Form 1

S. No.	Item	Details
1.	Name of the Project	Brick earth Mine, Village-Narayanpur, Udaha & Khaira, Tehsil- Ghanghata, District Sant kabir nagar, by M/s Star Bricks Field
2.	S. No. in the schedule	1 (a)
3.	Proposed Capacity/area/ Length/tonnage to be handled/ command area/ lease area/ number of wells to be drilled.	Proposed production capacity- 6925m^3 per year Total area-2.13713 ha.
4.	New/Expansion/Modernization	New
5.	Existing Capacity/Area etc.	New
6.	Category of project i.e. 'A' or 'B'	B_2 (Area less than 5 ha)
7.	Does it attract general conditions? If yes, Please Specify.	No
8.	Does it attract the specific condition? If yes, please specify.	No
9.	Location	Village- Narayanpur, udaha & Khaira Tehsil- Ghanghata, District- Sant kabirnagar,
	Latitude and Longitude	**Latitudes**: 26°32'43.92"N **Longitude**: 82°56'04.05"E
a.	Plot/survey/Khasra No.	Gata No.-**657sa, 658 sa, 593/2, 75, 91ka, 68, 148, 129, 133, 135, 110, 54, 70, 36, 33, 259, 252, 327kha, 328 & 147**
b.	Village	Narayanpur, udaha & Khaira

c.	Taluka	Ghanghata
d.	District	Sant kabir nagar
e.	State	Uttar Pradesh
10.	Nearest Railway station/ airport along with distance in kms.	Khalilabad railway station-25 km N
11.	Village panchayats, Zilla parishad, Municipal corporation, local Body(complete postal addresses with telephone nos. to be given)	Sant kabir nagar
12.	Nearest Town, city, district Headquarters along with distance in kms.	Ghanghata
13.	Name of the applicant	M/s Star bricks Field
14.	Registered Address	Udaha, Tehsil ghanghata & District Sant kabir nagar
15.	Address for correspondence:	Udaha, Tehsil Ghanghata & District Sant kabir nagar
a.	Name	Proporietor- Jamil ahmed
b.	Designation(Owner/Partner/CEO)	Proporietor
c.	Address	As Above
d.	Pincode	272162
e.	E-mail	
f.	Telephone No.	-
g.	Fax. No.	--

16.	Details of alternative Sites examined, if any. Location of these sites should be shown on a topo sheet.	NA
17.	Interlinked Projects	NA
18.	Whether separate application of interlinked project has been submitted?	NA
19.	If Yes, date of submission	NA
20.	If No, reason	NA
21.	Whether the proposal involves approval/ clearance under: if Yes, details of the same and their status to be given. (a) The forest (conversation) Act, 1980 ? (b) The wildlife (Protection) Act, 1972 ? (c) The C.R.Z. notification, 1991 ?	NA
22.	Whether there is any government order/ policy relevant / relating to the site?	NA
23.	Forest Land involved(Hectares)	There is no forest land within the leasehold area.
24.	Whether there is any litigation pending against the project and/ or land in which the project is propose to be set up? (a) Name of the court (b) Case No.	NA

	(c) Orders/ directions of the court, if any and its relevance with the proposed project.	

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	Yes	The total area for Brick Earth mine is 2.13713 ha. The area proposed for mining mainly comprises of low fertile land. After reaching ultimate depth the pit area will be restored to existing land use.
1.2	Clearance of existing land, vegetation and buildings?	No	There is no vegetation at site.
1.3	Creation of new land uses?	No	No
1.4	Pre-construction investigations e.g. bore houses, soil testing?	No	NA
1.5	Construction works?	No	NA
1.6	Demolition works?	No	No

1.7	Temporary sites used for construction works or housing of construction workers?	No	No, as the labours shall be hired from local villages
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations.	No	NA
1.9	Underground works including mining or tunneling?	NA	This is an open cast mining there will be no underground workings.
1.10	Reclamation works?	Yes	Reclamation of pit area will be undertaken after reaching ultimate depth
1.11	Dredging?	No	NA
1.12	Offshore structures?	No	NA
1.13	Production and manufacturing processes?	Yes	Proposed Production of clay is 6925m^3/year. It is open cast mining. Details of mining method is given in Pre feasibility report
1.14	Facilities for storage of goods or materials?	Yes	Excavated clay will be used for brick manufacturing and the bricks are temporarily stored on the mine site before transportation to brick kiln site. Therefore temporary storage site will be developed.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	No	Upper surface of average 0.2m thickness topsoil will be carefully scrapped and stored at earmarked soil dumping site. The stored soil will be used for reclamation, backfilling and restoration of land.
1.16	Facilities for long term housing of operational workers?	No	No provision of accommodation since labours will come from local villages.
1.17	New road, rail or sea traffic during construction or operation?	No	No new rail, road will be expected during construction & operation, since the mining site is proximal to brick kiln site and no use of public road during transportation of bricks from project site to brick kiln site. The available infrastructure are sufficient to meet

			the requirement
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	No new rail, road will be expected during construction & operation, existing roads & infrastructure is sufficient to access the project site.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	No closure or diversion in existing transportation
1.20	New or diverted transmission lines or pipelines?	No	No transmission line or pipeline will be made.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Proposed mine will not impact on surface hydrology. The mining has been proposed only up to 2.0 m below ground level, hence no impact on hydrology is anticipated
1.22	Stream crossings? Abstraction or transfers of water form ground or surface waters?	No	No stream crossing.
1.23	Changes in water bodies or the land surface affecting drainage or run-off?	No	The monsoon water gets drained off through the natural valleys. There is no seepage water and there will be no effect on water table. To prevent erosion of topsoil proper benching will be done and during monsoon, temporary wall will be constructed around the base of the dumps to prevent sliding and wash off soil.
1.24	Transport of personnel or materials for construction, operation or decommissioning?	Yes	All the personnel or materials for mining operation will be local.
1.25	Long-term dismantling or decommissioning or restoration works?	No	No

1.26	Ongoing activity during decommissioning which could have an impact on the Environment?	No	NA
1.28	Influx of people to an area in either temporarily or permanently?	Yes	It will be a manual open-cast mine and will employ only 28 employee. No influx of people for employment is anticipated
1.29	Introduction of alien species?	No	None
1.30	Loss of native species or genetic diversity?	No	No species exist at the site. Therefore, no such loss is anticipated.
1.31	Any other actions?	No	NA

2. **Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are nonrenewable or in short supply):**

S.No.	**Information/Checklist confirmation**	**Yes/No**	**Details thereof (with approximate quantities /rates, wherever possible) with source of information data**
2.1	Land especially undeveloped or agricultural land (ha)	NO	The lease area come under low fertile agricultural land
2.2	Water (expected source & competing users) unit: KLD	Yes	The water use will be only for domestic, drinking & sprinkling purpose. The water requirement for domestic and drinking purpose is approx. 0.9 KLD. About 1.5 KL per day water will be required for sprinkling and 0.5 KLD for horticulture.
2.3	Minerals (MT)	Yes	Clay as a minor mineral will be used for manufacture of bricks.
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	NO	NO

2.5	Forests and timber (source – MT)	No	NO
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	The mining activity is manual opencast mining, no heavy machinery will be deployed.
2.7	Any other natural resources (use appropriate standard units)	No	NA

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

.S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, 3. Use, storage, transport, handling or production of substances or materials, which wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	Yes	Required quantity of diesel will be purchased from day to day basis from nearby outlets. Neither diesel nor used oil will be stored onsite.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	This is a small scale mining activity only small quantity of domestic waste is anticipated to be generated which will discharged on composting site. However suitable drainage and waste management measures will be adopted for prevention of diseases.
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	Mining is proposed in agricultural land of low fertility. Therefore, it is expected that after commencement of this activity, benefits will be more than the losses. The direct and indirect employment will enhance the income level of local employee and hence improve the socioeconomic

			conditions of the area.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	None
3.5	Any other causes	No	Mining Operations mainly contribute to generation of dust for which sprinkling of water is proposed.

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	Yes	The solid waste generated will be topsoil and stacked at the earmarked soil dumping site.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Small quantity of domestic solid shall be generated & disposed on composting site outside leasehold area.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	No storage of hazardous material will be done. The used oil generated by service/repair of vehicles and waste oil will be sold to local vendors/repair shops.
4.4	Other industrial process wastes	No	NA
4.5	Surplus product	No	NA
4.6	Sewage sludge or other sludge from effluent treatment	No	NA

4.7	Construction or demolition wastes	No	NA
4.8	Redundant machinery or equipment	No	NA
4.9	Contaminated soils or other materials	No	NA
4.10	Agricultural wastes	No	NA
4.11	Other solid wastes	No	NA

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S.No.	**Information/Checklist confirmation**	**Yes/No**	**Details thereof (with approximate quantities /rates, wherever possible) with source of information data**
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	The emissions from combustion of fossil fuel will be from use of diesel operated vehicles.
5.2	Emissions from production processes	Yes	Dust is likely to be generated from the mining process and transportation, for which sprinkling will be done so that the impact on the environment will be minimal.
5.3	Emissions from materials handling including storage or transport	Yes	Dust will be generated from material handling and transportation of bricks from project site brick kiln site.
5.4	Emissions from construction activities including plant and equipment	NO	It is a brick earth mining project which is a small scale mining activity, no permanent construction activity will be done
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Dust is likely to be generated form mine that will be controlled through periodical sprinkling. Mobile toilets will be provided for disposal off sewage.

5.6	Emissions from incineration of waste	No	No incineration will be done.
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	No such activity will take place.
5.8	Emissions from any other sources	No	None

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	Mining operations will be practiced by open cast, manual means, no requirement of heavy mining equipments so no loud noise will be generated during operation of mine. Transportation of bricks from project site to brick kiln will be done by mule carts.
6.2	From industrial or similar processes	No	None
6.3	From construction or demolition	No	NA
6.4	From blasting or piling	No	NA
6.5	From construction or operational traffic	No	NA
6.6	From lighting or cooling systems	No	None

6.7	From any other sources	No	None

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	Yes	Conveyance vehicles will get repaired from repair shops in Khalilabad. Used oil is the only hazardous material proposed to be generated from the vehicles. No storage of this liquid waste will be done onsite, the waste oil will be sold to authorized vendors/recyclers..
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	No discharge of sewage on mining site will be done, mobile toilets facilities will be provided.
7.3	By deposition of pollutants emitted to air into the land or into water	Yes	Dust is likely to be generated for which water sprinkling shall be done. In addition to this plantation will be undertaken along road side to minimize the impact on environment.
7.4	From any other sources	No	NA
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	None

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment.

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data

8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	No	All appropriate measures will be taken as described in mining and environment management plan during operations. No storage of hazardous material will be done.
8.2	From any other causes	No	NA
8.3	Could the project be affected by natural disasters causing environmental damage (e.g? floods, Earthquakes, landslides, cloudburst etc)?	No	There is a less possibility of earthquake as the area lies in seismic zone IV. Mining depth is only 2.0 meters, however to avoid soil erosion proper benching will be done to maintain slope.

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality.

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
9.1	Lead to development of supporting facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: •Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • Housing development • Extractive industries • Supply industries • Other	Yes	Mining will lead to development of transportation, repair & maintenance shops etc.
9.2	Lead to after-use of the site, which could have an impact on the environment	Yes	The ultimate land-use proposed the same as existing one. After mine closure the pit will be restored to its original land use

9.3	Set a precedent for later developments	No	NA
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	NA

(III) Environmental Sensitivity

S. No.	Areas	Name/Identity	Aerial distance (within 15 km) from Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Nil	
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Nil	
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Nil	
4	Inland, coastal, marine or underground waters.	Nil	
5	State, National boundaries	Nil	
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	SH-72	2.5 K m N
7	Defence installations	Nil	
8	Densely populated or built-up are	Nil	

9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	School Post Office	1.0Km S 10Km S
10	Areas containing important, high quality or scarce resources *(Ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	NA	
11	Areas already subjected to pollution or environmental damage. *(Those where existing legal environmental standards are exceeded)*	NA	
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (*Earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions*)		There is a less possibility of earthquake as the area lies in seismic zone IV.

(IV) Proposed Term of Reference for EIA Studies- Not Applicable

"I hereby give undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost."

Date: 25.10..2019

Place:- Lucknow

M/s Star Brick Field

Jamil ahmed

PRE FEASIBILITY REPORT

1. EXEXCUTIVE SUMMARY

The present proposal for a mining of brick earth in villages Narayanpur, Udaha & Khaira, Tehsil – Ghanghata, District- Sant kabir nagar, (U.P.) for lease area 2.13713ha. by M/s Star bricks field, District Sant kabir nagar. The Gata Nos. of lease area are 657sa, 658 sa, 593/2, 75, 91ka, 68, 148, 129, 133, 135, 110, 54, 70, 36, 33, 259, 252, 327kha, 328 & 147. The project proponent intends to excavate clay for brick making for their brick kiln established near the proposed mining site.

The Soil mining lease area is located at village Narayanpur, Udaha & Khaira, Tehsil Ghanghata, District:- Sant kabir nagar, Uttar Pradesh. No ecological Sensitive zone that lies within 10 Km radius of the proposed soil mining project activity.

As per the EIA Notification 2006 & OM dated 12.12.2018 the project will be considered as a Category 'B-2' project.

It is a new mine & being applied for environmental clearance. The proposed production is 6925m^3 per year.

The excavated quantity of clay will be used to make about **35 Lakh** bricks per Year.

No heavy earth moving machinery/equipments will be deployed. Only semi mechanized mining will be done.

The vehicle for transportation will be hired from local villages. The water tanker will be hired for sprinkling purpose. On-call ambulance facility will also made available for proper treatment of any mishap during mining activity.

The proposed production of clay is 6925 m^3 per year that will be use used in manufacturing of bricks and transported from the mining site to brick kiln. The manufactured bricks will be transported through mule carts from mine to brick kiln.

There will be very small quantity of domestic waste in terms of food and packaging materials generated by workers. This waste will be disposed off on composting site. No servicing of vehicles will be done onsite hence no onsite generation of used/waste oil.

The requirement of water is given above under raw materials. About 1.5 KLD water will be required for sprinkling on haul road for suppressing dust, 0.9 KLD for drinking, 0.5 KLD for horticulture. The mining staff/workers use water from hand pump & supplied by water tankers.

The average consumption of diesel will be about 300 liters/month during peak production.

No liquid waste is generated during the mining. No chemical or toxic effluents are made/ discharged in the area during mining operations.

The lease hold area falls in village-Narayanpur, Udaha & Khaira, from where Munderwa railway Station is 25 km N. The Narayanpur, Udaha & Khaira village is located 0.5 km away from mine site. The site is easily assessable form road.

The landform represents typical clay features suitable for manufacturing of bricks. The area of lease is 2.13713 ha. No proposal of office, workshop onsite. The mining site is adjacent to brick kiln hence all essential infrastructure facilities are already available at brick kiln site.

The mineable reserve are 34625 m^3 considering 2.0 m as depth of excavation, leaving berm, and area left in slope/safety measures.

The strength of workers will be 28 so the total drinking water requirement will be 0.9 KL/day. The drinking water is provided through Hand-pump and bore well.

No sewerage system is proposed at the mine site. However, bio-toilets will be provided for employee.

There is no habitation existing on the mining area. Land of applied area is owned by brick kiln owner himself. The entire lease area is free from forest land. The land after end of the lease period will be restored for agricultural purpose, There will be no rehabilitation and resettlement involved with the project.

The project cost is about Rs. 40 lakhs. Due to semi mechanized nature of activity the project is economically viable.

PRE FEASIBILITY REPORT

2.0: INTRODUCTION

The activities of borrowing excavation of brick earth' and ordinary earth , up to an area less than 5 ha, categorized under "B2" category subject to purpose of clay for brick manufacturing, construction of roads, embankments and not involve blasting.

Clay soils are compounds of silica and alumina. Calcareous clay have calcium carbonate & Non-calcareous typically contain feldspar and iron oxide. The silica in the clay, when fired at 900-1200^{0}C, will turn to a glassy phase. This process, called vitrification, will turn the clay to a crystalline structure. Therefore, temperature is important. If under-fired, the bonding between the clay particles will be poor and the brick will be weak. If the temperature is too high, the bricks will melt or slump.

Vitrification does not have to be complete, and does not actually occur in many of the small traditional brick making plants around the world. However, the vitrification does occur enough to give sufficient strength to the brick.

In recent years, the Environment becomes major concern for the human survival across the countries. Now-a-days intellectuals, academicians and environmentalists put their concern at all platforms for betterment of society. A systematic and multidisciplinary approach of mapping, monitoring and controlling the impact caused by the mining activities is necessary so as to understand the character and magnitude of these hazardous events

Environmental Impact Notification S.O.1533 (E), dt.14th September 2006,as amended 2009 & 2012 issued under Environment (Protection) Act 1986, has made it mandatory to obtain environmental clearance for scheduled development projects. The notification has classified projects under two categories 'A' & 'B'. Category A projects (including expansion and modernization of existing projects) require clearance from Ministry of Environment and Forest (MoEF), Govt. of India (GoI) and for category B from State Environmental Impact Assessment Authority (SEIAA), constituted by Government of India.

Ministry of Environment and Forest & Climate Change, (MoEFCC) Govt. of India vide its circular No. L-11011/47/2011-IA.II(M) dated May 18th 2012 states as under:

"In order to ensure compliance of the above referred order of the Hon'ble Supreme Court dated 27.2.2012, it has now been decided that all mining projects of minor minerals including their renewal, irrespective of the size of the lease would henceforth require prior environment clearance. Mining projects with lease area up to less than 50 ha including projects of minor mineral with lease area less than 5 ha would be treated as category 'B' as defined in the EIA Notification, 2006 and will be considered by the respective SEIAAs notified by MoEF and following the procedure prescribed under EIA Notification, 2006.".

In compliance to NGT order dated 13.09.2018 & 11.12.2018 in which it was directed to Ministry of environment, forest and climate change (MOEF & CC) to take appropriate steps to revise the procedure laid down in impugned notification dated 15 January 2016 in terms of the conformity with the letter and sprit of the directions passed by the hon,ble supreme court in Deepak Kumar Vs State Of Haryana others (2012) 4SCC 629 & also of NGT tribunal in original application no. 123 of 2014 dated 13.01.2015.

Therefore MoEF & CC issued a circular dated 12.12.2018 and accordingly as per joint meeting minutes of SEAC/SEIAA UP dated 05.02.2019 the project has comes under category B2 thus applied for environmental clearance under this category.

A prior environmental clearance granted for a specific project or activity to an applicant may be transferred during its validity to another legal person entitled to undertake the project or activity on application by the transferor or the transferee with a written "no objection" by the transferor, to, and by the regulatory authority concerned, on the same terms and conditions under which the prior environmental clearance was initially granted, and for the same validity period.

2.1 IDENTIFICATION OF THE PROJECT AND PROJECT PROPONENT

The present proposal for a mining of brick earth in village Narayanpur, Udaha & Khaira, Tehsil – Ghanghata, District- Sant kabir nagar, (U.P.) for lease area 2.13713ha. by M/s Star brick field, District Sant kabir nagar. The Gata Nos. of lease area are **657sa, 658 sa, 593/2, 75, 91ka, 68, 148, 129, 133, 135, 110, 54, 70, 36, 33, 259, 252, 327kha, 328 & 147**. The project proponent intends to excavate clay for brick making for their brick kiln established near the proposed mining site.

2.2 Brief description of the nature of the project:-

The proposed project is to mine brick clay from above mentioned plots sustainably and scientifically. Mining will be opencast and semi-mechanized method & as per mining rules keeping all the nearby plots unaffected. Following geo-scientific methods are proposed to carry out the activity:

1. Mining will be confined to extraction of Brick Clay in its existing form, from their allotted plots only.
2. Mining of Brick Clay from their allotted plot (s) will be restricted to a maximum depth of 2.0m from the surface.
3. No drilling and blasting is proposed.
4. Approximately 6925 cum/season minor mineral will be extracted.
5. No mining activity will be undertaken during the monsoon season.
6. In order to avoid environmental pollution or any accidental hazards, the mining activity will be restricted to daytime only.
7. The operation will remain Semi mechanized.

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

The production of Brick 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.

Clay/brick earth mining is small scale activity for making of bricks. Bricks are consumed in large quantities in road, building construction, and other infrastructure developmental activities. It has major role in development. The activity will also generate direct as well as indirect employment to the locals; apart from this it will earn revenue for state in terms of royalty.

2.4 Demands-Supply Gap

Brick Clay has become a very important mineral for the manufacturing of Bricks which contributes to the expansion of infrastructure in the society. With the increase of urbanization the demand for Bricks is growing in infrastructure sector in our country. Individual and private companies are increasingly demanding Brick for construction purposes and this has immense pressure on brick clay resources. This increasing demand and extraction makes this an environmental issue.

2.5 Domestic / Export Market

Due to the increased industrial and infrastructural growth of the rural and urban areas demand of Brick is very high. Construction companies and local vendors in the nearby town and cities are the potential market for the brick made up of brick clay.

2.6 Employment Generation

The proposed project will generate direct /indirect employment to the people of all class of society. During the operational phase not more than 28 semi skilled and non skilled workers will be hired. The contractors will get the direct or indirect benefit from the project activity

3. PROJECT DESCRIPTION

Type of Project

Type of project including interlinked and interdependent projects, if any

This is an independent new mining project. The proposed project is for the extraction of Brick Clay from the allotted plot(s) semi-mechanically.

3.2 Location

The Soil mining lease area is located at village Narayanpur, Udaha & Khaira, Tehsil Ghanghata, District:- Sant kabir nagar, Uttar Pradesh. No ecological Sensitive zone that lies within 10 Km radius of the proposed soil mining project activity.

As per the EIA Notification 2006 & OM dated 12.12.2018 the project will be considered as a Category 'B-2' project. A Buffer map of 05 km radius is attached as **Annexure III**.

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

Mining is site specific and feasible in the allotted area. Hence no alternative site is examined for mining.

3.4 Size or magnitude of operation

It is a new mine & being applied for environmental clearance. The proposed production is 6925m^3 per year.

The excavated quantity of clay will be used to make about **35 Lakh** bricks per Year.

3.5 Project description with process details

The proposed project is to mine Brick Clay from plot(s) by 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:

Salient Features of the Mode of Working:

- It will be opencast semi mechanized mine.
- No Drilling & blasting will be done
- Working pit in the mine will be developed by proper benching formation
- The activity will be done in single shift operation
- Excavated clay will be used onsite for manufacture of bricks
- Bricks will be stored at storage site.

No heavy earth moving machinery/equipments will be deployed. Only semi mechanized mining will be done.

The vehicle for transportation will be hired from local villages. The water tanker will be hired for sprinkling purpose. On-call ambulance facility will also made available for proper treatment of any mishap during mining activity.

PROCESS DETAILS

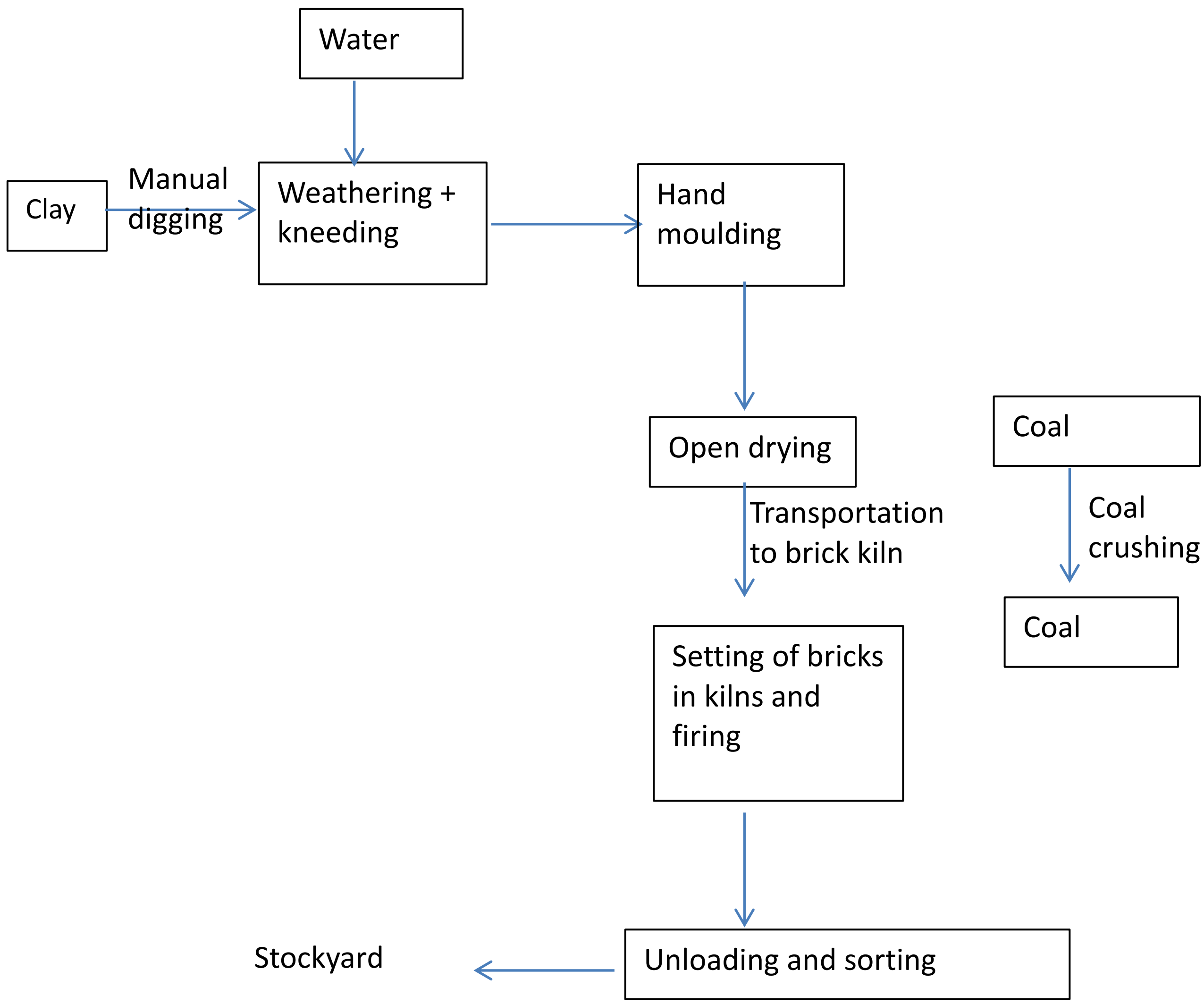
Normally, brick contains the following ingredient:

1. Silica (sand) – 50% to 60% by weight

2. Alumina (clay) – 20% to 30% by weight
3. Lime – 2 to 5% by weight
4. Iron oxide – ≤ 7% by weight
5. Magnesia – less than 1% by weight

The soft mud method is the most common, as it is the most economical. It starts with the raw clay, preferably in a mix with 25–30% sand to reduce shrinkage. The clay is first grinded and mixed with water to the desired consistency. The clay is then pressed into steel moulds with a hydraulic press. The shaped clay is then fired ("burned") at 900–1000 °C to achieve strength. The process chart for brick manufacturing is illustrated in figure given below-

Process flow:-Manufacturing of bricks



Fired bricks are burned in a kiln which makes them durable. Modern, fired, clay bricks are formed in one of three processes -soft mud, dry press, or extruded.

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

It is a small scale activity, which as a matter of fact, extracts raw material from nature. The important inputs required for excavation of desired quantity of clay are shown in the table given alongside.

Inputs	**Approx Quantity required**
Water for Sprinkling	1.5 KLD
Water for drinking	0.9 KLD
Water for horticulture	0.5KLD

Market and Mode of Transport:

The proposed production of clay is 6925 m^3 per year that will be use used in manufacturing of bricks and transported from the mining site to brick kiln. The manufactured bricks will be transported through mule carts from mine to brick kiln.

3.7 Resource optimization/ recycling and reuse

There will be very small quantity of domestic waste in terms of food and packaging materials generated by workers. This waste will be disposed off on composting site. No servicing of vehicles will be done onsite hence no onsite generation of used/waste oil.

3.8 Availability of water its source, energy/ power requirement and source

Requirement of Water, Energy/Power:

The requirement of water is given above under raw materials. About 1.5 KLD water will be required for sprinkling on haul road for suppressing dust, 0.9 KLD for drinking, 0.5 KLD for horticulture. The mining staff/workers use water from hand pump & supplied by water tankers.

The average consumption of diesel will be about 300 liters/month during peak production.

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

No liquid waste is generated during the mining. No chemical or toxic effluents are made/ discharged in the area during mining operations.

3.9.1 Solid Waste Generation & its Disposal

No solid waste generation is expected, hence no disposal is required.

3.9.2 Liquid Effluent

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

4.0 SITE ANALYSIS:

4.1 Connectivity:

The lease hold area falls in village-Narayanpur, Udaha & Khaira, from where Munderwa railway Station is 25 km N. The Narayanpur, Udaha & Khaira village are located 0.5 km away from mine site. The site is easily assessable form road.

4.2 Landform, Land-use and Ownership:

The landform represents typical clay features suitable for manufacturing of bricks. The area of lease is 2.13713 ha. No proposal of office, workshop onsite. The mining site is adjacent to brick kiln hence all essential infrastructure facilities are already available at brick kiln site.

Land of applied area has been taken on agreement for five years period. Entire lease area is free from forest land.

Topography:

The slope of the area is towards SE. The average elevation is 83m. The drainage system of district is mainly governed by the river Ghaghara, Kuwana and Rapti. Ami and Anui are the other rivers.

Geology:

Geomorphologically the district may be divided into two major units, the younger alluvium and the older alluvium plains. The younger alluvial plain is a flat to gently sloping, slightly undulated land surface produced by extensive deposition of unconsolidated sand, silt and clays adjacent to flood plain of the rivers. The older alluvial plains are very similar to younger alluvial plains, comprises the low valley of the Ghaghra in south, extending to its tributary Kuwana between Hainsar and Nathnagar blocks area and Rapti river North-East of district in Gorakhpur. The altitude of the Sant Kabir Nagar district area ranges between 73 to 97 mamsl. The soils of the district are mainly transported i.e. alluvial soil, comprising sand, silt and clay in varying proportions. The alluvial soils of the district are subdivided into older alluvial soil and younger alluvial soil. The older alluvial soil occupies high land which the younger soils are restricted to marginal tract of the Ghaghra river.

4.4 Existing land use pattern

The mine lease area is flat. There is no forest land or agriculture land in the soil mine lease area.

4.5 Existing Infrastructure

No infrastructure available on site.

Sensitivity of Location:

There is no any significant sensitive structure with in 5 km buffer zone around the mining site. The proposed mining activity is a small scale activity without drilling and blasting. Only semi-mechanized method will be envisaged to excavate the desired quantity of clay. There is no national park, wild life sanctuary with in 15 km. There are few small ponds within 5 km radius. Hence no major impact on environment has been anticipated.

Existing Infrastructure:

Electricity is available in nearby village, communication facilities have also been improved with introduction of mobile phones.

Climate:

The average annual rainfall is 1166 mm. The climate in sub-humid and it resembles out to be eastern part of U.P. being moist and relaxing exception the cold and summer seasons. About 90% of rainfall takes place from June to September.

During monsoon surplus water is available for deep percolation to ground water. There is a meteorological observatory station, the record of which may be taken as representative meteorological condition. May is the hottest month with the mean daily maximum temperature at 41.5^{0}C and maximum temperature in the period may sometimes be as high as 47^{0}C. With the onset of the monsoon temperature begin to drop and night temperature continue to be high, January is the coldest month with temperature 9.7^{0}C. The mean monthly maximum temperature is 32.2^{0}C and mean monthly minimum temperature is 19.9^{0}C.

During the cold season and first half of the hot season the air is very dry. In the period of June to November the air is moist with relative humidity being about 75%. The mean monthly morning relative humidity is 66% and mean monthly evening relative humidity 50%.

Social Infrastructure available:

Hospital:

The Primary Medical Health Centre in Ghaghar apart from this, other government, private hospital & nursing homes facilities are also available in Ghanghata.

School:

Primary, junior high school and higher education facilities are available in in Ghanghata & sant kabir nagar.

Transport:

The lease area is located adjacent to SH-70 road. Local bus services are easily available on this road.

Mineable Reserve:

The mineable reserve are 34625 m^3 considering 2.0 m as depth of excavation, leaving berm, and area left in slope/safety measures.

5.0 PLANNING BRIEF:

A mining project is much different than other industrial projects. Therefore, it's planning part also differ. In case of brick earth mining, the mining is small scale activity and granted the clay to be excavated will be used for manufacture of bricks for captive brick kiln of project proponent. This mining activity is simple, to be practiced by semi-mechanized method upto 2.0 metre depth only. However, the salient and important features of this project are given below —

- The maximum strength of workers will be 28.
- The workers will be hired from local area.
- It is an open cast semi mechanized mining.
- The ultimate land use of mined out land area is proposed to be restored.
- During plan period local plants shall be used for plantation purpose. Plantation shall be undertaken along the roads, community places.

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 business opportunities.

5.3 Land use planning

The land use of the mine lease area is agricultural and there will be no change in land use after operation. The ultimate land use of the mine lease area will not be change. Extracted mineral will be used in casting raw bricks which will be transported directly to the kiln, the workers will be hired locally and temporarily, no housing facility will be required.

5.4. Assessment of infrastructure demand (physical &social)

5.4.1 Physical

The road facility available which will be used maintained. The labor requirement is drawn from the nearest villages, which shall also be trained for the requirement in mines. Other requisite infrastructure for mine workers is Jeep or two-wheeler. Medical facility such as first-aid box will be provided at project site.

5.4.2. Social

This project is providing employment for about 28 people directly and indirectly including mine workers, supervisor and drivers.

5.4.3 Amenities/facilities

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

- Direct and indirect Employment, of which most of which will be from nearby villages.
- Arrangements for safe and healthy working conditions
- Provision of Drinking water.
- Conducting medical camps for workers and nearby villagers at regular interval.

6.0 PROPOSED INFRASTRUCTURE

6.1 Industrial area (Processing Area)

No industrial area is proposed.

6.2 Residential area (Non Processing Area)

The mine workers will be hired from nearby villages, no housing facility is required**.**

Physical Infrastructure:

As mentioned earlier the mining projects are much different than other industrial projects. Therefore, its infrastructure pattern is also different. The small lease area will be worked by semi-mechanized means, thus not requiring electricity. The haul road is already available up to mine, hence no requirement of construction of roads however haul road will be properly compacted before start of activity.

6.3 Green Belt/Afforestation:

During plan period local plants like Neem (*Azadirachta indica*), Sheesham (*Dalbergia sissoo*), Peepal (*ficus religiosa*), guwava (*psidium guajava*) etc. imli (*Tamarindus indica*) etc. and other native species having better survival rate will be selected will be planted along the road and boundary between brick kiln site and proposed mining area. Besides this, it is also proposed that periodical plantation drive will be undertaken in the surroundings with the involvement of community, to improve aesthetics of the environment. Plantation shall be done in large sized 50cm x 50 cm. pits dug in advance and filled with manure about 50 days before planting. The plantation raised earlier should be carefully maintained. Mortalities should be replaced by fresh saplings.

6.4 Social infrastructure

- Road facility (existing roads will be maintained regularly)
- Employment opportunity
- 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

Mining area is connected by an 'unmettaled' road which leads to the nearest metalled road thereafter the metalled road is connected to SH-70 road.

6.6 Drinking Water Management (Source & Supply of Water):

The main drinking water requirement will be for mine workers. The strength of workers will be 28 so the total drinking water requirement will be 0.9 KL/day. The drinking water is provided through Hand-pump and bore well.

6.6 Sewerage System

No sewerage system is proposed at the mine site. However, bio-toilets will be provided for employee.

6.7 Industrial Waste Management

Not applicable

Solid Waste Management:

There is thin topsoil cover that is supposed to dump on the earmarked dumping site. All the quantity of clay excavated will be used as raw material source for manufacture of bricks, and no waste will be generated.

No toxic and hazardous elements are present in the inter-burden material.

6.9 Power Requirement & supply/source:

Being a small scale activity and that to be undertaken with semi-mechanized methods, hence no deployment of heavy earth moving machinery/equipments. Diesel will be used for transportation vehicles used for transportation of materials.

7.0 ADDITIONAL STUDIES

Risk & Hazards Management

As it is soil mining project, so there are no major risk and hazard activities associated with the proposed activities. But the project proponent will must take care the site location by:

- Appropriate fencing all around the borrowed/ excavated pit shall be made to prevent any mishap.
- Measures will be taken to prevent dust emission by covering of excavated soil during transportation.
- Safeguards will be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of soil.

REHABILITATION AND RESETTLEMENT (R & R) PLAN

The mining lease encompasses only 2.13713 hectare area, which is almost low fertile agricultural land for agricultural use. There is no habitation existing on the mining area. Land of applied area is owned by brick kiln owner himself. The entire lease area is free from forest land. The land after end of the lease period will be restored for agricultural purpose, There will be no rehabilitation and resettlement involved with the project.

8. PROJECT SCHEDULE & COST ESTIMATES.

8.1 Likely date of start of mine:

The proposed activity is open cast semi mechanized mining and will commence immediately after getting environmental clearance.

8.2 Estimated Project Cost along with analysis in terms of Economic Viability of the Project.

The project cost is about Rs. 40 lakhs. Due to semi mechanized nature of activity the project is economically viable.

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

- There will be direct and indirect employment at the first instance. The employment will be given to locals.
- The brick earth mining activity is interlinked with brick kiln hence generation of indirect employment on brick kiln.
- Further, the share of indirect employment like increased purchasing power, dhabas and retail shops etc. is largely shared by local residents.
- The most important aspect of the project is the land proposed for mining is low fertile and not providing any significant income to the owner, implying that there will be no significant impact on the livelihood of residents.
- Finally, all clay excavated will be used in manufacture of bricks that will be used in construction of road buildings, which otherwise is a contribution towards building nation.