ENVIRONMENTAL MANAGEMENT PLAN

Environmental Management measures for general Impacts 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					
Activity	**Impact**	**Duration / Extent**	**Magnitude**	**Mitigation Measures**	**Responsibility**
Excavation	Removal of fertile top soil	Temporary	Moderate	Fertile top soil will be stored temporarily and will later be used for making bund walls around excavation plot.	Project Proponent
	Pit formation due to excavation	Temporary	Moderate	• Mining operations will be carried out as per mining rules systematically and scientifically. • Mining operations will be carried out on a slope of 45° making terraces/benches. The height of the bench not more than 15 mt and width of the bench more than height of the bench. • Stabilization of slope will be done by planting species having extensive root system, so as to bind the soil. • Species will be planted across the slope so as to arrest the soil movement, due to wind and water erosion. • Species planted will be Ficusreligosa (pipal),	Project Proponent

				Azadirachtaindica (Neem), Terminaliaarjuna (Arjun) and Syzygium cumin (Jamun) may also be recommended, Mangiferaindica (Aam), Acacia nilotica (Babul).	
	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. • Stabilization of slope by planting soil-binding species.	Project Proponent
	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 up to a max depth of 2m.	Project Proponent
	Fugitive dust emissions and suspension of dust in air	Temporary	Moderate	• Dust suppression measures like spraying / sprinkling of water to keep the surface wet. • Plantation on bund walls will act as dust. • No drilling or blasting proposed. • No boiler/ D.G. Sets proposed. • Mining to be done at day time only	Project Proponent
	Noise generation due to mining	Temporary	Moderate	• No heavy machinery is proposed for the extraction of soil, operational is manual. • Suitable noise barriers will be provided.	Project Proponent

	Impact on Ground Water	Temporary	Moderate	• Mining will be restricted up to a max depth of 1.5 m. • Mining will have no impact on water table. • Drinking water (1 KLD) for hired labours (not more than 20) will be brought from tanker and nearby sources. • Pit formed will have a positively significant impact as it would facilitate faster percolation of water.	Project Proponent
	Impact on Surface Water	Nil	Nil	• No surface water body is present within 500 m radius of excavation plot.	Project Proponent
	Disturbance to microbial flora and fauna, avifaunal migration or migratory routes of domesticated cattle.	Temporary	Moderate	• Top soil (up to 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	Project Proponent
	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 employment opportunities.	Project Proponent
	Occupational health of labors	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)	Project Proponent

				facility on site. • Anti venom will be provided in case of snake bites. • Awareness on safety and ensure using of personal protective equipment's (PPE) by workers like nose masks to respiratory disorders.	
Transportation of quarried soil	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	Project Proponent
	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	Project Proponent

				4. Plantation of soil binding species such as bamboos, 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, roads, so no impact predicted on existing traffic.	Project Proponent
	Impact on air environment	Temporary	Moderate	• Fugitive dust emissions and vehicular emissions from tractor trolleys may occur due to transportation activity which will be minimized 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 5. Plantation of soil binding species such as bamboos, euphorbia, agave etc.	Project Proponent
	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	Project Proponent

				haulage roads.	
	Impact on occupational health of labors	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's (PPE) by workers nose masks to avoid respiratory disorders. • The workers will be trained on using personal equipment's as a precautionary measure & thereby preventing any infectious diseases.	Project Proponent