# DRAFT ENVIRONMENTAL MANAGEMENT PLAN

**FOR** 

**SAND GHATS** 

**AT** 

**WARDHA DISTRICT** 

STATE - MAHARASHTRA

# FOR PUBLIC HEARING FOR 37 SAND GHATS

**PROPONENT** 

DISTRICT MINING OFFICER, COLLECTOR OFFICE, WARDHA

**CONSULTANT** 

**ENVIRO TECHNO CONSULT PRIVATE LIMITED** 

68,MAHAKALI NAGAR-2 NEAR MANEWADA SQUARE NAGPUR 440 024

**APRIL 2020** 

Introduction:

District Collector, Wardha intends to auction sand ghats and appointed District Mining Officer

Wardha as project proponent as per sand mining guidelines dated 03.09.2019. Total 37 sand

ghats are identified by Taluka level Technical Committee chaired by Tahsildar and Dy. Engineer

Irrigation, Junior Geologist, Directorate of Geology and Mining, Junior Geologist G.S.D.A.,

representative of Maharashtra Pollution Control Board for scooping of sand by manual method.

List of sand ghats proposed for auction prior environmental clearance are as below

Table 1.0 Details of Sand Ghat:

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# Table 1.0 Details of Sand Ghat:

| Sr.<br>N<br>o. | Taluka     | Name of Sand<br>Ghat        | Name of<br>Village          | Nearest Gut No.   | Name of<br>River/<br>Stream | Dimensions of Sand<br>Ghat in cum. | Sand<br>Proposed for<br>scooping in<br>Brass | Length of<br>Approach<br>Road | Width of<br>Approach | No. of<br>Workers | No.<br>of<br>Tract<br>ors | No of<br>Trees<br>along<br>Bank | No of<br>Trees<br>along<br>villag<br>e | Requirement              | EMP cost<br>in Rs. |
|----------------|------------|-----------------------------|-----------------------------|---|-----------------------------|------------------------------------|--|-------------------------------|----------------------|-------------------|---------------------------|---------------------------------|--|--------------------------|--------------------|
| 1              | Ashti      | Chincholi                   | Chincholi                   | 4,5,10,11,12  | Wardha                      | 120mx35mx0.50m                     | 742  | 570m                          | 3m                   | 28                | 2                         | 300                             | Road<br>228                            | 1.860m <sup>3</sup> /day | 635000             |
| 2              | Ashti      | Ismailpur                   | Ismailpur                   | 111,110,109,108,107,10<br>5/1,105/2,104,113,103                       | Wardha                      | 347mx19mx0.50m                     | 1165   | 1000m                         | 3m                   | 28                | 4                         | 70                              | 400                                    | 1.860m³/day              | 741000             |
| 3              | Ashti      | Nawabpur                    | Nawabpur                    | 2,3,5   | Wardha                      | 150mx30mx0.50m                     | 795  | 570m                          | 3m                   | 28                | 15                        | 30                              | 228                                    | 1.860m³/day              | 711500             |
| 4              | Arvi       | Salfal                      | Salfal                      | 7,8,9,14,15,16,17/1A,18   | Wardha                      | 400mx20mx0.50m                     | 1130   | 1000m                         | 3m                   | 33                | 15                        | 80                              | 400                                    | 2.860m³/day              | 892500             |
| 5              | Arvi       | Saikheda                    | Saikheda                    | 24,25,26,27,28,29   | Wardha                      | 900mx30mx0.50m                     | 4770   | 670m                          | 3m                   | 33                | 15                        | 180                             | 270                                    | 2.860m³/day              | 847500             |
| 6              | Arvi       | Dighi &<br>Wadgaon          | Dighi &<br>Wadgaon          | Dighi-112.113<br>Wadgaon-<br>124,125,126,132                          | Wardha                      | 600mx30mx0.50m                     | 3180   | 1500m                         | 3m                   | 33                | 15                        | 120                             | 600                                    | 2.860m <sup>3</sup> /day | 1032500            |
| 7              | Deoli      | Apti-1                      | Apti-1                      | 6   | Wardha                      | 278mx38mx0.40m                     | 1493   | 360m                          | 3m                   | 28                | 10                        | 60                              | 310                                    | 1.860m³/day              | 730000             |
| 8              | Deoli      | Tambha                      | Tambha                      | 36,37,45,46,47,48,57,58   | Wardha                      | 350mx35mx0.50m                     | 2164   | 730m                          | 3m                   | 28                | 10                        | 70                              | 300                                    | 1.860m³/day              | 695000             |
| 9              | Deoli      | Hiwra (Ka.)                 | Hiwra (Ka.)                 | 23to32  | Wardha                      | 500mx30mx0.50m                     | 2650   | 500m                          | 3m                   | 28                | 10                        | 100                             | 200                                    | 1.860m³/day              | 670000             |
| 10             | Deoli      | Takli Chana                 | Takli Chana                 | 14,11,297,34  | Yashoda                     | 350mx35mx 0.40 m                   | 1731   | 1000m                         | 3m                   | 28                | 4                         | 70                              | 400                                    | 1.860m³/day              | 832000             |
| 11             | Deoli      | Sonegaon Bai                | Sonegaon Bai                | 103,105,80,79,106,107,<br>126,127,128,129                             | Yashoda                     | 500mx24mx0.50m                     | 2120   | 80m                           | 3m                   | 28                | 5                         | 100                             | 200                                    | 1.860m³/day              | 692500             |
| 12             | Deoli      | Takli Darne                 | Takli Darne                 | 31,32,33,34,35,36   | Yashoda                     | 312mx32mx0.50m                     | 1764   | 860m                          | 3m                   | 28                | 4                         | 65                              | 350                                    | 1.860m³/day              | 814500             |
| 13             | Deoli      | Borgaon A                   | Borgaon A                   | 233,240,242,37,41   | Yashoda                     | 130mx14mx0.30m                     | 193  | 780m                          | 3m                   | 28                | 1                         | 30                              | 300                                    | 1.860m <sup>3</sup> /day | 481000             |
| 14             | Hinganghat | Junona &<br>Borgaon Da      | Junona &<br>Borgaon Da      | Junona-<br>29,32,33,36,40part and<br>Borgaon<br>14,15,16,18,19,20,238 | Wana                        | 1400mx35mx0.80m                    | 13852  | 2000m                         | 3m                   | 48                | 27                        | 280                             | 800                                    | 3.860m <sup>3</sup> /day | 1408500            |
| 15             | Hinganghat | Chikmoh                     | Chikmoh                     | 107,108,109,129,130,13<br>1,228,149,150,152,153                       | Wana                        | 900mx40mx1.0m                      | 12721  | 1000m                         | 3m                   | 43                | 24                        | 180                             | 400                                    | 3.860m <sup>3</sup> /day | 1117000            |
| 16             | Hinganghat | Tembha+Pardi                | Tembha+Pardi                | 67  | Wana                        | 800mx60mx0.70m                     | 11873  | 570m                          | 3m                   | 48                | 23                        | 160                             | 230                                    | 2.960m <sup>3</sup> /day | 985500             |
| 17             | Hinganghat | Ghatsawli &<br>Chincholi Bu | Ghatsawli &<br>Chincholi Bu | Ghatsawli-352(Forest)<br>and Chincholi -<br>48/1,48/2,48/3            | Wana                        | 1400mx35mx0.80m                    | 13852  | 720m                          | 3m                   | 48                | 27                        | 280                             | 288                                    | 3.860m <sup>3</sup> /day | 1052500            |
| 18             | Hinganghat | Khardi+Bardi                | Khardi+Bardi                | Kardi-1,2,3,12/3 and<br>Bardi 2,3,4,5,6,7                             | Wana                        | 800mx35mx0.80m                     | 7915   | 690m                          | 3m                   | 38                | 15                        | 160                             | 280                                    | 2.760m³/day              | 871000             |
| 19             | Hinganghat | Kajalsala                   | Kajalsala                   | 273,274,270,269   | Pothra                      | 454mx30mx0.50m                     | 2406   | 300m                          | 3m                   | 28                | 5                         | 90                              | 200                                    | 1.860m³/day              | 627500             |

| 20 | Hinganghat | Ganeshpur &<br>Borkhedi       | Ganeshpur &<br>Borkhedi       | Ganeshpur-<br>48,49,52,54,56,57<br>Borkhedi-<br>23,24,28,29,30,31                          | Wana    | 900mx20mx0.50m  | 3180  | 600m  | 3m | 33  | 9  | 180 | 240 | 1.860m³/day              | 739500 |
|----|------------|-------------------------------|-------------------------------|--|---------|-----------------|-------|-------|----|-----|----|-----|-----|--------------------------|--------|
| 21 | Hinganghat | Bhagwa - 2                    | Bhagwa - 2                    | 121,122,118  | Yashoda | 310mx20mx0.50m  | 1095  | 900m  | 3m | 28  | 3  | 60  | 360 | 1.860m³/day              | 654000 |
| 22 | Hinganghat | Bhagwa - 1                    | Bhagwa - 1                    | 14,15,13part   | Yashoda | 350mx20mx0.50m  | 1237  | 720m  | 3m | 28  | 4  | 70  | 290 | 1.860m³/day              | 631000 |
| 23 | Hinganghat | Yeli                          | Yeli                          | 73/1,73/2,74/1,74/2,75<br>/1,75/2,76/1,76/2,77,81<br>,82,92/1,92/2,93/1,93/2<br>,94/1,94/2 | Wana    | 700mx35mx0.50m  | 4329  | 800m  | 3m | 33  | 9  | 140 | 320 | 1.860m <sup>3</sup> /day | 759500 |
| 24 | Hinganghat | Shekapur Ba.                  | Shekapur Ba.                  | 210,206,205,204,203,20<br>2,201  | Wana    | 400mx40mx0.70m  | 3958  | 830m  | 3m | 33  | 8  | 80  | 330 | 1.860m³/day              | 779000 |
| 25 | Hinganghat | Kuran Rith                    | Kuran Rith                    | 68/2,68/1,67/1B,69   | Wardha  | 290mx 40mx0.50m | 2049  | 940m  | 3m | 33  | 4  | 60  | 380 | 1.660m³/day              | 780000 |
| 26 | Hinganghat | Nandra (Rith)                 | Nandra (Rith)                 | 81,82,83,72,71,70,69,68<br>,65,64,60,59,58/A,58/B,<br>57/A,57/B,56,55                      | Wana    | 900mx35mx0.90m  | 10018 | 1000M | 3M | 43  | 20 | 180 | 400 | 2.860m³/day              | 960000 |
| 27 | Samudrapur | Khuni, Vandli<br>& Seva2      | Khuni, Vandli<br>& Seva2      | 125,124,74,75,85,86,87,<br>88/2  | Wana    | 1150mx25mx0.80m | 8127  | 440M  | 3M | 33  | 15 | 230 | 175 | 2.860m³/day              | 840000 |
| 28 | Samudrapur | Mandgaon-1                    | Mandgaon-1                    | 219,220  | Wana    | 500mx50mx0.50m  | 4417  | 1550m | 3m | 33  | 9  | 100 | 460 | 2.860m <sup>3</sup> /day | 869500 |
| 29 | Samudrapur | Mandgaon-2                    | Mandgaon-2                    | 286,287,288,298,344,34<br>5,861,348part  | Wana    | 600mx50mx0.50m  | 5300  | 620m  | 3m | 33  | 10 | 120 | 250 | 2.860m³/day              | 730000 |
| 30 | Samudrapur | Mangaon                       | Mangaon                       | 7,8,10   | Wana    | 400mx45mx0.50m  | 3180  | 330m  | 3m | 33  | 6  | 80  | 130 | 1.860m³/day              | 583000 |
| 31 | Samudrapur | Barbadi                       | Barbadi                       | 116/2A,147,148 Part  | Wana    | 600mx25mx0.50m  | 2650  | 610 m | 3m | 33  | 5  | 120 | 250 | 1.860m³/day              | 625500 |
| 32 | Samudrapur | Waksur                        | Waksur                        | 101/1,95,102,117/1,118<br>,119   | Wana    | 700mx30mx0.50m  | 3710  | 340m  | 3m | 33  | 8  | 140 | 140 | 1.860m³/day              | 639000 |
| 33 | Samudrapur | Khuni                         | Khuni                         | 17,19/1,20   | Wana    | 650mx30mx0.50m  | 3445  | 550m  | 3m | 33  | 7  | 130 | 220 | 1.860m³/day              | 678500 |
| 34 | Samudrapur | Umra &<br>Aurangpur(Rit<br>h) | Umra &<br>Aurangpur(Rit<br>h) | Aurangpur- 1/2,5,7 and Umra-18,16,14   | Wana    | 450mx65mx0.50m  | 5167  | 720m  | 3m | 33  | 10 | 90  | 300 | 1.860m³/day              | 780000 |
| 35 | Samudrapur | Aurangpu(Rith<br>) &Umra      | Aurangpu(Rith<br>) &Umra      | Aurangpur- 18,21,22<br>and Umra-<br>258/1,258/2,259  | Wana    | 1250mx20mx0.70m | 6184  | 530M  | 3m | 33  | 12 | 250 | 210 | 1.860m³/day              | 826000 |
| 36 | Samudrapur | Chakur                        | Chakur                        | 15/1,15/2,13/1,13/2,8,6<br>,200,199,198,197  | Wana    | 600mx25mx0.50m  | 2650  | 530m  | 3m | 28  | 5  | 129 | 210 | 1.860m³/day              | 637500 |
| 37 | Samudrapur | Pardi                         | Pardi                         | 217 Part   | Wana    | 750mx30mx0.50m  | 3975  | 700m  | 3m | 33m | 8  | 150 | 280 | 2.860m³/day              | 754000 |

# • Status of Statutory Clearances for Sand Ghat

| Name & Address of Allottee | District Mining Officer Wardha/ Successful Bidder Wardha        |
|----------------------------|---|
|                            | District, Wardha  |
| Status of the lease        | New, Individual/ Project Proponent/Successful Bidder for        |
|                            | auction of sand ghat by District Collector Wardha.              |
| Mineral for which lessee   | Ordinary Sand for Construction purpose                          |
| intends to mine            |   |
| Name & Address of the      | Taluka level Technical Committee chaired by Tahsildar and       |
| Prospecting Agency         | Dy. Engineer Irrigation, Junior Geologist, Directorate of       |
|                            | Geology and Mining, Junior Geologist G.S.D.A.,                  |
|                            | representative of Maharashtra Pollution Control Board.          |
| Grampanchayat NOC          | Received from Gramsabha as per public consultation procedure    |
|                            | defined in sand mining guidelines of Maharashtra State dated    |
|                            | 03.09.2019.   |
| Plan Period for Activity   | Up to one year from the date of allotment of sand ghat or up to |
|                            | scooping of Allotted/Permitted quantity mined out, whichever    |
|                            | is earlier excluding stipulated monsoon period between 10 June  |
|                            | -30 September   |

### • Method of Mining:

The mining will be manual opencast mining method of scooping using simple tool like spade/pawdas.

- a. Over burden/Soil Removal:No overburden/Soil is anticipated.
- b. Scooping of Sand /LoadingThe ordinary sand will be loaded manually by labours.
- Hauling
   Ordinary sand is transported through tractors /trucks with permissible quantity.
- d. No machinery will be utilized.
- e. Period of scooping of sand will be for one year excluding monsoon period of 10<sup>th</sup> June -30<sup>th</sup> Sept or as defined by district collector.

- About 28-48 labours per ghat will be required.
- The site services will be provided by allottee/Successful Bidder, Office, First Aid and Rest Shelters will be temporarily constructed 20m away from the bank of river.
- Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well tilled area. The sand of the applied area is found to be underlain by dark basalt of the river bed.
- Anticipated Environmental impacts and Management Plan

## A summary of air pollution control measures is given below:

| S. No | Impact Source              | Impact  | Control measure  |
|-------|----------------------------|---|--|
| 1     | Transport Road             | On Air Quality On Land / Rd stability/ Rd degradation | <ul> <li>Compaction, gradation and drainage on both sides &amp; development of green belts</li> <li>Proper maintenance.</li> <li>Regular water spraying.</li> <li>Avoiding over filling of tractor and consequent spillage on the roads</li> <li>Air quality will be monitoring at impacted village.</li> </ul>  |
| 2     | Truck/ Tractor<br>Movement | Air Quality   | <ul> <li>No overloading of trucks.</li> <li>Sand carrying trucks will be effectively covered by tarpaulin to avoid escape of fines to the atmosphere.</li> <li>Enforcing speed limit.</li> <li>Regular monitoring of the exhaust fumes.</li> <li>No Engine of tractor/truck will be kept on during the filling.</li> <li>If possible entry be restricted to river bed</li> </ul> |
| 3     | Ramp and Sand<br>Reach     | Mining Operations                                     | <ul> <li>Regular ramp Inspection and Ramp maintenance</li> <li>Provision of dusk masks.</li> <li>Mining will be done during day time between fixed</li> </ul>  |

|   |                 |  | hours only.  |
|---|-----------------|--|--|
| 4 | Bank Management | Bank Erosion/<br>Flood Plain<br>management | <ul> <li>Green belt along bank</li> <li>Plantation of wide leaf tall trees on banks and grass along slanting portion of bank.</li> </ul> |

#### • Occupational Health and Services

| 1 | Occupational    | Safety of Workers and | Providing a working environment that is conducive to safety &    |
|---|-----------------|-----------------------|--|
|   | Health & Safety | Mining Operations     | health   |
|   | Measures to     |                       | The management of occupational safety & health is the prime      |
|   | Control Dust    |                       | responsibility of mine owner.                                    |
|   | Inhalation      |                       | Provision of necessary personal protective equipments            |
|   |                 |                       | Ensuring employees at all levels receive appropriate training    |
|   |                 |                       | and are competent to carry out their duties and responsibilities |
|   |                 |                       | Provision of First Aid and Drinking Water, Temporary             |
|   |                 |                       | rest Room  |

## • Noise control measures will be provided in the proposed crushing and screening plant.

- In addition, personnel working near high noise level generating sources will be provided with ear muffs
- No equipment generating Noise excluding tractor/truck will be permitted.
- No tractor engine will be kept idle.
- Conduct periodic audiometric tests for employees working close to high noise generating areas such as compressors, the loading and unloading sections, etc
- Provision of PPE's will be made and their proper usage will be ensured for hearing protection of the workers as well as visitors.

#### • Traffic Management

- •The mineral transporting vehicles will be registered with the forest department/revenue department and only registered vehicles will be used for mineral transport.
- The PUC certificate for exhaust emissions for all the transport vehicles will be made mandatory.
- All the vehicles will be properly maintained to control emissions and noise generation.
- Drivers of all the vehicles will strictly follow traffic rules.
- Speeds of the mineral transport vehicles will be regulated.
- Overloading of the tractors will not be allowed
- The mineral transporting tractors will be properly covered with tarpaulin to avoid fugitive emissions.
- Batch transport system will be adopted in consultation with the other sand ghat operators in the area to avoid excess traffic at a time on the road.
- Mineral transportation will be done only during day time only.
- Strict action will be taken against any driver, who do not comply the traffic rules.

#### Plantation program

It is proposed to plant local species during the monsoon period along bank of river and village roads.

List of Species Proposed for green Belt Development

Local species like Neem, peepal, subabhul, Karani, Gulmohar etc will be planted.

• Successful Bidder/ Sand Ghat allottee will implement the Environmental Management Plan for the amount as per Table 1.0 on his own.

Successful Bidder/ Sand Ghat allottee will submit compliance to terms of conditions stipulated in the prior environmental clearance to the District Mining Officer and respective Tahsildar with

the expenses made on implementation of environmental management plan.

District Mining Officer/respective Tahsildar will monitor the implementation of approved environmental management plan along with District Level Committee headed by District Collector as stipulated in Sand Mining Rules 2019.