EXECUTIVE SUMMARY FOR
PROPOSED ROUGH STONE AND GRAVEL QUARRY
CATEGORY – B1

(Submitted for Public Hearing as per the provisions of EIA Notification 2006 & its amendments thereof)

APPROVED TOR No. TO25B0108TN5723373N, Dated: 20.06.2025

PROPOSED QUARRY LEASE DETAILS	
SURVEY NOS	4/1, 4/2A, 4/2B, 4/2C, 6/1, 6/2A and 6/2B
VILLAGE	THOLLAMUR
TALUK	VANUR
DISTRICT	VILUPPURAM
EXTENT	2.80.50 Ha
PROPOSED PRODUCTION QUANTITY FOR FIVE YEARS	ROUGH STONE - 2,57,420 m^3 /7,07,905 Ts GRAVEL - 26,436 m^3 / 52,872 Ts PEAK PRODUCTION – 51,985 m^3 / 1,42,958.75 Ts OF ROUGH STONE & 20,100 m^3 / 40,200 Ts of GRAVEL
LAND	PATTA LAND

(Sector No. 1(a) (Sector no.1 as per NABET)
Category of the Project: B1 Cluster Mining, Total Cluster Area – 6.89.00 ha
Baseline Monitoring Period – March to May 2025.

APPLICANT

THIRU.G.VELU, S/o.GOVINDASAMY,
NO.126, METTU STREET, ERAIYUR VILLAGE,
VANUR TALUK, VILUPPURAM DISTRICT - PIN CODE -604304

ENVIRONMENTAL CONSULTANT	LABORATORY
M/s. GLOBAL MINING SOLUTIONS *(NABET Accredited & ISO 9001 Certified Consultant)* Plot No. 6, S.F.No. 13/2, A2, VS City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455. NABET Accreditation No: NABET/EIA/23-26/SA 0241, Valid Until - January 4, 2026 Contact: 97502 23535 & 94446 54520 Email: infoglobalmining@gmail.com, globalminingsolutionssalem@gmail.com	**M/s. SHRIENT ANALYTICAL & RESEARCH LABS PRIVATE LIMITED** (NABL Accredited Testing Laboratory) Valid Until -29.09.2025 #416/15, Dhargas Road, Perungalathur, West Tambaram, Chennai, Tamil Nadu, India.

July -2025

EXECUTIVE SUMMARY

1.1 INTRODUCTION

Environmental Impact Assessment (EIA) as a tool used to identify the environmental, social and economic impacts of a project prior to decision-making. It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers.

This proposal is towards obtaining environmental clearance for Rough Stone and Gravel Quarry located at survey nos. 4/1, 4/2A, 4/2B, 4/2C, 6/1, 6/2A and 6/2B over an extent of 2.80.50 Ha., in Thollamur Village, Vanur Taluk, Viluppuram District, Tamil Nadu State, for production capacity of 2,57,420 Cu.m of Rough Stone and 26,436 Cu.m of Gravel for five years upto a depth 42m (below ground level). The mining plan has prepared and same was approved by Assistant Director (i/c), Department of Geology and Mining, Viluppuram, vide Rc.No.A/G&M/50/2025, dated 25.04.2025.

As per EIA notification, 2006 and its subsequent amendments the proposed **"**Rough Stone and Gravel Quarry of Thiru.G.Velu**"** is falls under Schedule 1(a) Mining of Minerals. It is further classified under Category B1 due to the overall extent of cluster area is 6.89.00 Ha which is >5 Ha. The ToR for the preparation of EIA/EMP was approved vide TO25B0108TN5723373N, Dated: 20.06.2025. This report has been prepared in line with the approved TOR for maximum excavation of 2,57,420 Cu.m of Rough Stone and 26,436 Cu.m of Gravel for five years upto a depth 42m (below ground level).

S.No.	Description	Status/Remarks
1.	Sector	1(a), non-coal mining
2.	Category of the project	B1
3.	Proposed mineral	Rough Stone and Gravel

4.	Type of Lease	The applied lease area is an existing Quarry pits (Max- 12 m BGL) and previously operated by another lessee.
5.	Extent of the lease	2.80.5Ha
6.	Proposed depth of Mining	42m BGL
7.	Method of mining	Opencast Mechanized
8.	Proposed lease period	5 Years
9.	Proposed Environmental Clearance	5 Years
10.	Proposed production quantity for five years	2,57,420 m^3 of Rough Stone & 26,436 m^3 of Gravel (42 m BGL)

The Lessee Thiru.G.Velu, is an individual with sound experience in the identification, quarrying and marketing of Rough Stone and Gravel. The proposed land is a Patta land and attached as **Annexure 6.**

1.2 LOCATION

This project site is located in Thollamur Village, Vanur Taluk, Viluppuram District, Tamil Nadu State with Latitude 12°03'39.38"N to 12°03'46.94"N and Longitude: 79°40'15.52"E to 79°40'24.94"E with Survey of India Topo Sheet No. 57 P/12. To conduct the study, the proposed mine lease area (core zone) and an impact zone of 10 km radius (called buffer zone) around the proposed mine site were considered. The EIA report is based on three months baseline data (i.e. March 2025 to May 2025)

1.3 GEOLOGY

The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high grade metamorphic rock.The strike of the Charnockite formation is $N45^0E$ –$S45^0W$ with dipping towards $SE80^0$.

1.4 PROJECT DESCRIPTION

This is a proposed Rough Stone and Gravel quarry by Opencast Mechanized mining method with drilling and blasting. The quarrying is restricted up to a depth of 42m below ground level. The geological reserves are estimated to be 10,53,010 m^3 of

Rough Stone and 37,886 m^3 Gravel. The mineable reserve calculated by deducting safety distance and bench loss. The mineable reserves are 2,57,420 m^3 of Rough Stone and 26,436 m^3 Gravel which will be recovered at the rate of 100% recovery upto a depth of 42 m Below ground level for the period of five years.

- It is proposed to quarry out rough stone with 5m bench height, 5m width with overall slope is 47° using Open cast Mechanized method. The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, Loading and transportation of Rough Stone.
- There is no overburden anticipated during entire rough stone & Gravel quarrying operation.

S.No.	Type of Detail	Description
1	Sector	1(a) Non coal mining
2	Fresh/Existing project	The applied lease area is an existing Quarry pits (Max- 12 m BGL) and previously operated by another lessee.
3	Category	B1
4	Nature of mineral	Rough Stone and Gravel
5	Production	2,57,420 m3 of Rough Stone & 26,436 m3 of Gravel (42 m BGL)
6	Life	5 years
7	Waste generation and management	There is no overburden anticipated during the quarrying operation. Hence, no waste generation.
8	Bench height and width	Height and Width – 5m
9	Ultimate pit depth	42 m (BGL)
10	End use	Rough Stone and Gravel will be loaded into tippers to needy buyers for producing aggregates, M-sand.

1.5 PROJECT REQUIREMENTS

The requirements of the project is given below.

S.No.	Nature of requirement	Description
1	Water requirement	Total water requirement of 4.5 KLD which will be procured from the outside agencies. Out of 1.5 KLD drinking water requirement, green belt development is 1.5KLD and dust suppression is 1.5 KLD.
2	Power requirement	No electricity is needed for mining operations, for office demands, it will be met from the state grid.
3	Manpower requirement	Permanent employees – 14, temporary employees – 15
4	Financial requirement	Total EMP Cost for 5 years is 20.86 lakhs i.e., 7.82 Lakhs of Capital Cost + 13.04 Lakhs of Recurring cost (For 5 Years)
5	Funds for Socio economic development	INR 5 Lakhs is allocated for CER activities.

1.6 DESCRIPTION OF LEASE AREA

The features in the study area is given below.

<table>
<tr><th colspan="4">Description of the lease area</th></tr>
<tr><th>S.No.</th><th>Areas</th><th colspan="2">Distance from project site</th></tr>
<tr><td>1</td><td>Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value</td><td colspan="2">Nil within 15km radius</td></tr>
<tr><td>2</td><td colspan="3">Areas which are important or sensitive for ecological reasons</td></tr>
<tr><td rowspan="5">A</td><td rowspan="5">Wetlands, water courses or other water bodies,</td><td colspan="2">Within 1 km Radius</td></tr>
<tr><td>Seasonal Odai</td><td>480 m - NW</td></tr>
<tr><td>Tank 1</td><td>850 m (N)</td></tr>
<tr><td>Tank 2</td><td>688 m (SE)</td></tr>
<tr><td colspan="2">1 km to 10 km Radius</td></tr>
</table>

		Tank 3 – 1.55 km (W) Tank 4 – 2.12 km (SW) Tank 5 – 2.50 km (NE) Tank 6 – 4.17 km (SW) Sangarabarani River – 4.71 km (SW) Vidur Dam – 9.12 km (W)
B	Coastal zone, biospheres,	Nil within 10km radius
C	Mountains, forests	Nil within 10km Radius Melkondai R.F. – 13.59km (W)
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration	Nil within 15km radius
4	Inland, coastal, marine or underground waters	Nil within 15km radius
5	State, National boundaries	Nil within 15km radius
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Nil within 15km radius
7	Defense installations	Nil within 15km radius
8	Densely populated or built-up area	Karasanur Village – 380 m (N)
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Karasanur Village – 380 m (N)
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	Nil
11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	Nil

12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earth quakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions) similar effects	No. The area is not prone to earthquakes, floods, etc.

The baseline data collection for meteorology, air, water, noise and soil environments have been carried out during March to May 2025.

Air, water, noise and soil samples are collected and analyzed through NABL accredited lab.

1.7 AIR ENVIRONMENT

The air monitoring have been carried out in 6 locations and the results are given below.

S.NO	Location Code	Monitoring Locations	Latitude and longitude
1	A1	Within Mine Lease area	12° 3'43.24"N& 79°40'22.57"E
2	A2	Near Thollamur Bus Stand	12° 3'56.49"N & 79°40'31.97"E
3	A3	Karasanur Village	12° 4'11.21"N & 79°40'17.80"E
4	A4	Thollamur Village	12° 3'1.39"N & 79°40'35.07"E
5	A5	Eraiyur	12° 3'30.94"N & 79°39'25.41"E
6	A6	Perumbakkam	12° 4'41.13"N & 79°39'30.54"E

Ambient Air Quality											**All Value in µg/m3**		
	Parameters	**PM10**			**PM2.5**			**SO2**			**NO2**		
S.NO	**Locations**	**Min**	**Avg**	**Max**	**Min**	**Avg**	**Max**	**Min**	**Avg**	**Max**	**Min**	**Avg**	**Max**
1	A1 - Within Mine Lease area	61.5	67.8	75.4	29.5	32.5	36.2	5.3	6.0	6.7	11.6	13.5	16.2
2	A2 - Near Thollamur Bus Stand	46.9	51.8	57.0	21.1	23.3	25.6	3.8	4.8	6.1	10.2	11.3	12.5
3	A3 - Karasanur Village	47.9	54.1	59.3	22.1	25.04	27.4	5.3	6.4	8.1	10.2	11.5	13.1
4	A4 - Thollamur Village	47.1	53.0	59.7	23.8	27.2	31.1	5.2	6.3	7.1	8.9	10.4	11.8
5	A5 - Eraiyur	47.9	54.1	59.3	22.1	25.0	27.4	5.8	6.8	8.2	10.7	11.9	13.6
6	A6 - Perumbakkam	47.5	51.2	55.7	21.9	24.5	27.3	5.6	6.6	8.1	8.5	9.8	11.4
7	**CPCB NAAQS 2009**	**100**			**60**			**80**			**80**		

All the values of pollutant concentrations were found to be within the NAAQs Standards.

1.8 WATER ENVIRONMENT

Parameter	GW1	GW2	GW3	GW4	GW5	GW6	Standards as Per IS 10500: 2012	
							Acceptable Limits	Permissible Limits
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	5.0
pH at 25 °C	7.42	6.70	6.78	7.05	7.09	6.87	6.5- 8.5	No Relaxation
Electrical Conductivity µS/cm	400.9	1325	1789	1812	1021	2503	-	-
Total Dissolved Solids, mg/l	242	796	1073.4	1090	615	1502	500	2000
Total hardness as $CaCO_3$, mg/l	86.0	519	479	489	404	493	200	600
Calcium as Ca, mg/l	38.0	96.6	117	118	68.1	111	75	200
Magnesium as Mg, mg/l	11.6	66.5	44.7	46.3	56.1	51.6	30.0	100
Calcium as $CaCO_3$, mg/l	15.0	242	293	296	170	278	-	-
Magnesium as $CaCO_3$, mg/l	48.0	277	186	193	234	215	-	-

Total alkalinity as $CaCO_3$, mg/l	147	432	525	532	372	385	200	600
Chloride as Cl^-, mg/l	45.8	210	312	346	169	586	250	1000
Free Residual chlorine as Cl^-, mg/l	BDL (D.L - 0.2)	BDL (D.L - 0.2)	BDL (D.L - 0.2)	BDL (D.L - 0.2)	BDL (D.L - 0.2)	BDL (D.L - 0.2)	0.2	1
Sulphates as SO_4^{2-}, mg/l	19.5	155	238	245	89.6	376	200	400
Iron as Fe, mg/l	0.23	0.03	0.02	0.06	0.05	0.12	0.3	No Relaxation
Nitrate as NO_3, mg/l	1.38	3.24	3.58	2.98	2.57	5.89	45	No Relaxation
Fluoride as F, mg/l	0.24	0.45	0.54	0.58	0.35	0.64	1	1.5
Manganese as Mn, mg/l	BDL(D.L -0.05)	BDL(D.L -0.05)	BDL (D.L - 0.05)	BDL(D. L-0.05)	BDL(D.L -0.05)	BDL(D.L -0.05)	0.1	0.3

All the values were found to be within permissible limits

1.9 NOISE ENVIRONMENT

Noise levels were measured in 6 locations and the results are given below.

Monitoring Location	N1	N2	N3	N4	N5	N6
DAY EQUIVALENT	**53.7**	**52.7**	50.7	51.9	48.4	50.0
NIGHT EQUIVALENT	44.4	42.3	42.3	42.9	43.2	43.4
DAY & NIGHT EQUIVALENT	**52.2**	**51.1**	49.2	50.4	47.2	48.7
Limits as per MoEF&CC						
Day equivalent - 55 dB (A); Night equivalent - 45 dB (A); Work zone Exposure in 8 hr - 90 dB (A)						

1.10 SOIL ENVIRONMENT

Soil samples are collected from 6 locations and the results are given below.

S.No	Parameter	Unit	S1	S2	S3	S4	S5	S6
1	pH at 25 °C	-	8.16	6.98	7.46	8.00	6.34	8.43
2	Electrical Conductivity	µmhos/cm	225.2	291.4	285.4	132.6	189.5	187.4
3	Dry matter content	%	92.48	89.74	86.54	95.48	92.14	96.86
4	Water Content	%	7.52	10.26	13.46	4.52	7.86	3.14
5	Organic Matter	%	0.56	0.58	0.39	0.74	0.65	0.20
6	Soil texture	-	SILTY CLAY	SILTY CLAY	CLAY	SILTY CLAY	SILTY CLAY	SILT LOAM
7	Grain Size Distribution I. Sand	%	6.64	2.89	5.12	8.81	5.76	34.53
8	ii. Silt	%	35.65	58.02	37.65	39.88	44.59	53.20
9	iii. Clay	%	57.71	39.09	57.23	51.31	49.65	12.27
10	Phosphorous as P	mg/kg	0.45	0.69	0.74	1.25	1.03	0.79
11	Sodium as Na	mg/kg	211	725	793	99	1010	450
12	Potassium as K	mg/kg	193	287	384	103	649	340

13	Nitrogen and Nitrogenous Compounds	mg/kg	196	274	290	398	172	218
14	Total Soluble Sulphate	%	BDL(D.L.0.02)					
15	Porosity	%	19.7	17.5	18.6	15.2	18.7	15.5
16	Water Holding Capacity	Inches/foot	43	38	38	43	37	38

1.11 BIOLOGICAL ENVIRONMENT

FLORA

For measuring the extent of flora present in the study area, the area is divided in to 4 quadrants. The flora population in each quadrant is summed up for the total population in the study area. Field survey is done. Erukku, Aavarai and Nayuruvi are found in lease area. In the buffer zone, common trees like Neem, papaya, mango, teak, etc and shrubs like Avarai, Aloe vera, etc, climbers like Kovai,jasmine etc are found.

FAUNA

In the study area, commonly found animals like dogs, cats, bush rat, cows, birds like crow, Myna, Sparrow, etc were found.

1.12 LAND USE

The land use land cover data is found using the LANDSAT – 9 satellite imagery. The number of bands used are 11. The land use pattern is given below:

Major Land Use Units of the Study Area in Percentage

Sl.No.	LAND USE / LAND COVER	Area in Sq.Km	Area in Percentage
1	Built-up land	12.19	3.78
2	Crop land	106.32	32.98
3	Existing Quarry area	3.45	1.07
4	Fallow land	10.13	3.14

5	Land with scrub	4.99	1.54
6	Land without scrub	11.24	3.48
7	Plantations	143.93	44.65
8	Water bodies	30.09	9.36
	Total Area	**322.34**	**100.00**

1.13 SOCIO ECONOMIC ENVIRONMENT

The socio economic environment of the study area is studied by conducting primary sites through site visits and conducting sample surveys. The secondary data obtained from Census 2011 is also used.

The following data area collected from secondary data.

- Demographic pattern.
- Health pattern
- Occupational structure.
- Amenities available.

The expert visited 4 villages in the study area namely Karasanur Village, Thollamur, Eraiyur and Perumbakkam. Discussions were held with the people from nearby locality to study the social and economic conditions prevailing in the area. The expert also visited nearby hospitals, primary health centres and Tharuvai. The following observations were made.

The following observations were made.

Primary schools are available in many villages. For hospital facilities, people in the locality have to go to hospital in Thollamur which is about 1.23 km from the lease area. Major schools with higher secondary and senior secondary schools are located in Thollamur. The major Thollamur Union located in the area is Villupuram. Facilities like petrol pump stations, ATM facility are available in Thollamur.

1.14 HYDROGEOLOGY OF THE LEASE AREA

Since there is Sangarabarani River is located at a distance of 4.71 km in South west direction of lease area,

Sangarabarani River is the major river in the lease area. A detailed hydrogeological study will be incorporated in the Final EIA/EMP report.

The quarrying activity will not intersect ground water table as quarrying is proposed upto a depth of 42 m bgl and water table is found at a depth of 74 – 77 m BGL.

There are many tanks located in the study area, which are mostly dry throughout the year. These tanks get water only during monsoons. The factors may be monsoon failure, insufficient rainfall, poor rain water management and water consuming patterns.

1.15 GROUND WATER STUDY

For Ground water study, satellite imagery is used. Water levels from monitoring levels are collected through imaging. The pre-monsoon and post-monsoon data are collected and the results are analyzed.

As far as the mining lease area is considered, the area is rocky and no major seepage is envisaged. The production quantity is very less and the depth proposed is 42 m BGL. Hence, there will not be any major impact due to mining on water levels or ground water levels in the area.

ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental impacts on the following environments are identified.

- Land environment
- Water environment
- Vegetation
- Fauna
- Air environment
- Noise environment
- Socio-economic impacts

1.16 LAND ENVIRONMENT: IMPACT AND MITIGATION MEASURES

The major impact due to this project on land environment is the change in land use. Since this quarry is a small one and the production is less, mining activity will be carried out upto 42 m BGL. Other than quarrying of minerals, no other change will be done since there is no dumping. To prevent soil erosion during monsoon season, garland drain will be constructed with silt traps. At the mine closure stage, 2.14.00 Ha of lease area will be left as rain water harvesting pond. 0.64.50 Ha will be developed with green belt. For this, plants like Pongamia pinnata, Syzigium cumini, Albizia lebbeck, Thespesia populnea, Bauhinia racemose, Cassia siamea, Azadirachta indiaca are selected. A total of 650 trees are planned to be planted. Spacing will be 3m x 3m.

1.17 WATER ENVIRONMENT: IMPACT AND MITIGATION MEASURES

There is no water body present inside the lease area. The entire water requirement for the project is 4.5 KLD which will be sourced from outside agencies. Negligible sewage will be generated, for which a septic tank with soak pit will be set up.

During monsoon season, the excess rain water, if any, will be led through garland drain of 0.6m width and 0.3 m depth to the collection pond with silt traps.

Since the mining operation will be limited upto depth of 42m (BGL), there will not be any seepage. However, the rain water percolation and collection of water from seepage shall be less than 300lpm and it shall be pumped out periodically by a stand by diesel powered Centrifugal pump motivated with 7.5H.P.Motor. The quality of water is expected to be potable. Hence, water stored in the quarry pit will be pumped into the adjacent agricultural fields. Further the water can also be used for plantation purposes

The major water bodies found in the buffer zone are.

Within 1 km Radius	
Seasonal Odai	480 m - NW
Tank 1	850 m (N)

Tank 2	688 m (SE)
1 km to 10 km Radius	
Tank 3	1.55 km (W)
Tank 4	2.12 km (SW)
Tank 5	2.50 km (NE)
Tank 6	4.17 km (SW)
Sangarabarani River	4.71 km (SW)
Vidur Dam	9.12 km (W)

Since these water bodies are located outside the lease area and there is no discharge of effluent or any untreated water from the mines will be made in to these water bodies, there is no major impact. The proponent will restrict the mining operation only within the lease and no other work will be carried out near the water bodies or any area outside the lease.

It is planned to carryout appropriate rainwater harvesting schemes and artificial recharge schemes in the area.

- Rain water falling in the quarry will be collected efficiently through garland drains.
- Water thus collected will be passed through collection tank with silt traps. This water can be used by the proponent for water sprinkling and for green belt purposes.
- Excess water after desiltation will be provided to downstream users, if any

1.18 BIOLOGICAL ENVIRONMENT: IMPACT AND MITIGATION MEASURES

Impacts

- Fauna is affected due to noise and vibration.
- Dust generation due to mining activities
- Change in land use of the lease area
- Accidental falling of animals

Mitigation measures

- Sirens will be blown before blasting in the mines. To reduce noise levels, plantation will be done. Blasting will be carried out only in the allotted time.
- To reduce dust generation, mist sprayers will be used. During transportation, the material will be covered with tarpaulin. Water sprinkling will be done to reduce generation of pollutants
- After the mine closure stage, the mine pit will be left as rain water collecting tank, which can attract bird population in the nearby areas.
- To prevent entry of animals, the mining area will be properly fenced.

1.19 AIR ENVIRONMENT: IMPACT AND MITIGATION MEASURES

The major air pollutants due to mining operations are fugitive emissions like PM_{10}, $PM_{2.5}$. Other than these pollutants, gaseous emissions of sulfur dioxide (SO_2) and oxides of nitrogen (NO_x) due to excavation/loading equipment and vehicles plying on haul roads are the cause of air pollution in the project area.

The major impacts are Dust emission due to drilling, blasting and transportation. The major mitigation measures include Using Wet drilling methods, Allowing drilling only with PPE, Carrying out blasting only during specified times, Avoiding blasting during unfavourable weather conditions, Using explosives of good quality, Using mist sprayers Regular wetting of transport, Covering the materials carried in tippers with tarpaulin, Proper maintenance of vehicles used for transportation, Conducting regular emission tests for vehicles used for transport Development of greenbelt is proposed in the safety zone of 7.5m barriers in the lease area.

The anticipated data is calculated using AERMOD software and the projected values are found to be within limits.

1.20 NOISE ENVIRONMENT: IMPACT AND MITIGATION MEASURES

Impacts

- Noise generation in mining is due to operation like drilling, blasting and transportation of minerals within and outside the lease area.
- As per DGMS (Directorate General of Mines Safety) and OSHA (Occupational Safety and Health Administration) limits, the acceptable noise level is 90 dB(A) for an exposure period of 8 hours.
- Exposure to loud noise can also cause high blood pressure, heart disease, sleep disturbances, and stress. Noise pollution also impacts the health and well-being of wildlife.
- Noise exceeding prescribed limits may cause impairment like abnormal loudness perception, tinnitus, which causes a persistent high-pitched ringing in the ears, paracusis or distorted hearing

Mitigation measures

- As the distance between the source and receptor increases, the noise level also decreases. Hence, there will be a natural attenuation
- The proposed has planned to develop green belt in the periphery of the lease area, which diminishes sound volume by dampening them.
- All the equipment/machinery/trucks involved will be properly maintained to control noise generation
- Conducting regular health checkups for employees involved
- Employees will be made to work on shifts to reduce their exposure time
- Providing earplugs to all employees

By adopting these measures, the noise levels will be maintained well within MoEF & CC limits since the baseline value is low.

1.21 VIBRATION: IMPACT AND MITIGATION MEASURES

Impacts

- Though vibration will be only felt by the people working inside the lease area, it is usually undesired.
- Vibration may also cause flyrocks
- It may frighten the birds and small insects in the lease area. However, it will be felt only for a short period

Mitigation measures

- Carrying out blasting on limited scale, only from 12:00 PM to 2:00 PM
- Control of fly rock and vibration by maintaining peak particle velocity with in standard as prescribed by the DGMS and MOEF & CC.
- Shallow depths jackhammer drilling and blasting is proposed to be carried out with minimum use of explosive
- Supervising blasting by competent and statutory foreman/ mines manager

1.22 SOCIO ECONOMIC ENVIRONMENT

Impact and Mitigation measures

No land is acquired from anyone. No rehabilitation is needed. Hence, there is no negative impact. The proponent has planned to spend INR 5,00,000 for CER activities. This amount will be subjected to change after public hearing.

1.23 OCCUPATIONAL HEALTH

Impacts

Dust generation due to drilling and blasting, Noise generation due to drilling and blasting, unexpected accidents. Continuous exposure to dust causes Pneumonia, Tuberculosis, Rhematic arthritis and Segmental Vibration, Short term impact will be lack of sleep, high blood pressure and heart ailments. Long term exposure may lead to partial or permanent deafness, Risks include fly rocks, cracks or fissures due to improper mining methods

Mitigation measures

- Using dust suppression measures like water spraying on roads to reduce rise of air pollutants
- Providing green belt for air pollutant and noise attenuation
- Ensuring slope stability
- Employing only trained professionals for blasting
- Conducting Pre-Medical Examination for employees before inducting
- Conducting periodical Medical Examination once in 6 months.
- Making all first aid kits available in mines office
- Keeping fire extinguisher in place
- Educating the employees about how to handle unexpected happenings
- Posting information containing emergency contact numbers in mines office
- By adopting all these measures, the safety of the employees working in the quarry will be ensured.

1.24 ENVIRONMENTAL MONITORING PROGRAMME

Monitoring is done to measure the efficiency of control measures implemented. Regular monitoring of various environmental parameters like air, water, noise and soil environments is needed to assess the status of environment during the project operation. A schedule is framed with timeline to monitor various parameters during the operation of the project. To evaluate the effectiveness of environmental management programme, regular monitoring of the important environmental parameters will be taken up. Air monitoring will be carried out once in 3 months, water sample will be collected once in a season, noise will be monitored once in 3 months, soil samples will be analyzed once per season. For EMP, a budget of INR 20.86 Lakhs is allocated.

1.25 PROJECT BENEFITS

Financial benefits

- This project will contribute financially through payment of taxes like royalty, GST, etc.,
- The project will also contribute via CSR.
- The demands of people during public hearing will also be considered by the project proponent

Social benefits

- This project provides employment to 29 people directly. Local people will be hired for unskilled labour.
- Through CSR, nearby schools, hospitals will be benefitted.
- For CSR, INR 5,00,000 is allocated.
- Based on the demand of the people during public hearing, further funds will be allocated, if necessary.
- Various aspects of mining activities were considered and related impacts were evaluated. Considering all the possible ways to mitigate the environmental concerns Environmental Management Plan was prepared and 20.86 lakhs for the five years has been allocated as EMP cost. The EMP is dynamic, flexible and subjected to periodic review. For project where the major environmental impacts are associated, EMP will be under regular review. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will bring the positive impact in the study area.

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ANNEXURE-1

From

Thiru.S.Rameshkumar, M.Sc.,
Assistant Director (i/c),
Dept. of Geology and Mining,
Viluppuram District,
Viluppuram.

To

District Forest Officer,
Viluppuram.

Rc.No. A/G&M/50/2025, Dated: 25.04.2025

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough stone & Gravel - Viluppuram District – Vanur Taluk - Thollamur Village – Patta lands in S.F.Nos.4/1 (0.40.0), 4/2A (0.04.5), 4/2B (0.10.0), 4/2C (0.80.5), 6/1 (0.24.0), 6/2A (0.60.5) and 6/2B (0.61.0) – over an extent of 2.80.5 hectares - quarry lease application preferred by Thiru.G.Velu, S/o.Govindasamy – Precise area communicated – details called for – reg.

Ref :
1. G.O.(Ms.)No.295 Industries (MMC.1) Department dated: 03.11.2021.
2. Application dated 26.03.2025 from Thiru.G.Velu, S/o.Govindasamy, No.126, Mettu Street, Eraiyur Village, Vanur Taluk, Viluppuram District.
3. Assistant Director, Geology and Mining, Viluppuram Precise area communication notice Rc.No. A/G&M/50/2025, Dated: 23.04.2025.
4. Representation submitted by Thiru.G.Velu, S/o.Govindasamy, Dated: 25.04.2025.

Kind attention is invited to the references cited, wherein Thiru.G.Velu, S/o.Govindasamy has preferred a quarry lease application for the grant of quarry lease for rough stone and gravel over an extent of 2.80.5 hectares of patta land S.F.Nos.4/1 (0.40.0), 4/2A (0.04.5), 4/2B (0.10.0), 4/2C (0.80.5), 6/1 (0.24.0), 6/2A (0.60.5) and 6/2B (0.61.0) of Thollamur Village, Vanur Taluk, Viluppuram District for a period of five years vide reference 2nd cited.

In the reference 4th cited, the applicant has requested to provide the details of Reserve Forest, Protected areas, Sanctuaries, Tiger Reserve Etc. within a radial distance of 25 km from the periphery of the applied area since the details are required for the presentation to be made before the State Expert Appraisal Committee (SEAC) by the QP as per the SEAC's direction.

In this regard copy of the surface plan of the applied area incorporating the geographical coordinates of the boundary of the applied area situated in patta lands S.F.Nos.4/1 (0.40.0), 4/2A (0.04.5), 4/2B (0.10.0), 4/2C (0.80.5), 6/1 (0.24.0), 6/2A (0.60.5) and 6/2B (0.61.0) of Thollamur Village, Vanur Taluk, Viluppuram District is herewith enclosed.

Hence, you are requested to provide the details of Reserve Forest, Protected areas, Sanctuaries, Tiger Reserve Etc. situated within a radial distance of 25 km from the periphery of the applied area for taking further necessary action on the subject proposal.

Encl:

1. Copy of the surface plan.
2. FMB Sketch of the applied area.

Yours faithfully,

25/4/25

Assistant Director (i/c),
Dept. of Geology and Mining,
Viluppuram.

25.4.25

ANNEXURE-2

From

Thiru.S.Rameshkumar, M.Sc.,
Assistant Director (i/c),
Dept. of Geology and Mining,
Viluppuram District,
Viluppuram.

To

District Forest Officer,
Viluppuram.

Rc.No. A/G&M/50/2025, Dated: 25.04.2025

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough stone & Gravel - Viluppuram District – Vanur Taluk - Thollamur Village – Patta lands in S.F.Nos.4/1 (0.40.0), 4/2A (0.04.5), 4/2B (0.10.0), 4/2C (0.80.5), 6/1 (0.24.0), 6/2A (0.60.5) and 6/2B (0.61.0) – over an extent of 2.80.5 hectares - quarry lease application preferred by Thiru.G.Velu, S/o.Govindasamy – Precise area communicated – details called for – reg.

Ref :
1. G.O.(Ms.)No.295 Industries (MMC.1) Department dated: 03.11.2021.
2. Application dated 26.03.2025 from Thiru.G.Velu, S/o.Govindasamy, No.126, Mettu Street, Eraiyur Village, Vanur Taluk, Viluppuram District.
3. Assistant Director, Geology and Mining, Viluppuram Precise area communication notice Rc.No. A/G&M/50/2025, Dated: 23.04.2025.
4. Representation submitted by Thiru.G.Velu, S/o.Govindasamy, Dated: 25.04.2025.

Kind attention is invited to the references cited, wherein Thiru.G.Velu, S/o.Govindasamy has preferred a quarry lease application for the grant of quarry lease for rough stone and gravel over an extent of 2.80.5 hectares of patta land S.F.Nos.4/1 (0.40.0), 4/2A (0.04.5), 4/2B (0.10.0), 4/2C (0.80.5), 6/1 (0.24.0), 6/2A (0.60.5) and 6/2B (0.61.0) of Thollamur Village, Vanur Taluk, Viluppuram District for a period of five years vide reference 2nd cited.

In the reference 4th cited, the applicant has requested to provide the details of Reserve Forest, Protected areas, Sanctuaries, Tiger Reserve Etc. within a radial distance of 25 km from the periphery of the applied area since the details are required for the presentation to be made before the State Expert Appraisal Committee (SEAC) by the QP as per the SEAC's direction.

In this regard copy of the surface plan of the applied area incorporating the geographical coordinates of the boundary of the applied area situated in patta lands S.F.Nos.4/1 (0.40.0), 4/2A (0.04.5), 4/2B (0.10.0), 4/2C (0.80.5), 6/1 (0.24.0), 6/2A (0.60.5) and 6/2B (0.61.0) of Thollamur Village, Vanur Taluk, Viluppuram District is herewith enclosed.

Hence, you are requested to provide the details of Reserve Forest, Protected areas, Sanctuaries, Tiger Reserve Etc. situated within a radial distance of 25 km from the periphery of the applied area for taking further necessary action on the subject proposal.

Encl:

1. Copy of the surface plan.
2. FMB Sketch of the applied area.

Yours faithfully,

25/4/25

Assistant Director (i/c),
Dept. of Geology and Mining,
Viluppuram.

25.4.25

ANNEXURE-3

From
Thiru.S.Rameshkumar, M.Sc.,
Assistant Director (i/c),
Dept. of Geology and Mining,
Viluppuram District,
Viluppuram.

To
Thiru.G.Velu,
S/o.Govindasamy,
No.126, Mettu Street,
Eraiyur Village,
Vanur Taluk,
Viluppuram District.

Rc.No. A/G&M/50/2025, Dated: 25.04.2025

Sub: Mines and Minerals – Minor Mineral – Rough stone & Gravel - Viluppuram District – Vanur Taluk - Thollamur Village – Patta lands in S.F.Nos.4/1 (0.40.0), 4/2A (0.04.5), 4/2B (0.10.0), 4/2C (0.80.5), 6/1 (0.24.0), 6/2A (0.60.5) and 6/2B (0.61.0) – over an extent of 2.80.5 hectares - quarry lease application preferred by Thiru.G.Velu, S/o.Govindasamy – Details of quarries situated within 500 meter radial distance – furnished - Regarding.

Ref: 1. Assistant Director, Geology and Mining, Viluppuram Letter Rc.No. A/G&M/50/2025, Dated: 23.04.2025.
2. Representation received from Thiru.G.Velu, S/o.Govindasamy, Dated 25.04.2025.

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With reference to your letter in the reference 2nd cited, the details of existing, proposed and abandoned quarries located within 500 mts. radial distance from the periphery of the proposed Rough stone and Gravel quarry over an extent of 2.80.5 hectares of patta lands in S.F.Nos.4/1 (0.40.0), 4/2A (0.04.5), 4/2B (0.10.0), 4/2C (0.80.5), 6/1 (0.24.0), 6/2A (0.60.5) and 6/2B (0.61.0) of Thollamur Village, Vanur Taluk, Villupuram District are as follows.

1. Existing quarries:

Sl. No.	Name of the lessee / permit holder	Name of the Mineral	Taluk & Village	S.F. Nos.	Extent (in hects)	Lease period	Remarks
1.	Tmt.K.Rajamani, W/o.Kuppusamy, No.168, Mettu Street, Karasanur Village, Vanur Taluk, Viluppuram District	Rough stone & Gravel	Vanur Karasanur	171/1A 171/1B	1.21.5 0.81.0 **2.02.5**	26.03.2025 to 25.03.2030	-
2.	Tvl.Sri Santhosh Blue Metals represented by its partner Thiru.S.V.Venkatesh, No.173, Sarkar Thopu, Tindivanam, Viluppuram District.	Rough stone & Gravel	Vanur Thollamur	8/1B 8/2	0.61.5 1.44.5 2.06.0	23.02.2024 to 22.02.2034	-

II. Proposed Area :

Sl. No.	Name of the lessee / permit holder	Name of the Mineral	Taluk & Village	S.F. Nos.	Extent (in hects)	Remarks
1.	Thiru.G.Velu, S/o.Govindasamy, No.126, Mettu Street, Eraiyur Village, Vanur Taluk, Viluppuram District.	Rough stone & Gravel	Vanur Thollamur	4/1 4/2A 4/2B 4/2C 6/1 6/2A 6/2B	0.40.0 0.04.5 0.10.0 0.80.5 0.24.0 0.60.5 0.61.0 **2.80.5**	-

III. Abandoned quarries :

Sl. No.	Name of the lessee / permit holder	Name of the Mineral	Taluk & Village	S.F. Nos.	Extent (in hects)	Lease period	Remarks
1.	V.Sadaiyappan, No.18, Amal Nagar, West Tambaram, Chennai-600 045.	Rough stone & Gravel	Vanur Thollamur	1/3A 12/3 12/5B1	0.58.0 0.60.5 2.38.5 3.57.0	16.08.2018 to 15.08.2023	-
2.	K.Dharmalingam, S/o.Kannaiyan, 2/6, Kalaignar Street, Erumaiyur, Chennai-44.	Rough stone & Gravel	Vanur Thollamur	12/5B	2.52.0	20.04.2013 to 19.04.2018	-
3.	V.Sankar, S/o Vivekanandan, 14, Jayapuram Colony, Tindivanam Town & Taluk, Viluppuram District	Rough stone & Gravel	Vanur Thollamur	2/1 2/2 2/3 2/4 2/5 3/1 3/2 3/3 3/4 3/5 3/6 3/7	0.45.5 0.22.0 0.22.0 0.23.5 0.25.0 0.32.5 0.33.5 0.81.0 0.20.0 0.22.5 0.21.0 0.18.0 3.66.5	20.09.2016 to 19.09.2021	-

Assistant Director (i/c),
Dept. of Geology and Mining,
Viluppuram.

25.4.25