

PREFEASIBILITY REPORT

1. Executive Summary:

The economy of India is the eleventh largest in the world by nominal GDP and the third largest by purchasing power parity. The primary reason for the economic growth can be attributed to the growth in infrastructural facilities such as roads, highways & buildings. Infrastructural growth is directly proportional to the availability of raw materials such as soil, stone, sand etc. With the growing infrastructural requirement of the India, the demand of raw materials has increased geometrically. The soil is required in various construction activities and being used to fulfill the infrastructural demand. As mentioned above, proposed soil mining will be done for filling purpose.

1.1 Conditions Needed for Soil making:

The minimum conditions necessary to begin a Soil making production are as follows:

1.1.1 Materials:

The following materials required for soil will be used in filling or leveling purposes for approach to Construction work, Road filling, brick earth etc. Work proposed is mainly for soil mining business Construction of Railway BG formation including side drains, retaining wall and other protection works, minor, major and important bridges, Doubling of BG Railway track between Katihar and Kumedpur. by Siddheswar Das at Village- Babupur, Post- Mahadevpur, P.S- Prampur, District- Katihar(Bihar).

2. Introduction of the Project:

Soil mining by Siddheswar Das at Khata no. 81, 92., and Khasra No- 5, 7, 51, 52, 2388, 2389, 2554, 2555, 2591, 2601. Village- Babupur, P.O- Mahadevpur, P.S- Pranpur, District- Katihar (Bihar). The total mine lease area of the proposed Soil clay mining project is 6.32 Acre or 2.55 Ha. As per EIA Notification 14th September, 2006 & O.M No-L-11011/47/2011-IA.II (M) dated 24th June 2013 the proposed project falls under Schedule 1(a) & Category "B-2". As per MOEF&CC Office Memorandum no. L-11011/47/2011-IA.II (M) dated 24th June 2013 and MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE NOTIFICATION Dated. 15th January, 2016. Following conditions shall be followed during the mining activity:

The proposed Soil clay mining project is an open cast, semi mechanized process which will be carried out with the help of Excavator /JCB.

No drilling and blasting are proposed for Soil clay mining activity.

The borrowing/ excavation activity will be restricted up to maximum depth of 1.5 meter below general ground water level or up to 2 meter above the ground water table whichever comes first.

No Mining activity will be carried out with in 60 meter periphery of any civil structure.

The break-up of proposed Soil clay mine lease area is given as Table No. 1

	Khata No.	Khasra No.	Area (Acre)	Latitude	Longitude
Location & Revenue Details of Mining Site	81, 92	5, 7, 51, 52, 2388, 2389, 2554, 2555, 2591, 2601.	6.32	25°26'17.42"N	87°45'28.97"E
				25°26'20.63"N	87°45'33.06"E
				25°26'14.72"N	87°45'43.65"E
				25°26'12.09"N	87°45'42.28"E
				25°26'11.16"N	87°45'39.77"E
				25°26'7.42"N	87°45'45.59"E
				25°26'4.05"N	87°45'42.67"E

2.1. Identification of project and project proponent:

The project comprises of Soil mining at Khata no. 81, 92, and Khasra No- 5, 7, 51, 52, 2388, 2389, 2554, 2555, 2591, 2601. Village- Babupur, P.O- Mahadevpur, P.S- Pranpur, District- Katihar (Bihar). The total mine lease area of the proposed Soil clay mining project is 6.32 Acre or 2.55 Ha to Sri Siddheswar Das.

2.2. Brief description of nature of the project:

The project comprises of Soil mining at Khata no. 81, 92, and Khasra No- 5, 7, 51, 52, 2388, 2389, 2554, 2555, 2591, 2601. Village- Babupur, P.O- Mahadevpur, P.S- Pranpur, District- Katihar (Bihar). The total mine lease area of the proposed Soil clay mining project is 6.32 Acre or 2.55 Ha to Sri Siddheswar Das.

The total soil will be used for business purpose. Work proposed is mainly for soil mining business for Construction work, Road filling, brick earth etc.

Table 1 shows the mine lease area along with its dimensions

Sl. No.	Village	Area
1.	Babupur	6.32 Acres.

2.3. Need for the project and its importance to the country:

The production of Soil Clay will benefit to the state in the form of royalty. Apart from this project operation will provide employment directly and indirectly to the people residing in vicinity, thus improving the Socio-economic status of the area. The demand of clay Soils in India due to increasing urbanization many houses and industries to be constructed as per the requirement of the people.

2.4. Demand – supply gap

The growth in India's economy and population, coupled with urbanization, has resulted in an increasing demand for residential, commercial, industrial, and public buildings as well as other physical infrastructure. Building construction in India is estimated to grow at a rate of 3.5% per year. The building stock is expected to multiply five times during this period, resulting in a very large increased demand for building materials and filling land.

2.5. Imports vs. Indigenous Production

There will be no imports for the proposed project. All production of Soil making is earmarked for the indigenous demand/ local market.

2.6. Export Possibility

The present project does not seek the export possibility.

2.7. Domestic/Export Markets

The soil will be only for domestic market.

2.8. Employment generation (direct and indirect) due to the project.

The proposed Soil making activity is envisaged to improve the socio-economic condition on a micro-economic scale by generating local employment 25 direct and about 5 indirect.

3. Project Description:

3.1. Type of project including interlinked and interdependent projects, if any.

The present project is a fresh application for environmental clearance and not Interlinked or interdependent. The land agreement area of proposed soil mining is 6.32 acres. which is Situated at the proposed soil mining at the proposed soil mining at Village- Babupur, P.O- Mahadevpur, P.S- Prampur, District- Katihar (Bihar).

3.2. Location (map showing general location, specific location, and project boundary & project site layout) with coordinates:

The mining area is located at the proposed soil mining at Village- Babupur, P.O- Mahadevpur, P.S- Prampur, District- Katihar (Bihar).

Enclosed as Figure-1: Location Plan

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

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

3.4. Project description with process details

The proposed project is to mine Soil Clay from plot(s) under agreement sustainably and scientifically. Mining will be opencast and semi mechanized along the plot(s) keeping the nearby plot(s) unaffected. Following geo-scientific methods are proposed to carry out the activity:

- Mining will be confined to extraction of Soil Clay in its existing form from the allotted plot(s) only.
- Mining of Soil Clay from the allotted plot(s) will be restricted to a maximum depth of 2 m from the surface in proper bench form as per MMR-1961.
- No drilling and blasting is proposed.
- Approximately **44,752** tonnes or **38,250** cum minor mineral will be extracted.
- No mining activity will be undertaken during the monsoon season.
- In order to avoid environmental pollution or any accidental hazards, the mining activity will be restricted to daytime only.
- The operation will remain manual, using tools like shovel, spade, sieve & machine etc.
- During the agreement period, the deposit will be worked from the top surface to 2m

3.5. Resource optimization/recycling and reuse envisaged in the project, if any, should be briefly outlined.

Not envisaged.

3.6. Availability of water its source, energy/power requirement and source should be given.

There will be very little requirement of water to carry out operations as it will be done semi mechanized. The water will be required either for drinking purposes. It is projected that not more than 25 laborers will be required for the proposed project. The total water requirement will be 2.0 KLD. Drinking water requirement for not more than 25 workers would be 3.0 KLD, which will be met by nearby existing bore wells.

All the activities will be carried out manually. The operation will be done in day time.

3.7. Quantity of wastes to be generated (liquid and solid) and scheme for their management/disposal.

The entire mineral extracted is saleable. The laborers from nearby villages will be hired to carry out work in day time only, hence there will be no or very less waste is expected to generated. No liquid effluents will be generated at site.

4. Site Analysis

4.1. Connectivity

Connectivity details are given in Table-3.

Table3: Connectivity details from Proposed project site:

Nearest Railway Station	Labha Railway Station is approx. 1.35 Km in South-West direction.
Nearest Airport	Patna Airport at 268.50 km in West direction
Nearest Highway	SH-98 at 17.30 km in North direction

4.2. Land form, land use and land ownership

The land parcel on which has been land agreement to Sri Siddheswar Das for soil mining.

4.3. Topography

Katihar is one of the 38 districts in Bihar. It is one of the 4 districts of purnea division. The head quarter of the district is Katihar. The district Katihar is situated in the plains of North, Bhagalpur district in the west, sahebganj district in the south and west Bengal in the East. It was one of the subdivisions of the old purnea. Paddy is the main agricultural crops. Jute and paper Mills is the main industry. Mahananda and Ganga are the main rivers. Katihar district is situated in the plains of North Eastern part of Bihar State, surrounded by Purnea district (Bihar) in the north and the west, Bhagalpur district (Bihar) and Sahebganj district (Jharkhand) in the south and Malda district and Uttar Dinajpur district (Paschim Bengal) in the east.

The topography of the Katihar district has been very much affected by the floods of river Ganges, Mahananda and Koshi. The district has alluvial soil and due to deposit of sand-silt by rivers and soil in southern and the western part has become sandy. The land is slightly higher in the North and gradually slopping towards the south. The slop is gradual. There is no hill in the district except a small block in Manihari Block which is composed of nodular lime stone.

4.4. Existing land use pattern (agriculture, non-agriculture, forest, water bodies (include 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.

Not applicable

4.5. Existing Infrastructure

The applied area falls Village Babupur which is about 800m in South-West direction. SH-98 at 17.30 km in North direction. Labha Railway Station is approx. 1.35 Km in South-West direction.

4.6. Soil classification

Thus Soil is the backbone of agricultural and industrial development. Soil has a number of characteristics, which may be regarded as the aggregate of the physical, chemical and biological properties. The Bihar plane consists of a thick alluvial mantle of drift origin overlying in most part. The siwalik and older tertiary rocks. The soil is mainly young loam rejuvenated every year by constant deposition of silt, clay and sand brought by different streams. This soil is deficient in phosphoric acid, nitrogen and humus, but potash and lime are usually present in sufficient quantity.

There are three major types of soil in Bihar:

- ✓ Piedmont Swamp Soil - found in northwestern part of west Champaran district.
- ✓ Terai Soil – found in northern part of the state along the border of Nepal.
- ✓ The Gangetic Alluvium – the plain of Bihar is covered by gangetic alluvium (both new as well as old).

The district has alluvial soil. The soil in the southern and western part of the district is sandy in nature. Overall the soil in the district is no calcareous and non-saline in nature and is a mixture of clay, sand and silt in varying proportions.

4.7. Climate data from secondary sources

The district experiencing three seasons viz., summer from March to early June, rainy from mid June to September end, and winter from November to February. Mean daily maximum ambient temperature in summer is close to 43°C. The mean daily minimum ambient temperature in winter is 8°C. The relative humidity is generally above 70% in major part of the year.

Rainfall in the district is mainly by southwest monsoon active from mid June to September end. The average annual rainfall for the year 2004 is 2194 mm. Nearly 85% of the annual precipitation occurs during monsoon period.

4.8 Social infrastructure available

The proposed project is Village- Babupur, P.O- Mahadevpur, P.S- Pranpur, District- Katihar (Bihar). Mau is a town having all the basic social and civic amenities. Some of the Social amenities and basic civic amenities are as follow:

Hospital :

The nearest primary health centre is in Labha. The nearest hospital is at Katihar.

Education:

School is facilities upto Primary School is available in Tarapur. College Education upto Degree level is available at Harishchandrapur College, Harishchandrapur.

5. PLANNING BRIEF

5.1.Planning concept (type of industries, facilities and transportation etc.) town and countryplanning/development authority classification.

The proposed Soil mining is at Village- Babupur, P.O- Mahadevpur, P.S- Pranpur, District- Katihar (Bihar). The mine area is proposed on Khata no. 81, 92, and Khasra No- 5, 7, 51, 52, 2388, 2389, 2554, 2555, 2591, 2601 of area: 6.32 Acre or 2.55 Ha. Mining will be done for a period of 1 year. Mining will be done after getting environmental clearance from DEIAA, Katihar (Bihar). Work proposed is mainly for soil mining business for Construction work, Road filling, brick earth and etc.

5.2. Population Projection

The project will employ most of the workers from nearby villages. Only supervisory staff will be hired from outside. There will not be any increase in population due to the project. However, few people from other area may migrate in this area for business opportunities.

5.3.Land use Planning (Breakup along with green belt etc.)

The soil mining will be carried out on an area 6.32 Acre or 2.55 Ha Green belt will be developed in an area identified by the local gram panchayat.

5.4. Assessment of infrastructure demand (physical & social)

5.4.1. Physical

Conditions of roads are moderate and needs to upgrade.

5.4.2. Social

- ❖ The good numbers of educational facilities are available in the study area.
- ❖ Medical facilities are lacking.

5.5.Amenities/Facilities

The mine site office, first aid room & rest shelter will be established in the land agreement area. Clean drinking water will be provided. The Portable toilets will be provided separately for males and females.

6. Proposed Infrastructure 6.1.Industrial area (processing area)

Not applicable.

6.2.Residential area (non processing area)

Not applicable.

6.3. Green belt

It is proposed to plant trees along the village roads and other area in consultation with local gram panchayat. The details of the plantation are as given on the tabular form:

Year	Area (ha)	No. Samplings
First Year	0.25	25
Total	0.25	25

6.4. Social Infrastructure

No social infrastructure is proposed in present project.

6.5. Connectivity (Traffic and transportation road/rail/metro/water ways etc.)

Labha Railway Station is approx. 1.35 Km in South-West direction The nearest road is N.H.-31 Road 800 m in South-West Direction.

6.6. Drinking water management (source & supply of water)

In order to meet the drinking water requirement for site workers water from existing bore wells will be used.

6.7. Sewerage system

The domestic effluent from the clay/soil mining site and rest shelter will be generated, which will be managed through soak pit.

6.9. Solid waste management

Solid waste generated will be of domestic in nature and separate bins will be used for collection of organic, inorganic and inert waste. No littering will be allowed in the mine site.

6.10. Power requirement & supply/source

The mine would be semi mechanized. Electrical power will be required only at the Soil site in the office and will be obtained from the state electricity board. Transportation will be done through dumpers or tractor/trucks operating on diesel.

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 laborers (a brief outline to be given).

Since the project resettlement and rehabilitation is not applicable.

8. Project schedule & cost estimates

8.1. Likely date of start of construction and likely date of completion (time schedule for the project to be given)

The project activity will be taken up in parallel along with the opening of mine, after the Environmental Clearance is granted. The production will commence within two months of the Environmental Clearance.

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

The project proponent will incur a total cost of Rs. 16.35 lakhs.

Sr. no.	Description	Cost in Rs.
1	Land cost expenditure	1400000.00
2	Cost of infrastructure, Equipment, vehicles, Manpower, machineries, etc.	100000.00
3	Environmental protection (check dam etc)	100000.00
4	Socio-economic development	35000.00
	TOTAL	1635000.00

9. 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 project will bring economic benefits to the state by the way of royalty for mineral and people by the way of direct (25 laborers) and secondary employment (5 persons for transport) opportunities. The mine management will be helping nearby villages by providing aid to school, conducting medical and social awareness camps, helping in formation of self-help groups etc especially keeping in the view the tribal and economically backward population in the area as part of its corporate social responsibility. Thus the project will bring out socio- economic improvement of the area and will prove beneficial to the area.

Environment protection and its preservation is today the major concern all over the world. The environment proves that all the human activities on this earth are inter-connected, so much so that an environmental damage in the boundaries of one state has trans-border ramifications. Environmental destruction and pollution has seriously threatened the human life, health and livelihood.

Understanding the need to give back to the society, DEIAA, Katihar (Bihar) has made it mandatory to invest 2.5% of total project cost in CSR activities. In the present case, the project proponent have decided to invest their Rs. 40875/- (2.5% of 16.35 Lacs) in various activities such as:

1. Provision of private or community latrines in the village.
2. Betterment of village roads.
3. Medical facilities or checkups in the village.

These activities shall be in consultation with the local authority and shall be need based, so as to provide maximum benefit to the locals.