

March

2023

Executive Summary for Conducting Public Hearing

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**

Project Proponent:

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

Project termed under schedule 1(a) Category B₁

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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
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 |
| 15 | National parks / Wildlife | Nil in 15 km radius |

| | | |
|----|------------------------------|---|
| | Sanctuaries | |
| 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.

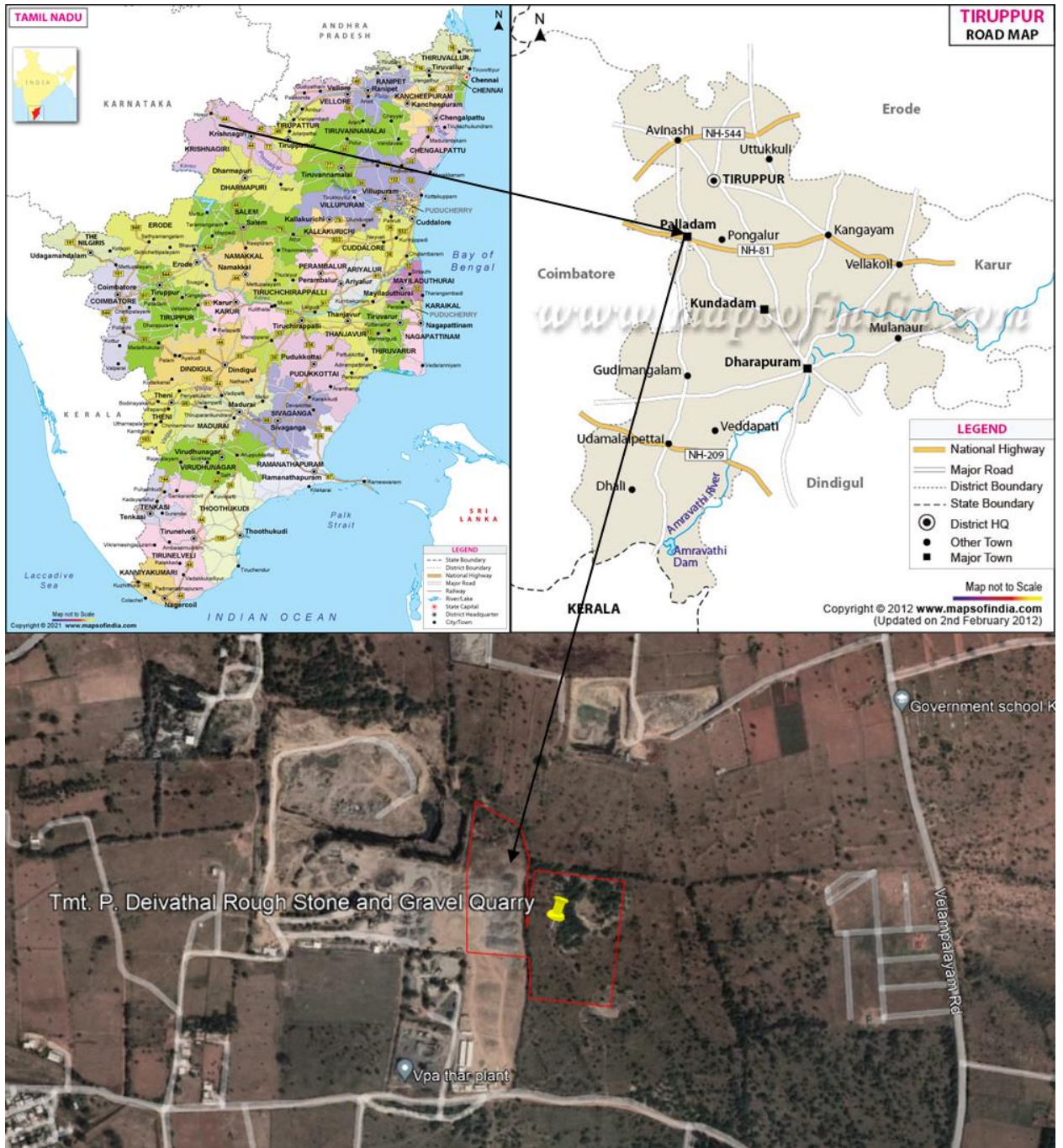


Figure 1: Location Map of the Project Site



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 | |

| | | | | | | | | |
|--------------------|--------------|-----|-----|---|----------------|----------------|--------------|--------------|
| | 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

| 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 |
| 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 |
| X1Y1-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 |
| 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 |

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 | | |
| | | 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.
- 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 |

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

| 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 |
| 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

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), PM_{2.5} (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

- 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

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 |
|--|--------------|------------------------|

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.