PRE-FEASIBILITY REPORT

1.0 EXECUTIVE SUMMARY

S.No.	Information	Details
1.	Project name	Sand Mining Projects of District Jahanabad on River Falgu(Stretch- 1), Dardha (Stretch- 2), Morhar (Stretch- 3), Mohana (Stretch- 4), Lokain (Stretch- 5) & Dhab (Stretch- 6)from Twenty Eight (28) village Ghats.
2.	Mining Lease Area	318.8 Ha. or 787.77Acre
3.	Location of mine	
	Villages	Villages & their Ghats on river Falgu,Dardha,Morhar,Mohana,Lokain,Dhab,river:- Stretch 1 (Falgu river):- 18 Ghats. 18 Ghats named as Sultanpur Ghat (Ja F 01)-24.3 Ha, Jaru Ghat (Ja F S 02)-20.2 Ha, Veera & Godiha Ghat (Ja F 03)- 16.8 Ha, Parawan Ghat (Ja F 04)- 11.4 Ha., Bauri Ghat (Ja F 05)-10.2 Ha, Banshi Bigha Ghat (Ja F 06)-21.9 Ha, Kairwa Ghat (Ja F 07)-9.4 Ha, Ginjee ghat (Ja F 08)-11.0 Ha, Sharwan- Dumri ghat (Ja F 09)-21.5 Ha, Nandana Ghat (Ja F 10) – 13.8 Ha , Damaua Ghat (Ja F 11)- 9.4 Ha, Khirauti Ghat (Ja F 12) – 5.4 Ha, Jhunki Ghat (Ja F 13) 6.6 Ha ,Maiawan Ghat (Ja F 14) -2.5 Ha, Sudasapur Ghat (Ja F 15) 4.6 Ha Okari Ghat (Ja F 16) -5.3 Ha, Chotkimath Ghat (Ja F 17) 9.7 Ha & Sarthua Triloki Bigha Ghat (Ja F 18) – 12.1 Ha . Stretch 2 (Dardha river):- 5 Ghats. 5 Ghats named as Boknarikala Ghat (Ja D 1) – 10.9 Ha , Kachnawan Ghat (Ja D 2) – 15.4 Ha, Madarichack Ghat (Ja D 3) – 7.5 Ha, Jamanbigha Ghat (Ja D 4) – 9.0 Ha , & Bandea Ghat (Ja D 5) – 10.3 Ha . Stretch 3 (Morhar river):- 2 Ghats. 2 Ghats named as Balabigha Ghat (Ja M 1) – 6.5 Ha , & Jaybigha Ghat (Ja M 2) – 9.9 Ha . Stretch 4 (Mohana river):- 1 Ghats. 1 Ghats named as Khudauri Kandaul Ghat (Ja Mo 1) – 10.5 Ha . Stretch 5 (Lokain river):- 1 Ghats. 1 Ghats named as Barchhi Bigha Ghat (Ja L 1) – 14.2 Ha. Stretch 6 (Dhab river):- 1 Ghats. 1 Ghats named as Utra Hajampur Ghat (Ja Dh 1) – 8.5 Ha **.** **District-Jahanabad, State- Bihar**

	District :	Jahanabad
	State :	Bihar
4.	River/Nalla/Nadi	River Falgu(Stretch- 1), Dardha (Stretch- 2), Morhar (Stretch- 3), Mohana (Stretch- 4), Lokain (Stretch- 5) & Dhab (Stretch- 6)
5.	Minerals of mine	Sand
6.	Proposed Production	Falgu, Dardha, Morhar, Mohana, Lokain & Dhab river:- **Production :-** **Total Production: - 9928304 tonnes/annum.**
7.	Method of mining	Other than fully Mechanized (OTFM) Mining using excavators/JCBs.
8.	Drilling or Blasting	No
9.	No of working days	300 days
10.	Water demand	Domestic Water : 11.0 KLD
		Dust Suppression: 4.0. KLD
		Plantation : 25.0 KLD
		Total Water Requirement: 40.00 KLD
11.	Man Power	733 Individuals.
12.	Nearest railway station	Details are given in Annexure-II for each Ghats, Refer **Annexure-II**
13.	Nearest state highway/national highway	Details are given in Annexure-II for each Ghats, Refer **Annexure-II**
14.	Nearest air port	Details are given in Annexure-II for each Ghats, Refer **Annexure-II**

2. INTRODUCTION OF THE PROJECT/ BACKGROUND INFORMATION

2.1 Identification of Project and Project Proponent

- Name of the Project: Sand Mining Project on River Falgu(Stretch- 1), Dardha (Stretch- 2), Morhar (Stretch- 3), Mohana (Stretch- 4), Lokain (Stretch- 5) & Dhab (Stretch- 6)of District- Jahanabad, State-Bihar. This comprises total Twenty Eight (28) Ghats.
- Location details of the stretch wise along with co-ordinates are as:-

Ghat code	Distt.	Name of river	Name of the Ghat	Latitude (N)	Longitude (E)	Area in (Ha.)	Minable Reserve (Tonnes)
Ja F 01	Jahanabad	Falgu	Sultanpur Ghat	25° 0'2.45"	85° 5'29.72"	24.3	814140
				24°59'53.45"	85° 5'46.94"		
				25° 0'11.62"	85° 5'51.82"		
				25° 0'14.25"	85° 5'28.45"		
Ja F 02	Jahanabad	Falgu	Jaru Ghat	25°00'00.6"	84°05'46.7"	20.2	691780
				25°01'06.5"	85°05'27.0"		
Ja F 03	Jahanabad	Falgu	Veera & Godiha Ghat	25° 2'24.71"	85° 5'54.67"	16.8	544518
				25° 2'25.34"	85° 6'7.44"		
				25° 2'41.40"	85° 6'2.80"		
				25° 2'37.37"	85° 5'49.08"		
Ja F 04	Jahanabad	Falgu	Parawan Ghat	25° 2'45.52"	85° 5'42.84"	11.4	354330
				25° 2'47.80"	85° 5'50.17"		
				25° 3'6.90"	85° 5'41.03"		
				25° 3'6.53"	85° 5'35.49"		
Ja F 05	Jahanabad	Falgu	Bauri Ghat	25° 4'12.22"	85° 6'18.35	10.2	311573
				25° 4'9.98"	85° 6'22.23"		
				25° 4'29.42"	85° 6'28.12"		
				25° 4'30.23"	85° 6'20.72"		
Ja F 06	Jahanabad	Falgu	Banshi Bigha Ghat	25°05'32.2"	85° 6'20.08"	21.9	689220
				25°04'40.05"	85° 6'16.01"		
				25°03'59.08"	85° 5'50.02"		
				25°15'24.00"	85° 8'55.07"		
Ja F 07	Jahanabad	Falgu	Kairwa Ghat	25° 6'22.21"	85° 6'48.52"	9.4	277290
				25° 6'21.53"	85° 6'54.04"		
				25° 6'43.42"	85° 7'0.42"		
				25° 6'44.81"	85° 6'56.76"		
Ja F 08	Jahanabad	Falgu	Ginjee ghat	25° 7'36.92"	85° 7'10.93"	11.0	330386
				25° 7'37.25"	85° 7'16.53"		
				25° 8'4.34"	85° 7'12.57"		
				25° 8'4.29"	85° 7'8.45"		
Ja F 09	Jahanabad	Falgu	Sharwan-Dumri ghat	25°09'38.0"	85°07'09.1"	21.5	891587
				25°10'09.6"	85°07'15.6"		
				25°10'07.05"	85°07'04.37"		
				25°09'39.44"	85°07'03.9"		
Ja F 10	Jahanabad	Falgu	Nandana Ghat	25°10'12.43"	85° 7'7.48"	13.8	423940
				25°10'10.80"	85° 7'15.70"		

Ghat code	Distt.	Name of river	Name of the Ghat	Latitude (N)	Longitude (E)	Area in (Ha.)	Minable Reserve (Tonnes)
				25°10'32.53"	85° 7'20.46"		
				25°10'35.31"	85° 7'12.74"		
Ja F 11	Jahanabad	Falgu	Damaua Ghat	25°10'51.91"	85° 7'15.07"		
				25°10'54.19"	85° 7'20.63"		
				25°11'13.00"	85° 7'25.22"		
				25°11'14.60"	85° 7'20.10"	9.4	283813
Ja F 12	Jahanabad	Falgu	Khirauti Ghat	25°11'34.81"	85° 7'34.58"		
				25°11'32.69	85° 7'38.22"		
				25°11'50.33"	85° 7'58.97"		
				25°11'54.10"	85° 7'58.50"	5.4	200160
Ja F 13	Jahanabad	Falgu	Jhunki Ghat	25°12'4.97"	85° 8'33.44"		
				25°12'4.19"	85° 8'38.14"		
				25°12'30.71"	85° 8'48.04"		
				25°12'29.42"	85° 8'42.95"	6.6	171637
Ja F 14	Jahanabad	Falgu	Maiawan Ghat	25°13'44.33"	85° 9'3.28"		
				25°13'44.55"	85° 9'5.29"		
				25°13'56.65"	85° 9'1.62"		
				25°13'56.58"	85° 8'59.88"	2.5	70139
Ja F 15	Jahanabad	Falgu	Sudasapur Ghat	25°14'56.41"	85° 8'59.59"		
				25°14'57.26"	85° 9'2.20"		
				25°15'15.70"	85° 8'58.85"		
				25°15'15.64"	85° 8'56.51"	4.6	124830
Ja F 16	Jahanabad	Falgu	Okari Ghat	25°15'22.52"	85° 8'54.01"		
				25°15'24.00"	85° 8'55.70"		
				25°15'23.46"	85° 8'30.06"		
				25°15'21.22"	85° 8'28.92"	5.3	124276
Ja F 17	Jahanabad	Falgu	Chotkimath Ghat	25°17'15.5"	85°08'05.3"		
				25°18'34.9"	85°08'00.9"		
						9.7	211468
Ja F 18	Jahanabad	Falgu	Sarthua Triloki Bigha Ghat	25° 8'37.89"	85° 8'39.45"		
				25° 8'33.57"	85° 8'50.17"		
				25° 8'52.95"	85° 8'41.32"		
				25° 8'53.11"	85° 8'32.70"	12.1	404701
				TOTAL		**216.1**	**6919788**
Ja D 01	Jahanabad	Dardha	Boknarikala Ghat	25° 3'39.45"	84°55'5.61"		
				25° 3'39.47"	84°55'8.31"	10.9	
				25° 4'13.31"	84°55'27.76"		362556
				25° 4'15.81"	84°55'26.94"		

Ghat code	Distt.	Name of river	Name of the Ghat	Latitude (N)	Longitude (E)	Area in (Ha.)	Minable Reserve (Tonnes)
Ja D 02	Jahanabad	Dardha	Kachnawan Ghat	25° 4'49.65"	84°56'41.24"	15.4	533898
				25° 4'48.11"	84°56'44.87"		
				25° 4'35.96"	84°56'14.28"		
				25° 4'40.49"	84°56'14.09"		
				25° 5'17.54"	84°56'52.30"		
				25° 5'17.48"	84°56'54.89"		
				25° 5'35.15"	84°56'56.56"		
				25° 5'37.00"	84°56'52.55"		
Ja D 03	Jahanabad	Dardha	Madarichaack Ghat	25°07'48.5"	84°58'09.2"	7.5	261234
				25°08'44.5"	84°58'09.8"		
Ja D 04	Jahanabad	Dardha	Jamanbigha Ghat	25°10'13.3"	84°58'11.6"	9.0	246773
				25°09'37.0"	84°57'56.7"		
Ja D 05	Jahanabad	Dardha	Bandea Ghat	25°5'17.40"	84°56'56.00"	**10.3**	230958
				25°6'15.44"	84°56'20.37"		
				25°6'17.57"	84°57'18.86"		
				25°5'18.18"	84°56'53.89"		
TOTAL						**53.1**	**1635419**
Ja M 01	Jahanabad	Morhar	Balabigha Ghat	25° 3'58.00"	84°54'17.80"	**6.5**	154530
				25°04'08.5"	84°54'30.2"		
				25°04'09.18"	84°54'29.22"		
				25° 3'56.59"	84°54'16.13"		
Ja M 02	Jahanabad	Morhar	Jaybigha Ghat	25°4'42.96"	84°54'24.68"	**9.9**	279306
				25°05'17.5"	84°54'08.2"		
				25°5'15.69"	84°54'8.03		
				25°4'42.86"	84°54'23.57"		
TOTAL						**16.4**	**433836**
Ja Mo 01	Jahanabad	Mohana	Khudauri Kandaul Ghat	25° 3'47.93"	85° 8'6.63"	**10.5**	271998
				25° 3'47.71"	85° 8'10.95"		
				25° 4'22.41"	85° 8'14.48"		
				25° 4'23.56"	85° 8'11.86		

Ghat code	Distt.	Name of river	Name of the Ghat	Latitude (N)	Longitude (E)	Area in (Ha.)	Minable Reserve (Tonnes)
TOTAL						**10.5**	**271998**
Ja L 01	Jahanabad	Lokain	Barchhi Bigha Ghat	25°16'18.4" 25°14'58.6"	85°10'17.2" 85°10'01.3"	**14.2**	439402
TOTAL						**14.2**	**439402**
Ja L 01	Jahanabad	Dhab	Utra Hajampur Ghat	25°05'42.5" 25°05'24.1"	84°52'12.7" 84°52'27.8"	**8.5**	227862
TOTAL						**8.5**	**227862**

- Total Production: - 9928304 tonnes/annum.

Name and address of the Project Proponent:

M/S Banshidhar Construction Pvt. Ltd
Mr. Ram Prasad Rai (Director)
Vill-Patila Maner
Distt-Patna (Bihar).

2.2 Brief description of nature of the project

The project is open cast mining of minor mineral in the form of Sand. Approx. 9928304 tonnes/annum. Sand will be excavated. Entire process of excavation will be through semi-mechanized.

The project has been proposed by Mr. Ram Prasad Rai. The project proponent had obtained mining lease on dated 23/6/15 through letter no.746 from Dist. Mining office Jahanabad-Arwal, for the Sand mining in proposed ghats for 5 years over an area of 318.8 ha or 787.77Acres on river Falgu, Dardha, Morhar, Mohana, Lokain & Dhab of District Jahanabad.

2.3 Need for the Project and Its Importance to the Country or 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.

2.4 Demands-Supply Gap

Creation of huge infrastructure as being envisaged by Government of India particularly in road and housing sector requires basic building raw materials. Thus the demand for Sand is ever growing with the growth of the infrastructure sector in our country. The requirement for the mineral is always high in the nearby cities and towns. Therefore there is always a good demand of the mineral in the domestic market.

2.5 Imports vs. Indigenous Production

The demand in the domestic market is high for Sand. Mineral is available in abundant quantity in allotted area and can be excavated indigenously. Vast quantities of sand are available in various river ghats of the respective the river stretches. Therefore import of sand is not required.

2.6 Export Possibility

There is no proposal to export the mineral as the minerals excavated, cater to the indigenous demand and the development is a never ending process.

2.7 Domestic/ Export Markets

a) DOMESTIC MARKET

There is always an ever increasing demand of these minerals in the domestic market.

b) EXPORT MARKET

The proposed mining activity is for indigenous consumption only for real state, road making etc. So no export will be envisaged.

2.8 Employment Generation (Direct and indirect) due to the project

The total direct manpower requirement for the proposed mining operation will be around 733. Significant Indirect employment is also expected due to the associated activities.

3 PROJECT DESCRIPTION

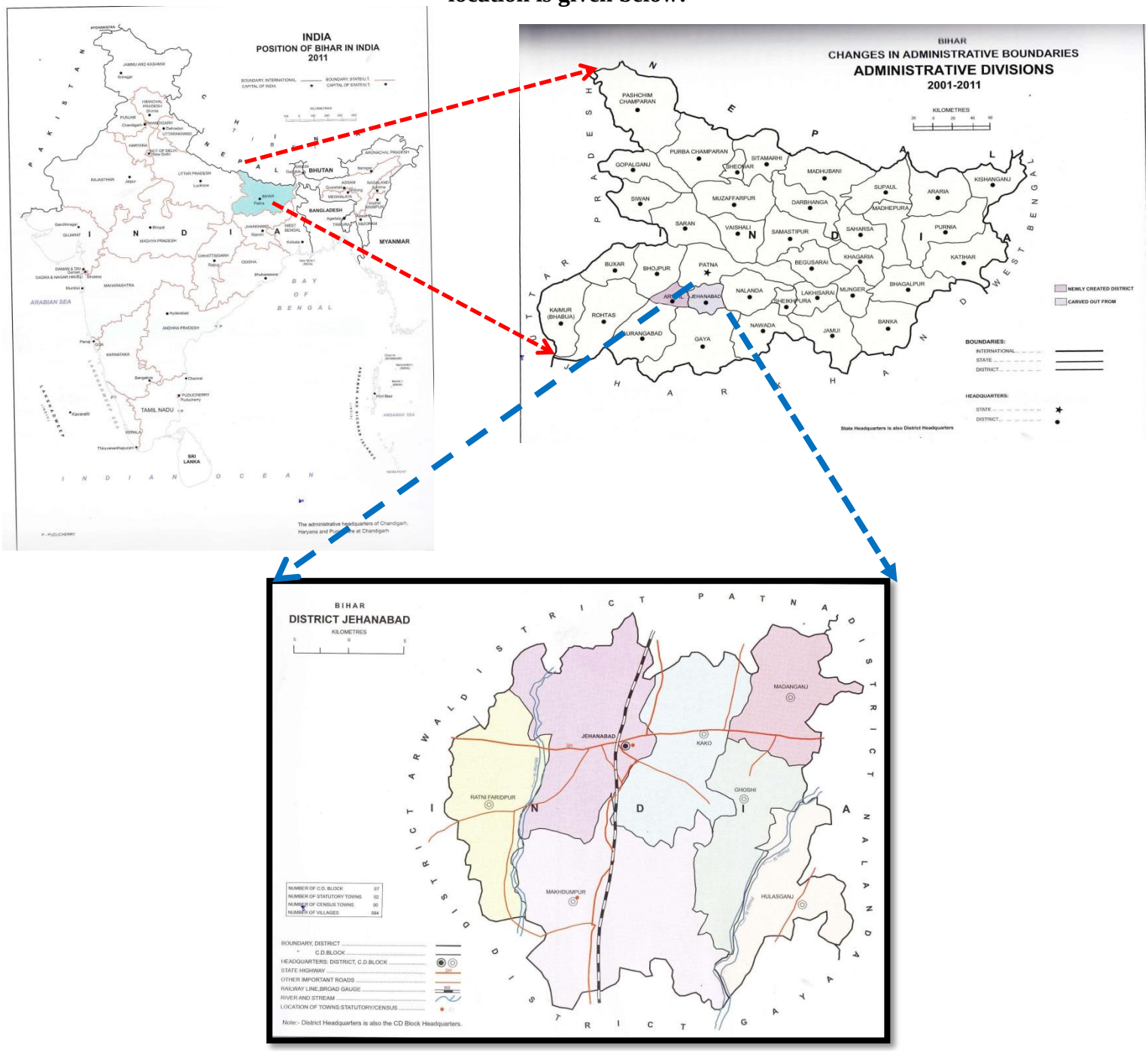
3.1 Type of Project Including Interlinked and Interdependent Projects, If Any.

The proposed project for excavation of Sand is an independent project in which minerals excavated will be directly sold in the local markets. It does not involve interlinked and interdependent project.

3.2 Location

The mining lease area is located on all Twenty Eight (28) Ghats of River Falgu, Dardha, Morhar, Mohana, Lokain & Dhab of District-Jahanabad, State-Bihar

Composite map showing project sites is attached as **Annexure III. The vicinity map of the mine location is given below:**



3.3 Details of alternate sites considered and the basis of selecting the proposed site, Particularly the environment considerations gone into should be highlighted.

Mineral location in site specific as well as the lease has been allotted in the particular sand bearing area. Hence no alternative site is examined for mining. The land has been allocated by government for the

mining only. As there is potential of Sand in large amount, so the mining will help to use a resource for beneficial purposes.

3.4 Size or magnitude of operation

The proposed mine has lease over an area of 318.8 ha or 787.77 Acres. The maximum rated capacity of the project wills 9928304TPA

Total Production: - Approx. 99.28304 Lakh Tonnes (i.e 9928304 tonnes/annum.) (As per approved mine plan)

3.5 Project description with process details

This is an open-cast mining project, confined to excavation of Sand from the proposed site. The operation will be Other than fully Mechanized (OTFM) mining using Excavators/JCB as well as manual. The mineral- sand will be collected in its existing form. Excavation will be carried out only up to a depth of 3m (Maximum) below ground level or above water level, whichever is less. Excavation of Sand material will be done only during the day time and completely stopped during the monsoon season.

Following table gives the list of equipment to be used:

S. No.	Name of machinery	Capacity	Fuel Consumption	No. of Machinery
1	JCB	1.00 m^3	10 Ltr/hr	2
2	Excavator	2.0 m^3	20 Ltr/hr	18
3	Trucks	25 tonnes	6 Ltr/hr	28
4	Water Tanker	4000 liter	4 Ltr/hr	2
5	Light vehicles	As per requirement	4 Ltr/hr	2

5.3 Quantity of HSD/ Fuel consumption per day

S. No	Machine	Details of fuel (Diesel) requirements	Consumption of Diesel (in lits/ day.)
1	Excavator	Number of Machine =18 Diesel consumption by three m/c in one shift working.(i.e-20litre/hr) =18*8*20=2880 liters	2880 liters

S. No	Machine	Details of fuel (Diesel) requirements	Consumption of Diesel (in lits/ day.)
2	Tippers/Truks	Number of Tippers=28 Diesel consumption by twenty eight tipper in one shift working. (I.e-6ltr/hr.) =28*10*06=1680	1680 liters
5	Water Sprinkler/Water Tanker	Number of Sprinkler= 2 Diesel consumption by Sprinkler in one shift working.(i.e-4ltr/hr). =2*10*4=80 liters.	80 liters
6	Extra	Transport vehicle, super vision vehicle, maintenance vehicle	200 liters
			Total=4840

3.6 Raw Material Required Along With Estimated Quantity, Likely Source, Marketing Area of Final Product/s, Mode of Transport of Raw Material and Finished Product

No raw material will be required in the proposed project. The operation involves only the excavation of Sand in its existing form and transported to the end users/ market.

3.7 RESOURCE OPTIMIZATION/ RECYCLING AND REUSE

Minerals are generally depleting asset once mined; but minerals like Sand will be replenished naturally. Thus a scientific approach will be taken up for excavation of mineral with systematic method.

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

3.8.1 Water Requirement

Activity	Water requirement (KLD)
Dust suppression	4.0
Domestic	11.0
Plantation	25.00
Total	40.00

Thus total water requirement will be 40.00 KLD. This water will be supplied from the nearby sources through tankers or by private tankers. Additional water will also be required for plantation purpose.

3.8.2 POWER

All the activities will be carried out using diesel based machines. The material will be excavated and loaded directly into tractors by the workers themselves. The operation will be done only from sun rise to sun set. So there is no power requirement for the mining activity.

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

3.9.1 Solid Waste Generation & its Disposal

No any Municipal solid waste will be generated.

3.9.2 Liquid Effluent

No liquid effluent will be generated at the mine site due to the mineral excavation.

4 SITE ANALYSIS

4.1 Connectivity

Refer **Annexure II** for connectivity details of each Ghats.

4.2 LANDFORM, LANDUSE AND LAND OWNERSHIP

The proposed activity is to take place in the bed of the River Falgu, Dardha, Morhar, Mohana, Lokain & Dhab. The land form is mostly river bed and non-forest land. The entire land is Government land.

Moreover there will be no change in land use as the mining will be confined to the river bed, which will get replenished naturally with the continuous flow of water.

4.3 TOPOGRAPHY

The topography of study area is fluvial in origin. It is developed by the Sand deposited by river Falgu, Dardha, Morhar, which are major tributary of River Ganga. Eastern embankment of Falgu, Dardha, Morhar River is relatively higher than western side. Major alluvial features including Pond, riverine island, marsh land, large sand marsh etc. other important smaller drainage include Siroka Nadi, Banas Nadi, Dardha river, Gangaghar Nadi, Sinane Nadi, Nira nadi, Mahariya Nala etc. The major man made drainages include Murka distributary, Nagwa distributary, Patna canal, Ekwari distributary, Narayanpur distributary, Ara-canal, Kurmorhi distributary, Panwari distributary, Paliganj distributary, Chandous distributary, Sinane main canal, Nira right canal, Mali distributary, Kochahsa distributary, Koliwar distributary etc. Almost each and every village having its pond. General slope pattern is from South-West to North-East.

4.4 EXISTING LAND USE PATTERN AND SHORTEST DISTANCES FROM FORESTS, WATER BODIES, ECO-SENSITIVE AREAS, ETC.

The mine lease area is flat. There is no forest land or agriculture land in the mine lease area. The entire mining lease lies within the inactive channel of the bed of River Falgu, Dardha, Morhar, Mohana, Lokain & Dhab. The existing land use pattern is dominated by barren land. The detailed land use pattern will be studied during baseline study.

4.5 EXISTING INFRASTRUCTURE

The site has no existing infrastructure, except for connecting road for transportation.

4.6 SOIL CLASSIFICATION

The basin land of the rivers is mostly Sandy Loam to clay, and the land adjacent to the rivers is sandy loam. The only mineral found in the district is sand, which is available in sufficient quantity in the river bed, and is used in construction works. The river bed consists of Sand. The soil profile of the whole district is as:-

Major Soils	Area (‘000 ha)	Percent (%) of total
Old- alluvial clay soils	42.0	43.8
Old – alluvial loamy soils	53.9	56.2

Source: - http://agricoop.nic.in/Agriculture%20contingency%20Plan/Bihar/BR18_Jahanabad_28.12.2013.pdf

4.7 CLIMATIC DATA FROM SECONDARY SOURCES

The Jahanabad district by and large is homogenous. It is of moderate type characterized by quite hot summers to moderately cold winters. The summer begins in April and peaks in June/July with the temperature soaring up to 43 °C till the moisture laden monsoon wind bring some much-needed relief to the parched fields. The rains last through August & September and continue into early October.The rain in Jahanabad falls mostly in the winter, with relatively little rain in the summer. The average day temperature generally ranges from 21.1 ºC in January to 38.7 ºC in May and night temperature from 7.3 ºC in December to 27.7 ºC in June. About 1313 mm of precipitation falls annually. The timely and well-distributed rainfall during Kharif and Rabi has a deciding influence on the land use and cropping pattern of the district.

4.8 SOCIAL INFRASTRUCTURE AVAILABLE

Mine lease area is within 25 Km from Jahanabad town. Detail of Social Infrastructure for each ghat attached in **Annexure II.**

5 PLANNING BRIEF

5.1 Planning Concept

Mining will be done as per the guidelines of Bihar Mineral Policy, and guidelines of Bihar Minor Mineral Concession Rules (amended thereof)

This is an open-cast mining project. Excavation of minerals will be carried out only up to a depth of 3 meter and 5 meter of safety zone will be left all around the lease area. Thus the lease area falling within this stability zone will be left as no mining area.

5.2 Population projection

The project will employ most of the workers from nearby villages except for supervisory staff. Thus there will no increase in population due to the project. However, few people from other area may migrate in this area for employment directly and indirectly for business opportunities.

Population projection as per last three decades population growth rate and addition in the existing population by the proposed project will be included in final EIA.

5.3 Land use planning (Break up along with green belt, etc.)

Mining will be done in slices starting from the top most level progressively advancing downwards. The area so excavated will get filled up due to sediment inflow during monsoon.

Plantation will be done near the Gram Panchayat or road sides in consultation with the local authorities/Government body. It is not feasible to plant trees in the lease area. Native plant / tree species will be planted in consultation with gram panchayat and local forest officials.

5.4 Assessment of Infrastructure Demand (Physical & Social)

Infrastructure like evacuation road, site services will only be required. Only local villagers from nearby villages will be employed for the mining activity. Thus no housing facility is proposed.

5.5 Amenities/Facilities

The following facilities/amenities will be extended by the mine management:

- Direct and indirect Employment, most of which most will be from nearby villages depending upon the suitability of persons required for the job.
- Arrangements for safe and healthy working conditions & temporary rest shelters.

- Provision of Drinking water.
- Provision of PPE.
- First-Aid facilities and Health check-up camps for the workers.
- Conducting medical camps for workers and nearby villagers at regular interval.

6 PROPOSED INFRASTRUCTURE

6.1 Industrial Area (Processing Area)

No industrial area is proposed.

6.2 Residential Area (Non Processing Area)

As the local people will be given employment, no residential area/ housing are proposed.

6.3 Green Belt

Plantation will be done in the 33% area of the total lease area which will be 105.24 Ha .Planation of approx. 8416 numbers of tress will do in every year. It is proposed to plant local trees along haul road and in Gramm panchyat of villages in consultation with the local authority/ Govt. body.

The project site is located in North-east alluvial subzone of Middle Gangetic Plains agro-climatic zone of India. The region is characterized by Dry sub humid to moist sub humid climate with a normal rainfall of 1470 mm. The below list is suggested trees and shrubs for greenbelt purpose.

S.No.	Common name	Hindi name	Binomial name	Family	Sensitive/ Tolerant	Height (M)	Regeneration BY	Flowering season	Crown shape	Crown surface area (M^2)	Leaf Area (CM^2)	Stomatal index
1	Indian Lilac	Nim	*Azadirachta indica* A. juss.	Meliaceae	Tolerant	20	By Seeds	Jan - March, Aug. - Sept.	Spreading	300445.30	83.89	29.2
2	Mysore gum	Safeda	*Eucalyptus hybrid*	Myrtaceae	Tolerant	20	By seeds	Feb. - April, Oct.- Dec.	Conical	50047.33	50.37	12.91
3	Devil Tree	Chattiyan	*Alstonia scholaris* (linn.)R. Br.	Apocynaceae	Tolerant	15	By Seeds	Dec - Mar.	Round	241680.50	52.31	15.23
4	Custard apple	Seetaphal	Anona swuamosa Linn.	Anonaceae	Tolerant	10	By Seeds	March - July extended upto sept.	Round	2178.21	53.86	26.19
5	Bullock's	Luvuni, nona	*Anona reticulata*	Anonaceae	Tolerant	10	By Seed	June.	Round	2017.44	50.91	17.24

S.No.	Common name	Hindi name	Binomial name	Family	Sensitive/ Tolerant	Height (M)	Regeneration BY	Flowering season	Crown shape	Crown surface area (M^2)	Leaf Area (CM^2)	Stomatal index
	Heart		Linn.				s					
6	Indian Gum-Arabic-tree	Babul	*Acacia nilotica* (Linn) Willd.	Mimoseae	Tolerant	8	By Seeds.	Aug-JAN.	Spreading	8293.74	135.7	11.23
7	Mulberry	Tut	*Morus alba* Linn.	Moraceae	Sensitive	8	By Seeds, Cutting,	Feb.-June	Oblong	1047.62	285.3	17.4
8	China Rose	Gurhal	*Hibiscuc rosa-sinensis* Linn	Malvaceae	Tolerant	3	By Cutting	Throughout the year	Round /Oblong	61.47	44.7	23.32
9	Bougainvillea	Kagji Phul	*Bougainvillea spectabilis* Willd	Nyctaginvillea	Tolerant	8	By cuttings	Through the year	Oblong/ Round	939.25	33.15	32.53
10	The castor	Erandi	*Ricinus communis* Linn	Euphorbiaceae	Tolerant	6	By seeds	Sept - Oct	Oblong	942.56	243.5	15.71

Source: Guidelines for developing Greenbelts, CPCB-2007

6.4 Social infrastructure

- Road facility (existing roads will be maintained regularly)
- Employment opportunity (733 Workers)
- Medical camps
- Social awareness camps,
- Donations to schools
- Secondary employment opportunities
- Formation of self-help groups for the women in nearby villages

6.5 Connectivity

Lease area is well connected to an un-metalled road which further joins the respective metaled roads. Details of connectivity from each Ghats are given in **Annexure II.**

6.6 Drinking Water Management

Water required for drinking purpose will be obtained through tankers/or by private tankers.

6.7 Sewerage System

No sewerage system is proposed. However for sanitation purpose soak pits are proposed to be made in every Ghats.

6.8 Industrial Waste Management

Not applicable

6.9 Solid Waste management

Clay/silt sieved from the excavated minerals will be used for plantation, filling low lying area and for spreading in the fields.

6.10 Power Requirement & Supply/Source.

All the activities will be carried out using diesel based machines. The material will be excavated and loaded directly into tractors by the workers themselves. The operation will be done only from sun rise to sun set. So there is no power requirement for the mining activity.

7 REHABILITATION AND RESETTLEMENT (R&R) PLAN

The mine area is inactive channel of river bed, so rehabilitation and resettlement plan is not required

8 PROJECT SCHEDULE & COST ESTIMATES

8.1 Likely date of start of construction and likely date of completion.

The project will commence once Environmental Clearance and other necessary certificates are obtained from the respective departments.

8.2 Estimated project cost along with analysis in terms of economic viability of the project

Sr. No.	Description	Cost in Lakhs Rs.
1	Equipment's & Machineries and site development	60.0
2	Manpower	40.0
2	Haul road Maintenance & Site amenities	45.0
3	Environnemental Protection	35.0
4	Miscellaneous	15.0
TOTAL		**190 Lakhs**

The total cost of project would be around Rs**. 190 Lakhs**

9.0 ANALYSIS OF PROPOSAL (FINAL RECOMMENDATIONS)

The Project will bring economic benefits to the state by the way of Royalty for mineral.

Achieving a huge infrastructure as being envisaged by Government of India particularly in road and housing sector requires basic building materials. 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 available only from such mining. Sand excavated is in high demand at the local market for real estate industry.

This project operation will provide livelihood to the poorest section of the society/economically backward population and tribal in the area. It provides employment to the people residing in vicinity directly or indirectly. The mine management will also help nearby villages by providing aid to school, conducting medical and social awareness camps, helping in formation of self-help groups, etc. Thus the project will bring about socio-economic improvement of the area and will prove beneficial to the area.

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