bbox="746 958 1458 1240"> <thead> <tr> <th colspan="4">The nearest habitations with the population.</th> </tr> <tr> <th>Direction</th> <th>Village</th> <th>Distance in Kms</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>North</td> <td>Velampalayam</td> <td>2.5kms</td> <td>980</td> </tr> <tr> <td>East</td> <td>Sedapalayam</td> <td>4.0Kms</td> <td>550</td> </tr> <tr> <td>South</td> <td>Naranapuram</td> <td>2.5Kms</td> <td>320</td> </tr> <tr> <td>West</td> <td>Chiayampalayam</td> <td>2.4Kms</td> <td>180</td> </tr> </tbody> </table>	The nearest habitations with the population.				Direction	Village	Distance in Kms	Population	North	Velampalayam	2.5kms	980	East	Sedapalayam	4.0Kms	550	South	Naranapuram	2.5Kms	320	West	Chiayampalayam	2.4Kms	180
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11.6	Plan for Air, Dust Suppression	: Air or dust expected to be generated from drilling process, hauling roads, places of excavation etc..., is being suppressed by periodical wetting of land by water spraying. For the sampling of air, high volume air sampler (Model VFC-PM10) was used (10 meter above and 5 meter away from road) and the particulates were collected on what man GFA glass fiber filters dried in a hot air oven at 105 ⁰ C for 1hr and weighed. The average flow rate was about 1.1 cubic meters.																								
11.7	Plan for Noise Control	: Quarrying of Rough Stone will be carried out by drilling and blasting by using low power explosives, and hence, noise is very minimum.																								



		<p>However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site. In order to assess the extent of noise pollution due to vehicular traffic different zones viz., Silence zone, Residential Zone, Commercial zone, Traffic signals and Industrial zones were identified in urban and suburban areas of Tiruppur. Adequate number of observations were made in all the selected sites by using the sound level meter (LT Lutron SL-4001).</p>
11.8	<p>Environmental Impact Assessment Statement Describing Impact on mining on the next Five Years.</p>	<p>Factors to be considered for EIA are,</p> <ol style="list-style-type: none"> 1. Dust generation, 2. Land degradation 3. Stabilization and vegetation of dumps 4. Adverse effect on water regime 5. Socio economic benefits arising out of Mining. 6. Noise and Vibration.
	a. Dust	<p>Dust is expected to be generated from drilling, hauling roads; place of excavation etc and it will be suppressed by periodical wetting of lands.</p>
	b. Land degradation	<p>Land degradation is by means of cutting the trees and removal of fertile soil does not arise. Proposed usage of land for the five years shall be less than 3.55.5Ha. Afforestation will be started during the first year of mining operation itself.</p>
	c. Stabilization and vegetation of dumps	<p>The Gravel 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.</p>
	d. Socio economic benefits arising out of mining	<ol style="list-style-type: none"> 1. To provide Employment opportunities of the nearby villagers. 2. For the cultural development of the nearby villagers.



	e. Noise and vibration	:	Since, no deep hole blasting is proposed with small dia explosives are used for breaking the hard rock and boulders, the noise and vibration is very minimum and are within the permissible limits.				
11.9	Proposal for Waste Management	:	Weathered Rock generated during the mining period is 25483m ³ will be proposed to dump into all sides of Block-II 7.5m boundary barrier of the lease area.				
			<table border="1"> <tr> <th colspan="2">WEATHERED ROCK DUMP DIMENSION</th> </tr> <tr> <td colspan="2">575.6m(L) x 7.5m(W) x 5.9m(H)=25483m³.</td> </tr> </table>	WEATHERED ROCK DUMP DIMENSION		575.6m(L) x 7.5m(W) x 5.9m(H)=25483m ³ .	
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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 38m. 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 & Gravel persist still at deeper level.				
11.11	Program for Afforestation	:	Trees like tamarind, casuarinas etc were planted along the lease boundary and avenues as well as over non active dumps at a rate 60 trees per year with an interval of 5m. The rate of survival expected to be 70% in this area.				
11.12	Proposed Financial Estimate / Budget for (EMP) Environment Management	:					
			Fixed Asset Cost:				
		1. Land Cost	: Rs.22,30,000/- (Amount for Patta Land)				
		2. Labour Shed	: Rs. 1,50,000/-				
		3. Sanitary Facility	: Rs. 80,000/-				
		4. Fencing cost	: Rs.86,000/-				
		Total=	: Rs.25,46,000/-				
		Operational Cost:					
		Machinery cost	: Rs.30,00,000/-				



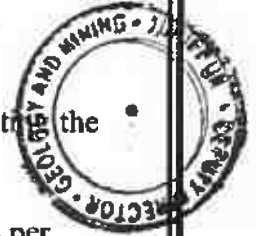
EMP Cost:		
1. Drinking water facility	:	Rs. 90,000/-
2. Safety kits	:	Rs. 60,000/-
3. Water sprinkling	:	Rs. 80,000/-
4. Afforestation	:	Rs. 30,000/-
5. Water quality test	:	Rs. 30,000/-
6. Air quality test	:	Rs. 30,000/-
7. Noise/vibration test	:	Rs. 30,000/-
Total=	:	Rs. 3,50,000/-
Total Project Cost		Rs.58,96,000/-

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 38m. The mined out area will be fenced on top of open cast working with S1 fencing to arrest the entry of cattle's and public in to the quarry site.
12.2	Measures to be under taken on mine closure as per Act & Rules	:	Measures will be taken as per the Acts and Rules. The quarried pit will be fenced by using Barbed wire fencing. Green belt development at the rate of 60 trees per year will be proposed.
12.3	Mitigation measures to be undertaken for safety and restoration/ reclamation of the already mined out area	:	It is a fresh Rough Stone & Gravel Quarry with a Mineable depth of 38m only and hence, no need of mitigation and restoration / reclamation of the applied lease area.

13.0 ANY OTHER DETAILS INTEND TO FURNISH BY THE APPLICANT

- (i) Permission will be obtained from the Director of Mines Safety for extracting the Rough Stone & Gravel from the Boundary barriers and from slopes.
- (ii) Care and precautionary measures will be taken for the safety of workers as per Rules and Acts.
- (iii) The applicant will endeavor every attempt to quarry the Rough Stone & Gravel economically without any wastage and to improve the environment and ecology.
- (iv) Accordingly, Mining Plan is prepared under Rule 41 & 42 as amended in Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating the conditions imposed in the precise area communication letter and by incorporating all the details proposed in the letter to obtain environment clearance from State Environment Impact Assessment Authority.
- (v) In the above circumstances, this Mining Plan is prepared for approval of Applied Rough Stone & Gravel Quarry for a period of Five Years.
- (vi) The proposed production of Rough Stone & Gravel for Five Years is 455570M³ & 54866 M³. The average production of Rough stone per Year is 91114M³.



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

This Mining Plan is approved subject to the Conditions Indicated in the Mining Plan approved Letter
No. RC.No. 848/2021/Mines
Dated 11.2.2022

This Mining Plan is approved as per the Powers conferred under rule 41(2) of Tamil Nadu Minor Mineral Concession Rules, 1959

J. S. M.
11/2/2022
DEPUTY DIRECTOR
Geology and Mining
Tiruppur

d.m.
11/2/2022

நாள்: 21.01.2022.

குறிப்பாணை

பொருள் : கனிமங்களும் சுரங்கங்களும் - சிறு கனிமம் - திருப்பூர் மாவட்டம் - பல்லடம் வட்டம் - சுக்கம்பாளையம் கிராமம் - புல எண். 3/2A (1.53.0) மற்றும் வேலம்பாளையம் கிராமம் - புல எண். 152/1 (பகுதி) (2.02.5) ஆகியவற்றில் மொத்தம் 3.55.5 ஹெக்டர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் மண் குவாரி குத்தகை உரிமம் கோரி திருமதி. P. தெய்வாத்தாள், க/பெ. பழனிசாமி கவுண்டர் என்பவர் விண்ணப்பம் அளித்தது - புலத்தணிக்கை அறிக்கை சமர்ப்பிக்கப்பட்டது - தகுதியான நிலப்பரப்பாக கருதி ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய இசைவினை பெற்று சமர்ப்பிக்கக் கோருதல் - தொடர்பாக.

- பார்வை :
1. திருமதி. P. தெய்வாத்தாள், க/பெ. பழனிசாமி கவுண்டர், நாசவன் காட்டுத் தோட்டம், வேலம்பாளையம் கிராமம், பல்லடம் வட்டம் என்பவரின் விண்ணப்பம் நாள்: 18.02.2021.
 2. இவ்வலுவலக கடிதம் நாள்: 09.03.2021.
 3. இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை ந.க. 1870/எம்.எம்.1/2020 நாள்: 10.08.2020 கடிதத்துடன் அரசாணை (பல்வகை) எண். 169, தொழில் (எம்.எம்.சி-1) துறை நாள்: 04.08.2020 இணைத்து வரப்பெற்றுள்ளது. (தமிழ்நாடு அரசிதழ் சிறப்பு வெளியீடு எண். 315 நாள்: 04.08.2020).
 4. வட்டார வளர்ச்சி அலுவலர் (வ.ஊ), பல்லடம் கடிதம் ந.க. 888/2020/அ2 நாள்: 03.05.2021 (இவ்வலுவலகத்தில் பெறப்பட்ட நாள்: 11.08.2021).
 5. வட்டாட்சியர், பல்லடம் கடிதம் ந.க. 1188/2021/அ4 நாள்: 30.07.2021.
 6. வருவாய் கோட்டாட்சியர், திருப்பூர் கடிதம் ந.க. 1292/2021/ஈ1 நாள்: 03.08.2021 (இவ்வலுவலகத்தில் பெறப்பட்ட நாள்: 11.08.2021)
 7. உதவிப் புவியியலாளர் (கனிமம்), திருப்பூர் புலத்தணிக்கை அறிக்கை நாள்: 12.01.2022.
 8. சுக்கம்பாளையம் மற்றும் வேலம்பாளையம் கிராம நிர்வாக அலுவலர்கள் சான்று 20.01.2022.
 9. மற்றும் உரிய ஆவணங்கள்

திருப்பூர் மாவட்டம், பல்லடம் வட்டம், சுக்கம்பாளையம் கிராமம், புல எண். 3/2A (1.53.0) மற்றும் வேலம்பாளையம் கிராமம், புல எண். 152/1 (பகுதி) (2.02.5) ஆகியவற்றில் மொத்தம் 3.55.5 ஹெக்டர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் குவாரிக் குத்தகை

உரிமம் வழங்க கோரி திருமதி. P. தெய்வாத்தாள், க/பெ. பழனிசாமி கவுண்டர் என்பவர் பார்வை 1-ல் கண்டுள்ளபடி உரிய ஆவணங்களுடன் விண்ணப்பம் அளித்துள்ளார்.



2. மேற்படி விண்ணப்பங்கள் தொடர்பாக, வட்டார வளர்ச்சி அலுவலர், பல்லடம், வட்டாட்சியர், பல்லடம், வருவாய் கோட்டாட்சியர், திருப்பூர் மற்றும் உதவிப் புவியியலாளர் (கனிமம்), திருப்பூர் ஆகியோர் புலத்தணிக்கை மேற்கொண்டு திருப்பூர் மாவட்டம், பல்லடம் வட்டம், சுக்கம்பாளையம் கிராமம், புல எண். 3/2A (1.53.0) மற்றும் வேலம்பாளையம் கிராமம், புல எண். 152/1 (பகுதி) (2.02.5) ஆகியவற்றில் மொத்தம் 3.55.5 ஹெக்டர் பரப்பில் திருமதி. P. தெய்வாத்தாள், க/பெ. பழனிசாமி கவுண்டர் என்பவருக்கு சாதாரண கற்கள் மற்றும் கிராவல் மண் குவாரி உரிமம் வழங்க கீழ்க்கண்ட நிபந்தனைகளுக்குட்பட்டு அனுமதி வழங்கலாம் என பரிந்துரை செய்துள்ளனர்.

நிபந்தனைகள்:

1. திருப்பூர் மாவட்டம், பல்லடம் வட்டம், சுக்கம்பாளையம் கிராமம், புல எண் 3/2A(1.53.0) மற்றும் பல்லடம் வட்டம், வேலம்பாளையம் கிராமம் புல எண் 152/1(பகுதி)(2.02.5)-இல் மொத்தம் 3.55.5 ஹெக்டர் பரப்பளவுள்ள பூமியிலிருந்து சாதாரண கற்கள் மட்டும் வெட்டி எடுக்க குவாரி குத்தகை உரிமம் வழங்குவது தொடர்பாக ஏற்பளிக்கப்பட்ட சுரங்கத் திட்டம் மற்றும் சுற்றுச் சூழல் ஒப்புதல் ஆகியன பெற்றளிக்கப்பட வேண்டும்.
2. விண்ணப்ப புலங்களை சுற்றியுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.
3. சுக்கம்பாளையம் கிராமம், புல எண்.02-ல் விண்ணப்பப் புலத்திற்கு வடமேற்கே அமைந்துள்ள குட்டைக்கு 50 மீட்டர் பாதுகாப்பு இடைவெளி பராமரிக்கப்பட வேண்டும்.

3. எனவே, வட்டார வளர்ச்சி அலுவலர், பல்லடம், வட்டாட்சியர், பல்லடம், வருவாய் கோட்டாட்சியர், திருப்பூர் மற்றும் உதவிப் புவியியலாளர் (கனிமம்), திருப்பூர் ஆகியோரின் பரிந்துரை மற்றும் நிபந்தனைகளின் அடிப்படையில், திருப்பூர் மாவட்டம், பல்லடம் வட்டம், சுக்கம்பாளையம் கிராமம், புல எண். 3/2A (1.53.0) மற்றும் வேலம்பாளையம் கிராமம், புல எண். 152/1 (பகுதி) (2.02.5) ஆகியவற்றில் மொத்தம் 3.55.5 ஹெக்டர் பரப்பில் 1959ம் வருட தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.19 (1)-ன் படி மேற்கண்ட நிபந்தனைகளுக்குட்பட்டு 5 (ஐந்து) வருட காலத்திற்கு திருமதி. P. தெய்வாத்தாள், க/பெ. பழனிசாமி கவுண்டர் என்பவருக்கு சாதாரண கற்கள் மற்றும் கிராவல் மண் குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதப்படுகிறது.



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

[Handwritten Signature] 2/1/2022
துணை இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
திருப்பூர்.

பெறுநர்:

திருமதி. P. தெய்வாத்தாள்,
க/பெ. பழனிசாமி கவுண்டர்,
நாசுவன் காட்டுத் தோட்டம்,
வேலம்பாளையம் கிராமம்,
பல்லடம் வட்டம்

[Handwritten Signature]
S. DHANASEKAR
Qualified Person

பெயர்: சீமைப்பள்ளம்

பெயர்: சீமைப்பள்ளம்

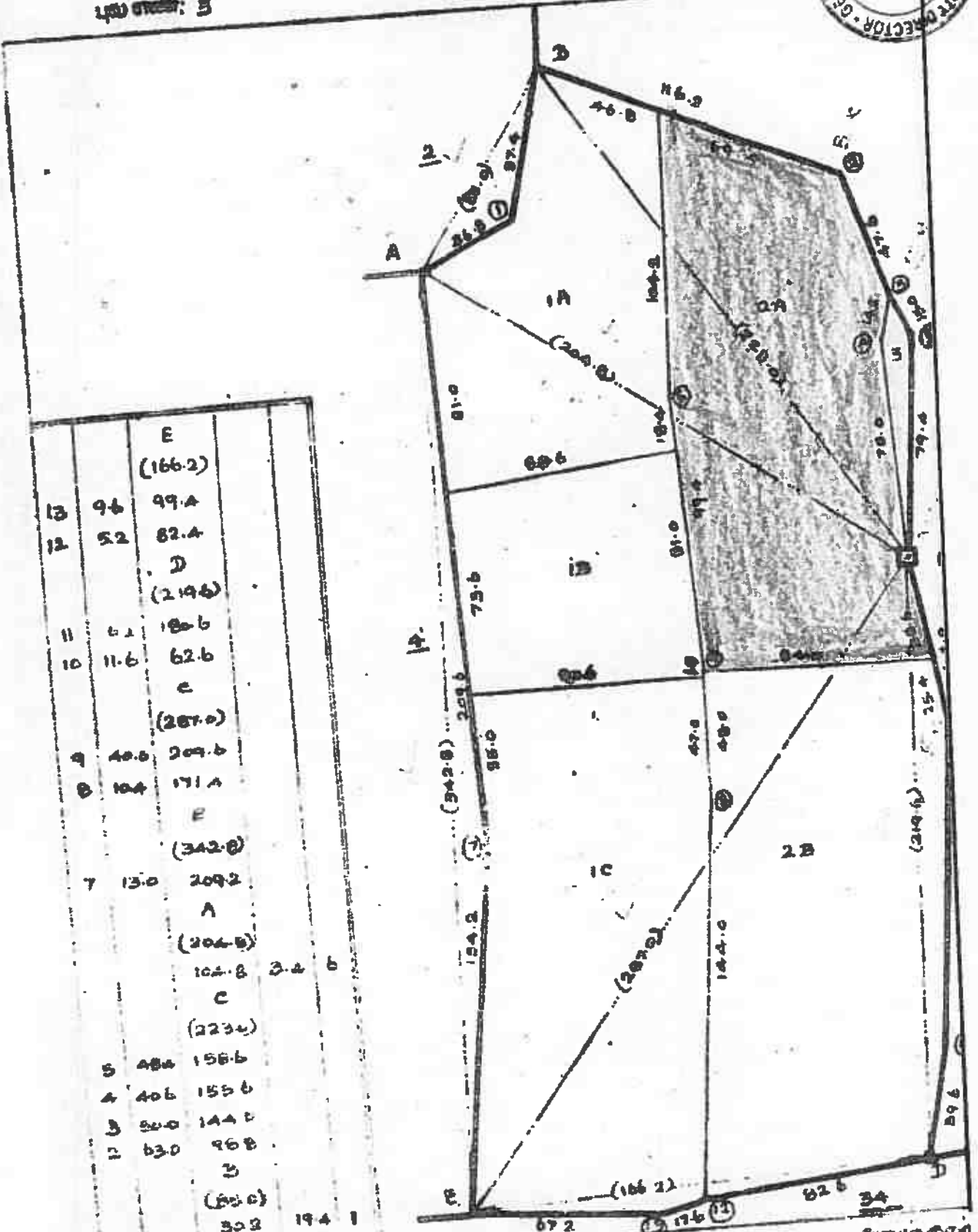
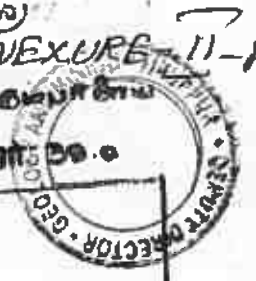
ANNEXURE II-A

பெயர்: சீமைப்பள்ளம்

பெயர்: சீமைப்பள்ளம்

பெயர்: சீமைப்பள்ளம்

பெயர்: சீமைப்பள்ளம்



		E	
		(166.2)	
13	96	99.4	
12	52	82.4	
		D	
		(214.6)	
11	61	180.6	
10	11.6	62.6	
		C	
		(287.0)	
9	40.0	209.6	
8	104	171.4	
		E	
		(342.0)	
7	13.0	209.2	
		A	
		(204.8)	
		104.8	3.2
		C	
		(223.4)	
5	48.6	156.6	
4	40.6	155.6	
3	30.0	144.0	
2	63.0	96.8	
		B	
		(85.0)	
		30.2	19.4
		A	

அளவு: 1 மீட்டர் = 2000 மீட்டர்

சீமைப்பள்ளம் -
பெயர்: சீமைப்பள்ளம்
25/1/83

சீமைப்பள்ளம்
பெயர்: சீமைப்பள்ளம்
25/1/83

S.DHANASEKAR, M.Sc. (Geo)
Qualified Person
297

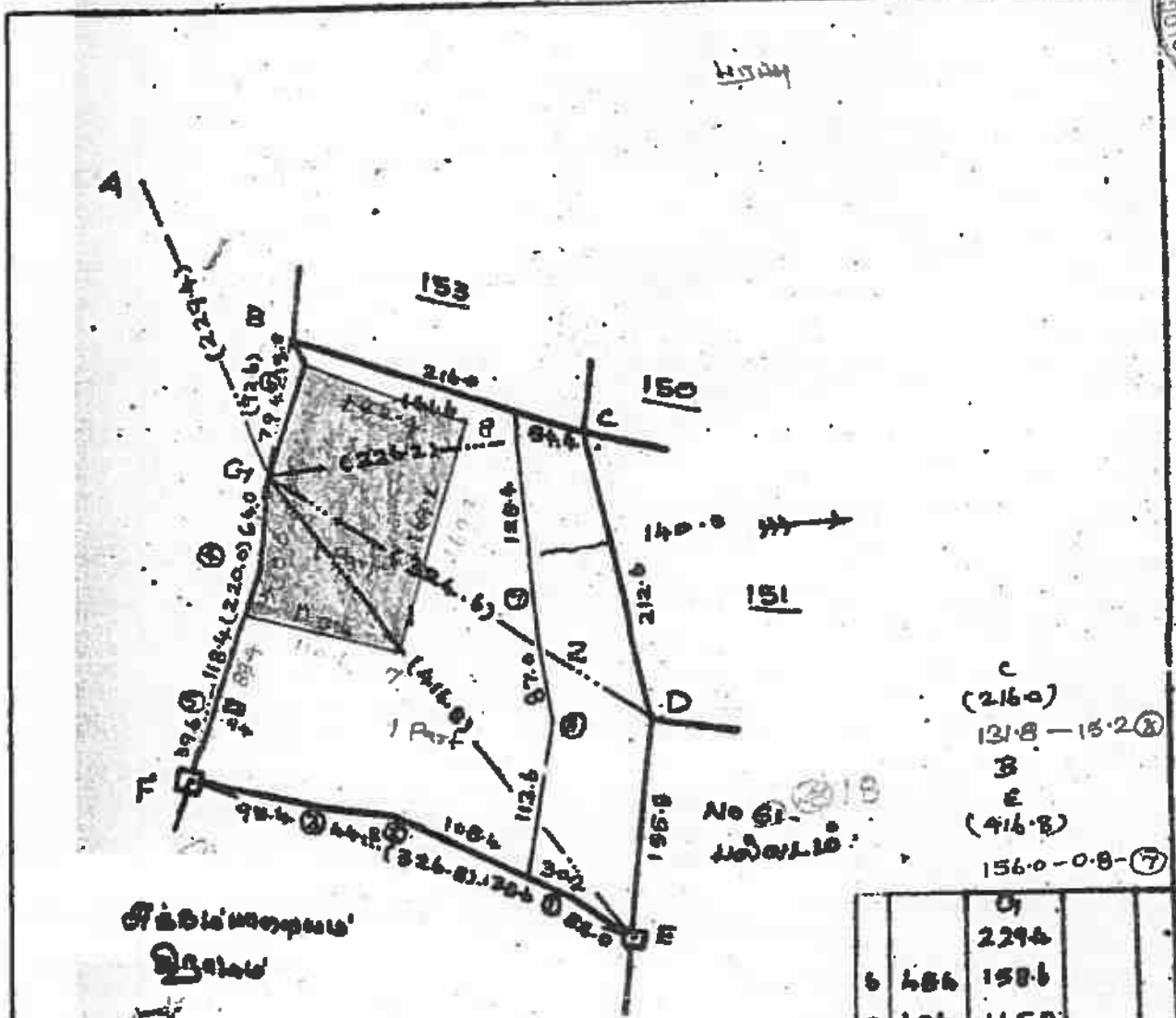
பெயர்: சீமைப்பள்ளம்
பெயர்: சீமைப்பள்ளம்

பில்டிங்
புள்ளி: 152

புள்ளி: 152

புள்ளி: 152

8 ஜா. 76.5 ANNEXURE



C
(216.0)
121.8 - 15.2 (8)
B
E
(416.8)
156.0 - 0.8 - (7)

புள்ளி: 152/1

புள்ளி: 152/1

புள்ளி: 152/1

புள்ளி: 152/1

	D		
	324.6		
	265.6	35.6	6
7	260	307.2	
	0		

	6	486	158.6
	8	496	165.0
			A
			F
5	62		180.6
H	114		166.6
H	116		164.6
4	116		62.6
			G
			F
			326.8
			232.6
		16.0	3
		188.6	25.8
		50.8	12.0
			0
			E

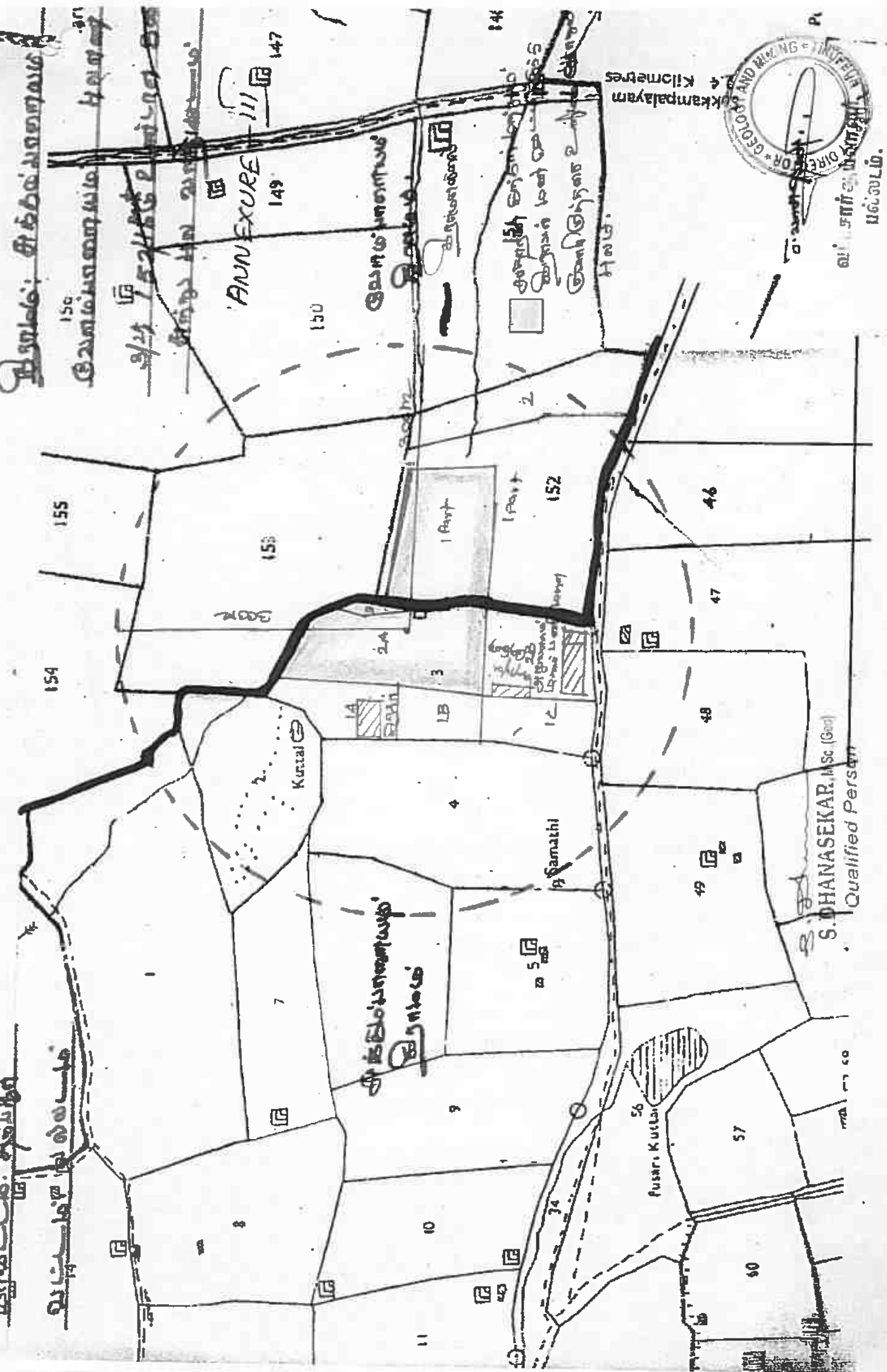
புள்ளி: 152/1

புள்ளி: 152/1

புள்ளி: 152/1

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

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 100. കുറ്റി





ANNEXURE IV



தமிழக அரசு

வருவாய்த் துறை

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

வட்டம் : பல்லடம்

மாவட்டம் : திருப்பூர்

பட்டா எண் : 36

வருவாய் கிராமம் : சுக்கம்பாளையம்

உரிமையாளர்கள் பெயர்

தெய்வத்தாள்

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
3	2A	1 - 53.00	3.06	--	--	--	--	R06/3214--- -- 19-09-2006
		1 - 53.00	3.06					

குறிப்பு2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 32/03/005/00036/50599 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
2. இத் தகவல்கள் 04-02-2021 அன்று 03:20:36 PM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



தமிழக அரசு

வருவாய்த் துறை

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

மாவட்டம் : திருப்பூர்

வட்டம் : பல்லடம்

வருவாய் கிராமம் : வேலம்பாளையம்

பட்டா எண் : 347

உரிமையாளர்கள் பெயர்

- | | | |
|-------------------------|-------|----------------|
| 1. பழனிச்சாமிக்கவுண்டர் | தந்தை | முத்துக்குமார் |
| 2. பழனிச்சாமிக்கவுண்டர் | கணவன் | தெய்வத்தாள் |
| 3. பழனிச்சாமிக்கவுண்டர் | தந்தை | நடராஜன் |

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
152	1	6 - 46.00	12.94	--	--	--	--	R06/1659--- -- 19-06-2006
		6 - 46.00	12.94					

குறிப்பு2 :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 32/03/004/00347/50404 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 04-02-2021 அன்று 03:19:59 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



ச. எண். 60 கல்வாய்க்கணம்

1	2	3	4	5	6	7	8	9	10	11	
1	5	1-5	ர	4	...	8-3	5	2 00	3 24.0	6 50	1 ர. அம்மாலை யம்மாள்.
									9 68.5	18 44	
2	...	2	ர	4	...	8-3	5	2 00	3 00.5	6 06	176 ப. சுப்பைய கவுண்டர்.
3	1A	3-1பா	ர	4	...	8-3	5	2 00	0 98.0	1 96	267 ப. பழனி.
	1B	-1பா	ர	4	...	8-3	5	2 00	0 64.0	1 28	177 க. சுப்பைய கவுண்டர்.
	1C	-1பா	ர	4	...	8-3	5	2 00	1 57.0	3 14	506 க. சாமாத் தாள் (1), இளவர் பரமசிவம் (2) காப்பாளர் தரமாத் தாள்.
	2A	-2பா	ர	4	...	8-3	5	2 00	1 53.0	3 06	36 த. கருப்ப கவுண்டர்.
	2B	-2பா	ர	4	...	8-3	5	2 00	1 62.0	3 25	415 மா. சாமாசாமிக் கவுண்டர்.
	3	-3	ர	4	...	8-3	5	2 00	0 04.0	0 06	416 ர. சாமாள்.
									6 38.0	12 75	
4	①	4-1	ர	4	...	8-3	5	2 00	3 58.0	7 19	507 ரா. முத்துசாமிக் கவுண்டர் (1), இளவர் நரசாயண சாமி (2) காப்பாளர் தகப்பனார் முத்துசாமி கவுண்டர்.
	2	-2	ர	4	...	8-3	5	2 00	1 44.0	2 87	417 க. சாமாசாமிக் கவுண்டர்.
									5 02.0	10 06	
									1 48.0	2 94	178 ப. சுப்பைய கவுண்டர்.
									0 68.0	1 34	268 க. பழனி.

Handwritten signatures and official stamps at the bottom left of the page, including the name 'சுப்பைய கவுண்டர்' and other administrative markings.



1	2	3	4	5	6	7	8	9	10	11		
147	2	147-பா	ர	பு	...	8-3	5	2 00	4 11.5	8 25	152 கொ.மாரிமுத்த கவுண்டர்.	கிணறு.
	3	-பா	ர	பு	...	8-3	5	2 00	0 69.0	1 38	204 க. ராமசாமி கவுண்டர்.	
									4 89.5	9 81		
148	...	148	அ	பு	...	...	...	...	1 29 5	...	...	வண்டிப் பாதை.
149	1	149-பா	ர	பு	...	8-3	5	2 00	1 39.0	2 78	45 மா. சுந்தராமிக் கவுண்டர்.	கிணறு.
146	2	-பா	ர	பு	...	8-3	5	2 00	1 60.5	3 22	84 சி. சுப்பே கவுண்டர்.	
									2 99.5	6 00		
150	1A	150-1 பா	ர	பு	...	8-3	5	2 00	1 73.5	3 46	434 மா. நடராஜன் மற்றும் ஏழு பேர்களும்.	
	1B	-1பா	ர	பு	...	8-3	5	2 00	0 27.0	0 54	45 மா. சுந்தராமிக் கவுண்டர்.	
	2	-2	ர	பு	...	8-3	5	2 00	3 19.5	6 44	90 க. சென்னி மலைக் கவுண்டர்.	
									5 20.0	10 44		
151	1	151-1	ர	பு	...	8-3	5	2 00	3 16.5	6 38	285 ந. ராக்ரியாக் கவுண்டர் (1), ந. கருப்பக் கவுண்டர் (2),	
	2	-2	ர	பு	...	8-3	5	2 00	3 15.0	6 31	204 க. ராமசாமிக் கவுண்டர்.	கிணறு
									6 31.5	12 69		
152	1	152-1	ர	பு	...	8-3	5	2 00	6 46.0	12 94	347 ர. ராயன் (1), சி. ராமாத் தான் (2), அ. பழனியம் மான் (3),	

கிராம நிர்வாக அலுவலர் மற்றும் விவரப்பட்டியலைப் பார்க்கவும்.

பிறப்பு இறப்பு பதிவுகள்
4. வேலம்பாளையம் கிராமம்,

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



531
19-1-98

Rs 5,000

சென்னை
63 வேலம்பாளையம்

சுமார் 58,500.00

சுமார் ரூபாய் 58,500.00

19.1.1998 ஆயிரத்த தொளாயிரத்த தொழிலா நிதி எட்டாம் வருடம் ஜனவரி மாதம் 19-ந் தேதிக்கு, கோயமுத்தூர் மாவட்டம், பல்லடம் வட்டம், 63 வேலம்பாளையம் கிராமம் கல்பா 63 வேலம்பாளையத்தில் நாகவலி தோட்டத்தில் வசிக்கும் பழனிச்சாமிக்கவுட்டர் மனைவி தெய்வாத்தாள் ஆகிய தம்பிக்கு.

அ. மாவட்டம், க. வட்டம், சாமளபுரம் கிராமம் மூரா வேலாயுதம்பாளையத்தில் வசிக்கும் காலஞ்சென்ற கருப்பகவுட்டர் மனைவி கருப்பாத்தாள் -1. அ. காலஞ்சென்ற கருப்பகவுட்டர் பெண்மகளும், சோமனா ரி மாதப்பூரல் வசிக்கும் செகவியப்பகவுட்டர் மனைவிமான தெய்வாத்தாள் -2. அ. காலஞ்சென்ற கருப்பகவுட்டர் மகிகள் விநாயகமூர்த்தி -3. பழனிச்சாமி -4.

1.-கீரல் கருப்பாத்தாள்,
இ.பெ.ரே.

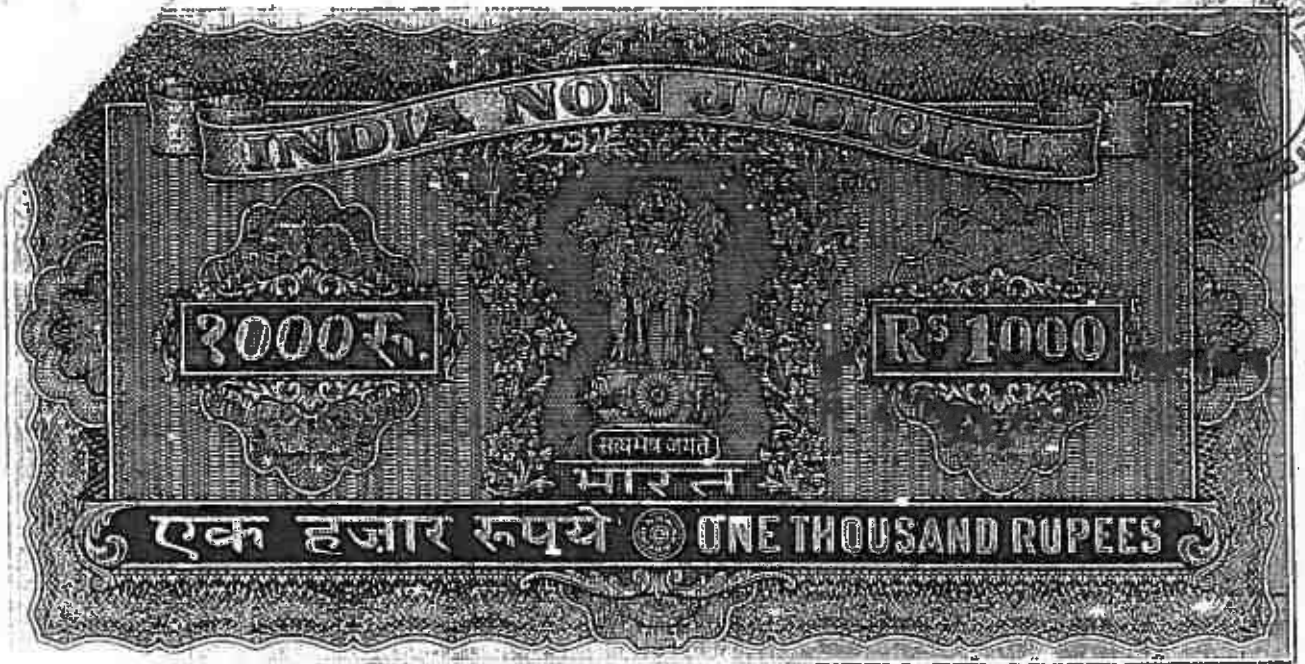
4. ச. பழனிச்சாமி

2.-கீரல் தெய்வாத்தாள்,
இ.பெ.ரே.

5. க. வட்டம்

3. காலஞ்சென்ற கருப்பகவுட்டர்

6. சோமனா ரி



வரிமுறை

எண் 533

நாள் 19.1.98

பாண்டிச்சேரி கி.பி.பி.
பித்திரைத் தாள்
வீடுபக்கப்பாளர், பல்லடம்
உரிமம் எண். 12/1992

செய்த அளவு

63.6000 மீட்டர்கள்

₹ 1000



..3..

சுகல, சரிவ சதநீரகங்களுடன் ஆண்டு அனுபவித்த வந்த, கையார் காலமாகி விட்டபடியால் கீழ்க்கண்ட சொத்து எங்களுக்கு பிற்றாஜித வகையிலும், அனுபவம் படியும், வாரிசுகளிடமிருந்தும் பாத்தியப்பட்டு எங்களுடைய சுவாதீன அனுபவத்தில் உள்ள கீழ்க்கண்ட சொத்தை நாட்கள் நாளது தேதியில் தங்களுக்கு கிரயம் ரூ.58,500.00-க்கு கிரயத்திற்கு கொடுத்த கிரயத் தொகை ரூபாய் ஐம்பத்தி எட்டாயிரத்து ஐநூற்று, தங்களுக்கு நாட்கள் நாளது தேதியில் கீழ்க்கண்ட சாட்சிகள் முன்னிலையில் கிரயத் தொகை ரூ.58,500.00-ம் ரொக்கமாய் பெற்றுக்கொண்டபடியால் கீழ்க்கண்ட சொத்தை நாளது தேதிமுதல் தங்களுடைய சுவாதீனத்திலும் அனுபவத்திலும் விடங்குகிறோம்.

1. - கீரல் கருப்பாத்தாள்,
இ.பெ.ரே.

4. K. பழனிசாமி

2. - கீரல் தெய்வாத்தாள்,
இ.பெ.ரே.

5. N. சண்முகம்

3. K. சண்முகம்

6. S. சாதிராமன்



RS 20



குறிப்புகள்
 எண் 534
 நாள் 19-1-1992

செய்தியைக் கொண்டு
 63.655 பி.பி.பி.

செய்தியைக் கொண்டு
 கா. ப. அ. மதுரை காவல்
 அலுவலகம், மதுரை
 திகதி 10-1-1992

..4..

கீழ்க்கண்ட சொத்தை நானது தேதிமுதலி நாட்களே சகல, சமீப
 கதந்திரங்களுட்கி ஆண்டு அனுபவித்தேக் கொள்ளவேண்டியது.

கீழ்க்கண்ட சொத்தை நாங்கள் எளிதான விவிலக விவகாரங்களுக்கு
 உட்படுத்தவில்லையென்ற தகவலை நம்பும்படி உரிமையாகவும், உறுதியாகவும்
 சொல்லுகிறோம்.

அப்படி ஏதாவது விவிலக விவகாரங்கள் இருந்து வெளிவந்தால்
 நாட்களே முடிவிற்கு எடுக்கப்படும் இது சொத்துக்களைக் கொண்டு எடுக்கப்படும்
 சொந்தக் செலவிலும், சொந்தப் பொறுப்பிலும் தீர்த்துக் கொடுப்போமாகவும்.

1. - கீரடி கருப்பாத்தாள்,
 இ.பெ.ரே.



4. K. பழனிசாமி

2. - கீரடி தெய்வாத்தாள்,
 இ.பெ.ரே.



5. K. பழனிசாமி

3. K. பழனிசாமி

6. K. பழனிசாமி



கீழ்க்கண்ட சொத்துக்குப் பற்றி இன்மேல் எங்களுக்கும், எங்களுடைய முன்பு வாரிசுகளுக்கும் எவ்வித பாதிப்பு சம்பந்தமும், பின்பொருட்செய்யும் இல்லை.

கீழ்க்கண்ட சொத்தானது தங்களுடைய பெயரில் பட்டாவாக பட்டா மாறாதல் மறு இத்துடன் தாக்கல் செய்திருக்கிறோம். அசல் பத்திரம் கைதவறி விட்டதால் ஆபீஸ் நகல் கொடுக்கப்படுகிறது.

சொத்து விபரம்

திருப்பூர் பதிவு மாவட்டம், பல்லடம் சார்பதிவு வட்டம், பல்லடம் தாலுகா பல்லடம் பஞ்சாயத்து யூனியனைச் சேர்ந்த சுக்கம்பாளையம் கிராம பஞ்சாயத்துப் போர்டு எல்லைக்குட்பட்ட சுக்கம்பாளையம் கிராமத்தின் க.ச.3/2ஏ நெ காலை (முற்ற உட்பிரிவு இரண்டு ஏ) பு.உறக்டேர் 1.53.0 அளவு பு.ஏ.3.89 இது பூராவும், ஊ பூமிக்கு செக்குபந்தி.

- வக்கீல் நாச்சிமுத்து பூமிக்கும் . . கிழக்கு,
 - கீழமேல் இட்டோரிக்கும் . . வடக்கு,
 - ராயாள் பூமிக்கும் . . மேற்கு,
 - பழனிச்சாமி பூமிக்கும் . . தெற்கு,
- இதன் மத்தியில் ஊ பு.ஏ.3.89 செல்ட் பூமி உவளது.

- 1. -கீரல் கருடிபாத்தாள், இ.பெ.ரே. 4. 120 பழனிச்சாமி
- 2. -கீரல் தெய்வாத்தாள், இ.பெ.ரே. 5. 120 தெய்வாத்தாள்
- 3. K...ய... 6. 120 ராயாள்



T64 21-4-97 " " " " 5000/-

பிழைப்பு எண் நாள்

ச. சிவசுப்பிரகாஷ்,
முதலியானவர் கிறிபுனியாளர்
குலார்.
உரிமம் எண் 9 / திருப்பூர் / 1993

செய்தியாளர்
63. வேலம்பாளையம்



..2..

கீழ்க்கண்ட சொத்து எங்களில் 1 லக்கமிட்டவருக்கு பல்லடம் சாரிபதிவாளர் அவ்வகத்தில் பதிவு எண் 1 புத்தகம் 1034 தொகுதி 281 முதல் 283 வரை பக்கங்களில் 1973-ம் வருடத்திய 125 நெம்பராக பதிவாகியுள்ள கிரைய சாசனப் பத்திரப்படிக்கும், பின்பும் கீழ்க்கண்ட சொத்து எங்களில் 2 லக்கமிட்டவருக்கு பல்லடம் சாரிபதிவாளர் அவ்வகத்தில் பதிவு எண் 1 புத்தகம் 1190 தொகுதி 447, 448 பக்கங்களில் 1982-ம் வருடத்திய 489 நெம்பராக பதிவாகியுள்ள கிரைய சாசனப் பத்திரப்படிக்கும், எங்களுக்கு சுயமாகப் பாத்தியப்பட்டு எங்களுடைய சுவர்தன அனுபோகத்தில் உள்ள கீழ்க்கண்ட சொத்தை நாங்கள் நாளை தேதியில் தங்களுக்கு கிரையம் ரூ. 2,18,500.00-க்கு கிரையத்துக்கு கொடுத்த கிரையத் தொகை ரூபாய் இரண்டு லட்சத்து பதினெட்டாயிரத்து இரண்டாய், தங்களால் நாளை தேதியில் கீழ்க்கண்ட சாட்சிகள் முன்னிலையில்

1. ராயன்

2. உதகியம்பலம்



765 21-4-97

5000/-

நாடு எண் நாள்

ச. அருள்மீரகாஷ்,
முத்திரைநாள் விற்றபையாளர்
குழார்.
உரியம் எண் 9 / திருப்பூர் / 1993

செய்யுண்டித்தரன்
63. செவல்பாளையம்



..3..

கிரையத் தொகை ரூ. 2,18,500.00.-ய் ரொக்கமாய் பெற்றுக்கொண்ட
படியால் கழீகண்ட சொத்தை நாளை தேதிமுதல் தங்குகூடைய சுளாதீனத்தினம்,
அவபோகத்தினம் விட்டிருக்கிறோம்.

கழீகண்ட சொத்தை நாளை தேதிமுதல் தாங்களே சகல, சர்வ
சுதந்திரங்களுடன் ஆண்டு அனுபவித்துக் கொள்ளவேண்டியது.

கழீகண்ட சொத்தை நாட்கள் எல்லித வில்லங்க விவகாரங்களுக்கும்
உட்படுத்தவில்லையென்ற தங்குகளை நம்பும்படி உன்மையாகவும், உறுதியாகவும்
சொல்லுகிறோம்.

1. ராயன்

2. சத்தியமங்கலம்



சமீபநாள் எண் நாள்
767 21-4-97

₹ 5000/-

சு. சி. சுவாமிநாதன்
சு. சி. சுவாமிநாதன்
முத்தியைந்தான் வற்புனையாளர்
கு. லார்.
உரிமை எண் 9 / திருப்பூர் / 1993

செய்யலாங்குளம்
63. வேலம் புகழையர்



..5..

சொக்தா விபரம்

திருப்பூர் பதிவு மாவட்டம், பல்லடம் சார்பதிவு வட்டம், பல்லடம் வட்டம், பல்லடம் பஞ்சாயத்தின் யூனியன்களுக்குச் சேர்ந்த சுதேசப்பாளையம் கிராம பஞ்சாயத்திற் போரிடு எல்லைக்குட்பட்ட சுதேசப்பாளையம் கிராமத்தில்: க.ச.3/3 நெ காலை(மூன்ற உட்பிரிவு மூன்ற)பு.கா.எ.0.10க்கு க.ந.0.06 பைசா இந்த பரி பராவும்.

1. ராஜாஜி

2. உயிரியல்



பதிற்றுநாடு எண் 768 நாள் 21-4-97

₹ 1000/-

சு. சிவசுப்பிரமணியன்
முத்தியைத்தாள் விற்பனையாளர்
குளார்.
உரிமம் எண் 9/திருப்பூர்/1993

செயல்வாங்கியாக
63. வேலம்பாளையம்

..6..

பிள்ளைம் ஊர் திருப்பூர் பதிவு, மாவட்டம், பல்லடம் சார்பத்தி வட்டம், பல்லடம் வட்டம், பல்லடம் பஞ்சாயத்திற்கு உட்பட்டிருக்கும் சேர்ந்த 63 வேலம்பாளையம் கிராம பஞ்சாயத்திற் போரிடு எல்லைக்குட்பட்ட 63 வேலம்பாளையம் கிராமத்தில்:

க.ச. 152/1 நெ காலை பு.கா. ஏ. 15.95க்கு த.ந. 12.94 பைசா இடம், தென்வடல் பொய்யாக மேல்புரம் செல்லக்காள் பங்கு பரிக்கும் மேற்கு, கிறமேல் இட்டோரிக்கும் வடக்கு

புசாரி மாரப்பகவுண்டர் வகையரா பரிக்கும் கிறக்கு,

கட்டுக்கார கருப்பகவுண்டர் பரிக்கும் தெற்கு

இதன் மத்தியில் பு.கா. ஏ. 10.82க்கு த.ந. 81. பைசா இந்த பரியும்.

1. ராயன்

2. அழகியன்

100RS



769 24-4-97

ச. அருண் பிரகாஷ்,
முத்திரைகள் விற்பனையாளர்
குளர்.
உலகம் எண் 9 / திருப்பூர் / 1993

செய்தல்கள்
63. கிராமப் பணங்காய்



...7..

சுக இரண்டு கிராமும் சேரிந்ஷ ஒட்டு ஏ.10.92க்கு த.ந.8.87 கபசா
இந்த பழிகள் பராவும்.

1. ராணாளர்

2. உதவி கிளவ 2020 9 1 1993



770 21-4-97
வரிநாடு எண் நாள்

₹ 100/-



சென்னை
பி. சிவசுப்பிரமணியன்,
முத்திரைநாள் விற்பனையாளர்
குஜார்.
உரிமம் எண் 9 / திருப்பூர் / 1993

பெயர்
63. வேளாங்குணம்

...8..

ஊர் புகழ்க்குரிய மாமூல் வழிநடை பாத்தியம் சுகிதம்.

ஊர் சொத்தின் தற்கால மதிப்பு ரூ. 2,18,500.00

1. ராய்மன்

2. உதகரியம்

சாட்சிகள் :-
1. K. N. சம்பந்தன், சிவசுப்பிரமணியன்
2. B. Chi. Kannan, சிவசுப்பிரமணியன்

ஆவணம் வரைவு செய்தவர் : [Signature]
ஆவணம் தடப் செய்தவர் : [Signature] 10/3/92. P. Vasanthalingam
[Signature] 10/3/92. P. Vasanthalingam



77) 21-4-97 020/-

தமிழ்நாடு எண் நாள்

பி. சமுதிரகாண்டி,
முத்திரைதான் விற்பனையாளர்
குணர்.
உரிமம் எண் 9 / மதுபூம் / 1993

செயல்வாங்கிகள்
63. வேலம்பாளையம்



..9..

1968-ம் வருடத்திய பத்திரங்களின் மதிப்புக் குறைவைத் தடுக்கும் மதரால் ஸ்டாம்புச் சட்டம் விதி 3(1)-ஊபடி பட்டியல்:

வ.எண். சரிவே எண் விவரம் பரிசின் இடை எழுதிக்கொடுப்பவர்களின் திரையைப்படி, தற்கால மாரிக்கட் மதிப்பு.

சுடிகம்பாளையம் கிராமம்			
1.	க.ச. 3/3	0.10	பு.கா.மதிப்பு ரூ. 2,000.00
63 வேலம்பாளையம் கிராமம்			
2.	க.ச. 152/1	10.82	" ரூ. 2,16,400.00
3.	தடபாத்திய		மதிப்பு ரூ. 100.00
			மொத்த மதிப்பு ரூ. 2,18,500.00

எழுதிக்கொடுப்பவர்களின் கையொப்பம்,

1. ராஜகாண்டி

2. ப. சமுதிரகாண்டி

भारतीय गैर न्यायिक

बीस रुपये

Rs. 20

₹. 20

TWENTY RUPEES

INDIA

INDIA NON JUDICIAL

தமிழ்நாடு தமிழ்நாடு TAMIL NADU

88AB 193160

25 JAN 2021

Handwritten signature

T. சர்ப்ரமணியன்
Jr. SRO IV Vendor
ROC No. 6645 B1/85
10-A, D.E. ஸ்டாடு

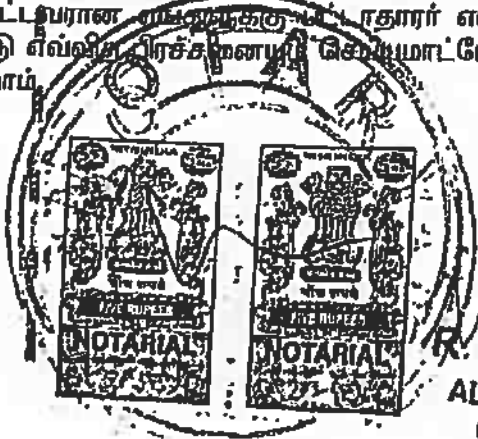


ஆட்சேபணையின்மைக் கடிதம் சந்தரணபுரம், மதுரை-625 01

திருப்பூர் மாவட்டம், பல்லடம் வட்டம், வேலம்பாளையம் கிராமம், நாசுவன்காட்டு தோட்டம் என்ற முகவரியில் வசிக்கும் பழனிச்சாமி கவுண்டர் மகன் முத்துக்குமார் (1), நடராஜன் (2) ஆகிய நாங்கள் (1) திருப்பூர் மாவட்டம், பல்லடம் வட்டம், வேலம்பாளையம் கிராமம், நாசுவன்காட்டு தோட்டம் என்ற முகவரியில் வசிக்கும் பழனிச்சாமி கவுண்டர் மனைவி தெய்வத்தாள் (3) ஆகிய உங்களுக்கு எழுதிக்கொடுக்கும் சம்மதக் கடிதம் என்னவென்றால்,

திருப்பூர் மாவட்டம், பல்லடம் வட்டம், வேலம்பாளையம் கிராமம், புல எண். 152/1-ல் 6.46.0 ஹெக்டர் பூமிபானது பட்டா எண். 347-ன்படி நம்மில் (1) முதல் (3) வரை இலக்கமிட்டவர் பெயரில் கூட்டுப்பட்டாவாக தாக்கலாகியுள்ளது.

மேற்படி புலத்தில் நம்மில் (3) இலக்கமிட்ட திருமதி. தெய்வத்தாள் என்பவர் பெயரில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் வழங்கக் கோரி விண்ணப்பம் செய்து, துணை இயக்குநர் (கனிமம்) அவர்களால் அனுமதி வழங்கும் நாளிலிருந்து பத்து ஆண்டுகளுக்கு குவாரி குத்தகை உரிமம் பெற்று சாதாரண கற்கள் மற்றும் கிராவல் குவாரி நடத்த நம்மில் (1) மற்றும் (2) இலக்கமிட்டவரான ராஜசேகரன் மற்றும் தாதாரர் என்ற முறையில் எவ்விதமான ஆட்சேபணையும் இல்லை. பின்னிட்டு எவ்வித பிரச்சனையும் செய்யமாட்டோம். முழுமனதுடன் சம்மதம் அளிக்கிறேன் என உறுதி கூறுகிறோம்.



Handwritten signatures

R. Suguna Devi-M.A.BL.,
ADVOCATE & NOTARY PUBLIC
Commissioner Of Oaths
No.6, Court Street, Tirupur-1
Cell - 9843172666

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



ANNEXURE - VI



இந்திய அடையாள அமைப்பு அதிகாரம்
Unique Identification Authority of India

முகவரி:
கணவர் பெயர்: பழனிச்சாமி,
7, நாவிதன்
காட்டுத்தோட்டம், பல்லடம்,
வேலம்பாளையம், திருப்பூர்,
தமிழ் நாடு - 641663

Address:
W/O: Palarisamy, 7, NAVITHAN,
KATTUTH THOTTAM,
PALLADAM, velampalayam,
Tiruppur,
Tamil Nadu - 641663

4406 8898 4744



help@uidai.gov.in



www.uidai.gov.in



இந்திய அரசாங்கம்
Government of India



தெய்வத்தாய்
Dervathai
பிறந்த நாள்/ DOB 09/06/1947
பாலினம் / FEMALE



4406 8898 4744

எனது ஆதார், எனது அடையாளம்


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

Reg. No 01BBB1005
Col Code 106/106

ANNEXURE - 1
No. 038673

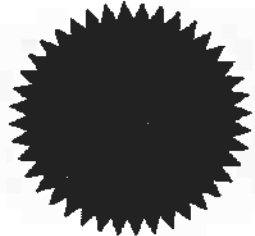


அறிவியல் புலம்
FACULTY OF SCIENCE

பெரியார் பல்கலைக்கழக ஆட்சிக்குழு 2003 ஆம் ஆண்டு ஏப்ரல் மாதம் நடந்த பயன்பாட்டு புவியமைப்பியல் தேர்வில் S தனசேகர் என்பவர் முதல் வகுப்பில் தேர்ச்சி பெற்றார் என்று தக்க தேர்வாளர்கள் சான்றளித்தபடி அறிவியல் நிறைஞர் என்னும் பட்டத்தை அவருக்குப் பல்கலைக்கழக இலச்சினையுடன் வழங்குகிறது.

The Syndicate of the Periyar University hereby makes known that **DHANASEKAR S** *has been admitted to the* **DEGREE OF MASTER OF SCIENCE in APPLIED GEOLOGY**

he/she having been certified by duly appointed Examiners to be qualified to receive the same and was placed in the **FIRST CLASS** *at the Examination held in* **APRIL 2003**



Given under the seal of this University

நாள்
Dated 15-09-2004
சேலம் 636011, தமிழ்நாடு, இந்தியா.
Salem 636011, TamilNadu, India.

பதிவாளர்
Registrar

துணைவேந்தர்
Vice-Chancellor

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

PRITHVI MINERALS,



ANNEXURE - VIII
© : 04288 - 262489

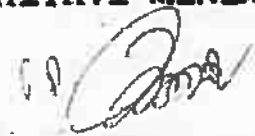
VARANALLAMPALAYAM,
ALATHUR POST - 637-303.
SANKARI Tk, Salem Dt. Tamil Nadu

Date :27.12.08.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that SHRI S. DHANASEKAR, S/o. Shri A. Sundaram residing at No.8/3, Kullappan Street, Omalur Taluk, Salem District - 636 455 is working in our mines for the date of 15.10.2003 to till date as Geologist. During the above tenure of service his execution of the assigned work is exemplary and worth mentioning. We wish him success in his future endeavours.

For PRITHVI MINERALS,


(T.P. THANGAVEL.)
Partner


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



PHOTO SHOWN PROPOSED APPLIED LEASE AREA VIEW-1

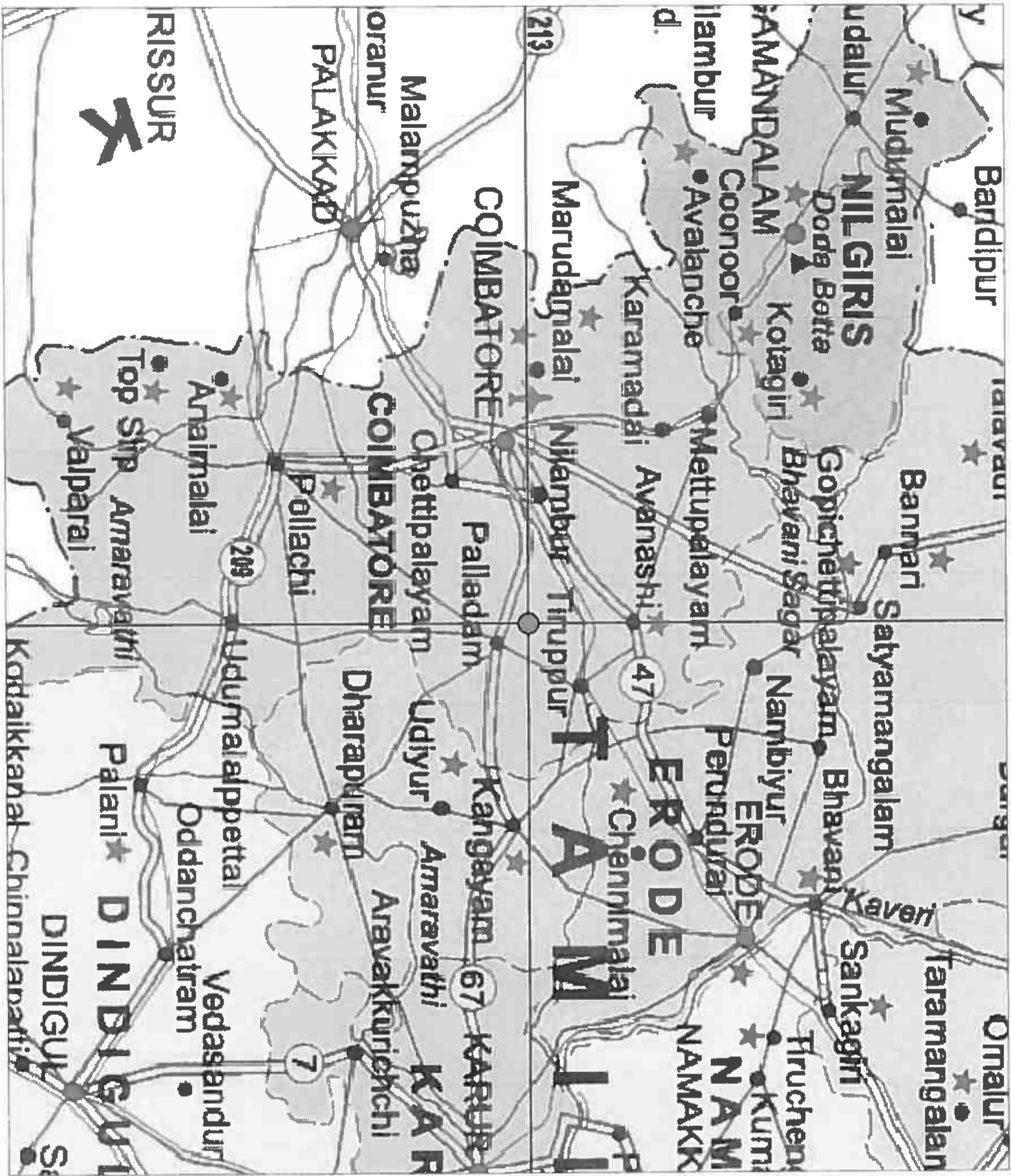


PHOTO SHOWN PROPOSED APPLIED LEASE AREA VIEW-2



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

77° 15' 23.0535" E



77° 15' 30.0902" E

11° 02' 17.2275" N

11° 02' 14.0866" N

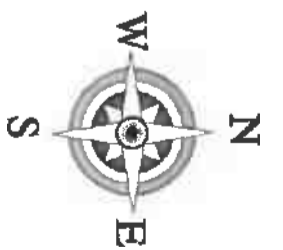


PLATE NO-1

DATE OF SURVEY: 22-01-2022

APPLICANT ADDRESS:

TMT. P. DEIVATHAL,
W/O. PALANISAMY GOUNDER,
NAASUVANKAATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TIRUPPUR DISTRICT- 641 663.

INDEX

QUARRY LEASE AREA: ●

TOPO SHEET NO.: 58-E/8.

LATITUDE : 11° 02' 17.2275" N to 11° 02' 14.0866" N

LONGITUDE : 77° 15' 30.0902" E to 77° 15' 23.0535" E

LOCATION OF QUARRY:

EXTENT : 3.55.5Ha.
S.F. Nos : 3/2A & 152/1(P).
VILLAGE : SUKKAMPALAYAM &
VELAMPALAYAM.
TALUK : PALLADAM.
DISTRICT : TIRUPPUR.

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. DHIANASEKAR M.Sc.
QUALIFIED PERSON

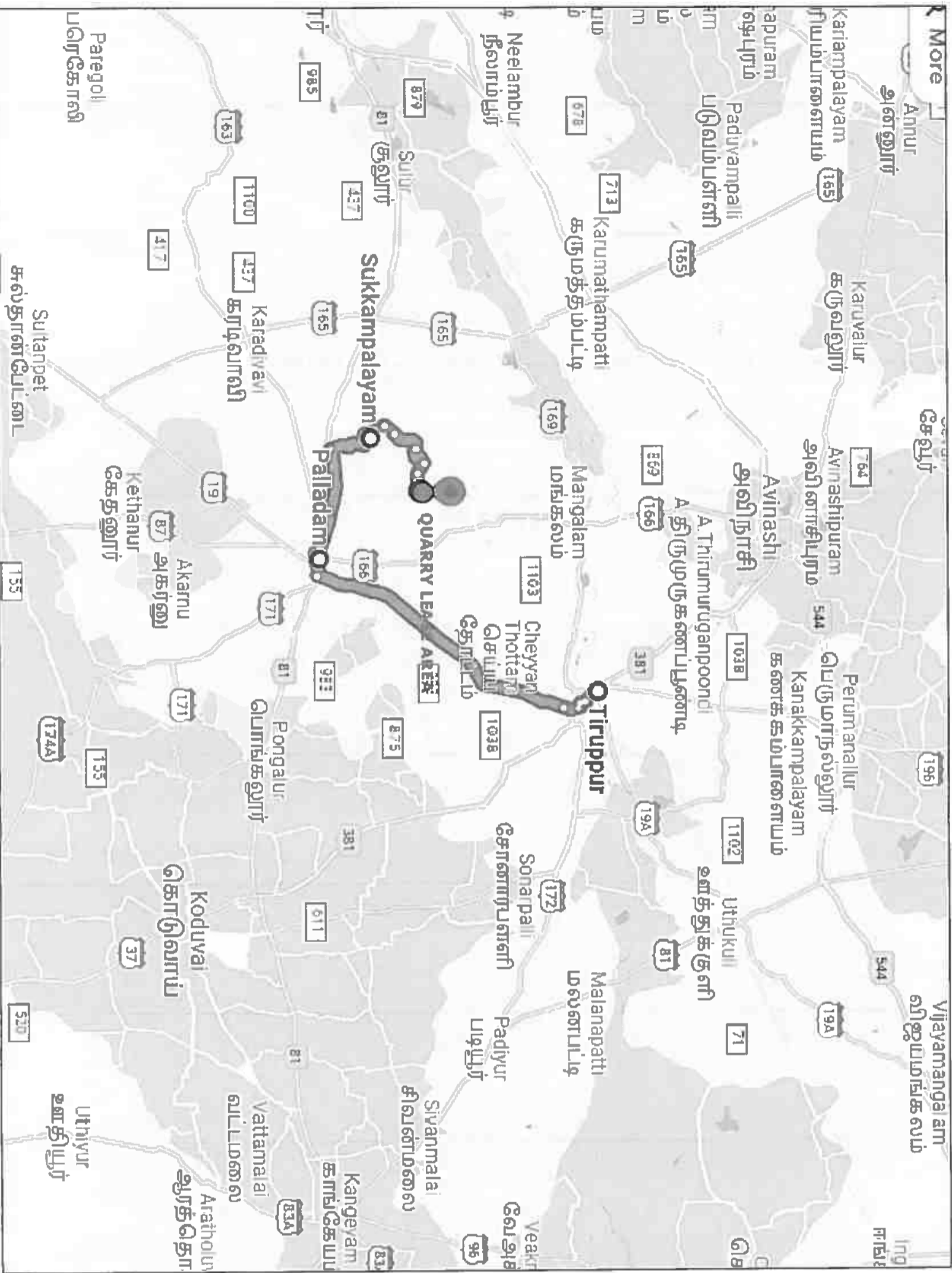
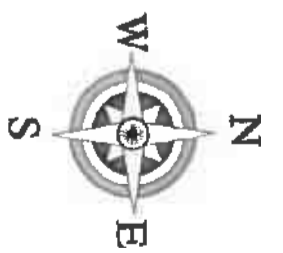


PLATE NO-1A

DATE OF SURVEY: 22-01-2022

APPLICANT ADDRESS:

TMT. P. DEIVATHAL,
W/o. PALANISAMY GOUNDER,
NAASUVANKAATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TIRUPPUR DISTRICT - 641 663.

INDEX

QUARRY LEASE AREA
ROAD

LOCATION OF QUARRY:

EXTENT : 3.55.5Ha.
S.F. Nos : 3/2A & 152/1(P).
VILLAGE : SUKKAMPALAYAM &
VELAMPALAYAM.
TALUK : PALLADAM.
DISTRICT : TIRUPPUR.

KEY MAP

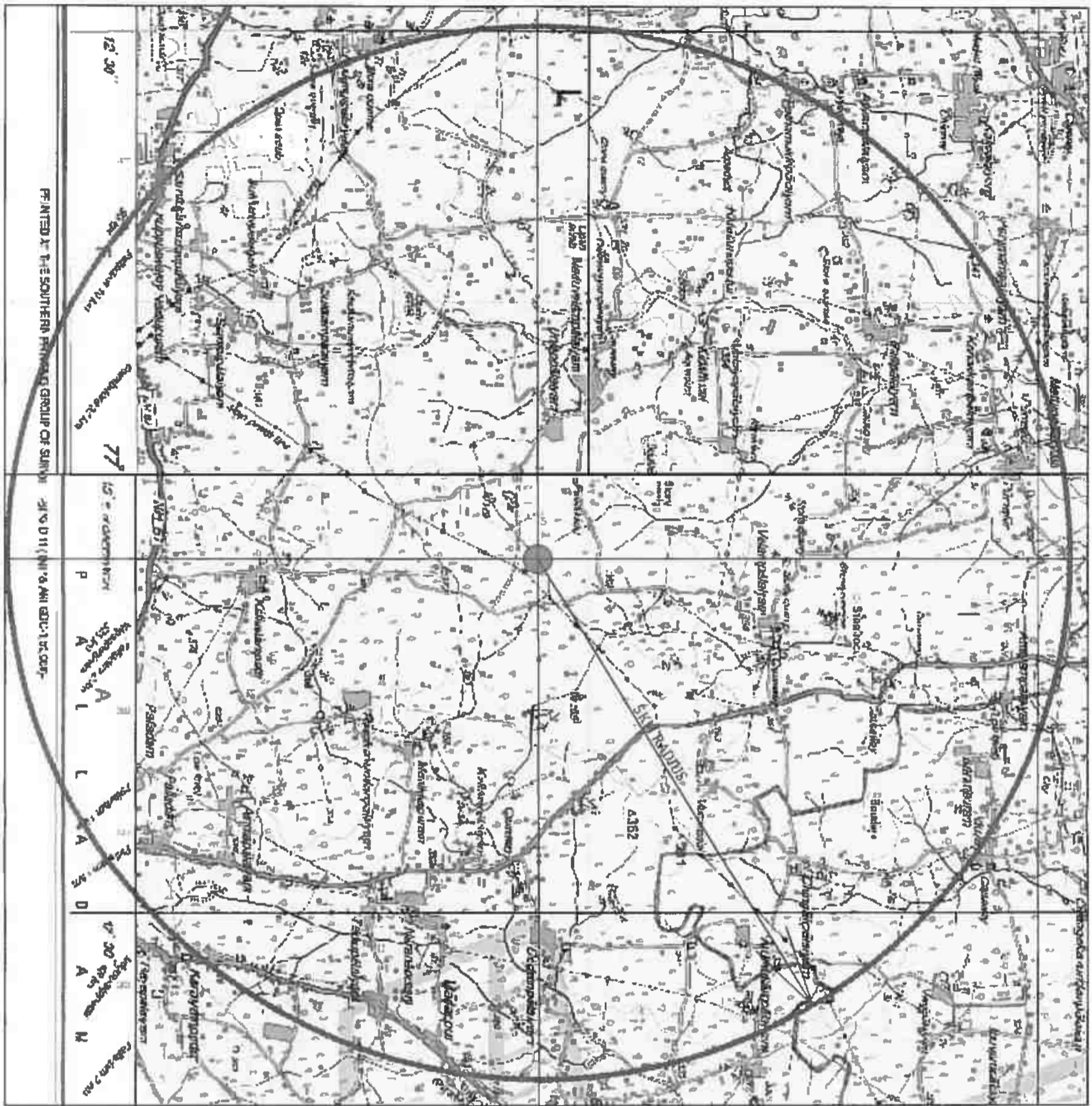
Not to Scale

Prepared By:

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

S. DHANASEKAR, M.Sc.,
QUALIFIED PERSON

77° 15' 23.0535" E



11° 02' 17.2275" N

11° 02' 14.0866" N

77° 15' 30.0902" E

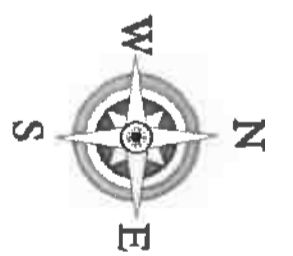


PLATE NO: B

DATE OF SURVEY: 22-01-2022

APPLICANT ADDRESS:

TMT. P. DEIVATHAL,
W/O. PALANISAMY GOUNDER,
NAASUVANKATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TIRUPPUR DISTRICT- 641 663.

INDEX

QUARRY LEASE AREA :

5KM RADIUS

TOPO SHEET NO.: 58-E/8,

LATITUDE : 11° 02' 17.2275" N to 11° 02' 14.0866" N

LONGITUDE : 77° 15' 30.0902" E to 77° 15' 23.0535" E

SYMBOLS	
	Quarry Lease Area
	5km Radius
	Topographic Sheet
	Boundary
	Road
	River
	Building
	Well
	Temple
	Cemetery
	Hill
	Contour
	Spot Height
	Spot Height with Error
	Spot Height with Error and Direction
	Spot Height with Error and Direction and Date

LOCATION OF QUARRY

EXTENT : 3.55. Sha.
S.F. Nos : 3/2A & 152/1(P),
VILLAGE : SUKKAMPALAYAM &
VELAMPALAYAM,
TALUK : PALLADAM,
DISTRICT : TIRUPPUR.

TOPO SHEET MAP OF
THE LEASE AREA

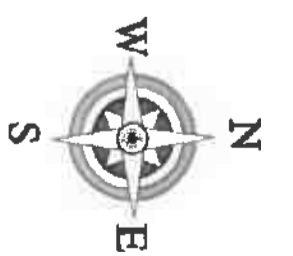
SCALE: 1:50,000

PREPARED BY:

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TO THE BEST OF MY KNOWLEDGE!

S. DHANASEKAR, M.Sc.,
QUALIFIED PERSON





PILLARNO	LATITUDE	LONGITUDE
1	11° 02' 12.0550" N	77° 15' 25.8743" E
2	11° 02' 13.0711" N	77° 15' 25.8748" E
3	11° 02' 13.8365" N	77° 15' 25.7983" E
4	11° 02' 14.0866" N	77° 15' 23.0535" E
5	11° 02' 17.2603" N	77° 15' 23.0052" E
6	11° 02' 20.7626" N	77° 15' 23.3843" E
7	11° 02' 19.6104" N	77° 15' 25.4459" E
8	11° 02' 18.1350" N	77° 15' 25.8596" E
9	11° 02' 17.7702" N	77° 15' 26.0773" E
10	11° 02' 17.2275" N	77° 15' 30.0902" E
11	11° 02' 11.7390" N	77° 15' 29.5323" E

PLATE NO-IC

DATE OF SURVEY : 22-01-2022

APPLICANT ADDRESS:

TMT. P. DEIVATHAL,
 W/O. PALANISAMY GOUNDER,
 NAASUVANKAATTU THOTTAM,
 VELAMPALAYAM VILLAGE,
 PALLADAM TALUK,
 TRUPPUR DISTRICT - 641 663.

INDEX

QUARRY LEASE AREA



LOCATION OF QUARRY:

EXTENT : 3.55.5Ha.
 S.F. Nos : 3/2A & 152/1(P).
 VILLAGE : SUKKAMPALAYAM &
 VELAMPALAYAM.
 TALUK : PALLADAM,
 DISTRICT : TRUPPUR.

SATELLITE IMAGE

(LEASE AREA)

SCALE: 1:2000

Prepared By:

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

S. Dhanaasekaram
 S. DHANASEKARAM, Sc.,
 QUALIFIED PERSON

11° 02' 19.6104" N
77° 15' 25.4459" E



11° 02' 14.0866" N
77° 15' 23.0535" E

11° 02' 17.2275" N
77° 15' 30.0902" E

11° 02' 12.0550" N
77° 15' 25.8743" E

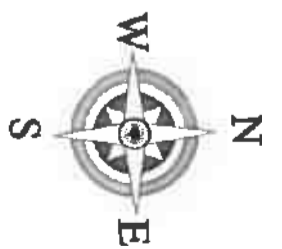





PLATE NO-ID

DATE OF SURVEY: 22-01-2022

APPLICANT ADDRESS:

TMT. P.DEIVATHAL,
W/O. PALANISAMY GOUNDER,
NAASUVANKAATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TIRUPPUR DISTRICT- 641 663.

INDEX

- QUARRY LEASE AREA 
- 500m RADIUS 
- 300M RADIUS 

LOCATION OF QUARRY:

EXTENT : 3.55.5Ha.
S.F. Nos : 3/2A & 152/1(P),
VILLAGE : SUKKAMPALAYAM &
VELAMPALAYAM,
TALUK : PALLADAM,
DISTRICT : TIRUPPUR.

SATELLITE IMAGE

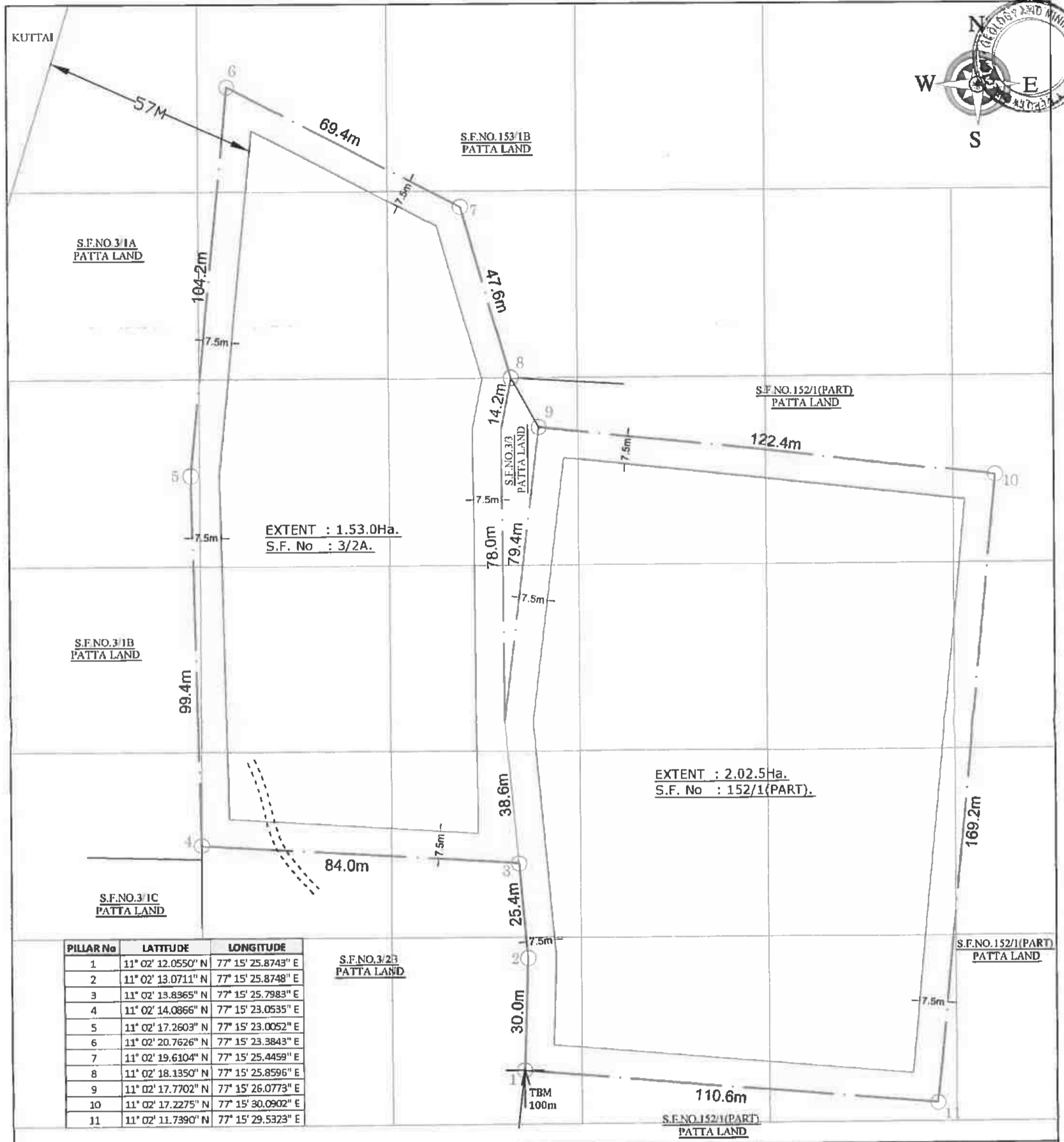
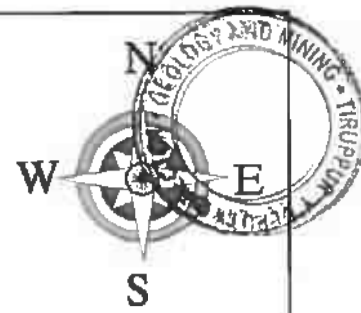
(500m RADIUS)

SCALE 1 : 5000

Prepared By:

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HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE


S. DHANASEKAR, M.Sc.,
QUALIFIED PERSON



EXTENT : 1.53.0Ha.
S.F. No : 3/2A.

EXTENT : 2.02.5Ha.
S.F. No : 152/1(PART).

PILLAR No	LATITUDE	LONGITUDE
1	11° 02' 12.0550" N	77° 15' 25.8743" E
2	11° 02' 13.0711" N	77° 15' 25.8748" E
3	11° 02' 13.8365" N	77° 15' 25.7983" E
4	11° 02' 14.0866" N	77° 15' 23.0535" E
5	11° 02' 17.2603" N	77° 15' 23.0052" E
6	11° 02' 20.7626" N	77° 15' 23.3843" E
7	11° 02' 19.6104" N	77° 15' 25.4459" E
8	11° 02' 18.1350" N	77° 15' 25.8596" E
9	11° 02' 17.7702" N	77° 15' 26.0773" E
10	11° 02' 17.2275" N	77° 15' 30.0902" E
11	11° 02' 11.7390" N	77° 15' 29.5323" E

INDEX	
QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
BOUNDARY PILLARS	
TEMPORARY BENCH MARK	
APPROACH ROAD	

APPLICANT ADDRESS:
TMT. P.DEIVATHAL,
W/o. PALANISAMY GOUNDER,
NAASUVANKAATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TIRUPPUR DISTRICT- 641 663.

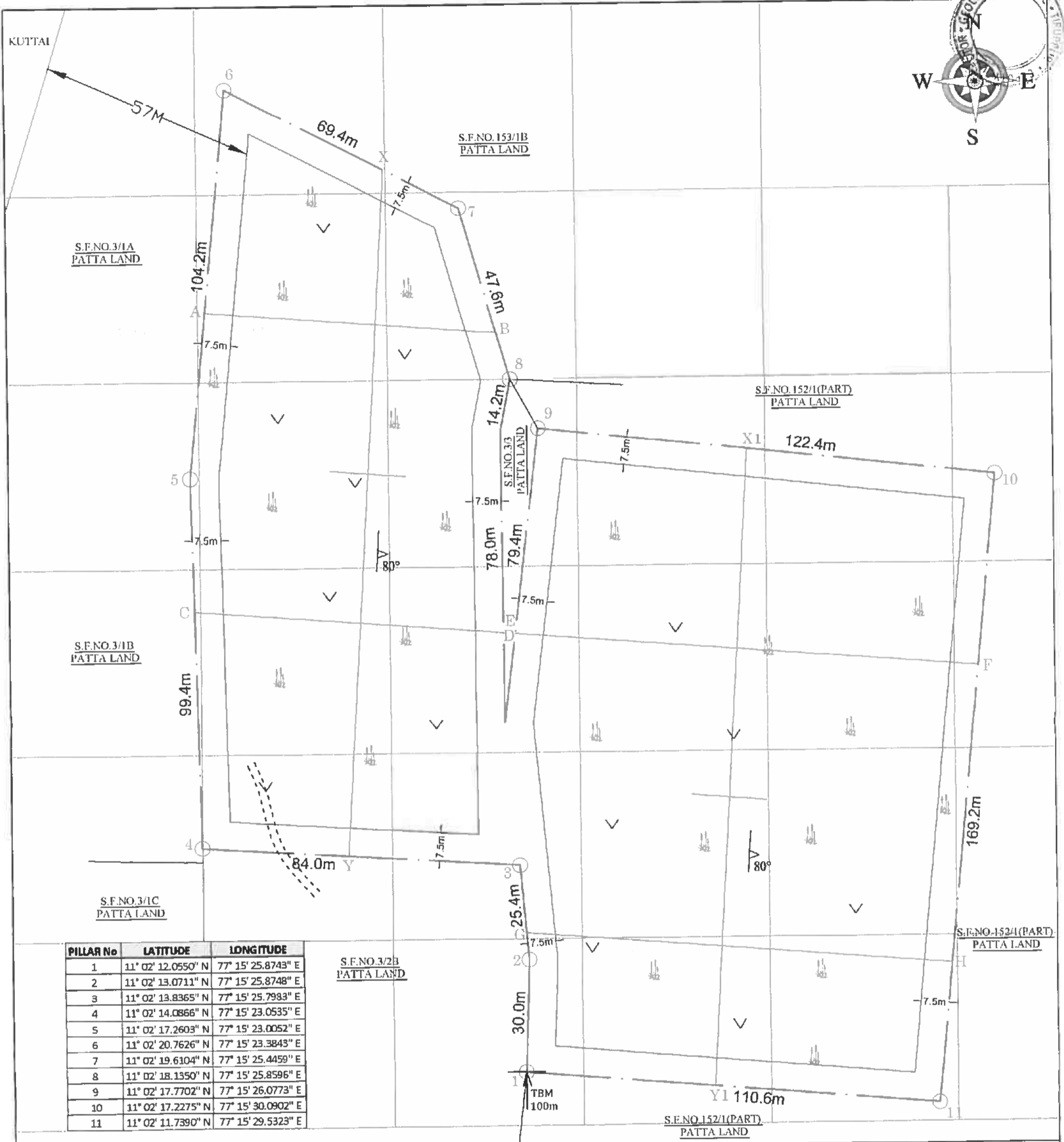
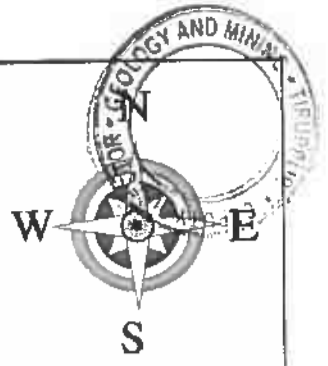
LOCATION OF QUARRY
EXTENT : 3.55.5Ha.
S.F. Nos : 3/2A & 152/1(P).
VILLAGE : SUKKAMPALAYAM &
VELAMPALAYAM.
TALUK : PALLADAM.
DISTRICT : TIRUPPUR.

PLATE NO:II
DATE OF SURVEY: 22-01-2022

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.,
QUALIFIED PERSON



PILLAR No	LATITUDE	LONGITUDE
1	11° 02' 12.0550" N	77° 15' 25.8743" E
2	11° 02' 13.0711" N	77° 15' 25.8748" E
3	11° 02' 13.8365" N	77° 15' 25.7983" E
4	11° 02' 14.0866" N	77° 15' 23.0535" E
5	11° 02' 17.2603" N	77° 15' 23.0052" E
6	11° 02' 20.7626" N	77° 15' 23.3843" E
7	11° 02' 19.6104" N	77° 15' 25.4459" E
8	11° 02' 18.1350" N	77° 15' 25.8596" E
9	11° 02' 17.7702" N	77° 15' 26.0773" E
10	11° 02' 17.2275" N	77° 15' 30.0902" E
11	11° 02' 11.7390" N	77° 15' 29.5323" E

S.F.NO.3/2B
PATTA LAND

S.F.NO.152/1(PART)
PATTA LAND

INDEX	
QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
GRAVEL	
ROUGH STONE	
STRIKE & DIP	
QUARRY ROAD	
SHRUB	

APPLICANT ADDRESS:
TMT. P.DEIVATHAL,
W/o. PALANISAMY GOUNDER,
NAASUVANKAATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TIRUPPUR DISTRICT- 641 663.

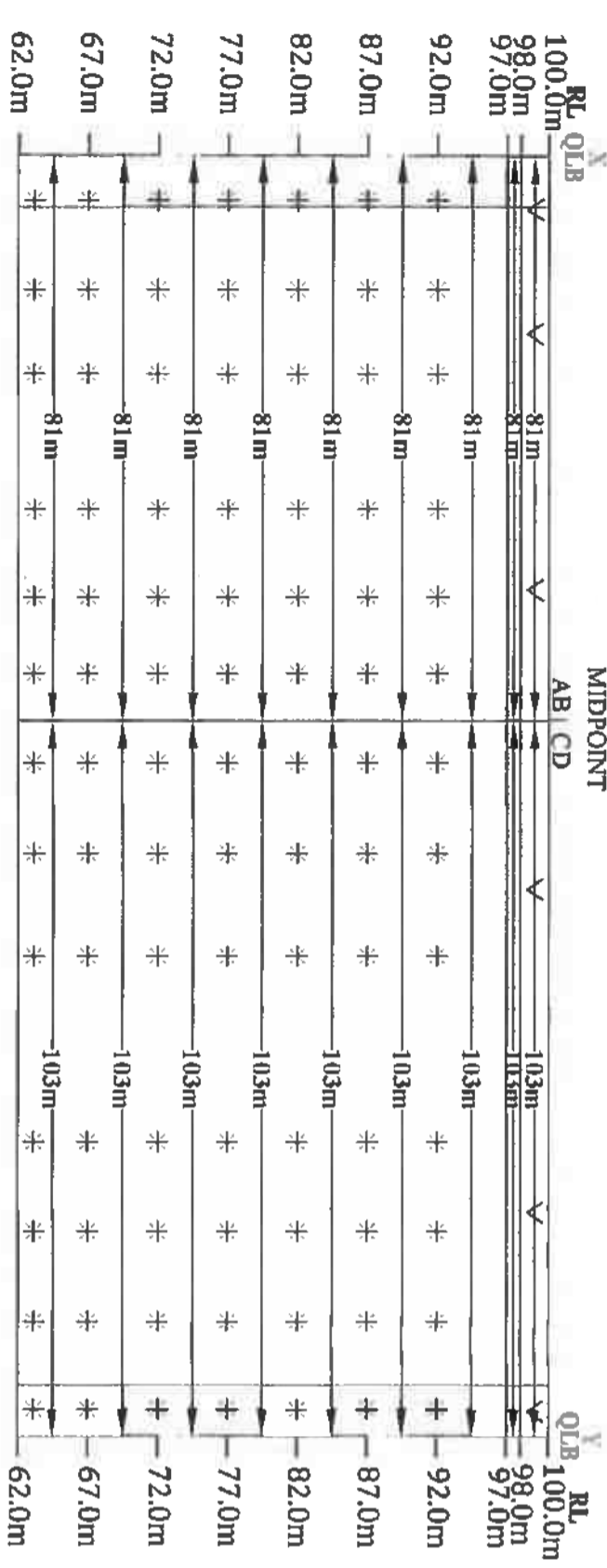
LOCATION OF QUARRY
EXTENT : 3.55.5Ha.
S.F. Nos : 3/2A & 152/1(P).
VILLAGE : SUKKAMPALAYAM &
VELAMPALAYAM.
TALUK : PALLADAM.
DISTRICT : TIRUPPUR.

PLATE NO:III
DATE OF SURVEY: 22-01-2022
**SURFACE & GEOLOGICAL
PLAN**
SCALE: 1:1000

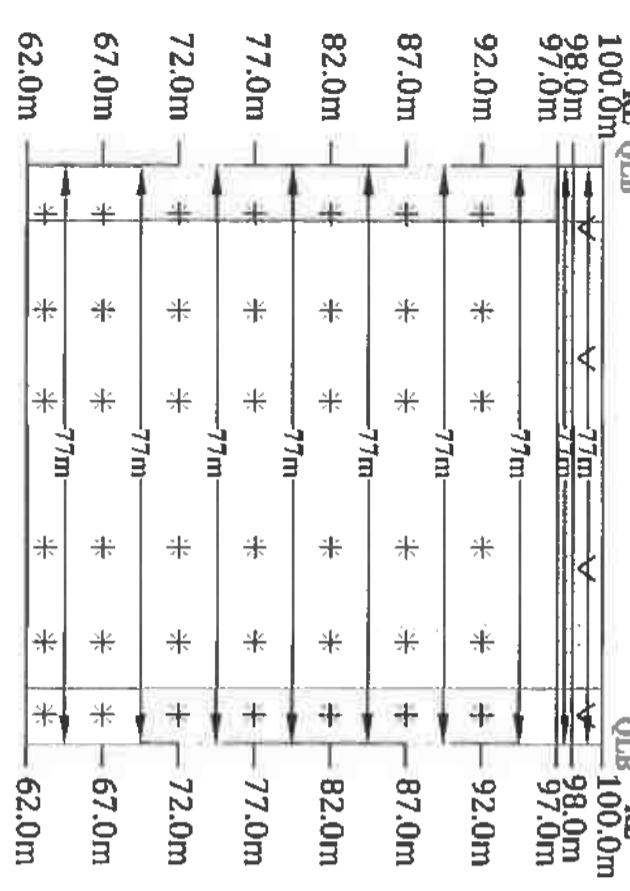
PREPARED BY:
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HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE.

S.DHANASEKAR, M.Sc.,
QUALIFIED PERSON

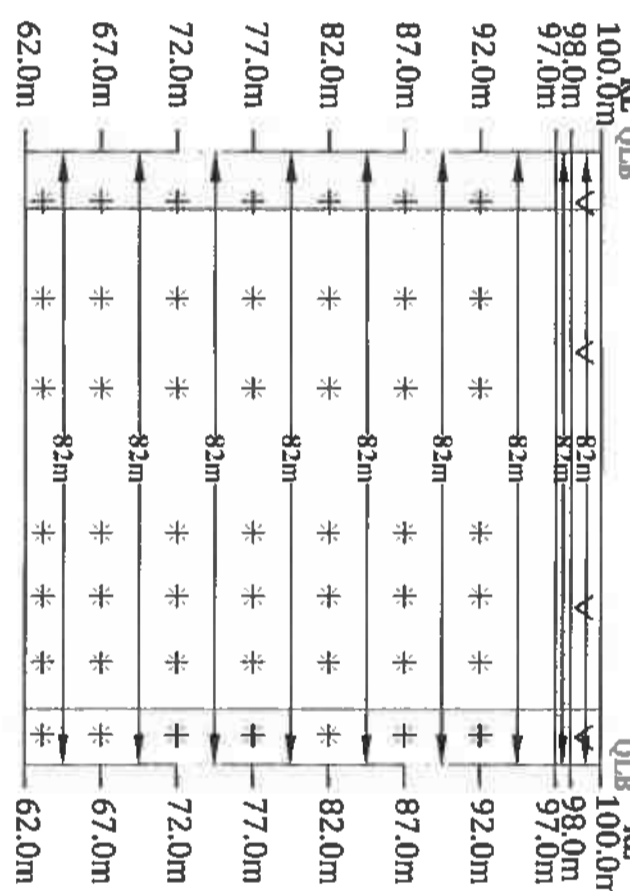
SECTION ALONG WITH X-Y



SECTION ALONG WITH A-B



SECTION ALONG WITH C-D



Section	Bench	length In (m)	Width In (m)	Depth In (m)	Volume In m3	Geological Reserves In m3 @ 100%	Weathered Rock In m3	Gravel In m3
XV-AB	I	81	77	2	31185	31185	6237	12474
	II	81	77	1	31185	31185		16892
	III	81	77	5	31185	31185		
	IV	81	77	5	31185	31185		
	V	81	77	5	31185	31185		
	VI	81	77	5	31185	31185		
	VII	81	77	5	31185	31185		
	VIII	81	77	5	31185	31185		
	IX	81	77	5	31185	31185		
	TOTAL				118295	218295	6237	12474
XV-CD	I	103	82	2	42230	42230	8446	16892
	II	103	82	1	42230	42230		
	III	103	82	5	42230	42230		
	IV	103	82	5	42230	42230		
	V	103	82	5	42230	42230		
	VI	103	82	5	42230	42230		
	VII	103	82	5	42230	42230		
	VIII	103	82	5	42230	42230		
	IX	103	82	5	42230	42230		
	TOTAL				295610	295610	8446	16892
XVI-EF	I	94	124	2	58280	58280	11656	23312
	II	94	124	1	58280	58280		
	III	94	124	5	58280	58280		
	IV	94	124	5	58280	58280		
	V	94	124	5	58280	58280		
	VI	94	124	5	58280	58280		
	VII	94	124	5	58280	58280		
	VIII	94	124	5	58280	58280		
	IX	94	124	5	58280	58280		
	TOTAL				407960	407960	11656	23312
GRAND TOTAL				1229095	1229095	35117	70234	

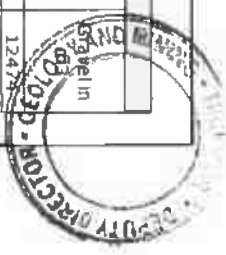
PLATE NO: III-A
DATE OF SURVEY: 22-01-2022
APPLICANT ADDRESS:
 TMT. P. DEIVATHAL,
 W/O. PALANISAMY GOUNDER,
 NAASUVANKAATTU THOTTAM,
 VELAMPALAYAM VILLAGE,
 PALLADAM TALUK,
 TRUPPUR DISTRICT- 641 663.

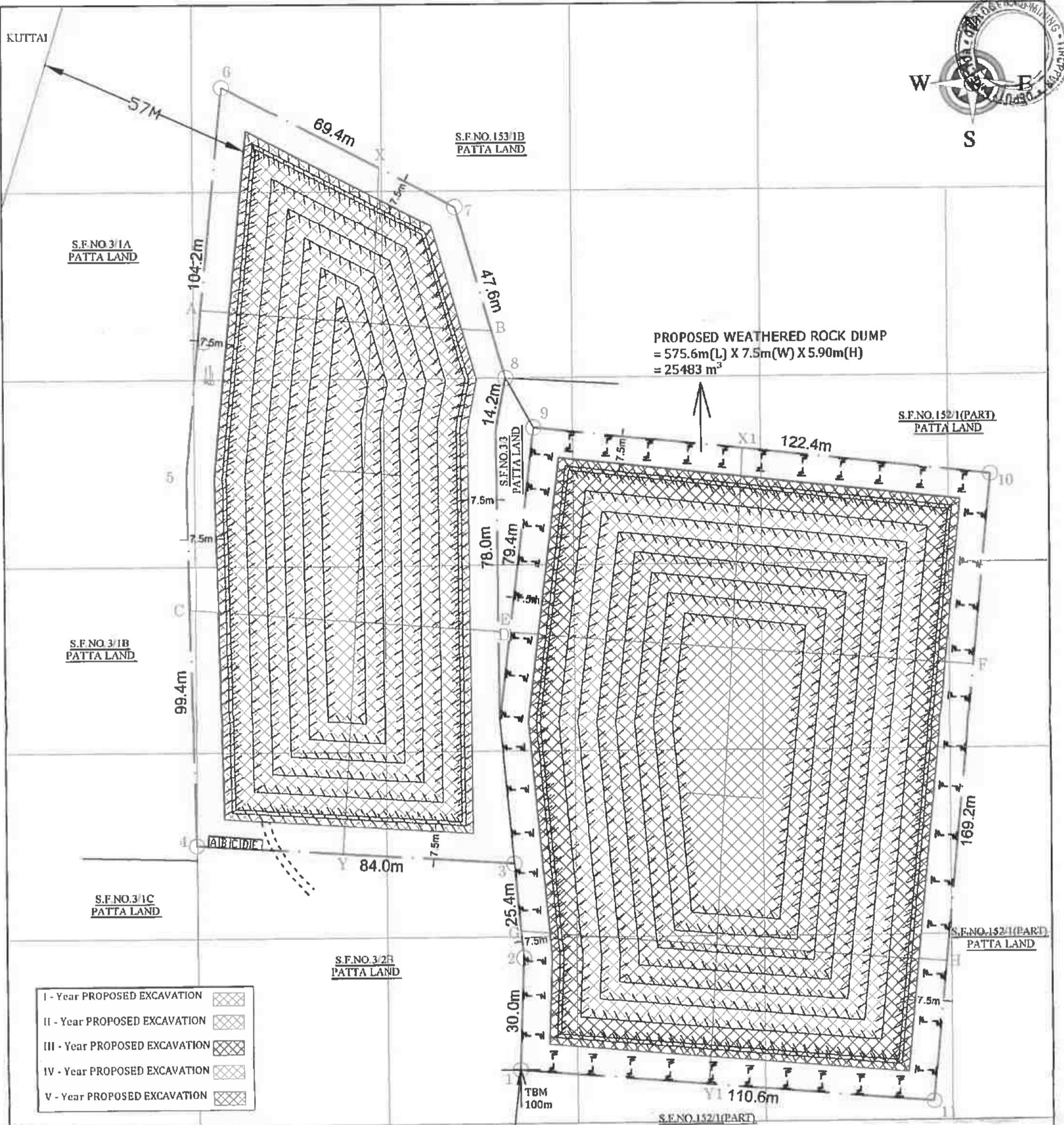
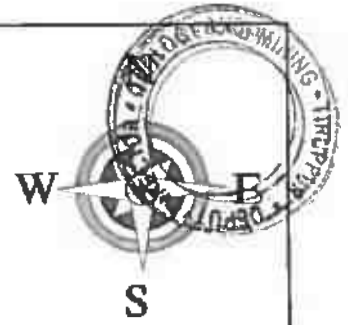
INDEX
 QUARRY LEASE BOUNDARY
 7.5m SAFETY DISTANCE
 GRAVEL
 WEATHERED ROCK
 ROUGH STONE

LOCATION OF QUARRY
 EXTENT : 3.55.5Ha.
 S.F. Nos : 3/2A & 152/1(P).
 VILLAGE : SUKKAMPALAYAM &
 VELAMPALAYAM.
 TALUK : PALLADAM.
 DISTRICT : TRUPPUR.

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

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





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

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

INDEX	
QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
GRAVEL	
ROUGH STONE	
QUARRY ROAD	
PROPOSED DUMP	
SHRUB	

APPLICANT ADDRESS:
 TMT. P.DEIVATHAL,
 W/o. PALANISAMY GOUNDER,
 NAASUVANKAATTU THOTTAM,
 VELAMPALAYAM VILLAGE,
 PALLADAM TALUK,
 TIRUPPUR DISTRICT- 641 663.

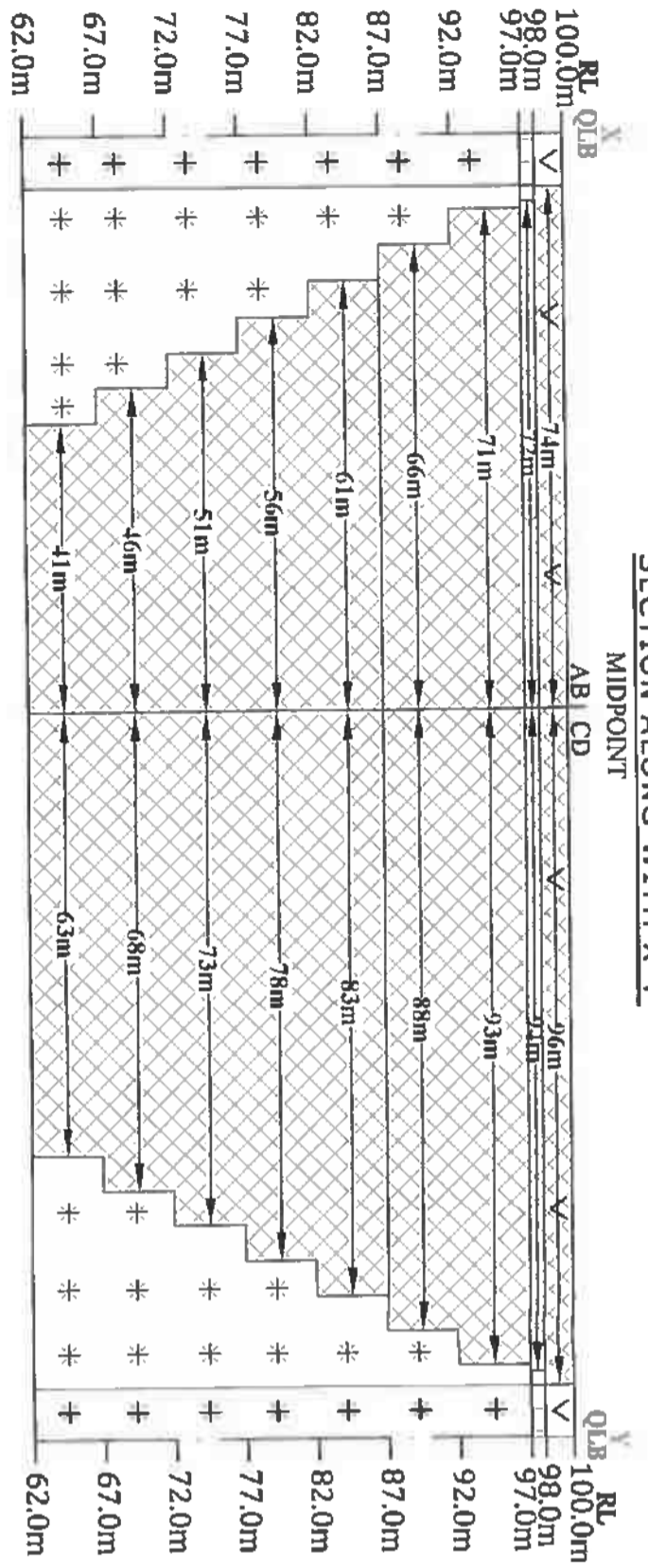
LOCATION OF QUARRY
 EXTENT : 3.55.5Ha.
 S.F. Nos : 3/2A & 152/1(P).
 VILLAGE : SUKKAMPALAYAM &
 VELAMPALAYAM.
 TALUK : PALLADAM.
 DISTRICT : TIRUPPUR.

PLATE NO:IV
 DATE OF SURVEY: 22-01-2022
YEARWISE DEVELOPMENT AND PRODUCTION PLAN
 SCALE: 1:1000

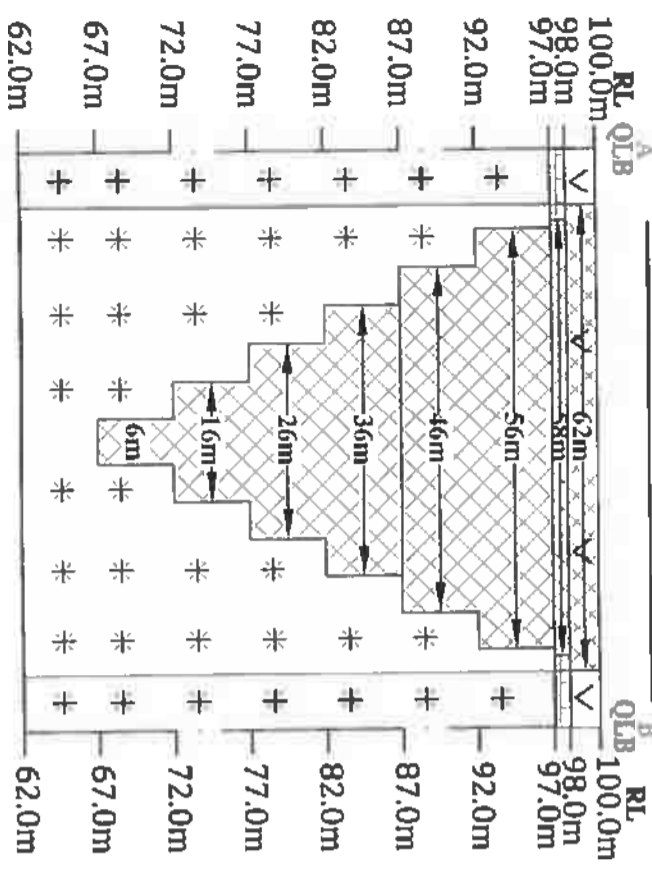
PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

 S.DHANASEKAR, M.Sc.,
 QUALIFIED PERSON

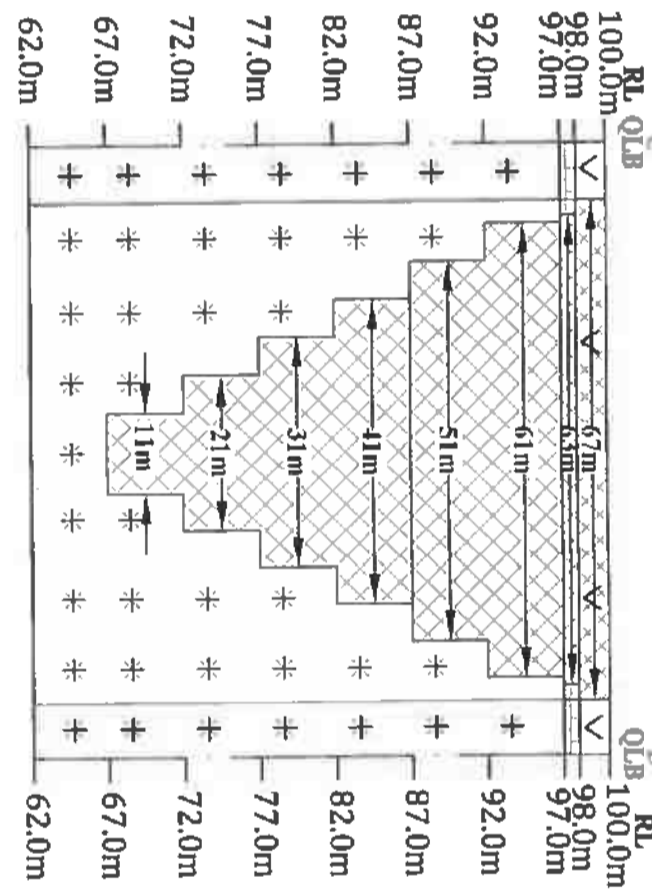
SECTION ALONG WITH X-Y
MIDPOINT



SECTION ALONG WITH A-B



SECTION ALONG WITH C-D



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

YEARWISE DEVELOPMENT AND PRODUCTION									
YEAR	Section	Bench	length In (m)	Width In (m)	Depth In (m)	Volume In m ³	Recoverable Reserves In m ³ @ 100%	Weathered Rock In m ³	Gravel In m ³
I-YEAR	X-Y-AB	I	74	52	2			4176	28276
		II	72	58	1				
		III	71	56	5	19880	19880		
		IV	66	46	5	15180	15180		
II-YEAR	X-Y-CD	I	96	67	2			5922	12864
		II	94	63	1	28365	28365		
		III	93	61	5	22440	22440		
		IV	89	51	5	85865	85865	10098	22040
TOTAL	X-Y-AB	V	61	36	5	10960	10960		
		VI	56	26	5	7280	7280		
		VII	51	16	5	4080	4080		
		VIII	45	6	5	1380	1380		
		IX	41	1	5	205	205		
		X	83	41	5	17015	17015		
		XI	78	31	5	12090	12090		
		XII	73	21	5	7665	7665		
		XIII	68	11	5	3740	3740		
		XIV	63	1	5	315	315		
TOTAL	X-Y-CD	I	87	109	2	64750	64750		18966
		II	85	105	1			8925	
		III	84	103	5	43260	43260		13860
		IV	70	99	2			6460	
TOTAL	X-Y-AB	I	67	93	5	31155	31155		
		II	79	93	5	74415	74415	15385	32826
		III	74	83	5	30710	30710		
		IV	62	83	5	25730	25730		
TOTAL	X-Y-CD	V	57	73	5	20805	20805		
		VI	69	73	5	25185	25185		
		VII	64	53	5	20160	20160		
		VIII	59	53	5	15635	15635		
TOTAL	X-Y-AB	IX	54	43	5	11610	11610		
		X	52	63	5	16380	16380		
		XI	47	53	5	12455	12455		
		XII	42	43	5	9030	9030		
TOTAL	X-Y-CD	XIII	37	33	5	6105	6105		
		XIV	69	73	5	116560	116560		
		XV	64	53	5	455570	455570	25483	54866
		XVI	57	73	5				

PLATE NO: IV-A

DATE OF SURVEY: 22-01-2022

APPLICANT ADDRESS:

TMT. P. DEIVATHAL,
W/O. PALANISAMY GOUNDER,
NAASUVANKATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TRUPPUR DISTRICT- 641 663.

YEARWISE DEVELOPMENT
AND PRODUCTION SECTIONS

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

PREPARED BY:

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

S. DHANASEKAR, M.Sc.,
QUALIFIED PERSON

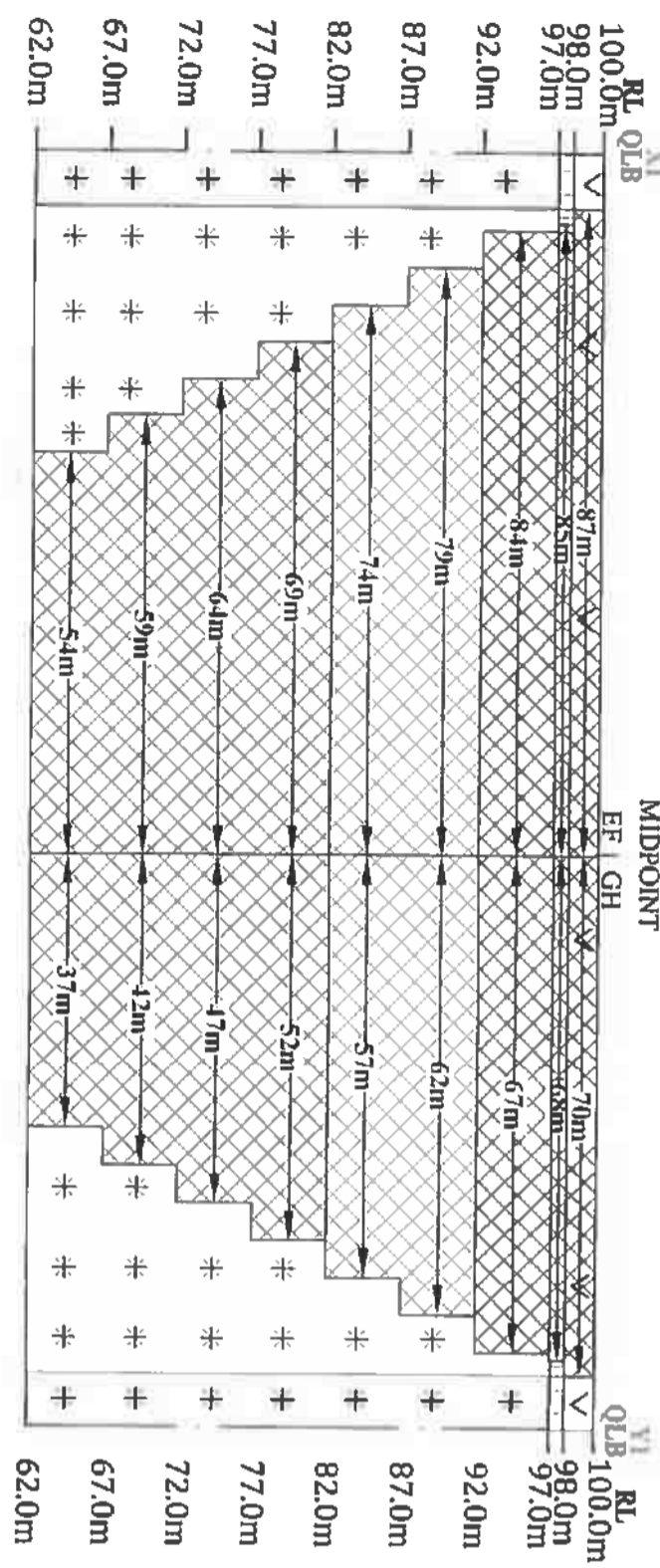
INDEX

- QUARRY LEASE BOUNDARY
- 7.5m SAFETY DISTANCE
- GRAVEL
- WEATHERED ROCK
- ROUGH STONE

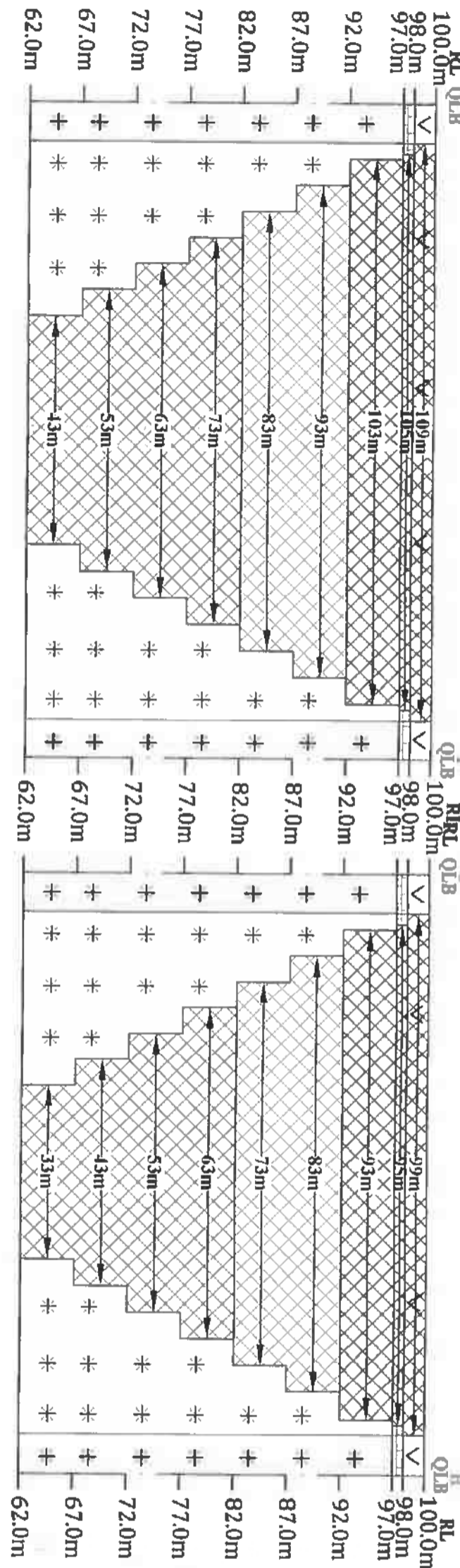
LOCATION OF QUARRY

EXTENT : 3.55.5ha.
S.F. Nos : 3/2A & 152/1(P).
VILLAGE : SUKKAMPALAYAM &
VELAMPALAYAM.
TALUK : PALLADAM.
DISTRICT : TRUPPUR.

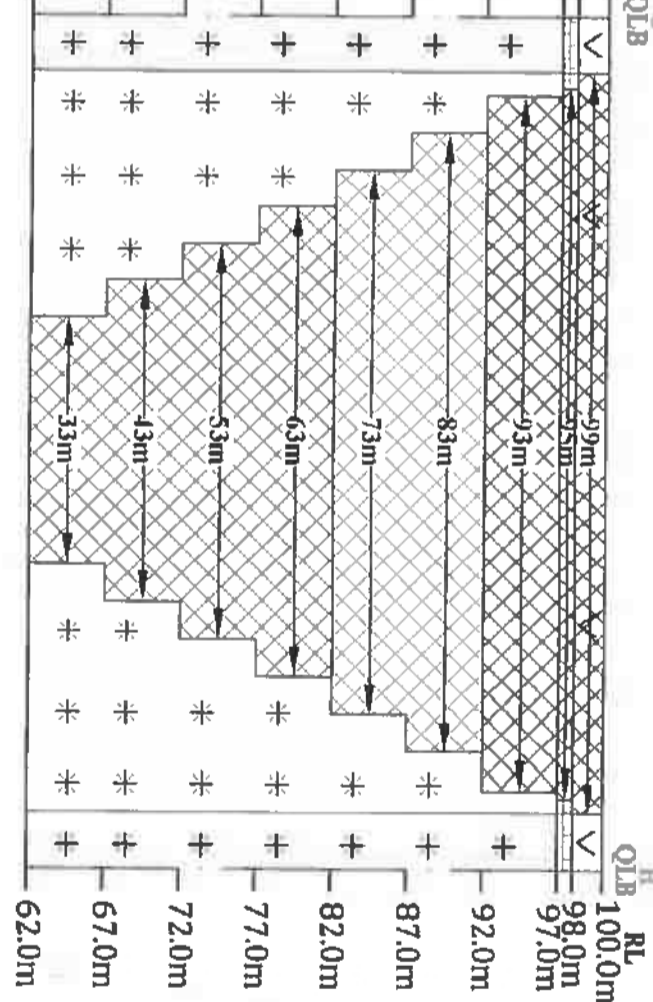
SECTION ALONG WITH X1-Y1



SECTION ALONG WITH E-F



SECTION ALONG WITH G-H



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



PLATE NO: IV-B
DATE OF SURVEY: 22-01-2022

APPLICANT ADDRESS:
TMT. P. DEIVATHAL,
W/O. PALANISAMY GOUNDER,
NAASUVANKAATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TRIRUPPUR DISTRICT- 641 663.

LOCATION OF QUARRY
EXTENT : 3.55.5Ha.
S.F. Nos : 3/2A & 152/1(P).
VILLAGE : SUKKAMPALAYAM &
VELAMPALAYAM.
TALUK : PALLADAM.
DISTRICT : TRIRUPPUR.

INDEX

QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
GRAVEL	
WEATHERED ROCK	
ROUGH STONE	

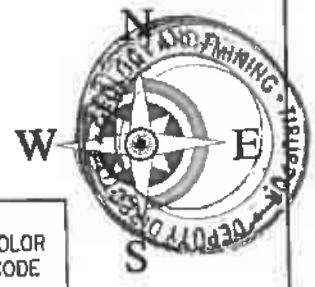
YEARWISE DEVELOPMENT
AND PRODUCTION SECTIONS

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

PREPARED BY:

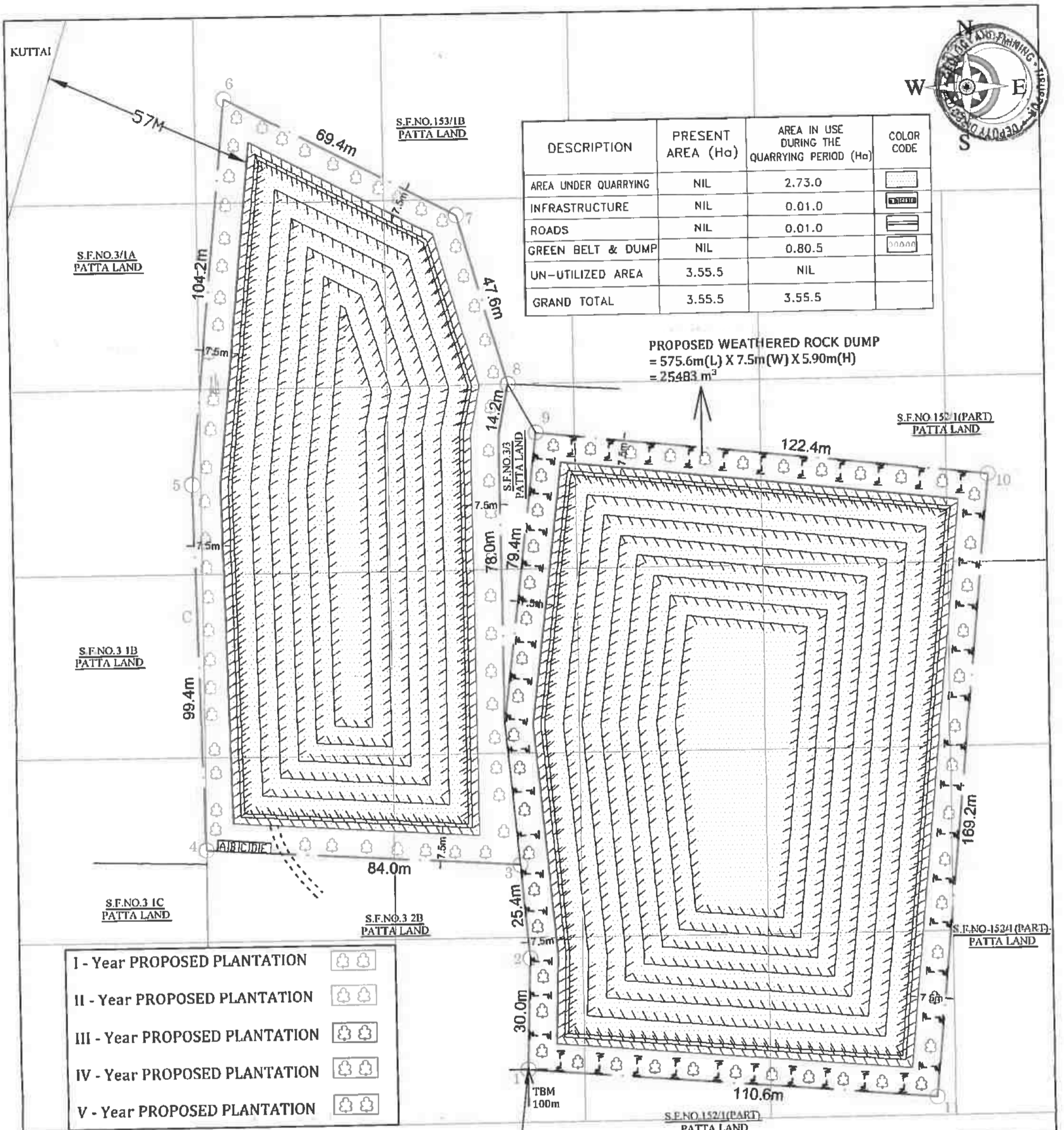
I DO HEREBY CERTIFY THAT THE PLATE
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE

S. DHANASEKAR, M.Sc.,
QUALIFIED PERSON



DESCRIPTION	PRESENT AREA (Ha)	AREA IN USE DURING THE QUARRYING PERIOD (Ha)	COLOR CODE
AREA UNDER QUARRYING	NIL	2.73.0	[Pattern]
INFRASTRUCTURE	NIL	0.01.0	[Pattern]
ROADS	NIL	0.01.0	[Pattern]
GREEN BELT & DUMP	NIL	0.80.5	[Pattern]
UN-UTILIZED AREA	3.55.5	NIL	[Pattern]
GRAND TOTAL	3.55.5	3.55.5	

PROPOSED WEATHERED ROCK DUMP
 = 575.6m(L) X 7.5m(W) X 5.90m(H)
 = 25483 m³



- I - Year PROPOSED PLANTATION [Tree icon]
- II - Year PROPOSED PLANTATION [Tree icon]
- III - Year PROPOSED PLANTATION [Tree icon]
- IV - Year PROPOSED PLANTATION [Tree icon]
- V - Year PROPOSED PLANTATION [Tree icon]

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

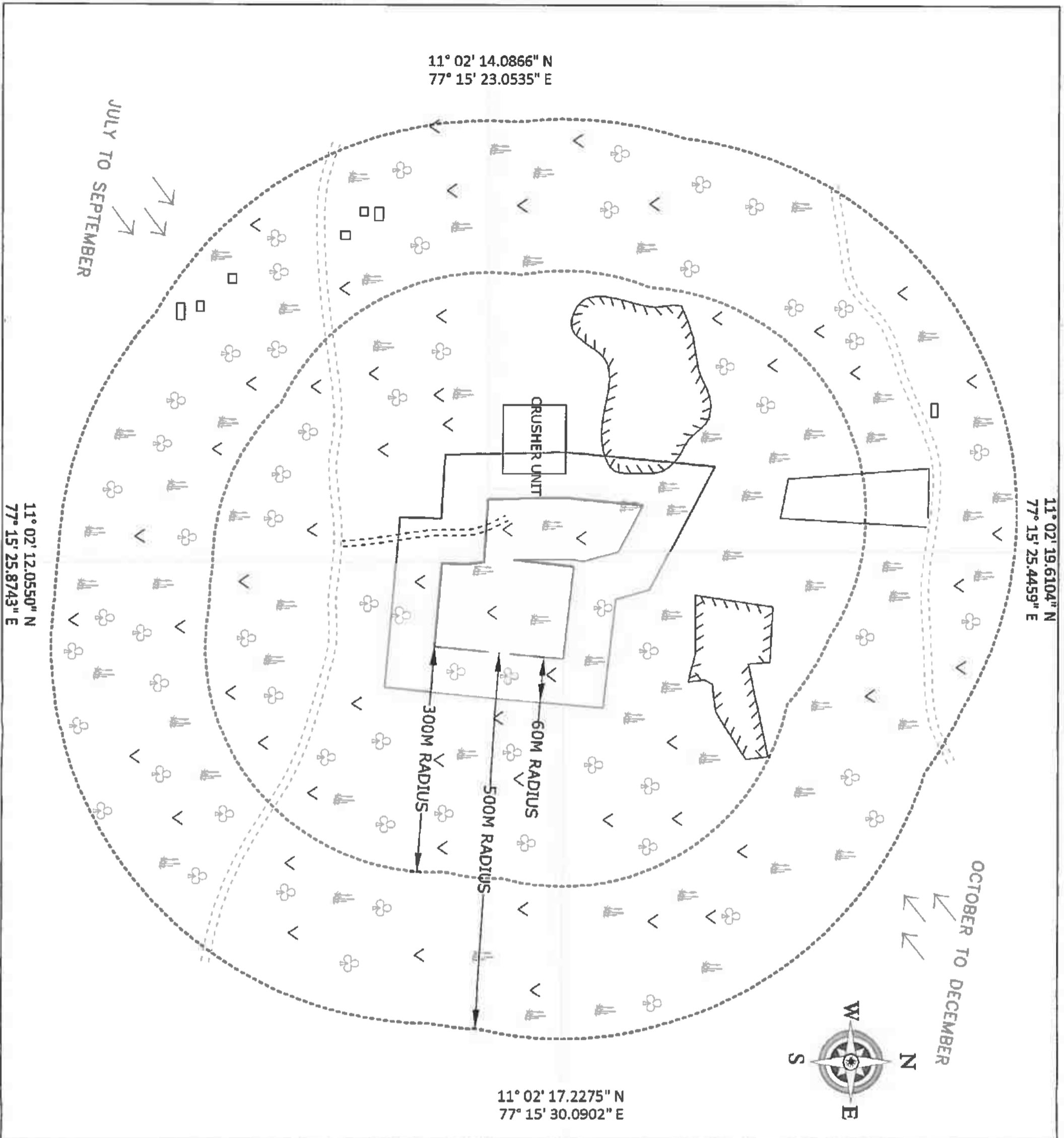
INDEX	
QUARRY LEASE BOUNDARY	[Pattern]
7.5m SAFETY DISTANCE	[Pattern]
TEMPORARY BENCH MARK	[TBM 100m]
GRAVEL	[Pattern]
ROUGH STONE	[Pattern]
QUARRY ROAD	[Pattern]
PROPOSED DUMP	[Pattern]
MINE LAYOUT	[Pattern]

APPLICANT ADDRESS:
 TMT. P.DEIVATHAL,
 W/o. PALANISAMY GOUNDER,
 NAASUVANKAATTU THOTTAM,
 VELAMPALAYAM VILLAGE,
 PALLADAM TALUK,
 TIRUPPUR DISTRICT- 641 663.

LOCATION OF QUARRY
 EXTENT : 3.55.5Ha.
 S.F. Nos : 3/2A & 152/1(P).
 VILLAGE : SUKKAMPALAYAM & VELAMPALAYAM.
 TALUK : PALLADAM.
 DISTRICT : TIRUPPUR.

PLATE NO:V
 DATE OF SURVEY: 22-01-2022
 MINE LAYOUT, LAND USE PATTERN & AFFORESTATION PLAN
 SCALE: 1:1000

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



11° 02' 19.6104" N
77° 15' 25.4459" E

11° 02' 12.0550" N
77° 15' 25.8743" E

11° 02' 17.2275" N
77° 15' 30.0902" E

OCTOBER TO DECEMBER

JULY TO SEPTEMBER

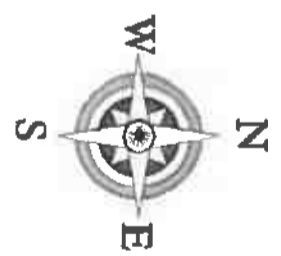


PLATE NO-VI

DATE OF SURVEY: 22-01-2022

APPLICANT ADDRESS:

TMT. P.DEIVATHAL,
W/O. PALANISAMY GOUNDER,
NASUVANKAATTU THOTTAM,
VELAMPALAYAM VILLAGE,
PALLADAM TALUK,
TRUPPUR DISTRICT - 641 663.

INDEX

- QUARRY LEASE BOUNDARY
- 500M RADIUS
- 300M RADIUS
- 60m RADIUS
- TREES
- CART TRACK
- QUARRY ROAD
- WIND DIRECTION
- INFRASTRUCTURES
- DRY AGRICULTURAL LAND
- SHRUB
- CRUSHER UNIT
- ADJACENT QUARRY

LOCATION OF QUARRY:

EXTENT : 3.55.5Ha.
S.F. Nos : 3/2A & 152/1(P).
VILLAGE : SUKKAMPALAYAM &
VELAMPALAYAM.
TALUK : PALLADAM.
DISTRICT : TRUPPUR.

ENVIRONMENT PLAN

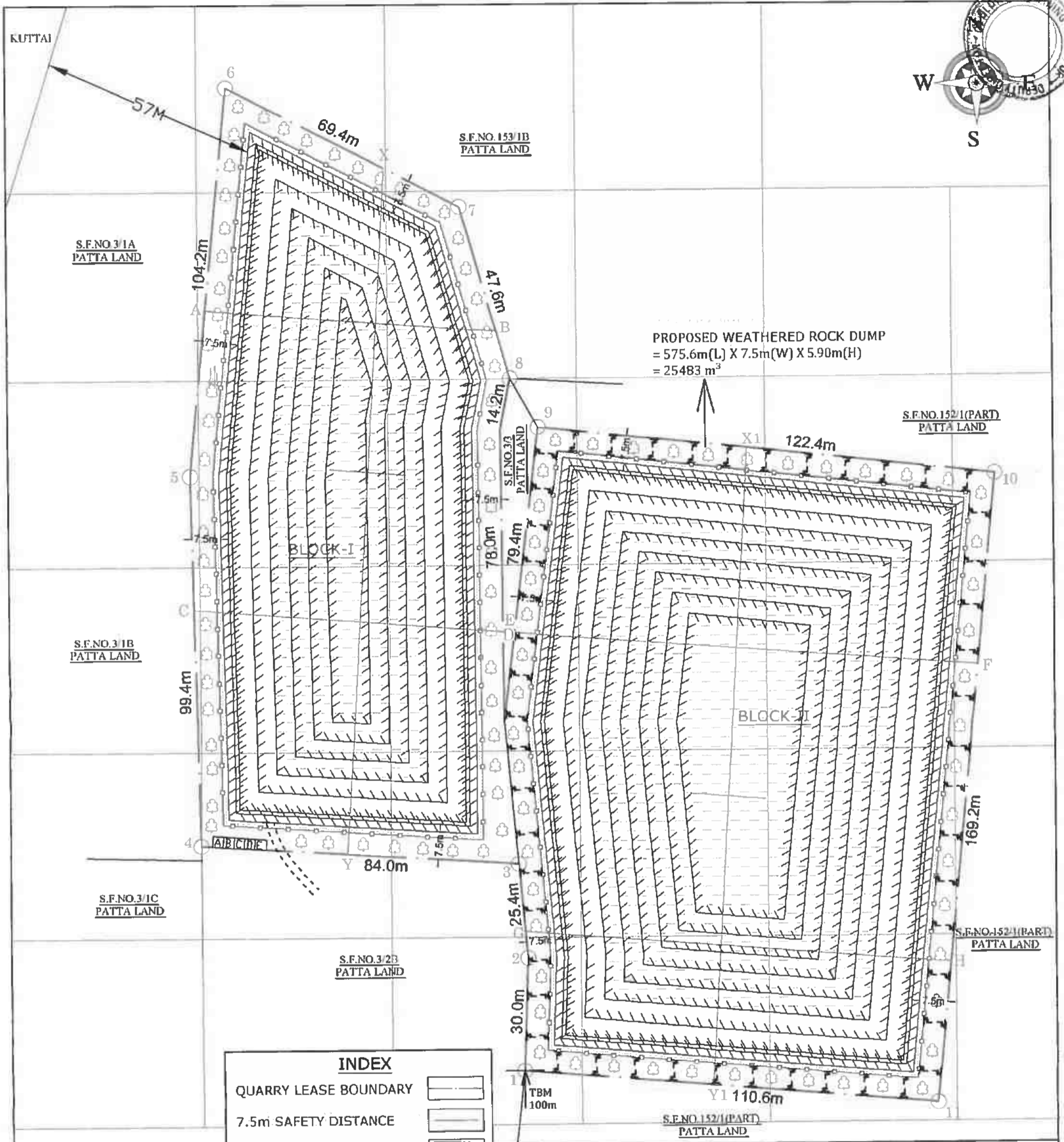
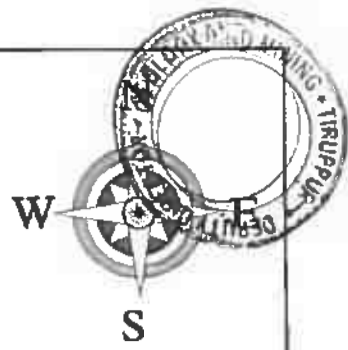
SCALE 1 : 5000

Prepared By:

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

S. DIAN NASEKAR, M.Sc.
QUALIFIED PERSON





INDEX	
QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
GRAVEL	
ROUGH STONE	
QUARRY ROAD	
PROPOSED DUMP	
FENCING	
PARAPET WALL	
PROPOSED WATER STORAGE	
ULTIMATE PIT LIMIT	

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

V Yr Afforestation

APPLICANT ADDRESS:
 TMT. P.DEIVATHAL,
 W/o. PALANISAMY GOUNDER,
 NAASUVANKAATTU THOTTAM,
 VELAMPALAYAM VILLAGE,
 PALLADAM TALUK,
 TIRUPPUR DISTRICT- 641 663.

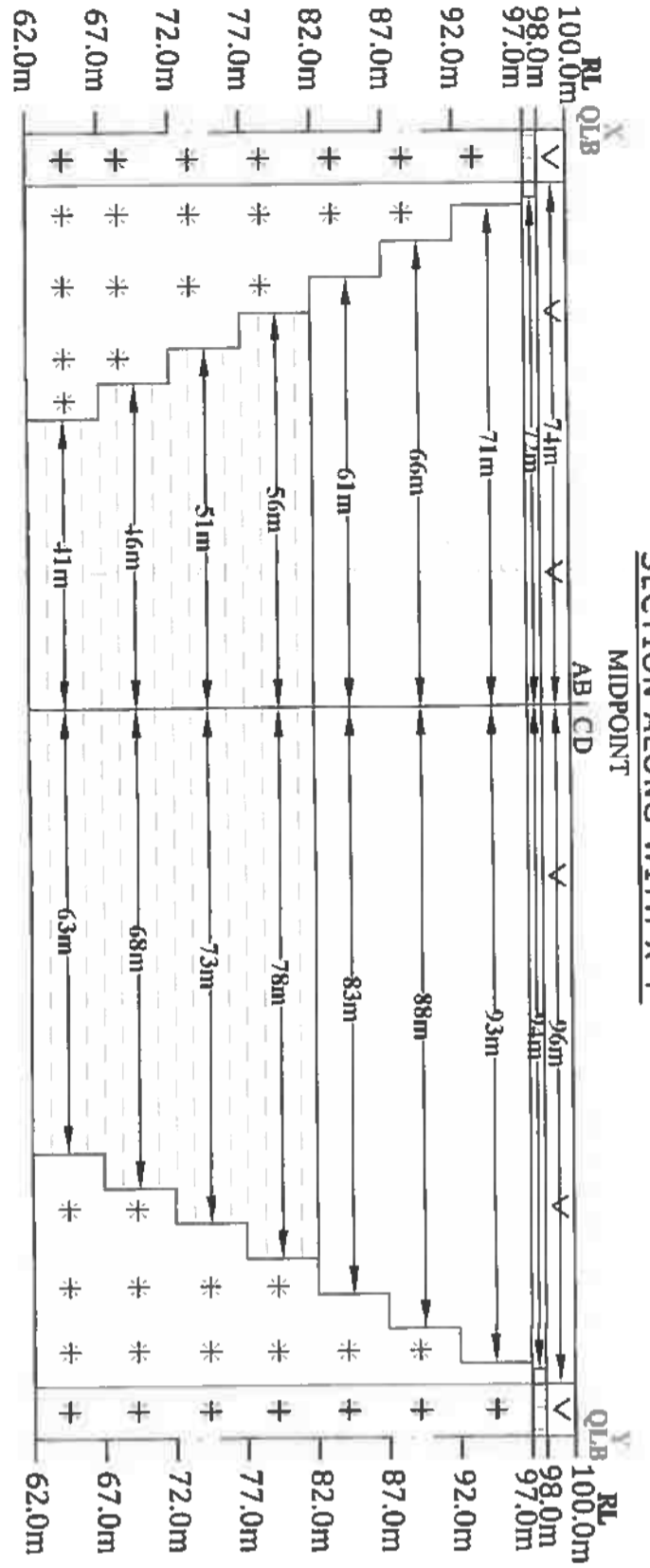
LOCATION OF QUARRY
 EXTENT : 3.55.5Ha.
 S.F. Nos : 3/2A & 152/1(P).
 VILLAGE : SUKKAMPALAYAM &
 VELAMPALAYAM.
 TALUK : PALLADAM.
 DISTRICT : TIRUPPUR.

PLATE NO:VII
 DATE OF SURVEY: 22-01-2022
CONCEPTUAL / FINAL MINE CLOSURE PLAN
 SCALE: 1:1000

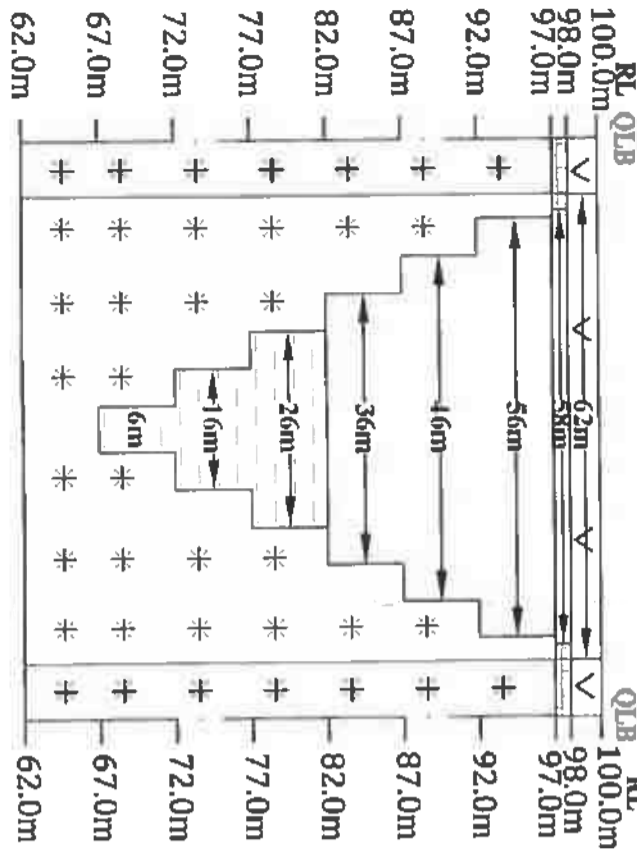
PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

 S.DHANASEKAR, M.Sc.,
 QUALIFIED PERSON

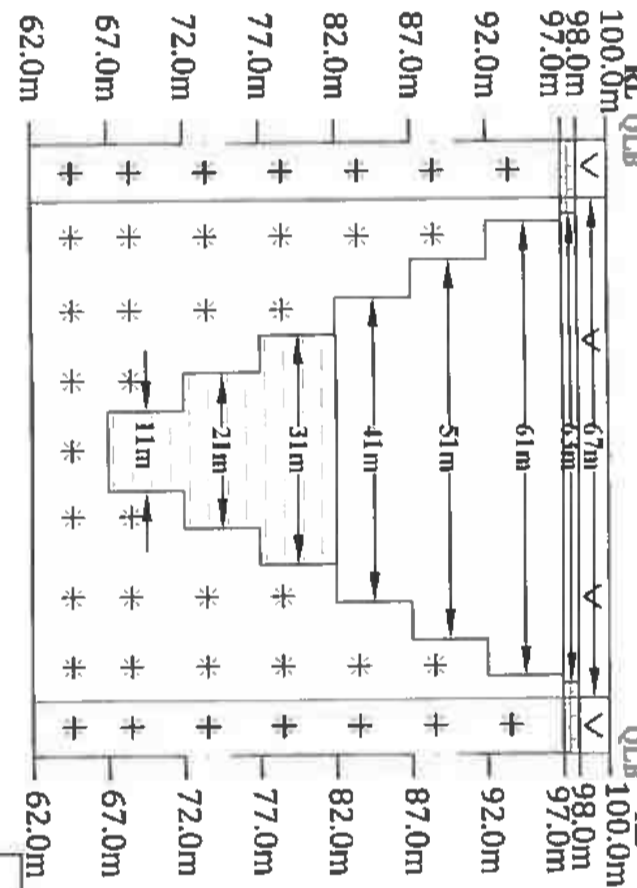
SECTION ALONG WITH X-Y



SECTION ALONG WITH A-B



SECTION ALONG WITH C-D



ULTIMATE PIT DIMENSION
 BLOCK-I = 170.0m(L) X 64.0m(W) Avg X 38.0m(D)
 BLOCK-II = 157.0m(L) X 104.0m(W) Avg X 38.0m(D)

Section	Bench	Length In (m)	Width In (m)	Depth In (m)	Volume In M3	MINERABLE RESERVES		Gravelly m3
						Reserves In m3 @ 100%	Weathered Rock In m3	
XV-AB	I	74	62	2				
	II	72	58	1	19880	19880	4176	9176
	III	71	56	5	15180	15180		
	IV	66	46	5	10980	10980		
	V	61	36	5	7280	7280		
	VI	56	26	5	4080	4080		
	VII	51	16	5	1380	1380		
	VIII	46	6	5	205	205		
	IX	41	1	5	205	205		
TOTAL					58985	58985	4176	9176
XIV-CD	I	96	67	2				
	II	94	63	1	28365	28365	5922	12664
	III	93	61	5	22440	22440		
	IV	88	51	5	17015	17015		
	V	83	41	5	12090	12090		
	VI	78	31	5	7665	7665		
	VII	73	21	5	3740	3740		
	VIII	68	11	5	315	315		
	IX	63	1	5	315	315		
TOTAL					91630	91630	5922	12864
XIII-EF	I	87	109	2				
	II	85	105	1	43260	43260	8925	18966
	III	84	103	5	36735	36735		
	IV	79	93	5	30710	30710		
	V	74	83	5	25185	25185		
	VI	69	73	5	20160	20160		
	VII	64	63	5	15635	15635		
	VIII	59	53	5	11610	11610		
	IX	54	43	5	6105	6105		
TOTAL					183295	183295	8925	18966
XII-YI-GH	I	70	99	2				
	II	68	95	1	31155	31155	6460	13860
	III	67	93	5	25730	25730		
	IV	62	83	5	20805	20805		
	V	57	73	5	16380	16380		
	VI	52	63	5	12455	12455		
	VII	47	53	5	9030	9030		
	VIII	42	43	5	6105	6105		
	IX	37	33	5	6105	6105		
TOTAL					121660	121660	6460	13860
GRAND TOTAL					455570	455570	25483	54866

INDEX	
QUARRY LEASE BOUNDARY	
7.5m SAFETY DISTANCE	
GRAVEL	
WEATHERED ROCK	
ROUGH STONE	
PROPOSED WATER STORAGE	

LOCATION OF QUARRY
 EXTENT : 3.55.5Ha.
 S.F. Nos : 3/2A & 152/1(P).
 VILLAGE : SUKKAMPALAYAM & VELAMPALAYAM.
 TALUK : PALLADAM.
 DISTRICT : TIRUPPUR.

PLATE NO: VII-A
 DATE OF SURVEY: 22-01-2022
 APPLICANT ADDRESS:
 TMT. P. DEIVATHAL,
 W/O. PALANISAMY GOUNDER,
 NAASUVANKATTU THOTTAM,
 VELAMPALAYAM VILLAGE,
 PALLADAM TALUK,
 TIRUPPUR DISTRICT- 641 663.

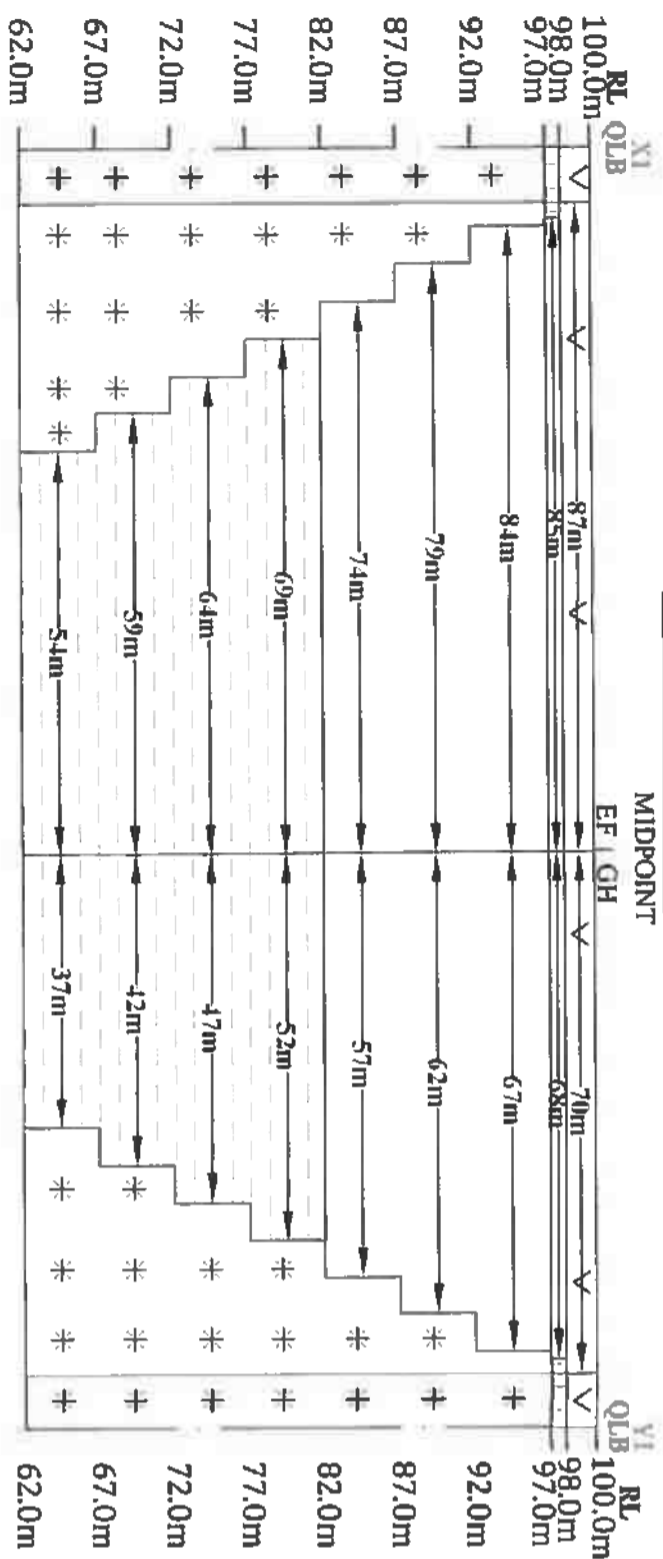
CONCEPTUAL / FINAL MINE CLOSURE SECTIONS
 SCALE: HOR-1:1000
 VER-1:500

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

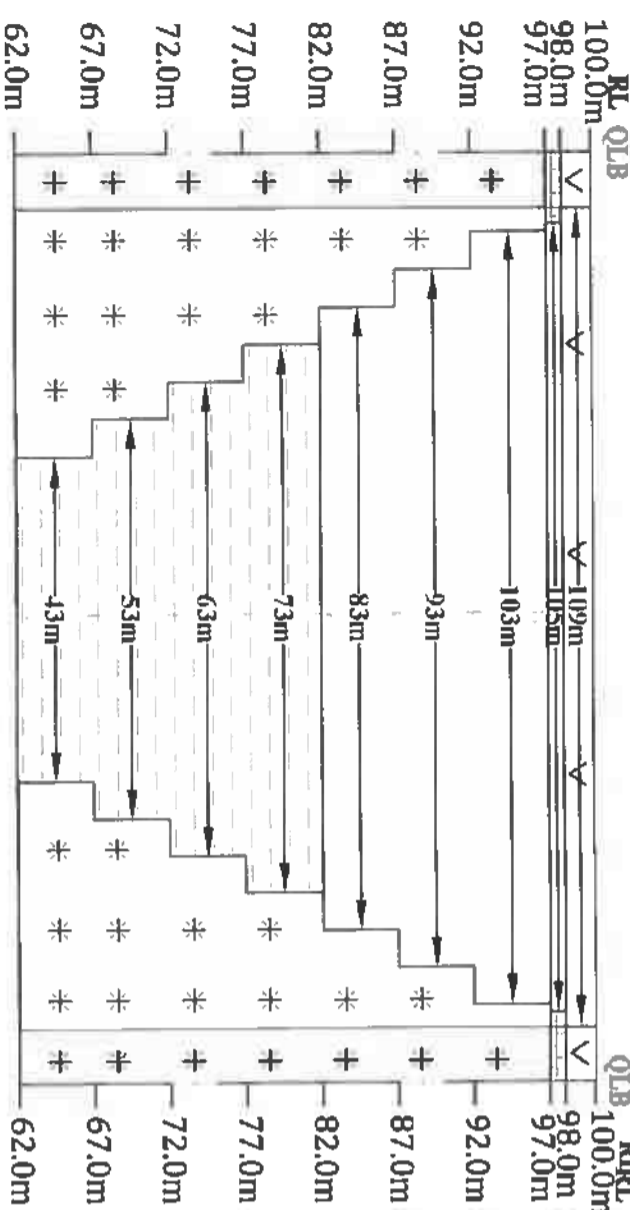
S. DHANASEKAR, M.Sc.
 QUALIFIED PERSON



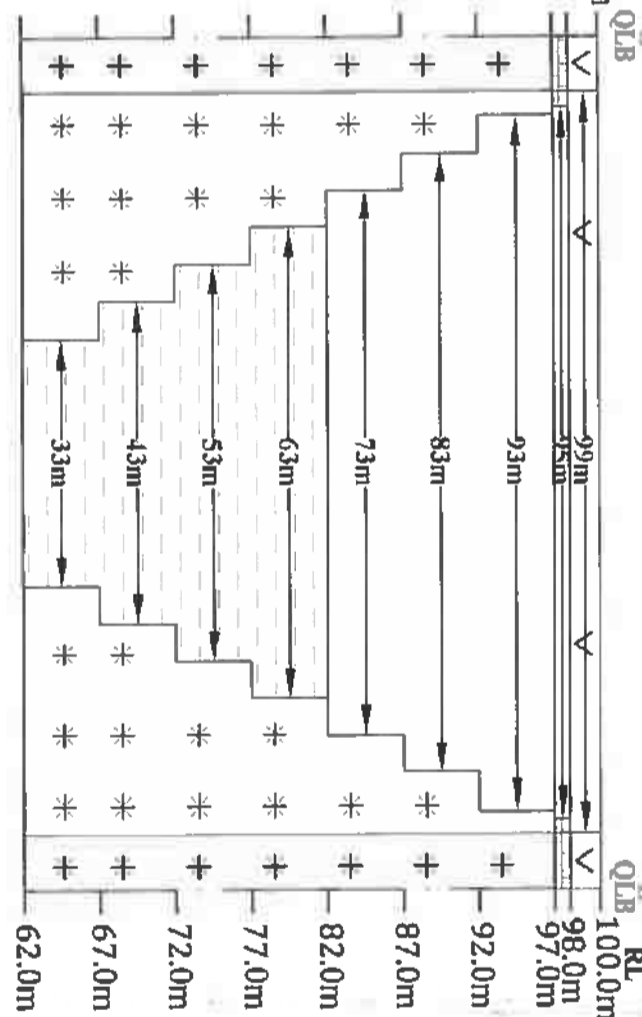
SECTION ALONG WITH X1-Y1



SECTION ALONG WITH E-F



SECTION ALONG WITH G-H



ULTIMATE PIT DIMENSION
 BLOCK-I = 170.0m(L) X 64.0m(W) Avg X 38.0m(D)
 BLOCK-II = 157.0m(L) X 104.0m(W) Avg X 38.0m(D)



PLATE NO: VII-B

DATE OF SURVEY: 22-01-2022

APPLICANT ADDRESS:

TMT. P. DEIVATHAL,
 W/o. PALANISAMY GOUNDER,
 NAASUVANKAATTU THOTTAM,
 VELAMPALAYAM VILLAGE,
 PALLADAM TALUK,
 TIRUPPUR DISTRICT - 641 663.

LOCATION OF QUARRY

EXTENT : 3.55.5ha.
 S.F. Nos : 3/2A & 152/1(P).
 VILLAGE : SUKKAMPALAYAM &
 VELAMPALAYAM.
 TALUK : PALLADAM.
 DISTRICT : TIRUPPUR.

INDEX

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

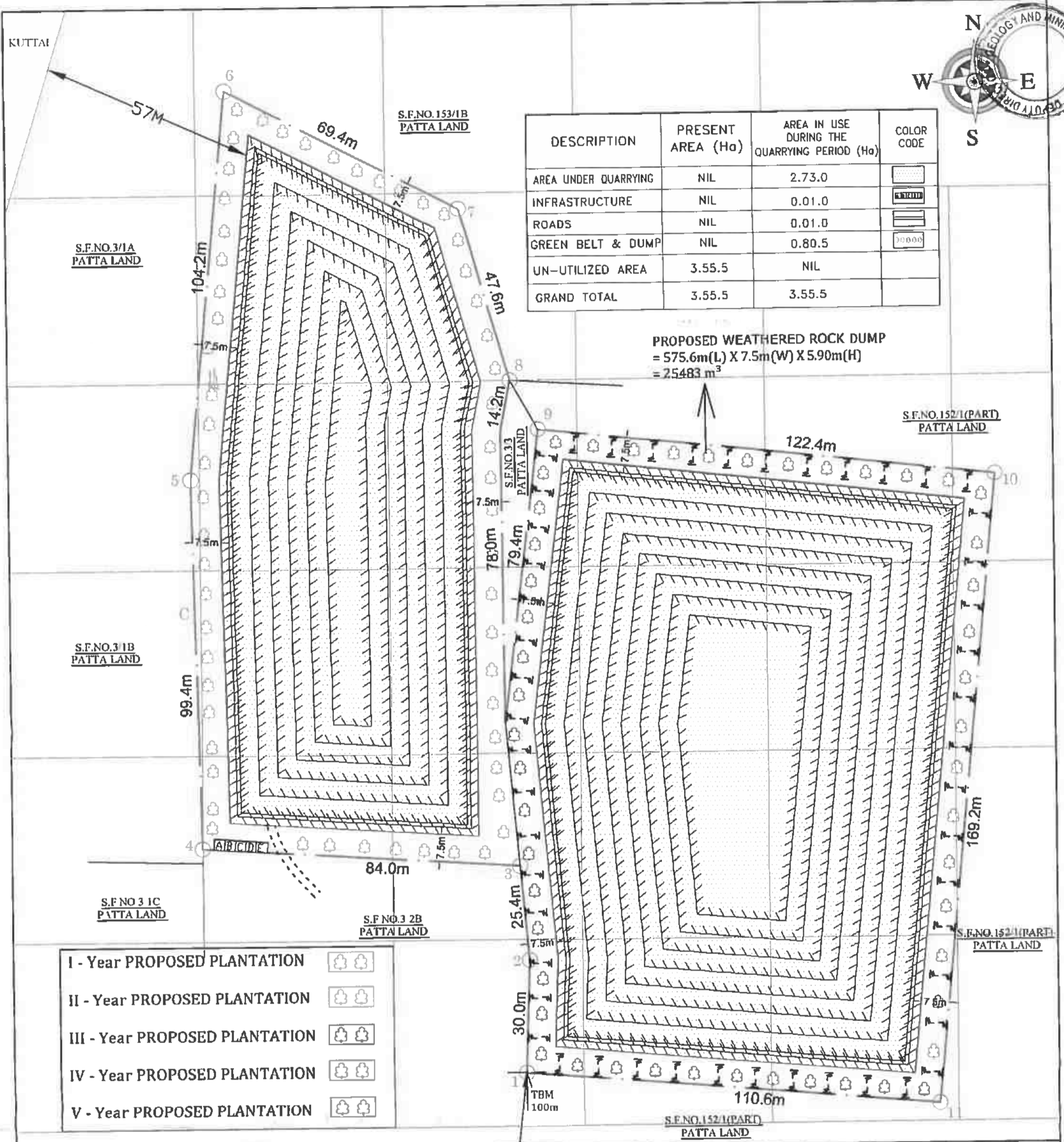
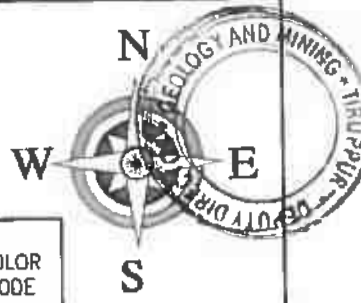
**CONCEPTUAL / FINAL
 MINE CLOSURE SECTIONS**

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

PREPARED BY:

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

S. DHIANASEKAR, M.Sc.
 QUALIFIED PERSON



DESCRIPTION	PRESENT AREA (Ha)	AREA IN USE DURING THE QUARRYING PERIOD (Ha)	COLOR CODE
AREA UNDER QUARRYING	NIL	2.73.0	[Pattern]
INFRASTRUCTURE	NIL	0.01.0	[Pattern]
ROADS	NIL	0.01.0	[Pattern]
GREEN BELT & DUMP	NIL	0.80.5	[Pattern]
UN-UTILIZED AREA	3.55.5	NIL	[Pattern]
GRAND TOTAL	3.55.5	3.55.5	

PROPOSED WEATHERED ROCK DUMP
 = 575.6m(L) X 7.5m(W) X 5.90m(H)
 = 25483 m³

- I - Year PROPOSED PLANTATION [Symbol]
- II - Year PROPOSED PLANTATION [Symbol]
- III - Year PROPOSED PLANTATION [Symbol]
- IV - Year PROPOSED PLANTATION [Symbol]
- V - Year PROPOSED PLANTATION [Symbol]

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

INDEX	
QUARRY LEASE BOUNDARY	[Symbol]
7.5m SAFETY DISTANCE	[Symbol]
TEMPORARY BENCH MARK	[Symbol]
GRAVEL	[Symbol]
ROUGH STONE	[Symbol]
QUARRY ROAD	[Symbol]
PROPOSED DUMP	[Symbol]
MINE LAYOUT	[Symbol]

APPLICANT ADDRESS:
 TMT. P.DEIVATHAL,
 W/o. PALANISAMY GOUNDER,
 NAASUVANKAATTU THOTTAM,
 VELAMPALAYAM VILLAGE,
 PALLADAM TALUK,
 TIRUPPUR DISTRICT- 641 663.

LOCATION OF QUARRY
 EXTENT : 3.55.5Ha.
 S.F. Nos : 3/2A & 152/1(P).
 VILLAGE : SUKKAMPALAYAM &
 VELAMPALAYAM.
 TALUK : PALLADAM.
 DISTRICT : TIRUPPUR.

PLATE NO: VIII
 DATE OF SURVEY: 22-01-2022
PROGRESSIVE MINE CLOSURE PLAN
 SCALE: 1:1000

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

ANNEXURE-VII
VAO CERTIFICATE

THIRU. P. DEIVATHAL, Rough stone & Gravel quarry in the S.F.Nos.3/2A in Sukkampalayam village & 152/1(P) in Velampalayam Village over an extent of 3.55.5 ha. Palladam Taluk, Tiruppur District.

GENERAL VIEW OF THE APPLIED LEASE AREA



P. Deivathal
(Deponent)

6.8.2022
கிராம நிர்வாக அலுவலர்
பிறப்பு இரப்பு பதிவாளர்
4, வேலம்பாளையம் கிராமம்,
பல்லடம் வட்டம், திருப்பூர் மாவட்டம்

2/3/22
கிராம நிர்வாக அலுவலர்
05, கக்கம்பாளையம் கிராமம்,
பல்லடம் வட்டம்
(VAO)


காண்பு

திருப்பூர் மாவட்டம் மண்டலம் வட்டம் 4
 வைப்பாளையம் கிராமம். நான்காம் கட்டிக்குரிய
 அன்றி அக்கிராமம் வசிக்கிற பண்ணிகளாகிய
 கண்ணன் குமாரசாமிநாதன் என்பவருக்கு 86759 கிராம
 கில் 8.8 அணி. 1521, 198. காண்புலி 15.02.51 அன்றி
 சிவாமி உரிமம் கோரியுள்ள பத்திரம் சான்றி 50000
 சான்றி அன்றி கிராம நகரம், ஓடோ, சூரியன்,
 கையாடலோ, மதுபாட்டுக்குள்ளும், மதுபாட்டு,
 4989 அன்றி அன்றி, மது சிவகாமன், மதுபாட்டு
 கட்டி அன்றி, சிவகாமன், அன்றி கட்டி அன்றி
 கட்டி அன்றி, மதுபாட்டு அன்றி கட்டி அன்றி
 கட்டி அன்றி, மதுபாட்டு அன்றி கட்டி அன்றி

6.55
 கிராம நிர்வாக அலுவலரும்
 பிரபு கிராம பதிவாளர்
 4, வைப்பாளையம் கிராமம்,
 மண்டலம் வட்டம், திருப்பூர் மாவட்டம்

சீரணிப்பு

திருச்சூர் மண்டலம், பல்லடம்
வட்டம், சக்கம்பாளையம் கிராமம், க.ச.எண்
3/2A காலடியில் 1.53.0 ஏக்கர்கள் -ல் இடமைய
பெற்ற இயங்கியது சுமார் 500 மீட்டர் சுற்றளவு -
வாழ்க்கை கிராம நகர்ப்பகுதி, விடுதலை, மதுதேயம்,
தேவையலம், உதுப்பாபட்டி தளவிகளம், 49 நாளை
கிணர்விகளம், 49 நாளை தளவிகளம், மீன்க்கட்டளவிகளம்,
சுற்றுச்சூழல் மருந்து அரங்கி கட்டளவிகளம் இவ்வாறு
வாழ்க்கை 49 நாளை தளவிகளம் மூலம் அந்நகர
சுமார் 500 மீட்டர் சுற்றளவு.


2/3/22
கிராம நிர்வாக அலுவலர்
05, சக்கம்பாளையம் கிராமம்,
பல்லடம் வட்டம்

ANNEXURE-VIII BLASTING AGREEMENT

भारतीय गैर न्यायिक

बीस रुपये

रु.20



Rs.20

TWENTY
RUPEES

INDIA NON JUDICIAL

தமிழ்நாடு தமிழ்நாடு TAMIL NADU

வ. எண்

நாள் 04-03-2022

மதிப்பு RS. 20/-

பெயர் MEENA EXPLOSIVES.

முகாம் KALINGARAYAN PALAYAM.

86AB 443675

மு. கணேசன்

முத்திரைத்தாள் விற்பனையாளர்

723, மேட்டுர் இராடு,

காவல் நிலையம் எதிரில்,

பவனி வட்டம், ஈரோடு மாவட்டம்.

உரிமம் எண்: 13 / ஈரோடு / 2013

BLASTING OPERATION CONTRACT

This agreement into at Bhavani on this 05/03/2022 between P.Deivathal, w/o. Palanisamy Gounder residing at Naasuvan Kaattu Thottam, Velampalayam village, Palladam Taluk, Tiruppur District Herein after referred to as part of FIRST PART and

Mr.S.C.Senthil Kumar, Proprietor, Meena Explosives, 5/464, CK Bhavan, Kalingarayanpalayam, Bhavani Post, Erode District-638301 Herein after referred to as part of SECOND PART.

The party of first is operating quarry lease for ROUGH STONE QUARRY at Survey No.3/2A &152/1(P) over an area of 3.55.5 Ha in Sukkampalayam & Velampalayam village, Palladam Taluk, Tiruppur District, Tamil Nadu.

1. P.Deivathal

2.Meena Explosives

S. C. Senthil Kumar
Proprietor

Whereas the party of the first part wants blasting to be done at quarry to excavate the Rough Stone. The blasting work is so intensive and large that the party of the first part has decided to entrust the work involved to the party of second part on contract basis is follows:

The party of the first part will allot the blasting operations in the above said areas to party of second part who is responsible for blasting rocks and also making his own arrangement for the explosives and exploding equipment required for the work. The entire blasting in the above quarry and the possession of the blasting equipment will be handled by the party of the second part having valid Explosives License No.E/SC/TN/22/74,E(10254) issued by the chief controller of Explosives, South Circle, Chennai and he hereby undertake the responsibility for the work entrusted.

Payments will be made periodically by the party of the first part for the quantity used, explosives consumed and hours and time of the exploding equipment put into use.

Calculations will be made and settlement will be arrived at every week. The rate for items of work will as mutually agreed as marginal cost which includes cost of explosives, transport cost and other charges for blasting work. This agreement is made for all blasting done in the said area.

This agreement is valid from the date of executive till validity of quarrying leases granted by the State Government to the party of the first part or terminable earlier by mutual consent with one month notice.

Place: Bhavani
Date: 05/03/2022

I P.Deivathal



Witness

2. Meena Explosives

Proprietor

① Brodhan
N. K. R. S. J.
s/o Palanisamy,
B252100210

② Jenmagan. R.
s/o Ranganayagi,
B252100210



भारत सरकार | Government of India
 वाणिज्य और उद्योग मंत्रालय | Ministry of Commerce & Industry
 पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पैसो) | Petroleum & Explosives Safety Organisation (PESO)
 पूर्व नाम- विस्फोटक विभाग | Formerly- Department of Explosives
 A और D - विंग, ब्लॉक 1-8, दूसरा तल, शास्त्री भवन | A & D - Wing, Block 1-8, IInd Floor, Shastri Bhavan
 26 हड्डोजस रोड, नुंगम्बक्कम चेन्नै | 26 Haddous Road, Nungambakkam Chennai 600006
 फोन (Phone) - 28281023 | फैक्स (Fax) - 28284848

दिनांक (Date): 29/11/2021

30-11-2021

संख्या (No.) F/SC/TN/22/74(E10254)

सेवा में | To,

M/s Meena Explosives Prop S C Senthilkumar,
 5/464, C.K. Bhavan, Kalngarayampalayam, Bhavani, Town Village - Erode
 District-ERODE, State-Tamil Nadu, Pincode - 638301

विषय: Survey No(s) 252/1, ग्राम Perode Village, Erode Taluk, District, जिला ERODE, राज्य Tamil Nadu में मेसर्स M/s Meena Explosives Prop. S.C. Senthilkumar द्वारा विस्फोटक के मैगजीन में उपयोग के लिए कब्जा हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-3 में जारी अनुज्ञप्ति सं E/SC/TN/22/74(E10254) के संशोधन संदर्भ में।
 (विस्फोटक की मात्रा / मासिक खरीद सीमा में परिवर्तन)
 Subject: Possession for Use of of Explosives from magazine situated at Survey No(s): 252/1, Perode Village, Erode Taluk, District, Dist. ERODE, Tamil Nadu - Licence No.: E/SC/TN/22/74(E10254) granted in Form LE-3 of Explosives Rules, 2008 - (Amendment of Quantity of Explosives/Monthly Purchase Limit).

महोदय, Sir,

आपका उपर्युक्त विषय पर पत्र संख्या 51934 दिनांक 09/11/2021 का संदर्भ ग्रहण करें।
 Please refer to your letter no. 51934 dated 09/11/2021.

अनुज्ञप्ति संख्या E/SC/TN/22/74(E10254) विस्फोटक की मात्रा / मासिक खरीद सीमा में परिवर्तन के संदर्भ में यथा संशोधित कर भेजी जा रही है।
 The Licence No.: E/SC/TN/22/74(E10254) is forwarded herewith duly amended in respect of followings;

Quantity of Explosives/Monthly Purchase Limit

किसी भी एक समय में लाइसेंस क्षमता निम्नलिखित वर्ग तथा मात्रा से अधिक नहीं होगी।
 The licence capacity at any one time shall not exceed the kinds and quantities mentioned below;

संख्या No	विस्फोटक Explosive(s)	वर्ग Class	प्रभाग Div	उप-प्रभाग Sub Div	क्षमता Capacity	इकाई Unit
1	Nitrate mixture - Slurry and Emulsion Explosives	2	0	0	1000	Kg
2	Safety Fuse	6	1	0	10000	Mtrs
3	Detonating Fuse	6	2	0	10000	Mtrs
4	Electric and/or Ordinary Detonators	6	3	0	44000	Nos

किसी एक क्वैटर मास में खरीदे जाने वाले विस्फोटक की मात्रा (अनुच्छेद 3 (ख) और (ग) के अधीन अनुज्ञप्ति के लिए लागू): 20 गुना
 Quantity of explosives to be purchased in a calendar month [applicable for licence under article 3(b) and (c)]: 20 times as above.

यह अनुज्ञप्ति दिनांक 31 मार्च 2025 तक प्रवृत्त रहेगी।
 This Licence shall remain valid till 31st day of March 2025.

अनुज्ञप्ति के आगामी नवीकरण हेतु कृपया विस्फोटक नियम, 2008 के नियम 112 के अंतर्गत प्रक्रिया का पालन करें। कृपया पावती दें।
 For further revalidation (if required), please follow the procedure under Rule 112 of Explosives Rules, 2008. Receipt of this letter may please be acknowledged

भवदीया | Your's faithfully

(डा. टी. एल. थानुलिंगम | Dr. T. L. THANULINGAM)

उप मुख्य विस्फोटक नियंत्रक | Deputy Chief Controller of Explosives
 कृते संयुक्त मुख्य विस्फोटक नियंत्रक | For Joint Chief Controller of Explosives
 दक्षिणांचल, चेन्नै | South Circle, Chennai

प्रतिलिपि प्रेषित | Copy Forwarded to:

1. District Magistrate, ERODE, Tamil Nadu with reference to his Noc No: R.DIS.30284/2000C4 Dated: 12/09/2000
2. Superintendent of Police, ERODE, Tamil Nadu

कृते संयुक्त मुख्य विस्फोटक नियंत्रक | For Joint Chief Controller of Explosives
 दक्षिणांचल, चेन्नै | South Circle, Chennai

(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क आदि के लिए हमारी वेबसाइट <http://peso.gov.in> देखें।)
 (For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

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

अनुज्ञप्ति प्ररूप एत. ई.-3 | LICENCE FORM I.E.-3

(विस्फोटक नियम, 2008 की अनुसूची 4 के भाग 1 के अनुच्छेद 3(क) 3(घ) देखिए।)
(See article 3(a) to (d) of Part I of Schedule IV of Explosives Rules, 2008)

(ग) उपयोग के लिए एक समय पर वर्ग 1, 2, 3, 4, 5 या वर्ग 7 के विस्फोटक या किसी मैगजीन में वर्ग 6 के विस्फोटक रखने
Licence to possess : (c) for use, explosives of class 1, 2, 3, 4, 5, 6 or 7 in a magazine

अनुज्ञप्ति सं. (Licence No.): E/SC/TN/22/74(E10254)
वार्षिक फीस रूपए (Annual Fee Rs): 4400/-



1 Licence is hereby granted to

M/s Meena Explosives Prop. S.C. Senthilkumar (अधिभोगी / Occupier : S C SENTHILKUMAR, AR), 5/464, C.K. Bhavan,
Kalingarayampalayam, Bhavani, Town/Village - Erode, District-ERODE, State-Tamil Nadu, Pin code - 638301

को अनुज्ञप्ति अनुदत्त की जाती है।

2 अनुज्ञप्तिधारी की प्रास्थिति | Status of licensee : Individual

3 अनुज्ञप्ति निम्नलिखित प्रयोजनों के लिए विधिमान्य है।
Licence is valid only for the following purpose

4 अनुज्ञप्ति विस्फोटकों के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिमान्य है।
Licence is valid for the following kinds and quantity of explosives: -- (क) (a)

क्र Sr. No.	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 - Slurry and Emulsion Explosives	2,0	0	1000 Kg
2.	Safety Fuse	6,1	0	10000 Mtrs
3.	Detonating Fuse	2	0	10000 Mtrs
4.	Electric and/or Ordinary Detonators	6	0	44000 Nos.

20 times
as above.

(ख) किसी एक कलेंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा [अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञप्ति के लिए]
(b) Quantity of explosives to be purchased in a calendar month [applicable for licence under article 3(b) and (c)]:

5 निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञप्ति परिसर की पुष्टि होती है।
The licensed premises shall conform to the following drawing(s)

रेखाचित्र क्र. (Drawing No.) E/SC/TN/22/74(E10254)
दिनांक (Date): 19/11/2021

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

Survey No(s): 252/1, ग्राम (Town/Village): Perode Village, Erode
जिला (District) ERODE
दूरभाष (Phone)
राज्य (State) Tamil Nadu
ई मेल (E-Mail)
पिनकोड (Pincode)
फैक्स (Fax)

7 अनुज्ञप्ति परिसर में निम्नलिखित सुविधाएं अंतर्भूत हैं।
The licensed premises consist of following facilities

8 अनुज्ञप्ति समय - समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उसके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपाबंधों के अधीन रहते हुए अनुदत्त की जाती है।
The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and the following Annexures.

- उपर्युक्त क्रम सं. 5 में यथा कथित रेखाचित्र (स्थान, संनिर्माण संबंधी और अन्य विवरण दर्शित करते हैं)।
Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
- अनुज्ञप्ति प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञप्ति की शर्तों और अतिरिक्त शर्तों।
Conditions and Additional Conditions of this licence signed by the licensing authority.
- दूरी प्ररूप DE-2 | Distance Form DE-2

9 यह अनुज्ञप्ति तारीख 31 मार्च 2008 तक विधिमान्य रहेगी। This licence shall remain valid till 31st day of March 2008.

यह अनुज्ञप्ति, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची V के भाग 4 के प्रति निर्दिष्ट सेट-VIII के अधीन तथा उपबंधित इस अनुज्ञप्ति की शर्तों का अधिकमन करने या यदि अनुज्ञप्ति परिसर योजना या उससे संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलंबित या प्रतिबंधित की जा सकती है, जहां वह लागू हो।
This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VIII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives
South Circle, Chennai

तारीख | The Date - 27/09/2000

Amendments :

- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 24/01/2013
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 29/04/2014
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 29/11/2021

नवीनीकरण के पृष्ठांकन के लिए स्थान
Space for Endorsement of Renewal

नवीनीकरण की तारीख Date of Renewal	समाप्ति की तारीख Date of Expiry	अनुज्ञापन प्राधिकारी के हस्ताक्षर और स्टाम्प Signature of licensing authority and stamp
04/03/2020	31/03/2025	SD/- Jt. Chief Controller of Explosives, South Circle, Chennai

कानूनी चेतावनी : विस्फोटकों को गलत ढंग से चलाने या उनका दुरुपयोग विधि के अधीन 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.

Digitally signed by Dr T L Tharulligam
Reason: Licence No. : E/SC/TN/22/74
Location: Chennai [E10254]
Date: 2021.11.29 11:21:34 +05:30

**ANNEXURE-IX AFFIDAVIT AND CER
DETAILS**

भारतीय गैर न्यायिक

बीस रुपये

रु.20



Rs.20

TWENTY RUPEES

INDIA NON JUDICIAL

தமிழ்நாடு தமிழ்நாடு TAMIL NADU

28 FEB 2022

செய்யுள்ள தீர்மானம்
பின்னர்

94AB 216063

S. ரகுநாதன் சிவசுப்பிரமணியன்
உள்ளிட்ட 6 / TRP / 2008
செய்யுள்ள தீர்மானம், திருப்பூர்
தமிழ்நாடு

AFFIDAVIT TO SEIAA, TAMIL NADU

I, P.Deivathal, w/o. Palanisamy Gounder residing at Naasuvan Kaattu Thottam, Velampalayam village, Palladam Taluk, Tiruppur 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.3/2A &152/1(P) over an area of 3.55.5 Ha in Sukkampalayam & Velampalayam village, Palladam Taluk, Tiruppur 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.



2. I will complete the following Corporate Environment Responsibility (CER) activities before commencement of the quarrying activities.

CER Activity	Project cost (Rs)	CER cost 2.0% of Project cost (Rs)
Carrying out various developmental works in the nearby region based on the need of the locals	Rs.58,96,000/-	Rs.1,17,920/-
Total cost Allocation	Rs.58,96,000/-	Rs.1,17,920/-

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

S.No	Name and address of the lessee	Village & SF.No.	Extent in Hectare	G.O. No. & date	Lease Status
a. Existing Quarries					
1	P.Sumathi	Sukkampalayam Village & 2	3.00.5 Ha.	Roc.No.171/2015/Mines dt:06.03.2020 Roc.No.1198/2021/Mines dt:28.10.2021	06.03.2020 to 05.03.2025
2	P.Viswanathan	Velampalayam Village & 153//2A 153/2C 156/1B	1.77.0 Ha.	Roc.No.820/2016/Mines dt:27.03.2018	27.03.2018 to 26.03.2023

b. Abandoned / Expired Quarries:

S.No	Name and address of the lessee	Village & SF.No.	Extent in Hectare	G.O. No. & date	Lease Status
-Nil-					



c. Present Proposed Quarries					
S.N o	Name and address of the lessee	Village & SF.No.	Extent in Hectare	G.O. No. & date	Lease Status
1	P.Deivathal	Sukkampalayam & Velampalayam Village and 3/2A & 152/1 (P)	3.55.5 Ha.	-	Proposed area

4. There will not be hindrance or disturbance to the people living no enrooted/ nearby my quarry site while transporting the mineral and due to quarrying activities.
 5. There is no approved habitation within 300m radius from the periphery of my applied quarry.
 6. I swear that afforestation will be carried out during the course of quarrying operation and maintained.
 7. The required insurance will be taken in the name of the laborers working in my quarry site.
 8. The existing road from the main road to quarry is in good condition and the same will be maintained and utilized for Transportation of Rough Stone and Gravel.
 9. I will not engage any child labor in my quarry site and I am aware that engaging child labor is punishable under the law.
 10. All types of safety / protective equipment will be provided to all the laborers working in my quarry.
 11. No permanent structures, temple etc., are located within 500m radius from the periphery of my quarry.
- I ensure to do the social and Environment commitment as mentioned in the Mining plan to the best of my knowledge.

P.Deivathal
(Deponent)



A. Anandakumar
02/03/2022
A. ANANDAKUMAR M.A., B.L.
ADVOCATE & NOTARY PUBLIC
(GOVERNMENT OF INDIA)
REGD. NO : 14248
16, PGOMPUGAR NAGAR WEST,
NEAR COLLECTORATE, PALLADAM ROAD,
TIRUPUR - 641 604. MOBILE : 98422 22232

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.

ANNEXURE-XI DFO LETTER

தமிழ்நாடு அரசு வனத்துறை

அனுப்புநர்

பெறுநர்

திரு.மா.கோ.கணேசன்,
துணை இயக்குநர் (சவ./பொ),
ஆணைமலை புலிகள் காப்பகம்,
திருப்பூர் வனக்கோட்டம்,
உடுமலைப்பேட்டை - 642 126.

துணை இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
திருப்பூர்.

ஓ.மு.எண்.6309/2022/வ1, நாள்.21.06.2022

ஐயா,

பொருள் : கனிமங்களும் சுரங்கங்களும்- சிறுகனிமம் - சாதாரண கற்கள் மற்றும் கிராவல் மண்- திருப்பூர் மாவட்டம் - பல்லடம் வட்டம்- சுக்கம்பாளையம் மற்றும் வேலம்பாளையம் - பட்டா புல எண்கள். 3/2A, மற்றும் 152/1 (Part) - ஆகியவற்றில் மொத்தம் 3.55.5 ஹெக்டர் பட்டா நிலப்பரப்பு- காப்புக்காடு எல்லை தூரம் கோரியது - தொடர்பாக

பார்வை : திருமதி.தெய்வாத்தாள், க/பெ.பழனிச்சாமி கவுண்டர், நாசுவன்காட்டுத் தோட்டம், 63, வேலம்பாளையம் கிராமம், பல்லடம் வட்டம், திருப்பூர் மனு நாள் 06.06.2022

மேற்காண் பொருள் தொடர்பாக, பார்வையிலான மனுவில் கேட்கப்பட்ட குவாரி அமைந்துள்ள இடமானது ஆணைமலை புலிகள் காப்பகம், திருப்பூர் வனச்சரகம் பகுதிக்குள் வருகிறது. மேற்படி இடத்தினை திருப்பூர் வனச்சரக அலுவலரால் களத்தணிக்கை செய்யப்பட்டதில் குவாரியானது புல எண்கள். 3/2A, மற்றும் 152/1 (Part) ஆகியவற்றில் மொத்தம் 8.77 ஏக்கர் பரப்பளவில் உள்ளது. மேலும் மேற்படி குவாரியானது அருகில் உள்ள ஊதியூர் காப்புக்காடு எல்லையிலிருந்து சுமார் 30.60கி.மீ. தொலைவில் அமைந்துள்ளது. மற்றும் ஆணைமலை புலிகள் காப்பக எல்லை பகுதியிலிருந்து சுமார் 62.3கி.மீ. தொலைவில் அமைந்துள்ளது என்பதை அன்புடன் தெரிவித்துக்கொள்கிறேன்.

ஓம்/- மா.கோ.கணேசன்,
துணை இயக்குநர் (சவ./பொ),
ஆணைமலை புலிகள் காப்பகம்,
உடுமலைப்பேட்டை.

நகல்:- திருமதி.தெய்வாத்தாள், க/பெ.பழனிச்சாமி கவுண்டர், நாசுவன்காட்டுத் தோட்டம், 63, வேலம்பாளையம் கிராமம், பல்லடம் வட்டம், திருப்பூர் -641663.

-உண்மை நகல்-

கண்காணிப்பாளர்
19/09/2022