INDEX

1 EXECUTIVE SUMMARY

Shahapur Sand Quarry area is situated in Tahsil- Daryapur District- Amravati, Maharashtra. It is located towards SW of town Daryapur at khasra No- 124,131. The Quarry area is located on the Chandrabhaga river bed, towards SE of village Shahapur. The area is approachable from Daryapur through SH 201 Road and the distance is about 2.0 kms towards SE. The climate of the area is tropical with well marked summer/ winter and rainy season. The sand available in the lease area (river bed) shall be mined (raised) by opencast method of mining,

The river bed will be explored by few trial pits (after grant of Mining lease) to evaluate the quantum of sand available within the lease area. However accordingly, a rough estimate of about 353 Brass/3 month sand has been assessed to be available in the area.

The Mining Plan and Progressive Mine Closure Plan has been approved by DGM govt. of Maharashtra. Copy of Mining Plan and Progressive Mine Closure Plan is enclosed as **ANNEXURE – I.**

The mining will be carried out by Open-cast manual method as per the Mining Plan and Progressive Mine Closure Plan only. The entire mining area is Govt. land with no forest land involved. The proposed production is 353 Brass/3 month.

Sand is one of the most sought- building materials for the construction purpose. Since Sand has hard texture and durability. It is used chiefly for construction, pavement of roads and imperviousness to moisture and acid. Sand is a perfect countertop material.

The Proposed Mine will also generate plenty of employment opportunity for local people. Economy and socio – economic level of the area will also improve and there will the opportunity for education, health and & sanitation, transport and other development. The living standards of the area will also up- lift on the positive side.

Table1: Salient Features of the project site

<table>
<tr><th>S.NO.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>A.</td><td>Nature of the Project</td><td>Proposed Shahapur Sand Quarry (Minor Mineral)</td></tr>
<tr><td>B.</td><td>Size of the Project</td><td></td></tr>
<tr><td>1.</td><td>Mine Area</td><td>0.20 ha</td></tr>
<tr><td>2.</td><td>Proposed Production capacity</td><td>353 Brass/3 month</td></tr>
<tr><td>C</td><td>Location Details</td><td></td></tr>
<tr><td>1.</td><td>Village</td><td>Shahapur</td></tr>
<tr><td>2.</td><td>Tehsil</td><td>Daryapur</td></tr>
<tr><td>3.</td><td>District</td><td>Amravati</td></tr>
<tr><td>4.</td><td>State</td><td>Maharashtra</td></tr>
<tr><td>5.</td><td>Latitude & Longitude</td><td>
<table>
<tr><th>Sr. No</th><th>Latitude “N”</th><th>Longitude “E”</th></tr>
<tr><td>1</td><td>20⁰57' 19.44"N</td><td>77º20' 56.78"E</td></tr>
<tr><td>2</td><td>20⁰ 57' 20.01"N</td><td>77º 20' 56.43"E</td></tr>
<tr><td>3</td><td>20⁰ 57' 19.17"N</td><td>77º 20' 54.95"E</td></tr>
<tr><td>4</td><td>20⁰ 57' 18.60"N</td><td>77º 20' 55.32"E</td></tr>
</table>
</td></tr>
<tr><td>6.</td><td>Toposheet No.</td><td>55 H/05</td></tr>
<tr><td>D</td><td>Environmental Settings of the Area</td><td></td></tr>
<tr><td>1.</td><td>River / water body</td><td>The quarry area is itself part of water body i.e. River-Chandrabhaga , there are number of tributes of River Chandrabhaga is also available in Study Area.</td></tr>
<tr><td>2.</td><td>Nearest Town / City</td><td>Nearest Town: Shahapur village is about 2.0 km in SE direction from the Shahapur sand ghat Site.</td></tr>
<tr><td>3.</td><td>Nearest Railway Station</td><td>The nearest railway station is located Lahgaon Railway Station at a distance of ~ 4.0 km in NW direction from Shahapur sand ghat Site.</td></tr>
<tr><td>4.</td><td>Nearest Airport</td><td>Akola Airport, is about 44.0 km away towards SW direction.</td></tr>
<tr><td>5.</td><td>State Boundary</td><td>No State boundary passes through the project site</td></tr>
<tr><td>6.</td><td>Seismic Zone</td><td>Zone – II
(Least Active) This is said to be the least active seismic zone.</td></tr>
<tr><td>D</td><td>Cost Details</td><td></td></tr>
<tr><td>1.</td><td>Total Project Cost</td><td>Rs. 6,53,200/-</td></tr>
<tr><td>E</td><td>Requirements of The Project</td><td></td></tr>
<tr><td>1.</td><td>Proposed Water Requirement</td><td>3.5 KLD</td></tr>
<tr><td>2.</td><td>Fuel requirement</td><td>N/A</td></tr>
<tr><td>3.</td><td>Man Power Requirement</td><td>20 (Skilled and unskilled persons)</td></tr>
</table>

2 INTRODUCTION OF THE PROJECT/ BACKGROUND INFORMATION

2.1 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT

Shahapur Sand Quarry area is situated in Tahsil- Daryapur District- Amravati, Maharashtra. It is located towards SW of town Daryapur at khasra No- 124,131. The Quarry area is located on the Chandrabhaga river bed, towards SE of village Shahapur. The area is approachable from Daryapur through SH 201 Road and the distance is about 2.0 kms towards SE.

2.2 BRIEF DESCRIPTION OF THE NATURE OF PROJECT

This is a proposed Sand Quarry area. As per EIA Notification dated 14th Sep, 2006 and as amended till date, the project falls under, Category "B2". Therefore, the District Collector has directed the applicant to prepare a mining plan for an area of 0.20 Ha and get the same approved from the Directorate of Geology and Mining. The proposed Mining Plan has been prepared and submitted under Rule 23 of MMME (D&R) Rule 2013; MoEF& CC Notification S.O. 141 (E) dated 15th January 2016, MoEF& CC Sustainable Sand Mining Management Guidelines 2016 and Govt. of Maharashtra Sand Policy dated 03.01.2018 for the approval. It has been proposed to excavate approximately 353 Brass/3 month of Sand by Open - cast manual method. The lease area is 0.20 ha., The Sand will be transported through trucks to the market area.

2.2 NEED FOR THE PROJECT & ITS IMPORTANCE TO THE COUNTRY/ REGION

Sand is used widely in the construction industry. It is mixed with cement and other ingredients to create mortar for building. It is also used in agriculture, as sandy soils are ideal for crops such as watermelons, peaches and peanuts. Sand is also used in Aquaria as it makes a low cost aquarium base material.

The mining and associated activities in the mineral rich areas increase the gains in gross domestic product (Gross Domestic Product). Total of 20 people will be employed for the mining activity. It will create ample opportunity for employment to local population. For the mineral production applicant will pay royalty, direct and indirect taxes will also paid and it will also contribute to the regional revenue. The proposed sides this, the project will prove beneficial in terms of socio economic development.

2.3 DEMAND – SUPPLY GAP

Sand is a constituent for infrastructural development projects like buildings and constructions. It has high demand in region due to increase in industrial and other infrastructural activities.

2.4 IMPORTS VS. INDIGENOUS PRODUCTION

In the current Sand business scenario, import of Sandstone is not envisaged. It is for Captive use only no import is done.

2.5 EXPORT POSSIBILITY

Not applicable as proposed mine is for captive use only.

2.6 DOMESTIC/EXPORT MARKETS

Domestic demand is one of the chief reasons for the rapid growth of Sand business in India. Thus, domestic market for Sand as building material is well established. Sand produced from the proposed Sand mine will be used for perpetuate the memory of individual to immortalize their achievements and top glorify the deities. It is also used for making temples, mosques and even houses.

2.7 EMPLOYMENT GENERATION (DIRECT AND INDIRECT) DUE TO THE PROJECT

The total number of manpower is required for the mining activity is 20 people. Priority for employment will be given to local workers. Following staff & workers are proposed to be employed:-

Table 2: Manpower requirement

1.	Mines Mate/Mine Supervisor	1
2.	Clerk/Time Keeper	1
3.	Skilled Worker / Tractor Trolley Driver	4
4.	Skilled Worker / Tractor Trolley Helper	4
5.	Unskilled Worker/ labour	10
Total		**20 No.**

3 PROJECT DESCRIPTION

3.1 TYPE OF PROJECT INCLUDING INTERLINKED AND INDEPENDENT PROJECTS, IF ANY

The mining of Sand is carried out by open-cast manual method. This is an independent project. No interlinked project is proposed.

3.2 LOCATION (MAP SHOWING GENERAL LOCATION, SPECIFIC LOCATION, AND PROJECT BOUNDARY & PROJECT SITE LAYOUT) WITH COORDINATES;

Shahapur Sand Quarry area is situated in Tahsil- Daryapur District- Amravati, Maharashtra. It is located towards SW of town Daryapur at khasra No- 124,131. The Quarry area is located on the Chandrabhaga river bed, towards SE of village Shahapur. The area is approachable from Daryapur through SH 201 Road and the distance is about 2.0 kms towards SE.. The project site falls in Survey of India Toposheet No. 55 H/05.

The geographical location with respect to boundary pillars of the proposed mining lease area are:-

Sr. No	Latitude "N"	Longitude "E"
1	20^{0}57' 19.44"N	77°20' 56.78"E
2	20^0 57' 20.01"N	77° 20' 56.43"E
3	20^0 57' 19.17"N	77° 20' 54.95"E
4	20^0 57' 18.60"N	77° 20' 55.32"E

The location map is given below:

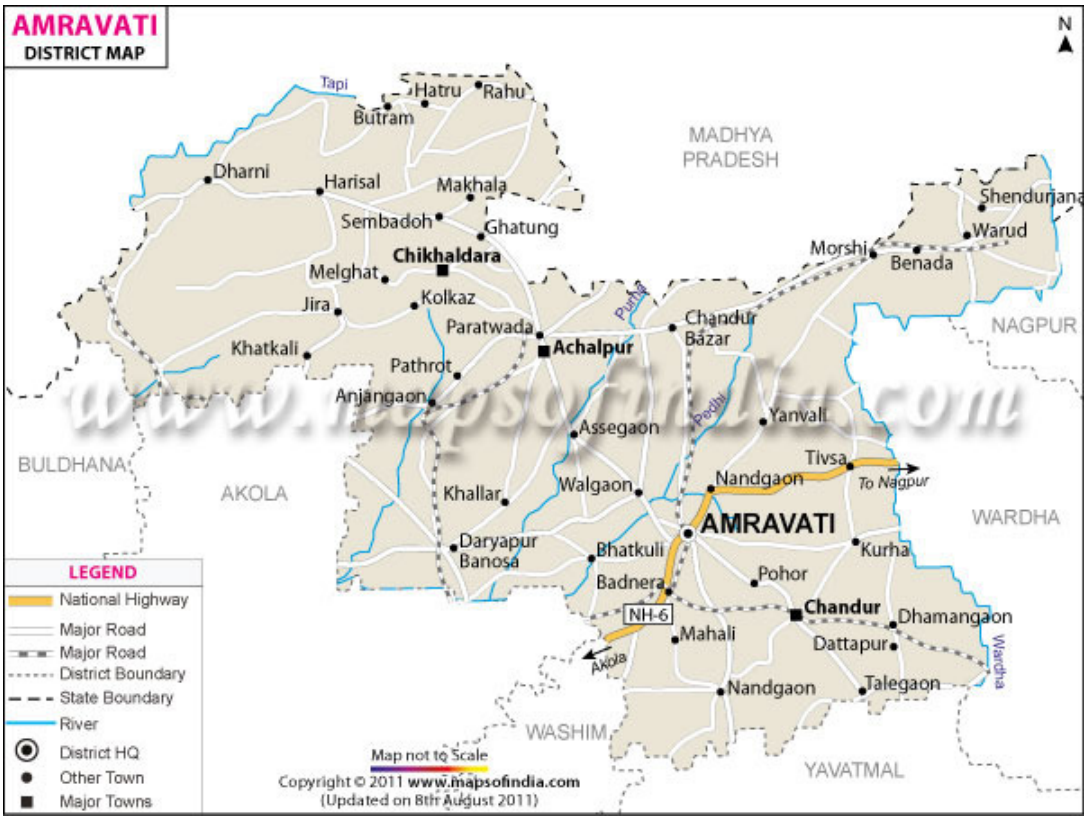

Figure-1: Location Map

3.3 DETAILS OF ALTERNATE SITES CONSIDERED AND THE BASIS OF SELECTING THE PROPOSED SITE, PARTICULARLY THE ENVIRONMENTAL CONSIDERATIONS GIVEN INTO SHOULD BE HIGHLIGHTED.

No alternative site has been taken into consideration as the Mineral (Sand) is available at this site.

3.4 SIZE OR MAGNITUDE OF OPERATION

Mine area for the proposed Sand mine is 0.20 ha and proposed production capacity is 353 Brass/3 month.

3.4.1 GEOLOGY

3.4.1.1 PHYSIOGRAPHIC & GEOGRAPHIC FEATURES:

Amravati Physiographically the taluka has been divided in two units. The first drained by the Wardha and the second by Puma river basin marking the water divide. Wardha basin gets separated through the Pohra hill range and the plain area of the Pedhiriver. The Pohra hills forms part of the Sahyadri hill ranges are made up of Deccan Trap Basalts. The eastern part of taluka falls under the Wardha River basin, whereas the western and north western part falls in the Puma basin. The Purna basin consists of the Pedhi river sub-basin. The valley is almost uniform in characteristics. Except the low range of stony and barren hills which crop up in the immediate vicinity of Amravati camp, which extends over the eastern border of the taluka. The Eastern and South eastern part of taluka is covered by Pohra hill ranges and a fair jungle, and the North-East part of taluka is covered by NerPinglai hills with scrub forest.

3.4.1.2 CLIMATE AND RAINFALL:

The area receives moderate rains during the monsoon. The average rainfall in the area is around 1500 mm to 2000 mm that spread over 4 months i.e. from June to September. This is spread over from the month of June to September, main spell being in the months of July and August.

3.4.1.3 Regional Geology:

The district mainly divided into two geographical regions, the Melghat hilly area of Satpura range and plain area. The prominent hill range in the District is the Gawilgarh hills which are located in the North West of district in Melghat area of Chikhaldara Tehsil.

The plain area may be subdivided into further sub types

- The piedement belt of light & medium black soils with pebble/boulder zone, with abundant ground water supplies, sloping away from Satpura range.
- The region of deep & fertile soils of the South West where the sub-soil water is very often saline.
- The regions of light red & medium black soils are at of Eastern Amravati & Chandur rly.
- Patches of fertile black soil adjoining to Morshi & Warud area.

Geology:

About 73 percent of Amravati tahsil is covered by basaltic lava flows of the Deccan Traps belonging to the Upper Cretaceous to Eocene age. The remaining part is underlain by other soft rock formations, particularly the Alluvium, Lameta beds, Gondwana Sediments and unclassified metamorphic rocks along the river Pedhi (Tributary of Puma) which occupies 20% area.

Northen part of district is mostly hilly area & covered by forest. The North West part is cover by thick forest of sagwan tree.The central part is cover by Purna alluvium,Total area is 3053 sq km. With slope NS 9 m. depth to 15 km while EW slope 15 m deep to 15 km. The Purna alluvium consist of silt, clay, sand, while Bazada zone foothill portion of Satpuda range covers part of Anjangaon surji, Achalpur & Chandur Bazar taluka consisting of clay, boulders & pebbles. The total coverage of this area is 25% while other 75% area is Deccan trap mostly jointed vesicular basalt type. .

Information on Distribution of Geological formation:

Age	Formation
Recent	Alluvium
Upper Creetaceous- Lower Eocene	Basalt (Deccan Trap)
Turonian	Lameta beds
Upper Carboniferous -Permian	Gondwana
Archean	Metamorphics (Gneisses/ Granites)

Deccan Trap Basalt

Deccan Traps belongs to the Upper Cretaceous to Eocene age. The horizontally disposed basaltic lava flows of the Deccan traps are the major geological formations occurring over about 652 sq.kms areas in the Taluka. The Vesicular and Amygdaloidal zeolitic basalt and massive basalt 9 flows are generally separated by red/ green boles and clay layers. The average flow thickness range is 10 to 30 m..

Alluvium

The Alluvial deposits are termed as Purna Alluvial depositsAbout 20% part of the Amravati taluka along the Pedhi basin is occupied by alluvial deposits. The alluvium consists of clay, sand and silts with thickness ranging from 10 to 15 m with a wide aerial extension spread over 184 sq. kms. It is of recent age, and lying over the Deccan Traps.

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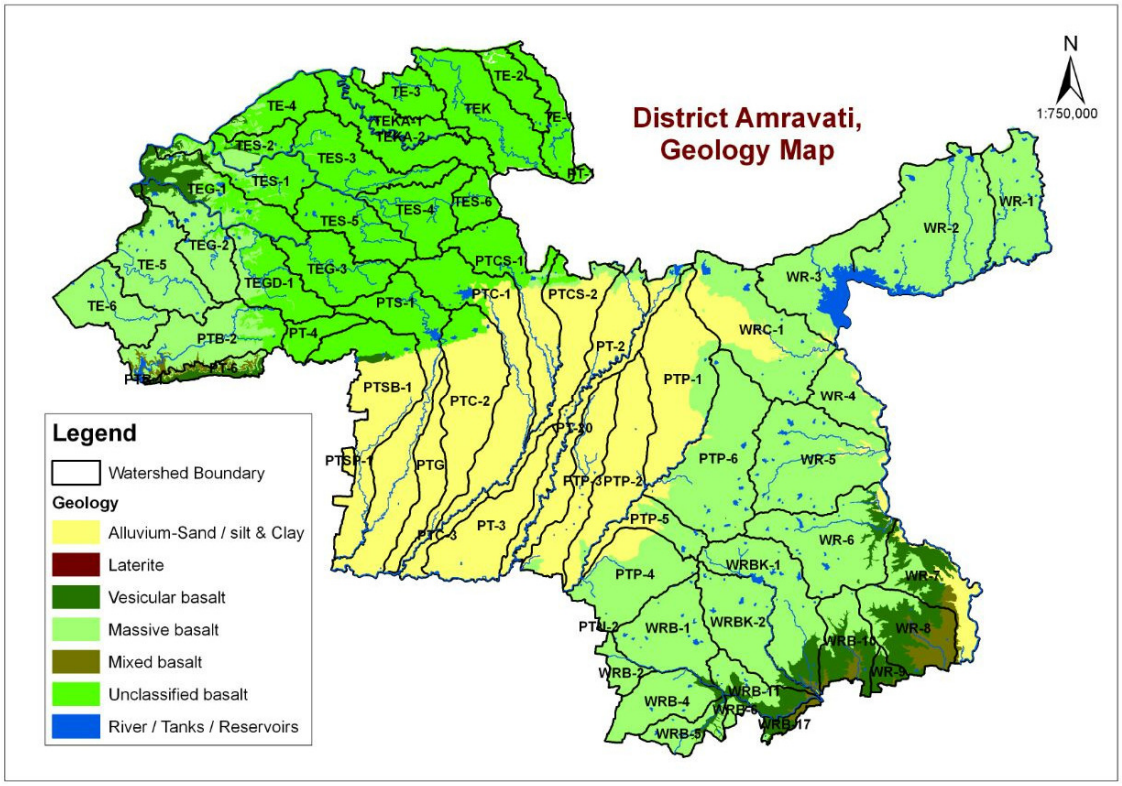


3.4.1.4 LOCAL GEOLOGY

The lease area as per survey is a River Bed of Chandrabhaga River. Applied area for sand extraction is covered with Sand, Pebbles and Gravels of various sizes. The sand of Granitic, Quartzitic in nature and which has been derived and transportated from Granite Gneiss/Quartzites of surrounding area of higher elevations. The sand of the applied area is found to be underlain by Granite Gneiss / Quartzite of the river bed.

3.4.2 PROPOSED METHOD OF MINING:

The proposed Sand Mine shall be developed by Open –cast manual mining which include d loading, transport and dispatch of mineral to and users.

3.4.2.1 OPEN CAST MINING

The mining will be done by open- cast manual method of mining. The ultimate depth of the workings is estimated to reach up to 0.50 from the surface level. The proposed depth of sand mining will be kept up to recommendation given by GSDA Department. It is excavated upto 0.5 m to 1.5 m and hence no bench will be applicable. Only one sand pit with proper slope will be dug out.

3.4.3 CONCEPTUAL MINING PLAN

The Sand is occurring throughout the area. The mineable reserves are estimated to be 500 Cum. The annual Production is proposed to be 353 Brass/3 month.

LAND USE PATTERN

The land use for mining and allied purposes is given below:-

Table 5: Conceptual Land Use Plan

S.No.	Particulates	Present Land - Use	After 1th year land- Use
1.	Top soil	--	--
2.	Excavated area	--	0.20
3.	Waste dump (Externalproposed)	--	--
4.	Infrastructure	--	--
5.	Plantation	--	--
6.	Undisturbed area	0.20	--
7.	Reclaimed Area	--	--
Total		0.20	0.20

3.4.4 DRILLING

No Drilling is proposed.

3.4.5 BLASTING

No blasting is proposed.

3.5 RAW MATERIAL REQUIRED ALONG WITH ESTIMATED QUANTITY, LIKELY SOURCE, MARKETING AREA OF FINAL PRODUCTS, MODE OF TRANSPORT OF RAW MATERIAL AND FINISHED PRODUCT

No raw material will be required. The final product will be sent to consumer industries based on their demand. The mode of transportation of material will be road. Trucks will be used for transportation of Sand.

3.6 AVAILABILITY OF WATER & ITS SOURCE, ENERGY / POWER REQUIREMENT AND SOURCE

WATER:

The daily water demand for the proposed project is 3.5 KLD. It will be procured from the supply source of Village- Shahapur. The detailed breakup of the water requirement is given below.

Table 6: Water Demand

S. No.	Particulars	Quantity (KLD)
1.	Domestic Purpose	1.00
2.	Dust Suppression / Water Sprinkling	1.50
3.	Green belt / Plantation	1.00
Total		**3.50**

4 SITE ANALYSIS

4.1 CONNECTIVITY (Mine Site)

Table No.7: Connectivity

PARTICULARS	DISTANCE & DIRECTION
Nearest Railway Station	The nearest railway station is located Lahgaon Railway Station at a distance of ~ 4.0 km in NW direction from Shahapur sand ghat Site.
Nearest Airport	Akola Airport, is about 44.0 km away towards SW direction.
Nearest Highway/State Highway/Road	There is SH-201 is about 2.0 km in SE direction from Shahapur sand ghat Site. There is SH-212 is about 5.0 km in West direction from Shahapur sand ghat Site. There is SH-194 is about 6.0 km in SW direction from Shahapur sand ghat Site.There is village Road is about 0.50 km in East direction from Shahapur sand ghat Site. .

4.2 LAND FORM, LAND USE AND LAND OWNERSHIP

LAND USE

The present land use pattern is as below:-

Table 8: Land Use Pattern

S. No.	Particulars	Present Land-use (ha.)
1.	Excavation Pit (Voids Only)	--
2.	Waste Dump (External)	--
3.	Infrastructure including office Road	--
4.	Afforestation	--
5.	Undisturbed Area	0.20
6.	Green Belt Development	--
Total		**0.20**

LAND OWNERSHIP

The land as per revenue records is Govt. Land of 0.20 hectare.

4.3 TOPOGRAPHY

Topographically, the Mining area is low height undulating, highest elevation of 279 mRL.

4.4 EXISTING LAND USE PATTERN (AGRICULTURE, NON-AGRICULTURE, FOREST, WATER BODIES (INCLUDING AREA UNDER CRZ)), SHORTEST DISTANCES FROM THE PERIPHERY OF THE PROJECT TO PERIPHERY OF THE FORESTS, NATIONAL PARK, WILD LIFE SANCTUARY, ECO SENSITIVE AREAS, WATER BODIES (DISTANCE FROM THE HFL OF THE RIVER), CRZ. IN CASE OF NOTIFIED INDUSTRIAL AREA, A COPY OF THE GAZETTE NOTIFICATION SHOULD BE GIVEN.

Table 9: Existing Land Use Pattern (In Ha.)

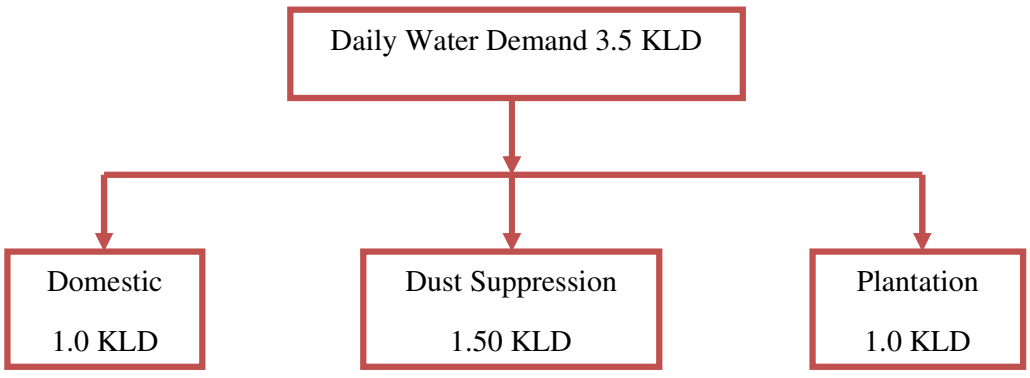
S. No.	Particulars	Forest Land	Grazing Land	Govt. waste land	Private land		Total
					Ag.	Non Ag.	
1.	Excavation Pit (Voids Only)	--	--	--	--		--
2.	Waste Dump (External)	--	--	--	--		--
3.	Infrastructure including office Road	--	--	--	--		--
4.	Afforestation	--	--	--			--
5.	Undisturbed Area	--	--	0.20			0.20
Total		**--**	**--**	**0.20**			**0.20**

4.5 EXISTING INFRASTRUCTURE

Refer the para no. 4.1 of section 4.0

4.5.1 WATER

The total water demand will be as follows:



4.5.2 BASIC AMENITIES

a) School: Primary School facility is available at village – Shahapur (2.0 Km, SE), Shahapur sand ghat Site

b) Hospital: PHC facility is available Shahapur (2.0 Km, SE), Shahapur sand ghat Site

c) Temple: Mata ji /ka .mandir is about 1.0 Km, towards SE direction Shahapur sand ghat Site

5 PLANNING BRIEF

5.1 PLANNING CONCEPT (TYPE OF INDUSTRIES, FACILITIES, AND TRANSPORTATION ETC.) TOWN AND COUNTRY PLANNING/ DEVELOPMENT AUTHORITY CLASSIFICATION

It is a mining open cast manual method will be adopted. The proposed mine will produce Sand with capacity of 353 Brass/3 month. It will be used for construction activity and will be transported by trucks to end users.

5.2 LAND USE PLANNING (BREAKUP ALONG WITH GREEN BELT ETC.)

The green development it will improve the eco-systems and aesthetic beauty of the area. Post plantation cares including provision for watering, soil Daryapur ching manure supply to plants will be done. The list of the species to be planted in the green is provided below:-

Table 12: Green belt Programme

Year	Area (ha.)	No. of Saplings
Ith Year	**0.0.066**	**66**

5.3 ASSESSMENT OF INFRASTRUCTURE DEMAND (PHYSICAL AND SOCIAL)

The mine area is easily accessible from the SH 201 Road (2.0 Km towards SE) it will be helpful to approach workers to the mine site as well as transportation of mineral to the nearby areas and end user. Railway station at Lahgaon Railway station located on 4.0Km from the project site. The infrastructure demand in the villages will be evaluate on the basis of necessity and priority. Job opportunities are inadequate and new possibility for income generation is required.

5.4 AMENITIES/FACILITIES

- **Mine Office:** It is proposed to have a temporary mine office with First Aid Facility.
- **Rest Shelter:** Temporary Rest Shelter will be made available.
- **Drinking Water Facility:** The drinking water will be made available from the nearby open well as well as from the supply of Shahapur village by water tankers. It will be stored in earthen pots and tanks at the site. The quality of water is reportedly potable.
- **Portable canteen**: A van having facilities of tea / coffee, snacks etc. will be used as a portable canteen. The workers will be provided food items at concessional rates.
- **Toilets:** There is proposal of toilet for the better sanitary condition of the workers employed in Mining area.

6 PROPOSED INFRASTRUCTURE

6.1 INDUSTRIAL AREA (PROCESSING AREA)

The area is well connected by road network to the mines, District headquarter etc. The area is self sufficient to supply the needs of the project. Hence no, infrastructure is proposed.

6.2 RESIDENTIAL AREA (NON PROCESSING AREA)

The local people will be employed, hence no residential area/ housing is proposed.

6.3 GREEN BELT

Refer point no. 5.3.

6.4 DRINKING WATER MANAGEMENT (SOURCE & SUPPLY OF WATER)

The total water requirement for the proposed activity is 3.5 KLD. The drinking and other water demand will be met from the nearby village water source through mobile tanker supply.

6.5 SEWAGE SYSTEM

Not applicable.

6.6 INDUSTRIAL WASTE MANAGEMENT

No industrial waste will be generated.

6.7 SOLID WASTE MANAGEMENT

Given in point no. 3.9

7 REHABILITATION AND RESETTLEMENT (R & R PLAN)

7.1 POLICY TO BE ADOPTED (CENTRAL/STATE) IN RESPECT OF THE PROJECT AFFECTED PERSONS INCLUDING HOME OUSTEES, LAND OUSTEES AND LANDLESS LABOUR (A BRIEF OUTLINE TO BE GIVEN).

No Rehabilitation and Resettlement plan is required because there is no infrastructure to affect the persons or to any landless labour.

8 PROJECT SCHEDULE AND COST ESTIMATES

8.1 LIKELY DATE OF START OF CONSTRUCTION AND LIKELY DATE OF COMPLETION (TIME SCHEDULE FOR THE PROJECT WILL BE GIVEN).

The project will be started immediately after Environmental Clearance and other necessary approvals from concerning authorities of State Government.

8.2 ESTIMATED PROJECT COST AND ALONG WITH ANALYSIS IN TERMS OF ECONOMIC VIABILITY OF THE PROJECT

Project cost

The proposed project cost will be Rs. 6,53,200/-

Expenditure Proposed for Environmental protection activities:

It is proposed to invest an amount of Rs. 1.55 Lac towards environmental action plan. The details of the same are given below:-

Table 13: Expenditure Proposed for Environmental Protection Activities

S. No.	Description of Item	Recurring Cost (Rs)
1	Air Pollution Control - Water Sprinkling	5,000
2	Environmental Monitoring and Management	90,000
3	Green Belt Development	50,000
4	Water Pollution control	10,000
Total		**1,55,000/-**

CSR (Corporate Social Responsibility)

S.No.	CSR Activity	Proposed Budget(in Thousand)

1.	Social Forestry (At Gram Panchayat, Schools, Hospital)	15000
2.	Health check - up Camps for villagers as well as mine workers	20000
3.	Occupation health Surveillance program for worker and habitants	15000
Total		**50,000**

9 ANALYSIS OF PROPOSAL

Proposed Sand mine project will result in growth of the surroundings areas. Direct and indirect employment will be created in nearby village. Special emphasis on Financial and Social benefits will be given to the local People. No major adverse effect on environment is envisaged as the required mitigation measures are inbuilt in the project.

10 ENVIRONMENT MANAGEMENT PLAN

PARTICULARS		**MANAGEMENT**
Air Quality	Excavation, Loading and Transportation	➢ Dust generated due to excavation and vehicular movements will be suppressed by water spraying on haul road. ➢ Dust mask will be provided to the workers. ➢ Proper maintenance of vehicles & machineries will be done. ➢ Water sprinkling on the haul road and other road at regular intervals will be done. ➢ Speed of the vehicles will be kept within the prescribed limits. ➢ Trucks will not be over loaded.
Water Quality		➢ Mining operations will be at higher levels; therefore there will be no effect on ground water condition due to mining.
Noise Quality	Drilling, Blasting, Loading and unloading of Mineral and movement of Trucks.	➢ No Blasting is proposed. ➢ Green belt development and plantation
		At the end of life of mine excavated area is

Land Reclamation	0.20 ha, after excavation it will recover in next rainy season.
Land Environment	✓ Safety zone of about 45m on each side of the rail/ road bridges and 45m radius around the wells located in the river bed have been earmarked. Sand excavation will not be carried out in this zone. ✓ 20m offset will be left against the banks to protect from side collapse. ✓ To prevent erosion, moving the road or footpath will be kept away from the river's edge. ✓
Soil Erosion.	Safety distance of 3m or 1/4th of the width of the river whichever is more will be left from both the bank of the river (as per "Sustainable Sand Mining Guidelines").