

# **Environment Management Plan**

**FOR**

## **Mining of Flag Stone**

**Area - 1.000 Hectare, Khasra No. - 116, 121, 122, 124**

**AT**

<b>Village</b>	<b>REHTI</b>
<b>Tehsil</b>	<b>GHATI GAON</b>
<b>District</b>	<b>GWALIOR</b>
<b>State</b>	<b>MADHYA PRADESH</b>

### **Proponent**

**SHRI KULDEEP DUBEY**

**S/O SHRI B.S. DUBEY**

**RESI - D.H.-59, DINDAYAL NAGAR,  
DISTT-GWALIOR, MADHYA PRADESH**

### **PREPARED BY**

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## **ENVIRONMENTAL MANAGEMENT PLAN: -**

### **A) BASE LINE INFORMATION**

#### **Existing land use pattern:**

The proposed quarry lease area is gentle sloping flat ground and having undulating topography surrounded by agriculture land. The area is mostly covered with thin occasionally soil layer. There is no activity in the area excepting proposed quarry operation and the area is present barren. As the deposit is in small ground and the surrounding area is agriculture land of single crop pattern depending on proper and the surrounding area rainfall. The surrounding area is mostly revenue and private agriculture land. In the proposed lease area as well as in surrounding area there is sufficient cover of alluvial soil so that agriculture activities are being carried out properly. The EMP has been prepared according to Rule 48 of MPMMR 1996 and Madhya Pradesh gazette notification, dated 23<sup>rd</sup> March 2013, The 14 points given in Notification with replies and references. A detailed study having baseline data, impact assessment and management plan is given in the proceeding section incorporating all the desired information.

#### **LAND USE PATTERN:**

<b>Area</b>	<b>Existing</b>	<b>At The End of The Plan Period</b>
PITS	0.000 Hectare	0.050 Hectare
DUMPS	0.000 Hectare	0.05 Hectare
APROCH ROAD	0.000 Hectare	0.01 Hectare
PLANTATION	0.000 Hectare	0.020 Hectare
UN-USED	1.000 Hectare	0.24 Hectare
<b>TOTAL</b>	<b>1.000 Hectare</b>	<b>1.000 Hectare</b>

### **1. Name and Address of the Holder of Quarry Lease / Auction Quarry**

**Name of Lessee** : SHRI KULDEEP DUBEY  
S/O SHRI B.S. DUBEY

**Residence** : D.H.-59, DINDAYAL NAGAR,  
DISTT-GWALIOR, MADHYA PRADESH

**Mineral to mine out** : **FLAG STONE**

**Capacity** : 6000 M3/Year

**Grant of Lease is applied for Quarry lease for the period for 10 years the lease approval letter is enclosed with Mine plan.**

**1. Details of Area**

- i. Detail of Principle Approval:** The Flag Stone Quarry Lease has been sanctioned through The Collector **GWALIOR** Consent order vide letter no. QL21/2016/1075 **Gwalior** Dated: 10/06/2016.
- ii. Period – Ten years**
- iii. Map Showing Boundary of Sanctioned Area.**  
**Khasra Map is enclosed with Mine plan**
- iv. Khasra Number – 116, 121, 122, 124**
- v. Area – 1.000 Hectare**
- vi. Name of Village/ Tehsil/District of Sanctioned Area**  
**Village : REHTI, Tehsil- GHATI GAON, Distt.- GWALIOR (M. P.)**

**Existence of Public Road / Railway Line [if any nearby and approximate distance]**

<b>S.NO</b>	<b>Place</b>	<b>Distance (KM)(As per mining plan)</b>
<b>1.</b>	<b>GWALIOR</b>	<b>48</b>
<b>2.</b>	<b>REHTI (Village)</b>	<b>0.57</b>

**3. Details of Machines to be used in Mining Operation:**

The method of mining is open cast mining operation will be carried out manually as well mechanized. The machine will be used as follows:

JCB for excavation activity, loading of stone shall be done manually, if required the following machine will be used.

<b>Type</b>	<b>Nos.</b>	<b>Size/ capacity</b>	<b>Make</b>	<b>Motive power</b>	<b>HP</b>
<b>L&amp;T PC-110/Hyd. Excavator</b>	<b>1</b>	<b>0.9 cum</b>	<b>L&amp;T , TATA</b>	<b>Diesel</b>	<b>110</b>

**Transportation of Stone from quarry head to destination**  
**Stone transported by Hired Trucks per day 20 M<sup>3</sup> per day**

**Heaped Capacity of the dumpers = 18 M<sup>3</sup>**

**Hence number of dumpers required = 1-2**

### **Scheme for tree Plantation**

The quarry lease is sanctioned for the period of ten years. During the lease period we will plant 100/YEAR plant (As per your guide lines) and species in the boundary area of quarry zone in consultation with Forest Department and revenue department.

### **4.0 Proposed annual production of mineral**

**Production - 6000 M<sup>3</sup>/Year**

**Mineral - Flag Stone**

### **5.0 Effect on ground water level due to mining operation and its prevention measures.**

The mining of Stone during the lease period will be worked out from the top surface above the ground water table. Thus no ground water pollution is expected, as mining will not intersect the ground water. Ground water is not likely to be affected, as the mining will not intersect water table. The stone is inert and do not react or dissolve with water and non-toxic. No discharge of water effluents from the mines.

### **6.0 Details of scheme of development of the land degradation due to mining.**

At the end of lease period following land will be mined out as per present knowledge land will be redeveloped as under.

	Present	At the end of Ten year
<b>Mined out land</b>	<b>0.000 HA</b>	<b>0.805 Ha</b>
<b>BACKFILLED</b>	<b>-</b>	<b>0.00HA</b>

<b>Plantation</b>	-	<b>0.150ha No. trees = 100 trees Per year (as per your guide lines)</b>
<b>Water Body</b>	-	<b>Mined Out Area with proper safety norms i.e. proper fencing with stepping of pit land</b>

### 7.0 RQP Site Inspection proposal -

Lessee proposed site inspection and mining activity monitoring at every six month interval by registered RQP. He will prepare compliance report for MoEF and giving guidelines to lessee for mining activity as per mining plan and proposed EMP.

### 8.0 Details of preventive and control scheme of air and water pollution.

#### Air Pollution Control

The air quality in the lease area as well as in the nearby zone is below the permissible limits. Following mitigative measures shall be adopted for air pollution control due to mining, crushing activity and Transportation of Minerals.

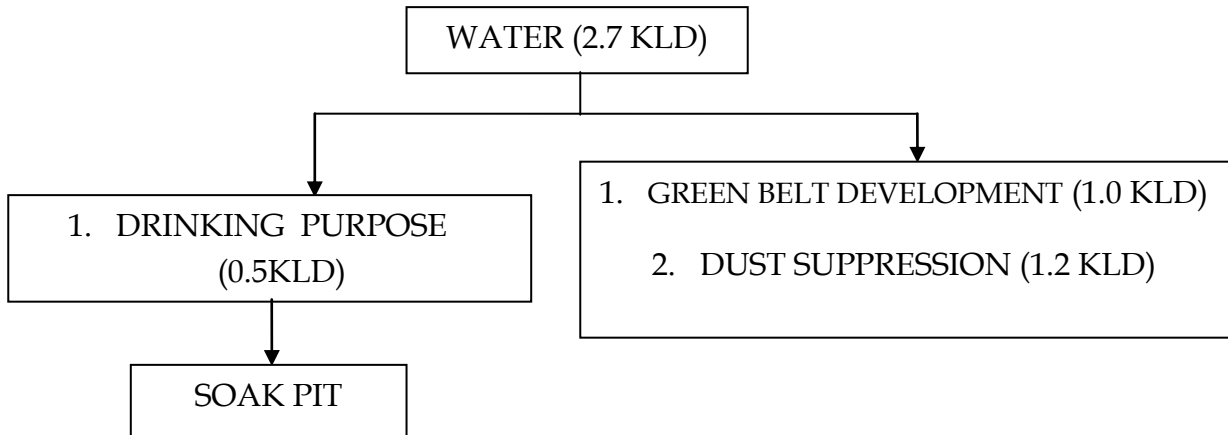
S.No.	Dust Source	Control Measures
1.	<ul style="list-style-type: none"> <li>Mining activity</li> </ul>	Regular water Spraying in dry area of quarry Wetting of land and dump stock in case it is dry. Water sprinkling at dust sources. The angle of dip is 45 degrees. # Dust Mask shall be provided to all working workers in dusty atmosphere. # Minimizing drop height of stone in trippers/provide telescopic chutes to drop

	<ul style="list-style-type: none"> <li>Crushing Of Stone</li> </ul>	<p>crushed stone on the stockpile</p> <p># Manual Mining</p>
2.	Transportation	<p># No overloading of tractors , dumpers , trucks</p> <p>Proper maintenance of vehicles</p> <p># Periodic maintenance of <i>kachha/approach</i> road</p> <p># Regular sprinkling of water on roads in the morning and also at a moment if observed that the dust on road is easily getting airborne</p> <p># Fortnightly scraping/bulldozing of road to prevent accumulation of loose dust on road, to shift it to sides and to keep roads almost leveled to ensure smooth movement of vehicles and also prevent spillage, thereby, minimizing fugitive dust emissions from the roads towards the villages</p> <p># Covering the carrying vehicles with tarpaulin to prevent spillage.</p> <p># Proper tuning of vehicles to keep the CO gas emissions and noise as per norms.</p> <p># Restriction of vehicle speed</p>

**Water Consumption:** Water used for different mining activities are given below:

- (a) Drinking
- (b) Mining
- (c) Afforestation
- (d) Dust Suppression

### Water Consumption & source



Water will be purchased from nearby available sources.

### 9.0 Provision for separate stacking of surface soil excavated from mining operation and its utility.

Top soil is not available in the quarry lease area. Therefore, no separate stacking of soil is required. If top soil generated during mining will be use for plantation.

### 10.0 Details of social and economic up gradation of mining effected area due to proposed project.

The implementation of stone mining project will generate direct and indirect employment.

### Details of Budgetary Arrangement for Environment Management. Cost of EMP

Sl. No.	Description	Cost to be Incurred (in lacs/annum)
1.	Air Quality: a) Cost of dust suppression i.e. water sprinkling	0.15

	b) Cost of bulldozing the accumulated dust on road	<b>0.15</b>
	c) Air Quality Monitoring by third party (approx. expense)	<b>0.15</b>
<b>2</b>	Water Quality Monitoring by third party (approx. expense)	<b>0.20</b>
<b>3</b>	Reducing of Noise Level By regular maintenance of quarry vehicle and machine.	<b>0.10</b>
<b>4</b>	Socio-economic welfare of local, and	<b>0.15</b>
<b>5</b>	Population i.e. school <i>Aganwadi</i>	<b>0.10</b>
<b>6</b>	Infrastructure development	<b>0.10</b>
<b>7</b>	Tree plantation, survival etc	<b>0.60</b>
	<b>Total</b>	<b>1.70/Year</b>

#### **11. Any other details desired to be submitted by mineral concession holders**

Lease will comply all rules and norms as prescribed by regulatory authority.

#### **NOISE LEVEL:**

Drilling and movement of truck/ dumper, etc will create the transitional noise level. However noise generated by these will be occurring at low level and will be within the prescribed upper limit. For all workers shall be provided with earmuff, ear plugs etc. Unnecessary use of horns by the drivers of vehicles shall be avoided.

#### **VIBRATION:**

Proposed mining operations will be of small scale and Low intensity blasting proposal is only for removing the boulder material which will be very very less, hence the blasting will be very occasionally and whatever the transient vibration will be in under norms.

#### **FLORA :**

Regionally the area falls under subtropical climatic zone and sustaining dry tropical forest. The common trees are Seja (*Terminalia tormentors*) Achar (*Narcissus latifolia*) Lundiya (*Lagers toemia purvilora*) Amaltas (*Cassia fistula*)



and Mahuwa. Apart from this many varieties of grass creepers and climber are found. Quarry Lease area has no trees.

**FAUNA: -**

The area itself though devoid of much fauna except occasional langur, Mangos and birds such as Heron, Crow, Parrots etc. Apart from this many kinds of snakes other reptiles are found. No wild life found in surrounding of QL area.

**PUBLIC BUILDING, PLACES, MONUMENTS:**

There is no any public building, places or monumental construction seen in the vicinity of the area great importance.

**PROTECTION OF FLORA & FAUNA**

We will protect flora and fauna with proper fencing around the lease area and transport route. Also improve plantation around the lease area.

**PROTECTION/SAFETY OF HABITATION ON THE TRANSPORT ROUTE**

We will protect habitation on the transport route with proper water sprinkling for dust suppression and also maintain roads for better and safe transport.

**ENVIRONMENTAL IMPACT STATEMENT DESCRIBING THE IMPACT OF MINING AND BENEFICIATION OF ENVIRONMENT**

Due to mining operation, there will be change in the environment whatsoever may be the small nature of mining activities. The proposed mining activity of manual in nature and quarry leasehold area is not large and also the area is devoid of good flora and fauna. The socio-economic status of the surrounding villages is rural with dominant agriculture economy. The surrounding area is thin populated. There will be no adverse impact due to mining on socio – economic environment.