

**December**

**2025**

**Executive Summary for Conducting Public Hearing  
FOR**

**“Thiru. P. Subramanian Rough Stone and Gravel  
Quarry over a total extent of 2.41.42 Ha”**

**At**

**S.F.No. 85/1A, 88/1A2, & 88/1B of Eraiyur Village,  
Vanur Taluk, Villupuram District, Tamilnadu State**

**Project Proponent:**

**Thiru. P. Subramanian,  
S/o. Pandurangan,  
3<sup>rd</sup> Street, Pudu Nagar, Kondareddipalayam,  
Mannadipet Commune, Tirukkanur,  
Puducherry - 605 501**

**Project termed under schedule 1(a) Category B<sub>1</sub>**

**Prepared By:**

**Ecotech Labs Pvt. Ltd.**



**NABET Accredited EIA Consultant**

**48, 2<sup>nd</sup> Main Road, Ram Nagar South Extension,  
Pallikaranai, Chennai - 600100.**

## EXECUTIVE SUMMARY

### 1. Project Background:

The Proposed project total extent area is 2.41.42 Ha, it is Patta land (Consent registered) S.F. No:85/1A, 88/1A2, & 88/1B of Eraiyur Village, Vanur Taluk and Viluppuram District, TamilNadu State for a period of 5 years. The category of project is B1 Cluster, it is a Rough Stone and Gravel Quarry. The lease area exhibits plain terrain topography with very gentle slope towards north and covered thin layer of clayey black cotton soil followed by gravel, weathered rock formation and massive Charnockite rock formations. The massive rock formation is noticed / occurred at an average depth of 2.0 mts from the surface i.e. below topsoil and weathered rock formation.

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. Quarrying operation is carried out Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to needy Crusher. Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting.

The quarry operation is proposed up to depth for 32.0m (2.0m Gravel & 30.0m Rough Stone) Below ground level for the proposed mining plan. The Total Geological reserve is about 20,06,070 Ts of Rough stone and 97,264 Ts of Gravel. The Mineable Reserves are 600820 Ts of Rough stone and 58880 Ts of Gravel for a period of 5 years. Production schedule is proposed production of 600820 Ts of Rough stone and 58880 Ts of Gravel for the period of five years only.

The precise area communication letter was received from Assistant Director, Department of Geology and Mining, Viluppuram District has passed an order vide R.c.No. A/G&M/49/2025, dated 18.06.2025 for lease period of 10 years and The Mining Plan was approved by the Assistant Director, Geology & Mining, Viluppuram vide letter R.c.No. A/G&M/49/2025, dated 24.07.2025 for the period of 10 years. There is no CRZ zone, Western Ghats, wildlife sanctuaries as per Wildlife protection Act 1972, within the radius of 15Km. Oussudu Lake Bird Sanctuary located 14.92 kms, SE & Kazhuveli Wetland Bird Sanctuary located at 16.66 kms, E from the project site and National Petrified/Fossil Wood Park Thiruvakkarai located 5 kms, SE direction.

The project does not require huge amount of water for quarry operation and total water requirement is 1.45 KLD. (0.45 KLD) Drinking water use only Packaged drinking water is available from the nearby approved water vendors and (0.5 KLD) and (0.5 KLD) of water use only road tankers supply. Requirements will be arranged from nearby sources.

The project cost is about Rs. Rs. 85,57,100/- (Eighty-Five Lakhs Fifty-Seven Thousand and One Hundred Rupees Only). EMP (Environmental Management Plan) Cost is about 2,13,89,607/- (Two Crore Thirteen Lakh Eighty-Nine Thousand and Six Hundred Seven Rupees Only).

## 2. Nature & Size of the Project

The New Rough Stone and Gravel Quarry over an extent of 2.41.42 Hectares land is located at Eraiyur Village of Vanur Taluk, Villupuram District.

|                           |   |                        |
|---------------------------|---|------------------------|
| Mineral intends to quarry | : | Rough stone and Gravel |
| District                  | : | Villupuram             |
| Taluk                     | : | Vanur                  |
| Village                   | : | Eraiyur                |
| S. F. Nos.                | : | 85/1A, 88/1A2, & 88/1B |
| Extent                    | : | 2.41.42 Hectares       |

**Table 1: Brief Description of the Project**

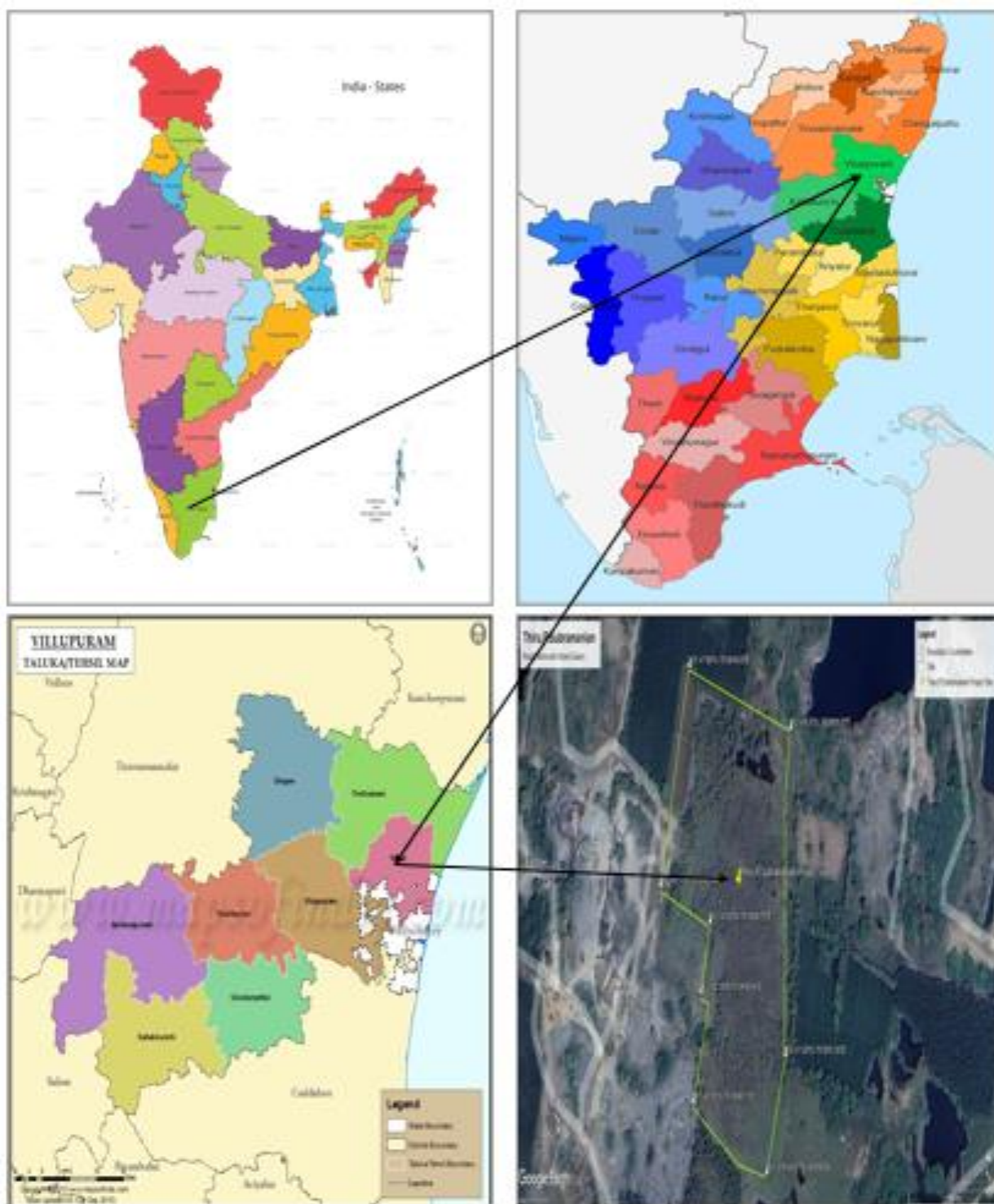
| S. No | Particulars              | Details                                                                                                                                                                                                           |
|-------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Latitude                 | 12° 03' 59.35"N to 12° 04' 07.83"N                                                                                                                                                                                |
| 2     | Longitude                | 79° 38' 46.92"E to 79°38' 51.69"E                                                                                                                                                                                 |
| 3     | Site Elevation above MSL | The altitude of the lease area is 72.0m above MSL.                                                                                                                                                                |
| 4     | Topography               | Plain                                                                                                                                                                                                             |
| 5     | Land use of the site     | Patta land (Consent registered)                                                                                                                                                                                   |
| 6     | Extent of lease area     | 2.41.42 Ha                                                                                                                                                                                                        |
| 7     | Nearest highway          | <ul style="list-style-type: none"> <li>➤ MDR-808: Perumbakkam to Pidaripattu Road is about 1.13 Kms on East of the area</li> <li>➤ SH-136 Mailam to Puducherry Road is about 1.50 Kms on N of the area</li> </ul> |
| 8     | Nearest railway station  | <ul style="list-style-type: none"> <li>➤ Mailam Railway Station – 11.36 km, NW</li> <li>➤ Villupuram Junction – 21.24 km, SW</li> </ul>                                                                           |
| 9     | Nearest airport          | <ul style="list-style-type: none"> <li>➤ Chennai International Airport – 117.17 km - NE</li> </ul>                                                                                                                |

|    |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Nearest town / city  | <ul style="list-style-type: none"> <li>➤ Town - Villupuram - 19.22 km - SW</li> <li>➤ City - Villupuram - 19.22 km - SW</li> <li>➤ District – Villupuram - 19.22 km - SW</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 11 | Rivers / Canal / Dam | <ul style="list-style-type: none"> <li>➤ Sankarabarani River – 4.24 kms, S</li> <li>➤ Gingee River – 6.48 kms, W</li> <li>➤ Tondi River – 9.07 kms, NW</li> <li>➤ Varaga Nadhi – 7.42 kms, SW</li> <li>➤ Chettipattu Small Dam – 4.73 kms, S</li> <li>➤ Veedur Dam – 6.69 kms, W</li> <li>➤ Sankarabarani Reservoir – 6.98 kms, SE</li> <li>➤ Sengadu-Mathur Small dam (Pambe Water Reservoir) – 12.73 kms, SW</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 12 | Lake                 | <ul style="list-style-type: none"> <li>➤ Eraiyur Lake – 0.37 Kms, E</li> <li>➤ Ambuzhukai Lake – 1.53 Kms, SE</li> <li>➤ Nemili Lake – 2.07 Kms, S</li> <li>➤ Konamangalam Lake – 2.26 kms, W</li> <li>➤ Kanniyam Lake – 2.55 Kms, NW</li> <li>➤ Veedur Lake – 2.77 Kms, W</li> <li>➤ Korakkeni Lake – 3.12 Kms, S</li> <li>➤ Ponnampundi Lake – 3.40 Kms, SW</li> <li>➤ Thaludhali Lake – 3.50 kms, N</li> <li>➤ Thaludhali Kulam – 3.55 kms, N</li> <li>➤ Kunnam Lake – 3.97 kms, NE</li> <li>➤ Mailam Lake – 6.66 Kms, N</li> <li>➤ Ezhaoli Lake – 7.81 Kms, W</li> <li>➤ Thirukkanur Lake – 8.35 kms, S</li> <li>➤ Mannadipet Pond – 8.59 kms, S</li> <li>➤ Katterikuppam Lake – 8.62 kms, SE</li> <li>➤ Avudayarpattu Lake – 9.35 kms, W</li> <li>➤ Sompet Lake – 10.56 kms, S</li> <li>➤ Kumalam Lake – 11.31 kms, S</li> <li>➤ Katrambakkam Lake – 11.54 kms, E</li> <li>➤ Mathur Lake – 11.58 kms, SW</li> </ul> |

|    |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                       | <ul style="list-style-type: none"> <li>➤ Omandur Lake – 11.65 kms, N</li> <li>➤ Melakondai Pond – 11.87 kms, W</li> <li>➤ Annamputhur Lake – 12.05 kms, N</li> <li>➤ Pulichapallam Lake – 12.56 kms, SE</li> <li>➤ Thoravi Lake – 13.17 kms, W</li> <li>➤ Budhur Lake – 13.64 kms, SW</li> <li>➤ Nallavur Lake – 14.14 kms, NE</li> <li>➤ Kodur Lake – 14.79 kms, E</li> <li>➤ Oussudu Lake – 15.55 Kms, SE</li> </ul> |
| 13 | Hills / valleys                       | Nil in 15 km radius                                                                                                                                                                                                                                                                                                                                                                                                    |
| 14 | Archaeological places/Monuments       | National Petrified/Fossil Wood Park, Thiruvakkarai – 5 kms, SE                                                                                                                                                                                                                                                                                                                                                         |
| 15 | National parks / Wildlife Sanctuaries | <ul style="list-style-type: none"> <li>➤ Oussudu Lake Bird Sanctuary – 14.92 kms, SE</li> <li>➤ Kazhuveli Wetland Bird Sanctuary – 16.66 kms, E</li> </ul>                                                                                                                                                                                                                                                             |
| 16 | Reserved / Protected Forests          | <ul style="list-style-type: none"> <li>➤ Melkondai R.F – 11.13 Kms, W</li> <li>➤ Kongarampoondi R.F – 11.21 kms, W</li> </ul>                                                                                                                                                                                                                                                                                          |
| 17 | Seismicity                            | Proposed Lease area come under Seismic zone-II (low risk area)                                                                                                                                                                                                                                                                                                                                                         |
| 18 | Defense Installations                 | Nil in 15 Km radius                                                                                                                                                                                                                                                                                                                                                                                                    |

### 3. Need for the Project

- ❖ The mining activities as proposed are the backbone of all construction and infrastructure projects as the raw material for construction is available only from such mining. The Rough stone and gravel extracted will be transported to be Stone crusher of Villupuram District.
- ❖ 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 artificial recharge to the nearby wells.
- ❖ No damage to the land is caused, no reclamation or backfilling is required.



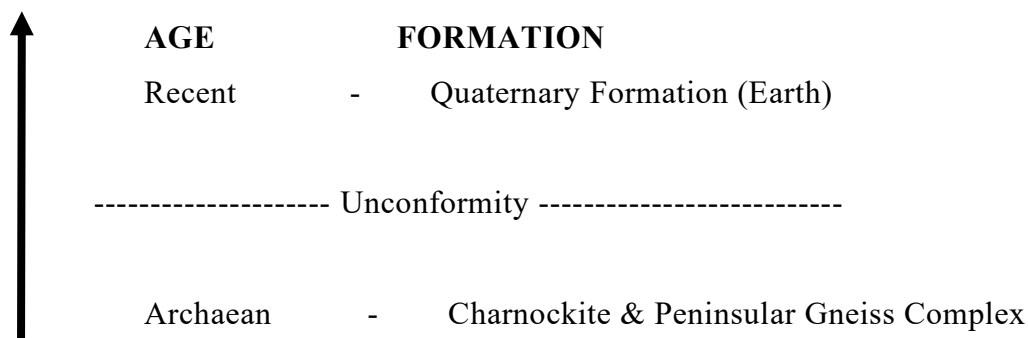


**Figure 2: Google Image of the Project Site**

#### 4. Charnockite

The greater part of the district is covered by rocks belonging to Archaean age comprising the Charnockite group, the Migmatite complex, Sathyamangalam group and the Bhavani group and the alkali complex of Proterozoic age. West of Kallakurichi (Southwestern part of the district), the area comprises the Charnockite Group of rocks, viz., Charnockite, pyroxene-granulite and garnetiferous gabbro. West of Tirukoilur (Central part of the district) and east of the Charnockite terrain (i.e., Kallakurichi area) the Migmatite complex is made up of Hornblende-Biotite gneiss. Peninsular gneiss forms the oldest rock formations, in which the massive formation of Charnockite body N30°E – S30°W with dipping towards SE60°.

The general geological sequences of the rocks in this area are given below:



## 5. Geological Resources

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

**Table 2. Geological resources**

| section      | Bench | length<br>in (m) | Width<br>in (m) | Depth<br>in (m) | Gravel<br>in m <sup>3</sup> | Geological<br>Resources<br>Rough in<br>m <sup>3</sup> | Bulk<br>Density | Gravel<br>in (Ts) | Geological<br>Resources<br>in (Ts) |
|--------------|-------|------------------|-----------------|-----------------|-----------------------------|-------------------------------------------------------|-----------------|-------------------|------------------------------------|
| XY-AB        | I     | 118              | 88              | 2               | 20768                       |                                                       | 2               | 41536             |                                    |
|              | I-VII | 118              | 88              | 30              |                             | 311520                                                | 2.75            |                   | 856680                             |
| XY-CD        | I     | 108              | 129             | 2               | 27864                       |                                                       | 2               | 55728             |                                    |
|              | I-VII | 108              | 129             | 30              |                             | 417960                                                | 2.75            |                   | 1149390                            |
| <b>TOTAL</b> |       |                  |                 |                 | <b>48632</b>                | <b>729480</b>                                         |                 | <b>97264</b>      | <b>2006070</b>                     |

**Table 2(a) Mineable resources**

| section      | Bench | Length<br>in (m) | Width<br>in (m) | Depth<br>in (m) | Gravel<br>in m <sup>3</sup> | Mineable<br>Reserves<br>Rough stone<br>in m <sup>3</sup> | Bulk<br>Density | Gravel<br>in (Ts) | Mineable<br>Reserves<br>in (Ts) |
|--------------|-------|------------------|-----------------|-----------------|-----------------------------|----------------------------------------------------------|-----------------|-------------------|---------------------------------|
| XY-AB        | I     | 110              | 72              | 2               | 15840                       |                                                          | 2               | 31680             |                                 |
|              | II    | 107              | 65              | 5               |                             | 34775                                                    | 2.75            |                   | 95631.25                        |
|              | III   | 102              | 55              | 5               |                             | 28050                                                    | 2.75            |                   | 77137.50                        |
|              | IV    | 97               | 45              | 5               |                             | 21825                                                    | 2.75            |                   | 60018.75                        |
|              | V     | 92               | 35              | 5               |                             | 16100                                                    | 2.75            |                   | 44275.00                        |
|              | VI    | 87               | 25              | 5               |                             | 10875                                                    | 2.75            |                   | 29906.25                        |
|              | VII   | 82               | 15              | 5               |                             | 6150                                                     | 2.75            |                   | 16912.50                        |
| <b>TOTAL</b> |       |                  |                 |                 | <b>15840</b>                | <b>117775</b>                                            |                 | <b>31680</b>      | <b>323881.25</b>                |
| XY-CD        | I     | 100              | 68              | 2               | 13600                       |                                                          | 2               | 27200             |                                 |
|              | II    | 97               | 63              | 5               |                             | 30555                                                    | 2.75            |                   | 84026.25                        |
|              | III   | 92               | 53              | 5               |                             | 24380                                                    | 2.75            |                   | 67045.00                        |
|              | IV    | 87               | 43              | 5               |                             | 18705                                                    | 2.75            |                   | 51438.75                        |
|              | V     | 82               | 33              | 5               |                             | 13530                                                    | 2.75            |                   | 37207.50                        |
|              | VI    | 77               | 23              | 5               |                             | 8855                                                     | 2.75            |                   | 24351.25                        |

|                    |     |    |    |   |              |               |      |              |                  |
|--------------------|-----|----|----|---|--------------|---------------|------|--------------|------------------|
|                    | VII | 72 | 13 | 5 |              | 4680          | 2.75 |              | 12870.00         |
| <b>TOTAL</b>       |     |    |    |   | <b>13600</b> | <b>100705</b> |      | <b>27200</b> | <b>276938.75</b> |
| <b>GRAND TOTAL</b> |     |    |    |   | <b>29440</b> | <b>218480</b> |      | <b>58880</b> | <b>600820.00</b> |

**Table 3. Yearwise Production Plan**

| Year  | Section   | Bench | L in<br>(m) | W in<br>(m) | D in<br>(m) | Gravel<br>in m³ | Rough<br>stone in<br>m³ | Bulk<br>Density | Gravel<br>in Ts | Mineable<br>Reserves of<br>Rough stone in<br>Ts |
|-------|-----------|-------|-------------|-------------|-------------|-----------------|-------------------------|-----------------|-----------------|-------------------------------------------------|
| I     | XY-<br>AB | I     | 11<br>0     | 72          | 2           | 15840           |                         | 2               | 31680           |                                                 |
|       |           | II    | 10<br>7     | 65          | 5           |                 | 34775                   | 2.75            |                 | 95631.25                                        |
|       | XY-<br>CD | I     | 28          | 68          | 2           | 3808            |                         | 2               | 7616            |                                                 |
|       |           | II    | 28          | 63          | 5           |                 | 8820                    | 2.75            |                 | 24255.00                                        |
| TOTAL |           |       |             |             |             | 19648           | 43595                   |                 | 39296           | 119886.25                                       |
| II    | XY-<br>CD | I     | 72          | 68          | 2           | 9792            |                         | 2               | 19584           |                                                 |
|       |           | II    | 69          | 63          | 5           |                 | 21735                   | 2.75            |                 | 59771.25                                        |
|       |           | III   | 82          | 53          | 5           |                 | 21730                   | 2.75            |                 | 59757.50                                        |
| TOTAL |           |       |             |             |             | 9792            | 43465                   |                 | 19584           | 119528.75                                       |
| III   | XY-<br>CD | III   | 10          | 53          | 5           |                 | 2650                    | 2.75            |                 | 7287.50                                         |
|       | XY-<br>AB | III   | 10<br>2     | 55          | 5           |                 | 28050                   | 2.75            |                 | 77137.50                                        |
|       |           | IV    | 57          | 45          | 5           |                 | 12825                   | 2.75            |                 | 35268.75                                        |
| TOTAL |           |       |             |             |             |                 | 43525                   |                 |                 | 119693.75                                       |
| IV    | XY-<br>AB | IV    | 40          | 45          | 5           |                 | 9000                    | 2.75            |                 | 24750                                           |
|       | XY-<br>CD | IV    | 87          | 43          | 5           |                 | 18705                   | 2.75            |                 | 51438.75                                        |
|       |           | V     | 82          | 33          | 5           |                 | 13530                   | 2.75            |                 | 37207.50                                        |
|       | XY-<br>AB | V     | 13          | 35          | 5           |                 | 2275                    | 2.75            |                 | 6256.25                                         |

|                    |       |     |    |    |   |              |               |      |              |                  |
|--------------------|-------|-----|----|----|---|--------------|---------------|------|--------------|------------------|
| <b>TOTAL</b>       |       |     |    |    |   |              | <b>43510</b>  |      |              | <b>119652.50</b> |
| V                  | XY-AB | V   | 79 | 35 | 5 |              | 13825         | 2.75 |              | 38018.75         |
|                    |       | VI  | 87 | 25 | 5 |              | 10875         | 2.75 |              | 29906.25         |
|                    | XY-CD | VI  | 77 | 23 | 5 |              | 8855          | 2.75 |              | 24351.25         |
|                    |       | VII | 72 | 13 | 5 |              | 4680          | 2.75 |              | 12870.00         |
|                    | XY-AB | VII | 82 | 15 | 5 |              | 6150          | 2.75 |              | 16912.50         |
| <b>TOTAL</b>       |       |     |    |    |   |              | <b>44385</b>  |      |              | <b>122058.75</b> |
| <b>GRAND TOTAL</b> |       |     |    |    |   | <b>29440</b> | <b>218480</b> |      | <b>58880</b> | <b>600820.00</b> |

**Production quantity per day** (1Load = 6m<sup>3</sup> approx.) (1Year = 260 Working days)

Rough Stone quantity                   =       6,00,820Ts, 218480m<sup>3</sup> / 36,413 Loads  
                                                       =       36,413 / 1300 days (5 Years)  
                                                       =       168m<sup>3</sup> or 28 Lorry Loads per day

Gravel quantity                            =       58,880Ts, 29440m<sup>3</sup> / 4,907 Loads  
                                                       =       4,907 / 600 days (2 Years)  
                                                       =       49m<sup>3</sup> or 8 Lorry Loads per day

## 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 with slope of 60°. The Quarry operation involves shallow hand jack hammer drilling, mild explosives in blasting, excavation, loading and transportation of rough stone to the needy crusher.

### Process Description

- The reserves and resources have arrived based upon the Geological investigation
- Removal of Gravel by Excavators and directly Loaded into Tippers.
- Removal of Rough Stone by Excavators by Drilling and Blasting.
- Shallow Drilling With Jackhammer of 30-35 mm Dia.

- Minimum Blasting With Class 3 Explosives.
- Loading of Rough Stone By Excavators Into Tippers.

## 7. Water Requirement

Total water requirement for the mining project is 1.45 KLD. Domestic water will be sourced from nearby Eraiyur Village and other water will be sourced from nearby road tankers supply.

**Table 4. Water Balance**

| Purpose                     | Quantity        | Sources                                                                                                          |
|-----------------------------|-----------------|------------------------------------------------------------------------------------------------------------------|
| Drinking Water              | 0.45 KLD        | Packaged Drinking water vendors are available in Eraiyur village which is about 1.24 km E from the project site. |
| Afforestation & Green belt  | 0.5 KLD         | Other domestic activities through road tankers supply                                                            |
| Dust suppression Sprinkling | 0.5 KLD         | From road tankers supply                                                                                         |
| <b>Total</b>                | <b>1.45 KLD</b> |                                                                                                                  |

## 8. Manpower

Total manpower required for the project is approximately 10 persons. Workers will be from nearby villages.

**Table 5. Man Power Requirement**

| S.No. | Levels & Details               |                                                                  | Persons |
|-------|--------------------------------|------------------------------------------------------------------|---------|
| 1.    | Skilled                        | Operators- Excavator & Jackhammer                                | 2 Nos   |
| 2.    | Semi – skilled                 | Drivers                                                          | 2 Nos   |
| 3.    | Unskilled                      | Musdoor/Labours, Cleaners & Watch man                            | 2 Nos   |
| 4.    | Management & Supervisory staff | Second Class Mines Manager (with valid statutory qualification): | 1 No    |
|       |                                | Mines Foreman (with valid statutory qualification)               | 1 No    |
|       |                                | Mines Mate (with valid statutory qualification)                  | 1 No    |
|       |                                | Blaster                                                          | 1 No    |
| Total |                                |                                                                  | 10 Nos  |

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

## 9. Solid Waste Management

**Table 6 Solid Waste Management**

| S. No | Type      | Quantity   | Disposal Method                    |
|-------|-----------|------------|------------------------------------|
| 1     | Organic   | 1.8 kg/day | Municipal bin including food waste |
| 2     | Inorganic | 2.7 kg/day | TNPCB authorized recyclers         |

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

**Table 7. 500m Radius Cluster Mine**

| <b>1. Existing quarries:</b> |                                                                                                                             |                            |                                     |                                            |                                                                             |                                |         |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------|--------------------------------|---------|
| S. No.                       | Name of the Lessee/Permit Holder                                                                                            | Name of the Mineral        | Taluk & Village                     | S.F. Nos.                                  | Extent in Hect.                                                             | Lease Period                   | Remarks |
| 1.                           | K.Anandavelu,<br>S/o.Kesavan<br>No.225, Mettu Street,<br>Eraiur village,<br>Vanur Taluk,<br>Viluppuram Dt                   | Rough<br>Stone &<br>Gravel | Vanur<br>Taluk<br>Eraiur<br>village | 76/2,<br>76/3A,<br>76/6                    | 0.86.0<br>0.22.0<br>1.10.0<br><b>Total<br/>2.18.0</b>                       | 24.07.2024<br>to<br>23.07.2029 | -       |
| 2                            | A.Veeraragavan,<br>S/o.Ananthavelu,<br>No.225, Mettu Street,<br>Eraiur village,<br>Vanur Taluk,<br>Viluppuram Dt            | Rough<br>Stone &<br>Gravel | Vanur<br>Taluk<br>Eraiur<br>village | 75/1,<br>75/4,<br>75/5,<br>75/6,<br>76/3B2 | 0.53.5<br>0.30.0<br>0.76.0<br>0.24.0<br>0.59.13<br><b>Total<br/>2.42.63</b> | 11.04.2025<br>to<br>10.04.2035 | -       |
| 3.                           | D.Dhandapani,<br>S/o.Duraisamy,<br>No.154A, Vinayavgar<br>koil street, Eraiur<br>village, Vanur Tk,<br>Viluppuram District. | Rough<br>Stone &<br>Gravel | Vanur<br>Taluk<br>Eraiur<br>village | 64/3,<br>64/4,<br>65/6<br>(part)           | 0.05.0<br>0.08.0<br>0.80.0<br><b>Total<br/>0.93.0</b>                       | 11.04.2025<br>to<br>10.04.2035 | -       |

| Proposed Area:      |                                                                                                                                           |                            |                                     |                                                                                        |                                                                                                  |                                |   |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------|---|
| 1.                  | T.Bharathan,<br>S/o.Thambiraj,<br>No.11,1/2,<br>Thiruvakkarai Main<br>Road, Nemili village,<br>Vanur Tk,<br>Viluppuram Dt                 | Rough<br>Stone &<br>Gravel | Vanur<br>Taluk<br>Eraiyr<br>village | 98/1,<br>95/2,<br>80/2B,<br>95/1                                                       | 0.43.0<br>1.68.0<br>0.51.5<br>1.68.5<br><b>Total</b><br><b>4.31.0</b>                            | -                              |   |
| 2.                  | P.Subramanian,<br>S/o.Pandurangan, 3 <sup>rd</sup><br>Street, Pudu Nagar,<br>Kondareddypalayam,<br>Mannadipattu<br>Commune,<br>Puduchery. | Rough<br>Stone &<br>Gravel | Vanur<br>Taluk<br>Eraiyr<br>village | 85/1A,<br>88/1A2,<br>88/1B                                                             | 1.88.0<br>0.35.42<br>0.18.0<br><b>Total</b><br><b>2.41.42</b>                                    | -                              |   |
| Abandoned quarries: |                                                                                                                                           |                            |                                     |                                                                                        |                                                                                                  |                                |   |
| 1.                  | E.Jeyasankar,<br>S/o.Elumalai, No.198,<br>Vinayakar Koil<br>Street, Eraiyr<br>village, Vanur Tk,<br>Viluppuram Dt.                        | Rough<br>Stone &<br>Gravel | Vanur<br>Taluk<br>Eraiyr<br>village | 93/4,<br>93/5,<br>94/1B,<br>94/4                                                       | 1.14.0<br>0.21.0<br>0.27.0<br>1.75.5<br><b>Total</b><br><b>3.37.5</b>                            | 15.02.2019<br>to<br>14.02.2024 | - |
| 2.                  | T.Vasudevan,<br>S/o.Thangavel,<br>Eraiyr village,<br>Vanur Tk,<br>Viluppuram Dt.                                                          | Rough<br>Stone &<br>Gravel | Vanur<br>Taluk<br>Eraiyr<br>village | 80/3,<br>80/4,<br>81/1,<br>81/3,<br>81/4,<br>81/5,<br>81/6,<br>94/1A,<br>94/2,<br>94/3 | 0.28.0<br>0.47.0<br>0.48.0<br>0.36.0<br>0.36.0<br>0.35.0<br>1.18.0<br>0.27.0<br>0.29.0<br>0.79.5 | 15.02.2019<br>to<br>14.02.2024 | - |

|    |                                                                                                                        |                            |                                     |                                                                                                |                                                                                                         |                                |   |
|----|------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------|---|
|    |                                                                                                                        |                            |                                     |                                                                                                | <b>Total<br/>4.83.5</b>                                                                                 |                                |   |
| 3. | P.Loganathan,<br>S/o.Perumal, 63,<br>Mettu street, Anna<br>Nagar, Kadagampattu<br>village, Vanur Tk,<br>Viluppuram Dt. | Rough<br>Stone &<br>Gravel | Vanur<br>Taluk<br>Eraiur<br>village | 101<br>(Part)                                                                                  | 3.00.0                                                                                                  | 25.07.2020<br>to<br>24.07.2025 |   |
| 4. | G.Purushothaman,<br>S/o.Govindasamy, 98,<br>Pattikara street,<br>Eraiur village and<br>post, Vanur Taluk.              | Rough<br>Stone             | Vanur<br>Taluk<br>Eraiur<br>village | 84/2                                                                                           | 1.24.0                                                                                                  | 19.01.2009<br>to<br>18.01.2019 | - |
| 5. | D.Radhakrishnan,<br>306, Mettu street,<br>Eraiur post, Vanur<br>Tk                                                     | Rough<br>Stone             | Vanur<br>Taluk<br>Eraiur<br>village | 67/1,<br>67/3(P),<br>67/4(P),<br>67/6,<br>67/7,<br>67/8,<br>67/9,<br>69/2                      | 0.10.5<br>0.22.5<br>0.54.0<br>0.09.5<br>0.04.0<br>0.08.5<br>0.06.0<br>0.35.0<br><b>Total<br/>1.50.0</b> | 17.07.2012<br>to<br>16.07.2017 | - |
| 6. | A.Ganesan,<br>S/o.Appadurai,<br>Kadaiveethi, Eraiur<br>& Post, Vanur Tk,<br>Viluppuram Dt                              | Rough<br>Stone             | Vanur<br>Taluk<br>Eraiur<br>village | 67/2,<br>67/3,<br>67/10,<br>67/11,<br>67/12,<br>67/13,<br>67/14,<br>67/15,<br>67/16,<br>67/17, | 0.30.5<br>0.33.0<br>0.07.0<br>0.03.5<br>0.04.5<br>0.05.5<br>0.04.5<br>0.04.0<br>0.05.5<br>0.05.5        | 30.05.2013<br>to<br>29.05.2018 | - |

|    |                                                                                                 |                |                                      |                                                                                                                                                                                             |                                                                                                                                                                                                                                       |                                |   |
|----|-------------------------------------------------------------------------------------------------|----------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---|
|    |                                                                                                 |                |                                      | 68/2B,<br>69/12,<br>69/13,<br>69/14,<br>69/15,<br>69/16,<br>69/17,<br>69/18,<br>69/19,<br>70/1,<br>70/2,<br>70/3,<br>70/4,<br>70/5,<br>70/6,<br>70/7,<br>70/8,<br>70/9,<br>70/10 &<br>70/11 | 0.13.0<br>0.15.0<br>0.09.5<br>0.13.0<br>0.19.5<br>0.07.5<br>0.03.5<br>0.06.5<br>0.06.0<br>0.18.0<br>0.07.5<br>0.09.5<br>0.08.0<br>0.07.5<br>0.07.5<br>0.02.5<br>0.02.5<br>0.08.0<br>0.06.0<br>0.05.0<br><b>Total</b><br><b>2.79.5</b> |                                |   |
| 7. | A.Ganesan,<br>S/o.Apadurai, 190,<br>Kadaiveethi, Eraiyur<br>& Post, Vanur Tk,<br>Viluppuram Dt. | Rough<br>stone | Vanur<br>Taluk<br>Eraiyur<br>village | 81/2,<br>82/2                                                                                                                                                                               | 0.36.0<br>2.26.5<br><b>Total</b><br><b>2.62.5</b>                                                                                                                                                                                     | 22.08.2016<br>to<br>21.08.2021 | - |

The Total extent of the Existing / Lease expired / Proposed quarries are 12.26.05 Ha

## 10. Land Requirement

The total extent area of the project is 2.41.42 Ha, Patta land in Eraiyur Village of Vanur Taluk, Villupuram District.

**Table 8 Land Use Breakup**

| S. No. | Land Use       | Present Area (Hect) | Area in use during the quarrying period (Hect) |
|--------|----------------|---------------------|------------------------------------------------|
| 1.     | Quarrying Pit  | Nil                 | 1.47.20                                        |
| 2.     | Infrastructure | Nil                 | 0.01.00                                        |
| 3.     | Roads          | 0.01.00             | 0.02.00                                        |
| 4.     | Green Belt     | Nil                 | 0.87.09                                        |
| 5.     | Unutilized     | <b>2.40.42</b>      | 0.04.13                                        |
|        | <b>Total</b>   | <b>2.41.42Ha</b>    | <b>2.41.42Ha</b>                               |

### 11. Human Settlement

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

**Table 9 Habitation**

| S.No | Name of the Village | Approximate distance | Direction from lease applied area | Approximate population |
|------|---------------------|----------------------|-----------------------------------|------------------------|
| 1.   | Karasanur           | 2.7                  | NE                                | 350                    |
| 2.   | Eraiyur             | 1.2                  | SE                                | 3257                   |
| 3.   | Konamangalam        | 2.0                  | NW                                | 400                    |
| 4.   | Koraikeni           | 3.8                  | SW                                | 200                    |

### 12. Power Requirement

The Rough Stone and Gravel 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 and **10 Litre** diesel per hour for excavator for mining and loading for gravel.

### 13. Scope of the Baseline Study

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

1. Micro – Meteorology
2. Water Environment
3. Air Environment

4. Noise Environment
5. Soil / Land Environment
6. Biological Environment
7. Socio-economic Environment

### **13.1 Micro – Meteorology**

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

- i) Average Minimum Temperature: 18° C to 26° C
- ii) Average Maximum Temperature: 30° C to 40° C
- iii) Average Annual Rainfall of the area: 985 mm

### **13.2 Air Environment**

Ambient air monitoring was carried out on monthly basis in the surrounding areas of the Mine Lease area to assess the ambient air quality at the source. To know the ambient air quality at a larger distance i.e. in the study area of 10 km. radius, air quality surveys have been conducted at 7 locations. Major air pollutants like Particulate Matter (PM<sub>10</sub>), Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Dioxide (NO<sub>2</sub>) were monitored, and the results are summarized below.

The baseline levels of PM<sub>10</sub> (65-36 µg/m<sup>3</sup>), PM<sub>2.5</sub> (33-13 µg/m<sup>3</sup>), SO<sub>2</sub> (23-4 µg/m<sup>3</sup>), NO<sub>2</sub> (35-9 µg/m<sup>3</sup>), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from September to November 2025.

### **13.3 Noise Environment**

The maximum Day noise and Night noise were found to be 62 dB(A) and 51 dB(A) respectively in Dhanalakshmi Mahal. The minimum Day Noise and Night noise were 54 dB (A) and 39 dB(A) respectively, which was observed in Dhanalakshmi Mahal and Sri Varadharaja Perumal Sannathi. The observed values are all well within the Standards prescribed by CPCB.

### **13.4 Water Environment**

- The average pH ranges from 7.04 – 7.98.
- TDS value varied from 335 mg/l to 1082 mg/l
- Hardness varied from 164 to 712 mg/l
- Chloride varied from 23.3 to 210 mg/l

### 13.5 Land Environment

The analysis results show that the majority of soil in the project and surrounding area is slightly alkaline in nature and pH value ranges from 7.55 to 8.31 with organic matter 0.17 to 1.72 %. 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 mine is Patta land. There is no displacement of the population within the project area and adjacent nearby area. Social development of nearby villages will be considered in this project.
- The mine area does not cover any habitation. Hence the mining activity does not involve any displacement of human settlement.

### 15. Greenbelt Development

1. The development of greenbelt in the peripheral buffer zone of the mine area.
2. Green belt has been recommended as one of the major components of Environmental Management Plan, which will improve ecology, environment and quality of the surrounding area.
3. Local trees like Neem, Vilvam, Panai, etc will be planted along the lease boundary and avenues as well as over non-active dumps at a rate of 240 trees per annum with interval 5m.
4. The rate of survival expected to be 80% in this area

**Table.10 Plantation/ Afforestation Program**

| Name of species proposed                                                                                                                                                                                                   | Survival | No of species |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------|
| Neem, Vilvam, Vaagai, Eachai, Naval, Mantharai, Magizha Maram, Vila Maram, Poo Marudhu, Panai, Marudha maram, Thandri, Sengondrai, Poovarasu, Pungam, Sandhana Vembu, Uva, Uzha, Illuppai, Sarakondrai, Puthranjivi, etc., | 80%      | 1200          |
| <b>Total</b>                                                                                                                                                                                                               |          | <b>1200</b>   |

## 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. 85,57,100/-** for deployment of machinery and creation of infrastructural facilities like approach road, mine office / Workers Shed, First Aid Room etc., including electrifications and water supply.

**Table .11 Project Cost details**

| S. No. | Description      | Cost (Rs.)         |
|--------|------------------|--------------------|
| 1      | Fixed Asset Cost | 15,57,100/-        |
| 2      | Machinery Cost   | 70,00,000 /-       |
|        | <b>Total</b>     | <b>85,57,100/-</b> |

The project cost is about **Rs. 85,57,100/-** (Eighty-Five Lakhs Fifty-Seven Thousand and One Hundred Rupees Only).

Environmental Management Cost – **Rs.21389607/-** (Two Crore Thirteen Lakh Eighty-Nine Thousand and Six Hundred Seven Rupees Only).

## 20. Corporate Environmental Responsibility

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

**Table 12 CER Cost**

| <b>S.No.</b> | <b>CER Activity</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>CER value (Rs)</b> |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 1.           | <p>Govt Hr. Sec School. Eraiyur - 604 304, Vanur Tk, Villupuram Dt<br/>(<b>Total strength 414 students</b>)</p> <p>Providing facilities are:</p> <ul style="list-style-type: none"> <li>➤ Construction of school perimeter wall of approximately 100 meters and increasing the height of the perimeter wall on both sides of the school entrance.</li> <li>➤ Basic amenities such as Environmental awareness books (Tamil) in Library for students, Green Belt development, RO water purifiers, Hygienic Toilet and maintenance of toilet upto lease period.</li> </ul> | 5,00,000/-            |
| <b>Total</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>5,00,000/-</b>     |

## 21. Benefits of the Project

- There is positive impact on socio-economics 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.