PRE- FEASIBILITY REPORT

1.0 EXECUTIVE SUMMARY

Boulder, Gravel and Sand Minor mineral mining is proposed at "Shamtoo -2 Block/PKL B-12" in district Panchkula Haryana over an area of **45.00 Hectares**. The mining lease has been granted to M/s Ganesh Enterprises, C-16, TDI City, Panipat, Haryana – 132013 dated on 16/11/2017 letter wide Memo No. DMG/HY/Cont./Shamtoo-2 Block/PKL B-12/2017/7040 from The Director, Mines & Geology, Haryana, 30 Bays Building, Sector-17, Chandigarh for a period of 10 years.

The proposed rate of production is **18,00,000 TPA**. The estimated project cost is **INR 450 Lakhs**. The anticipated life of mine is 10 years. The proposed project falls under **Category "A"** project due to Khol Hai Raitan Wildlife Sanctuary within 5 km North from the mine lease boundary.

1.1 SALIENT FEATURES OF THE PROJECT

<table>
<tr><td colspan="2">Environmental setting</td></tr>
<tr><td>Project Name</td><td>Boulder, Gravel and Sand Mining (Minor Mineral) at Shamtoo Village by M/s Ganesh Enterprises, 45 Hectare</td></tr>
<tr><td>Location of mine</td><td>Khasra No / Killa No.: 55 min
Name of Block – Shamtoo 2 Block/PKL B 12
Village : Shamtoo
District : Panchkula
State : Haryana</td></tr>
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<tr><td>Toposheet number</td><td>H43K14</td></tr>
<tr><td>Land use</td><td>River Bed</td></tr>
</table>

Minerals of mine	Boulder, Gravel and Sand
Total Geological Reserve	2700000 MT
Total mineable reserves	1905000 MT
Life of mine	10 Years
Proposed production of mine	1800000 TPA
Method of mining	Open cast Semi mechanized method
No of working days	300 days
Water demand	**Total Water Requirement: 25 KLD** Domestic: 5 KLD Dust Suppression: 15 KLD Plantation: 4 KLD Drinking: 1KLD
Sources of water	Nearby village
Man power	78
Nearest railway station	Ghaggar railway station about 13.4 km W
Nearest airport	Chandigarh International Air Port 20 km away from site
Seismic zone	Zone IV

1.2 PRESENT LAND USE-

The mining contract area is **45 ha** and a part of Dangri river bed falling in Panchkula district Haryana. There is no reserved and protected forest land is involved within lease area. The area excavated will get filled after sediments flow during flooding and heavy rain fall in the river bed. The land use of the project site will not change after complete mining of Boulder, Gravel and sand of river bed.

1.3 PROPOSED PLANNING

Mining method	Open cast semi-mechanized mining method will be adopted for Boulder, gravel and sand mining. Excavated mineral will be used for construction of infrastructure works and buildings.
Project cost	**INR 450 Lakhs**
Proposed Production	18,00,000 MT (18 Lack MT per annum)

1.4 CONCLUSION

The mine lease can produce Boulder, Gravel and sand required for construction of Infrastructure projects and buildings. Mining operation will provide employment to local people. Additionally, mining revenue in terms of royalty will be paid to government, which will help the state & country for development for development work. Total mining lease will be approx. 45 ha as per LOI and all the conditions given in LOI will be adhere.

2.0 INTRODUCTION OF THE PROJECT/ BACKGROUND INFORMATION

2.1 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT

LOI of over an area of 45 Ha of Mining lease been granted in favor of M/s Ganesh Enterprises, C-16, TDI City, Panipat, Haryana – 132013 dated on 16/11/2017 letter wide Memo No. DMG/HY/Cont./Shamtoo-2 Block/PKL B-12/2017/7040 from The Director, Mines & Geology, Haryana, 30 Bays Building, Sector-17, Chandigarh for a period of 10 years.

The details of project proponent have been given below Table:

Name of the applicant	**Parmesh Singh (Manager)**
Address of Applicant	C-16, TDI City, Panipat, Haryana – 132013
Name of Mine	Shamtoo-2 Block/PKL B-12
Mineral	Boulder, Gravel and Sand (Minor mineral)
Area (ha)	45 Ha
Status of Project	New

2.2 BRIEF INFORMATION ABOUT THE PROJECT

The existing project has been proposed for the production of Boulder, Gravel and sand Mining by Opencast semi-mechanized method utilizing Heavy Earth Moving Equipment (HEMM). The lease area is 45 hectares. The expected life of the mine is 10 years. Water requirement for the proposed project for drinking use, dust suppression & plantation will be 25 KLD, which will be taken from nearby villages.

Boulder, Gravel and Sand Minor mineral is situated at Shamtoo -2 Block/PKL B-12" in district Panchkula Haryana over an area of 45.00 Hectares. The mining lease has been granted to M/s Ganesh Enterprises, C-16, TDI City, Panipat, Haryana – 132013 dated on 16/11/2017 letter wide Memo No. DMG/HY/Cont./Shamtoo-2 Block/PKL B-12/2017/7040 from The Director, Mines & Geology, Haryana, 30 Bays Building, Sector-17, Chandigarh for a period of 10 years.

With subsequent notification dated 10.02.2015, 31 minerals (as notified in the Act) have been declared as Minor Minerals. Therefore, minerals namely Boulder gravel and sand for which lease was granted Major Mineral now have fallen under category of Minor Minerals and shall be under the purview and provisions of the "Haryana Minor Mineral Concession, Stocking, Transportation and Prevention of Illegal Mining Rule, 2012"

The proposed rate of production is 18,00,000 MTPA. The estimated project cost is **INR 450 Lakhs**. The anticipated life of mine is 10 years. The total mine lease area is Gram panchayat river bed.

Salient features of the project

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Nearest railway station	Ghaggar railway station about 13.4 km W
Nearest airport	Chandigarh International Airport 20 km NW away from site
Seismic zone	Zone IV

2.3 NEED FOR THE PROJECT AND ITS IMPORTANCE TO THE COUNTRY OR REGION

The lease area has been prospected by various Government Departments. Based on the deposits available, the area is granted for mining lease for the extraction of Boulder, Gravel and sand mining. Uses of Boulder, Gravel and sand includes building construction and infrastructure projects. The Boulder, Gravel and Sand is one of primary building material required for the purpose. The mining activities as proposed are the backbone of all construction and infrastructure projects as the raw material for construction is made available only from such mining. The Boulder, Gravel and Sand to be excavated is in high demand at the local market for real estate and infrastructure industry. This project will also provide employment to local people helping them earn livelihood. In addition to this, it will further prevent widening of the Sirsa river bed due to the deposition of sediments which if not mined out will result in raising of the river bed causing flooding, damage to the adjoining areas, destruction of life and property.

2.3.1 Importance to the Region

Applicant will pay royalty for the Boulder, Gravel and Sand to be produced from the mine, sales tax and other applicable taxes will be paid thereby contributing to the regional revenue. The public revenue will further be put for public expenditure.

2.3.2 Importance to the country

Gains in Gross Domestic Product: - The mining and associated activities in the mineral bearing areas bring about gains in gross domestic product, i.e. there is through a minor contribution by the proposed project but will add to the gains in G.D.P.

2.4 DEMANDS-SUPPLY GAP

The proposed capacity of the Boulder, Gravel and Sand mine is to the tune of **18,00,000 TPA**. Boulder, Gravel and Sand demand has been on an upsurge in the region due to the high-rise demand in the building and construction industries resulting in regional growth. Boulder, Gravel and Sand is important mineral and small movements in its demand may produce price fluctuations. The mining industry has witnessed continuous modernization and adoption of new technologies in recent years for the excavation of mineral like Boulder, Gravel and Sand. The proposed project is encountering huge market demand presently.

2.5 IMPORTS Vs. INDIGENOUS PRODUCTION

There will be no import for the existing project. Local villagers will be employed. There will be Indigenous production in the entire mining activity.

2.6 EXPORT POSSIBILITY

Indigenous production of mineral will be for domestic industries only. No export is envisaged of the mineral presently and in future also.

2.7 Domestic/ Export Markets

The excavated mineral will be used and sold in the local market of Panchkula district and nearby regions. In domestic market, Boulder, Gravel and Sand is majorly used as a construction material of buildings and highways.

The export market is not envisaged for the proposed project.

2.8 Employment Generation

Around 78 persons will be employed directly and 375 workers indirectly in the proposed Boulder, Gravel and sand mining project. Transportation will be required for proposed project therefore many local people will get employment due to proposed project for upto 10 years.

3.0 PROJECT DESCRIPTION

3.1 TYPE OF PROJECT INCLUDING INTERLINKED AND INTERDEPENDENT PROJECTS, IF ANY.

This mining project is open cast semi mechanized, situated over an area of 45 hectares. The proposed production is 18,00,000 TPA.

There is no interlinked and interdependent project to the Boulder, Gravel and sand mine. It is a self-sustaining independent project of Boulder, Gravel and sand mining used in building construction and other infrastructure projects.

This mining project falls under Category “A” Project or activity 1(a) as per EIA Notifications 2006 and its amendments thereafter. As per general conditions cat B projects will be considered cat A project if located in whole or in part within 5 km from the boundary of Protected areas notified under the Wild life (Protection) Act, 1972, Critically polluted areas identified by CPCB from time to time and Notified Eco sensitive zone. (Reference: S.O. 1599 (E) 25th June 2014 MoEF&CC Government of India). With reference to the S.O. 1394 (E) dated 3rd June 2009 MoEF&CC Notification Khol Hi Ratan Wild life sanctuary has been Notified and is located within 5 km from the boundary of mining lease.

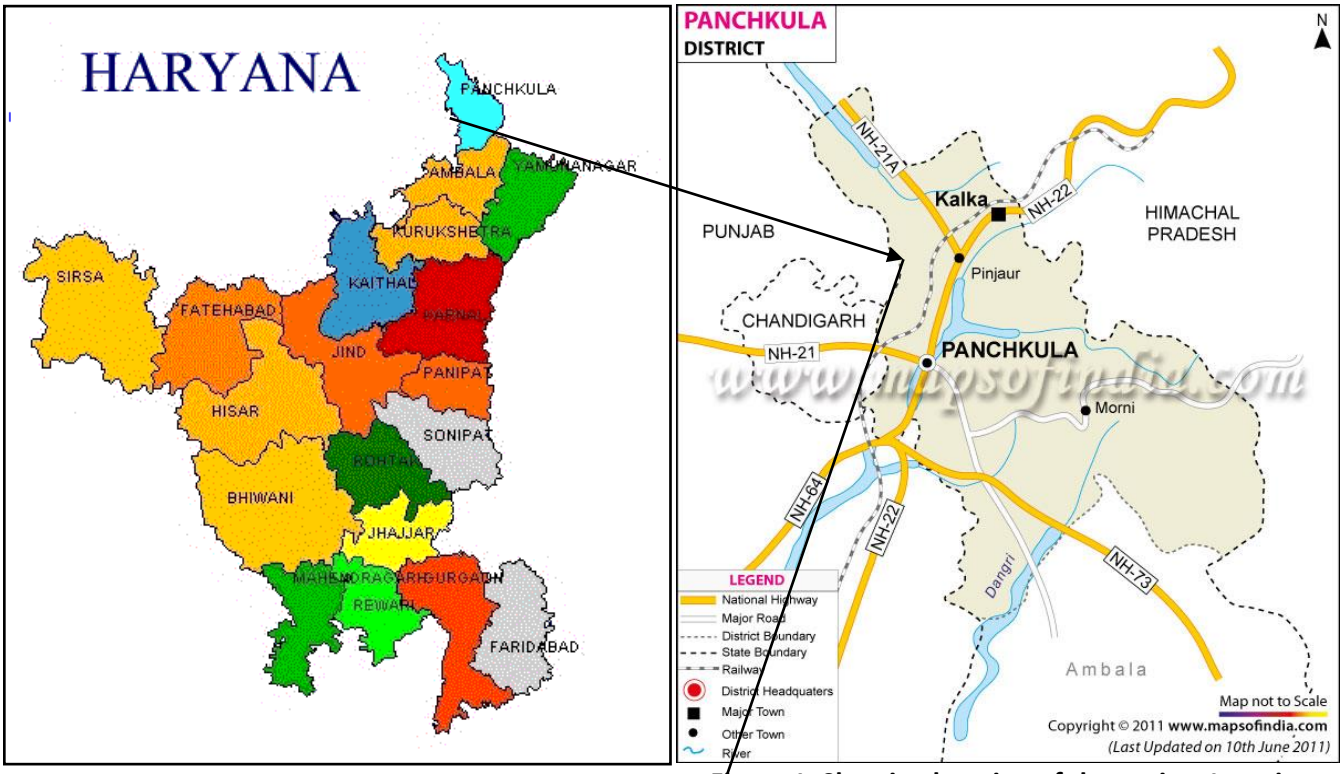


Figure 1: Showing location of the project Location

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

Boulder, Gravel and sand mine of M/s Ganesh Enterprises, C-16, TDI City, Panipat, Haryana – 132013 dated on 16/11/2017 is situated at Shamtoo -2 Block/PKL B-12 Taluka- Panchkula, District: - Panchkula, Haryana, over an area of 45 hectares Buffer map showing 2, 5 and 10 km radius from project site is enclosed as **Annexure-I**. The mining lease area falls in Survey of India Toposheet No.: H43K14

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

No alternate site was considered as the project is existing and mineral specific.

3.4 SIZE OR MAGNITUDE OF OPERATION

The mine lease area is 45 ha. The proposed rate of production will be 18 lacs TPA of Boulder, Gravel and Sand. Total available mining area will be 31.75 hectare and remaining 13.25 hectare will be restricted as per mining plan. Total available geological reserve is 27,00,000 MT where 7,95,000 MT is blocked reserved which cannot be mined as a part of sustainable sand mining. Total available reserve for mineral is 19,05,000 MT from which 18,00,000 MT per annum has been proposed for mining. Mining duration will be 10 Years.

Composite Production during the Plan Period: Year wise proposed production during the plan period will be as follows:

Summary of Mineral Production with area detail (In MT)

Sr. No	Description of Mining	Area in Ha	Quantity of Mineral	Period of Mining
1	Total Mining area	45	-	10 Years
2	Available area of Mining	31.75	-	
3	Restricted area of Mining	13.25	-	
4	Total geological reserve		27,00,000 MT	
5	Total Minable reserve	-	19,05,000 MT	
6	Total Blocked reserve	-	7,95,000 MT	
7	Total proposed production	-	18,00,000 MTPA	

3.5 PROJECT DESCRIPTION WITH PROCESS DETAILS (A SCHEMATIC DIAGRAM/FLOW CHART SHOWING THE PROJECT LAYOUT, COMPONENTS OF THE PROJECT ETC. SHOULD BE GIVEN)

3.5.1 Project Description with Process Details

The average production of Boulder, Gravel and Sand will be 18,00,000 TPA. Top soil and overburden are present in the lease area. The top soil will be removed with JCB and stacked on the earmarked site and will be used in plantation. Subsequently, the Boulder, Gravel and Sand will be transported by truck to destination.

3.5.2 Method of Mining

The river bed areas apart from other related condition for mining are allowed to excavate mineral (Boulder, gravel and Sand) to ensure safety of river bed structures and the adjoining areas on the following specific conditions:

i. No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge on up-stream side and ten times the span of such bridge on downstream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the downstream side;
ii. There shall be maintained an unmined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authority by him;
iii. The maximum depth of mining in the river-bed shall not exceed three meters measured from the unmined bed level at any point in time with proper bench formation;
iv. Mining shall be restricted within the central 3/4th width of the river/ rivulet;

As the mining river bed remains restricted in the Central 3/4th part of the river bed, the area left on both side of the river bank not only ensures the safety of banks (bank cutting due to water stream) but also ensure that in the central part of river, water stream flows smoothly during rains and process of river meandering does not occur.

The light weight excavator/JCB are being deployed to remove mineral from river bed up to maximum depth of 3-meter layer from general level of the bed. The mining in the river bed are undertaken in mechanized manner. At times the RQPs do refers the excavation in river bed mining through excavator as “Semi Mechanized Mining”

The mineral excavated is directly loaded in the vehicles/dumpers and the vehicles owners and drivers take away the mineral directly to the stone crushers or screening plants or consumers. In certain cases, mineral

concession holders' stacks mineral on the river bank in case are not able to sell the material on actual mining itself.

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

Raw material will not be required for production of sand, gravel and Boulder. The marketing area product is local region of the district. The mode of transportation will be through road ways, trucks and tractor trolley, dumper will be hired for the purpose of transport.

3.7 RESOURCE OPTIMIZATION/RECYCLING AND REUSE ENVISAGED IN THE PROJECT, IF ANY

Not Applicable for this project

3.8 AVAILABILITY OF WATER ITS SOURCE, ENERGY/ POWER REQUIREMENT AND SOURCE

Ground water will be used for dust suppression, drinking and domestic purpose which will be carried to the project site from nearby villages

3.8.1 Water Requirement

The water supply for drinking purpose proposed as well as for dust suppression is proposed to be done from nearby village. The requirement of water for various activities is detailed here below.

S. No	Particular	Proposed KLD
1	Dust suppression	15
2	Drinking	1
2	Green Belt/ Plantation	4
3	Domestic	5
	Total Water Requirement	**25**

3.8.2 Power

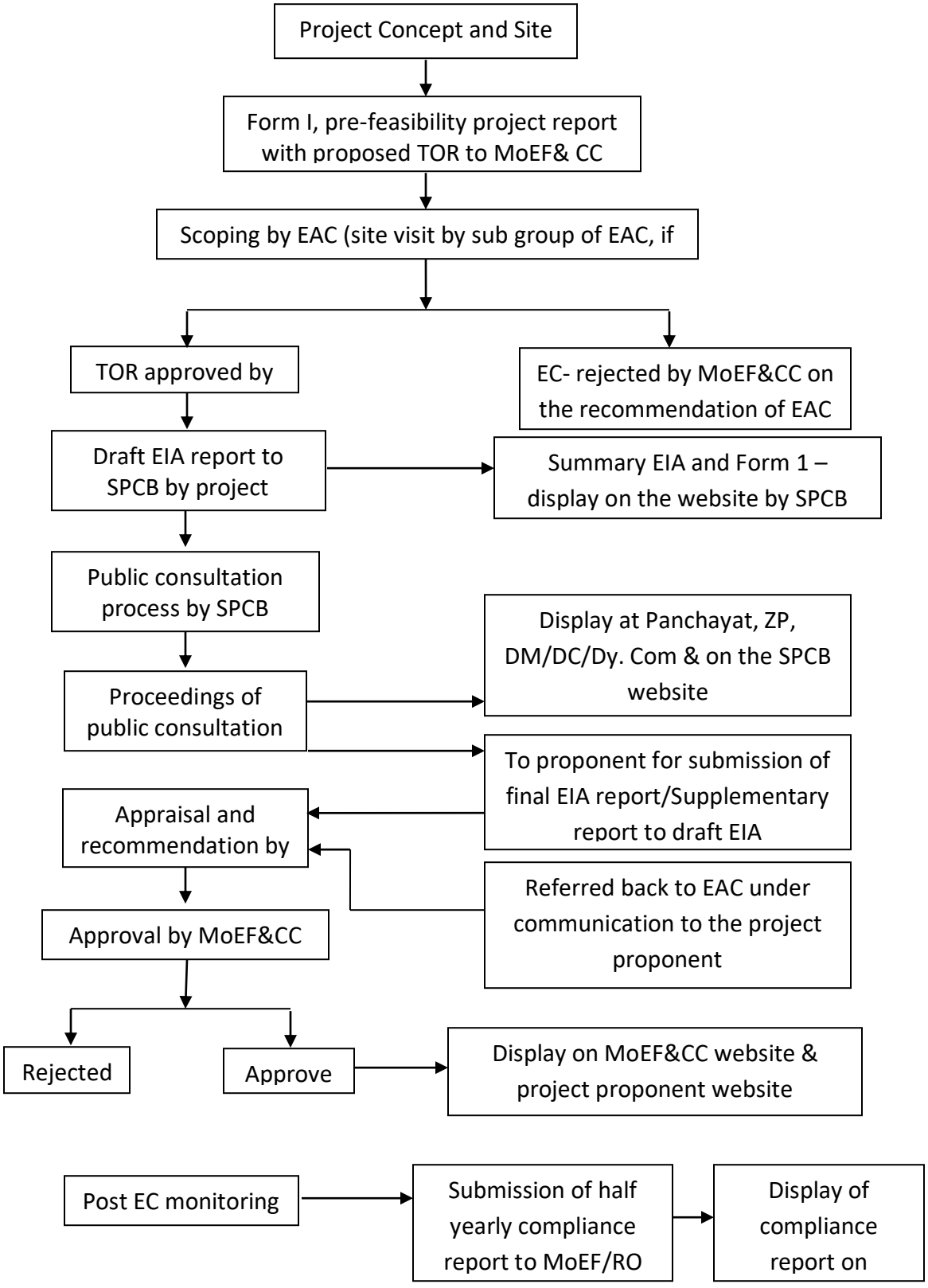
All the heavy earth moving equipment will be run on low Sulphur diesel. Activities will be carried out in a semi-mechanized manner. The material will be excavated and loaded directly into dumpers, tractors Trolley etc. The mining will be done from sun rise to sun set therefore no requirement of power for lightning to the proposed mining activity.

3.9 QUANTITY OF WASTES TO BE GENERATED (LIQUID AND SOLID) AND SCHEME FOR THEIR MANAGEMENT/ DISPOSAL

3.9.1 Liquid Effluent

No liquid waste is anticipated to be generated due to proposed project. Only domestic waste water will be generated from mine offices which will be disposed off in septic tank via soaking pits.

SCHEMATIC REPRESENTATIONS OF THE FEASIBILITY DRAWING WHICH GIVEN INFORMATION OF EIA PURPOSE



4.0 SITE ANALAYSIS

4.1 CONNECTIVITY

The lease is well connected with the village road from shamtoo to Toka village. The road further connects with SH 1 at distance of 4.5 km in south east direction and connects with NH 73 towards west direction via Toka village. Another village road is going via Parwala is connecting to Tarlokpur. Nearest railway station is Ghaggar railway station at a distance of 13.4 km towards west direction. Nearest airport is Chandigarh international airport about 20 km away from project site.

4.2 LANDFORM, LANDUSE AND LAND OWNERSHIP

4.2.1 Landform

The lease area is a part of river bed in sub-district Panchkula District – Panchkula Haryana. The proposed activity is to take place in river bed where the excavated sand will be replenished during rainy season every year and hence there will be no change in land use. Mining will be done as per mining plan proposed by approved RQP.

4.2.2 Land use

The present land use of the project site is river bed. The mined area will be replenished after monsoon hence no change in land use is anticipated due to proposed project.

4.3 Topography

The district is mainly drained by the river Ghaggar and its tributaries. A small patch of northwest part of the district is drained by northwesterly flowing Sirsa nadi, as its tributaries east - west direction before joining Sirsa nadi, which is tributary of Sutlej river. The Panchkula district has been divided into three physiographic units namely Siwaliks, Dissected rolling plains (kandi) and Alluvial Plains. Siwalik hills occupy the Northern and Northeastern fringe of the Panchkula District and attain the height from mean sea level at 950 meters. The hills are about 500-meter-high with respect to alluvial plans. These are characterized by the broad flatland topography that has been carved into quite sharp slopes by numerous ephemeral streams come down to the outer slopes of the Siwaliks and spread much of gravels boulder, pebbles in the beds of these streams. Kandi belt are dissected rolling plains. It is about 3-8 km wide and elevation varies between 250 and 375 m above mean sea level (MSL). Alluvial plains zone is part of higher ground between Ghaggar and Chautang and includes high mounds and valleys. In general, the slope is from northeast to southwest.

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.

Mine lease area to be utilize for mining boulder gravel and sand is involve only river bed of Dangari River. There is no reserved and protected forest land involved in mining lease but only grassland. Shortest distance from the periphery of the project to periphery of the Bhoj Mataur Protected forest is 4.7 km towards north. Bhoj Mataur PF also has been declared as Wild life sanctuary namely Khol Hi Raitan Wildlife sanctuary by Ministry of Environment forest and Climate change (MoEF&CC) Notification wide S.O. 1394 E 3rd June 2009. The area is almost barren. Quartzite's are covered by weathered surface of the geological formation or by a thin cover of soil. Project site is river bed of Dangri Nadi as per topographic survey.

4.5 EXISTING INFRASTRUCTURE

The following infrastructure facilities are available in the lease area of shyamtoo village project site:

(A) **Roads:**

All the villages are well connected by public roads with nearby town of Kot and Parwala. Site connectivity is good to National highway and state highway within 5 km.

(B) **Power supply**

All the villages have got power supply from the State Electricity Board.

(C) **Water Supply**

Water is supplied by the Public Health Department Haryana through water supply plan to the entire village.

(D) **Medical, educational, Post & Telegraphs Facilities**

A Govt. Hospital is available at Panchkula which is Just 19 Km from the Mine site. All the nearby villages have Middle schools & Sub Post Office. College, I.T.I and other facilities are available at Panchkula.

4.6 SOIL CLASSIFICATION

Types of soil found in studied area in Panchkula district is mentioned below:

Eutrochrepts/Udorthents- These are shallow and loamy sands to fine sandy loams, except in depressions, well-drained, non-saline, non-alkali, non-calcareous, mostly base saturated and are classified as loamy skeletal typic, lithyhic, eutrocherpts/ Udorthents. These soils are found in the Siwalik range.

Udipsamments/ udorthents- These are loamy sand to sandy loam deep, excessively or well-drained, non-saline, non-alkali. These are placed under the associations of transitional tract between Siwaliks hills and alluvial plains.

Psammaquents and Haplaquepts- These soils are found in Yamuna Plains

Haplaquept- These soils are non-saline, alkalinity hazards are classified as typic ustochrepts but water-logged soils with loam to clay loam texture showing the effect of glazing, are classified as aeric/ typic Haplaquepts. Areas as aeridic soil moisture have classified as camborthics and torropsamments.

4.7 CLIMATIC DATA FROM SECONDARY SOURCES

The climate of Panchkula district can be classified as subtropical monsoon, mild & dry winter, hot summer and sub-humid which is mainly dry with hot summer and cold winter except during monsoon season when moist air of oceanic origin enters in to the district. In Panchkula district mainly four seasons in a year, the hot weather season starts from mid-March to last week of the June followed by the southwest monsoon, which lasts up to September. The transition period from September to November season. The winter season starts late in November and remains up to first week of March.

With respect to rainfall pattern the Panchkula district normal annual rainfall is 1057 mm, which is unevenly distributed over area in 49 days. The southwest monsoon sets in from last week of June and withdraws in end of September, contributed about 86% of annual rainfall. July and August are the wettest months. Rest 14% rainfall is received during non-monsoon period in the wake of western disturbance and thunderstorms. Mean maximum temperature of study area is 39.1^0C and mean minimum temperature of study area in January is 6.1^0C. Normal rainy days as per district profile is 49 days.

4.8 SOCIAL INFRASTRUCTURE AVAILABLE

Public Building, Places and Monuments:

There are no permanent public buildings within the lease area. The permanent human settlement is about 0.3 km away from the proposed mining area. There are no other public places or monuments within or around the mining area.

Infrastructure Facilities

The following facilities already exist in the village mentioned above:

Roads: All the village are well connected by public roads with nearby town of Panchkula. Buses of Haryana Road ways ply regularly in these village.

Power supply: All the villages have got power supply from the State Electricity Board.

Water Supply: Water is supplied by the Public Health Department Haryana through water supply plan to all the village.

Medical, educational, Post & Telegraphs Facilities: A Govt. Hospital is available at Panchkula which is Just 19 Km from the Mine site. All the nearby villages have Middle schools & Sub Post Office. College, I.T.I and other facilities are available at Panchkula.

Quality of water: There are no water sources in the area except dry Nallahs (rivulets). The precipitated water flows along the slope of boulder and gravel. The water table in the area is about 10 to 20 MBGL.

5 PLANNING BRIEF

5.1 PLANNING CONCEPT

It is proposed that open cast semi-mechanized mining method will be adopted for boulder, gravel and sand mining. Mineral excavated will be used for meeting the huge demand of construction material like coarse and fine aggregate required for construction and maintenance of buildings and infrastructures like roads etc. Mining will be done up to maximum 3 meters from ground surface of river and will be limited to any condition above 2 meters from water table. After one kilometer 50 meter will be left unmined as per conditions given in LOI followed by bridges will be considered unmined up to a specific distance to upstream and downstream of river.

On the project site adequate facilities are available in the vicinity of mine lease area due to mining activities, no extra infrastructure over and above the existing infrastructure is required except for the creation of approach road from riverbed to link road from different block of mining.

5.1.1 AMENITIES AND FACILITIES PROVIDED

Mine office, Workshop etc.: Proper site services such as first aid, rest shelter and drinking water will be provided to all the mine workers. Rest shelters along with first aid station complying with all the provisions of Mines Rules will be provided by the project proponent. Adequate water supply will be provided to workers for consumption dust suppression and for plantation. Mining operation will be done at day time only so no light arrangement is required. Proper transportation will be provided to the mine workers and all the material from the mine will be transported by trucks / tippers / tractors trollies. Appropriate security arrangements will be made available to the employees and labors.

5.2 POPULATION PROJECTION

There will be no change in the population projection of the nearest and farther most villages of the project. The requirement workers for the expansion project is will be met through the recruitment of local workers. Influx of people will be negligible with managerial and supervisory staff. The nearest villages are Located within 1 to 5 km from the area under reference. The population of these villages as follows

Sr. No	Village	Total Population	Total male	Total female	Literate male	Literate female
1	Shamtoo	139	78	61	51	27
2	Toka	875	495	380	200	96
3	Sukhdarshan pur	480	248	232	158	93
4	Kot	1525	812	713	582	437
5	Bhanoo	2650	2055	595	1857	386
6	Manak Tabra	1721	927	794	614	396
7	Dabkauri	1178	679	499	316	166

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

Land use Pattern during next five years: - (in hectares)

The mining lease area is about **45 hectares** is part of Dangri river bed falling in Panchkula district, Haryana. There is no reserved and protected forest in the contact lease area. The area so excavated will get filled up due to sediment inflow during flooding / heavy rain fall in the river bed. The ultimate land use of the mine contract area will not change after systematic and scientific mining closure.

5.4 Residential Area (Non-Processing Area)

The maximum workforce will be hired from the nearby village, no residential area/ housing is proposed.

5.5 Green belt:

The green belt shall be developed as per approved eco-friendly mine lease plan and as per CPCB guidelines. The project proponent shall also develop greenbelt in the premises of the schools, hospitals and also carry out the avenue plantation in the vacant areas along roads. The greenbelt shall be developed by planting sapling per year. Indigenous species with the consultation of the state forest department shall be planted and maintain.

5.6 SOCIAL INFRASTURECTURE

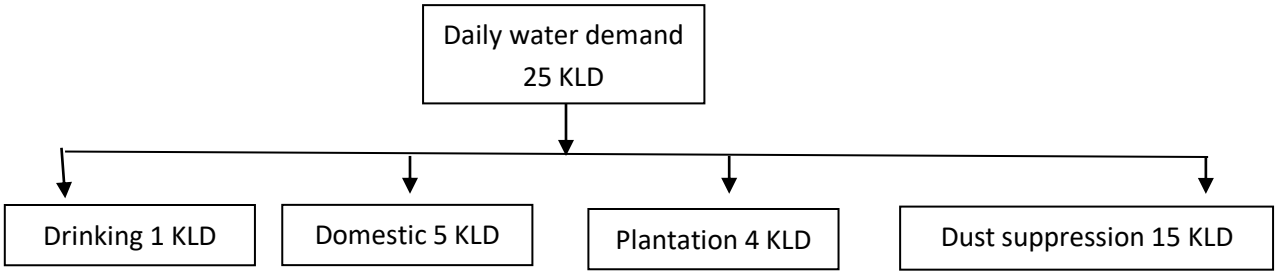
Road facilities will be provided for mineral transportation and for mine workers and maintained regularly. Employment opportunities will be generated for local labors and contractors. Medical camps and non-formal education will be provided to mining staff on regular basis including safety managements. Social awareness camps will be organized and secondary employment opportunities will be generated.

6 CONNECTIVITY

Mine lease area is well connected to road, National and State highways within 4-5 km distance. Only temporary road will have to be constructed for mineral transportation.

6.1 DRINKING WATER MANAGEMENT

Water for drinking, domestic and plantation is required to be 25 KLD. It is proposed to obtain water from nearby villages. The daily water demand will be 25 KLD. The domestic water (5 KLD) demand will be met from tanker supply from nearby village, for plantation (4.0 KLD) and dust suppression (15 KLD) existing water stored in pit will be used as well tanker supply.



6.2 SEWERAGE SYSTEM

Domestic waste water will be treated into septic tank followed by soak pit.

6.3 INDUSTRIAL WASTE MANAGEMENT

Not applicable

6.4 SOLID WASTE MANAGEMENT

There is no solid waste of or over burden is anticipated due to Boulder, gravel and sand mining of river bed. If in case any waste is generated will be utilize for plantation and green belt development.

6.5 POWER REQUIREMENT & SUPPLY/SOURCE

Mining activities will be carried out in mechanical manner with diesel operated machinery. The operation will be done only from sun rise to sun set hence there is no power requirement for the proposed activities.

7. REHABILITATION AND RESETTLEMENT (R&R) PLAN

The mine is located in barren land & there is no habitation lost for any settlement, so as per conditions no R&R is required for the project.

7.1 Policy to Be Adopted (Central/State) In Respect of The Project Affected Persons Including Home Oustees, Land Oustees And Landless Laborers (A Brief Outline to Be Given)

The mine is located in barren land & there is no habitation lost for any settlement, so as per conditions no R&R is required for the project.

8 PROJECT SCHEDULE & COST ESTIMATES

8.1 Likely Date of Start of Construction and Likely Date of Completion

The project will start only after complete NOC from all relevant Government departments including environmental clearance from appraisal committee.

8.2 Estimated Project Cost Along with Analysis in Terms of Economic Viability of the Project

The estimated project cost is **INR 450 Lakhs**

9.0 ANALYSIS OF PROPOSAL (FINAL RECOMMENDATIONS)

9.1 Financial and Social Benefits with Special Emphasis on the Benefit to the Local People Including Tribal Population, If Any, In the Area.

The underlying benefits through the proposed project are:

- It aims to provide additional employment to the local population of the present project. As there would be vocational training camps and Technical Training of mining to the regional people, hence there will be potential manpower available for the proposed and surrounding mines of the tehsil.

- The project will directly/ indirectly develop the area by providing employment opportunities. With the development in and around the area there will be many supporting facilities/ infrastructures eventually leading to the development of the area.
- Assessment of the potential socioeconomic benefits during mining focused primarily on work force requirements, achievement of supplies, and the temporary increased demand for service related to the mining project like food, housing, communications, law enforcement, medical care, local transportation etc. Due to these, additional revenue to local suppliers for required products and services related to the construction and operation phases of the project will generate.
- Thus, mining activities will provide work opportunities to the skilled and unskilled labor as well as contribute significantly to the local economy.

As per the preliminary site visit, the above activities were identified on the need based requirement of the study area. Further activities including baseline data generation has been initiated at project site and in buffer zone of 10 km radius from 01/12/2017. Environmental attributes such as ambient air quality, meteorology surface and ground water quality, soil quality, noise quality and study of flora and fauna has been considered for baseline data generation as per standard terms of references. Socio- economic observations; and clearance from National Board of wildlife (NBWL) will be completed in due course of time.