ENVIRONMENTAL MANAGEMENT PLAN

Environmental Management Plan helps identify and reduce the potential negative effects of a project on the environment. Environmental Management measures for general Impacts due to the Proposed Brick Earth Mining for M/S Sujjet Ite Udhyog-Basudhar Soil Brick Mining Project at Village+P.O- Basudhar, P.S+Anchal- Itarhi, District- Buxar (Bihar) are below:-

This section recommends the management measures needed to prevent minimize and mitigate the general impacts arising in operation phase as shown in Table 1 below:

Table 1: EMP for the general anticipated impacts

1.Mining Activity/ Quarrying of brick clay					
Activity	Impact	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
Clay excavation	Removal of fertile top soil	Temporary	Moderate	Fertile top soil will be stored temporarily and will later be spread over the mined out pit so that the fields can be used for agricultural activity	Kiln owner
	Pit formation due to excavation	Temporary	Moderate	• Mining operations will be carried out as per mining rules systematically and scientifically. • The mining faces will open from top to down towards & faces shall be advance from one end to the other. • Stabilization of slope will be done by planting species having extensive root system, so as to bind the soil. • Species will be planted as a part of greenbelt development. Species planted will be *Ficus religosa* (pipal), *Azadirachta indica* (Neem), *Ficus glomerata (Gular), Dalbergia sisso* (Shisham) and *Syzygium cumin* (Jamun) may also be recommended. *Mangifera indica* (Aam), *Emblica officinalis* (Anwala), *Aegle marmerlos* (Ibei	Kiln owner

	Siltation of fertile soil from adjoining farms into the pit formed	Temporary	Moderate	• Loss of fertile top soil from adjoining farms will be arrested by the bund wall • Plantation of bio vegetative species along the bund wall to act as a fence	Kiln owner
	Change of land use from agricultural to mining	Temporary	Moderate	• Mining will be done as per the mining rules, sustainably and scientifically. • Mining will be done only after obtaining lease from land owner. • It is temporary (for a period of 5 years) and reversible • Agricultural practices will be resumed after mining • Mining will be done only upto a depth of 2 m.	Kiln owner
	Fugitive dust emissions and suspension of dust in air	Temporary	Moderate	• Dust suppression measures like spraying/sprinkling of water to keep the surface wet. • No drilling or blasting proposed • No boiler/ D.G. Sets proposed • Mining to be done at day time only	Kiln owner
	Noise generation due to mining	Temporary	Moderate	• No heavy machinery is proposed for the extraction of brick clay, operational is manual. • Suitable noise barriers will be provided.	Kiln owner
	Impact on ground water	Temporary	Moderate	• Mining will be restricted upto a depth of 2m • Mining will have no impact on water table • Only Drinking water for hired labours (not more than 30) will be brought from existing bore wells	Kiln owner

				from adjoining areas. • Pit formed will have a positively significant impact as it would facilitate faster percolation of water.	
	Impact on Surface Water	Nil	Nil	• No surface water body is present within 500 m radius of excavation plot.	Kiln owner
	Disturbance to microbial flora and fauna, avifaunal migration or migratory routes of domesticated cattle.	Temporary	Moderate	• Top soil (upto a depth of 6 inches) will be excavated and stored under tarpaulin sheets, and will be used later for making bund walls. Hence the microbial flora and fauna will be restored while bunding. • There is no migratory route of avifauna or grazing route of domesticated animal is reported, hence there will be no impact anticipated. • Mining operation will be carried out during day time	Kiln owner
	Generation of employment	Temporary	Moderate	• The proposed project will generate employment opportunities to all the section of people, locally. • Will improve the livelihood condition of the nearby areas by providing e mployment opportunities.	Kiln owner
	Occupational health of labours	Temporary	Significant	• Predominantly mining activities should be manual, using hand to avoid accidental hazards. • Labors will have access to basic first aid (first aid – box) facility on site. • Anti venom will be provided	

				in case of snake bites. • Awareness on safety and ensure using of personal protective equipments (PPE) by workers like nose masks to respiratory disorders.	

2. Transportation Activity					
Activity	Impact	Duration / Extent	Magnitude	Mitigation Measures	Responsibility
Transportation of quarried clay/ cast bricks to brick kiln	Impact on adjoining farms	Temporary	low	• Casting / drying will be done on excavation site to prevent dust emissions along haulage route • Cast bricks will be transported to brick kiln through tractor trolleys or carts. • Vehicular exhaust will be minimised by using PUC certified vehicles and planting dust barrier species along chak roads. • Tractor trolleys/ carts will use the existing route for to and fro movements and no additional haulage route shall be formed. • Hence, no impact on adjoining farms anticipated	Kiln owner
	Impact on crop yield/ quality and productivity in adjoining farms	Temporary	low	• Only fugitive dust emissions may occur due to transportation activity which will be minimized by using: 1. Tarpaulin cover over tractor trolleys/ carts 2. Dust suppression measures like spraying/sprinkling of water to keep the surface wet 3. Provision of the dust barriers along haulage route Plantation of soil binding species such as bamboos,	Kiln owner

				euphorbia, agave etc.	
	Impact on existing traffic	Temporary	Low	Cast bricks will be carried off to brick kiln through tractor trolley/ carts through village path roads. • There is no existing traffic on village chak roads, so no impact predicted on existing traffic.	Kiln owner
	Impact on air environment	Temporary	Moderate	Fugitive dust emissions and vehicular emissions from tractor trolleys may occur due to transportation activity which will be minimised by using: 1. Tarpaulin cover over tractor trolleys/ carts 2. PUC certified tractors will be employed 3. Dust suppression measures like spraying/sprinkling of water to keep the surface wet 4. Provision of the dust barriers along haulage route Plantation of soil binding species such as bamboos, euphorbia, agave etc.	Kiln owner

	Impact on noise environment	Temporary	Moderate	• Carts or tractor trolleys will be employed on village roads. • fitness certified vehicles will be used after obtaining pollution under control certificate • Timely maintenance of vehicles and their silencers to minimize vibration and sound. • Care will be taken to produce • minimum sound during loading. • Noise barriers in form of plantations will be done at haulage roads.	Kiln owner
	Impact on occupational health of labours	Temporary	Moderate	• Labors will have access to basic first aid (first aid –box) facility on site. • Anti venom will be provided in case of snake bites. • Awareness on safety and ensure using of personal protective equipment (PPE) by workers nose masks to avoid respiratory disorders. • The workers will be trained on using personal equipment as a precautionary measure & thereby preventing any infectious diseases.	Kiln owner