1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Aajarsoda	Aundha Na	404, 403, 405, 416, 417, 426, 427, 430.	1.22

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.40 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Aajarsoda	Purna	0.40	1.22	1657	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 163 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	25,000/-
		Water Sprinkling	45,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 1626 m and Width= 3 m)	35,000/-
3	Plantation	Along River Bank (35)	2,100/-
		Along haul road (128)	7,680/-
4	Security	Display Boards and other security measures	9,500/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,45,780/-

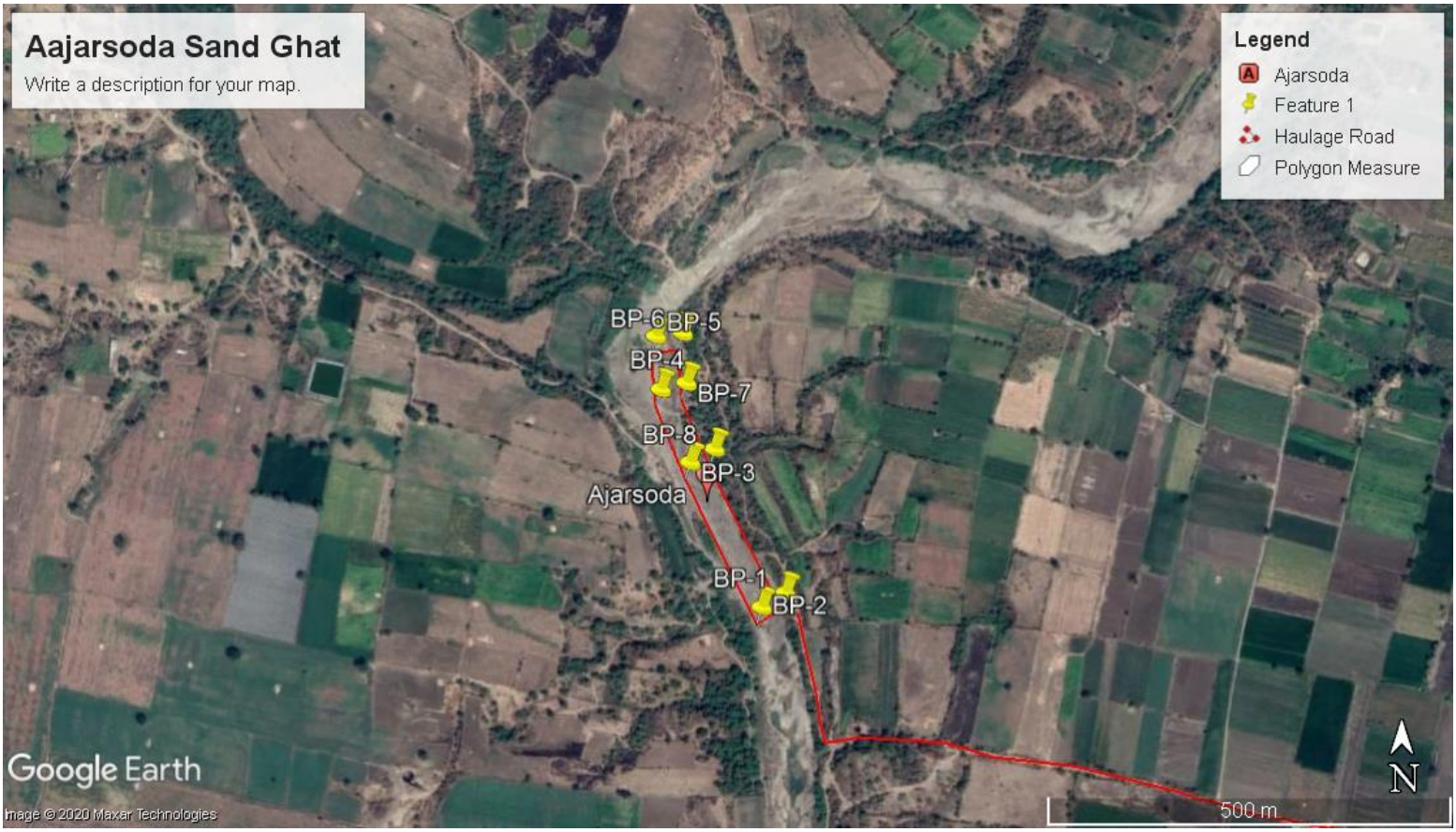
Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Aajarsoda Sand Ghat	Aundha Na	Hingoli	Purna	404, 403, 405, 416, 417, 426, 427, 430.	350*35*0.40	12250	1.22	1657	--	**BP1**	19°26'48.97"N	76°55'13.68"E
										BP2	19°26'48.38"N	76°55'12.65"E
										BP3	19°26'54.22"N	76°55'9.59"E
										BP4	19°26'57.16"N	76°55'8.33"E
										BP5	19°26'59.30"N	76°55'8.12"E
										BP6	19°26'59.43"N	76°55'9.26"E
										BP7	19°26'57.42"N	76°55'9.43"E
										BP8	19°26'54.76"N	76°55'10.63"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



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Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Anjanwadi	Aundha Na	211, 212, 213, 214, 06, 10, 11, 20, 22, 207, 208, 209, 210, 215, 216, 217, 218	1.96

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viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Anjanwadi	Purna	0.50	1.96	3464	As per Auction letter / EC granted period.	--

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1. Occupational health surveillance program for workers is undertaken periodically.
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1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
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3. Display of warning signal boards at prominent locations.
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5. Deployment of adequate security arrangement.

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		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 1196 m and Width= 3 m)	30,000/-
3	Plantation	Along River Bank (20)	1,200/-
		Along haul road (100)	6,000/-
4	Security	Display Boards and other security measures	9,000/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,99,700/-

Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Anjanwadi Sand Ghat	Aundha Na	Hingoli	Purna	211, 212, 213, 214, 06, 10, 11, 20, 22, 207, 208, 209, 210, 215, 216, 217, 218	516*38*0.50	19608	1.96	3464	--	**BP1**	19°31'5.90"N	76°57'48.66"E
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										BP4	19°30'58.88"N	76°57'39.01"E
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District Mining Officer, Hingoli.

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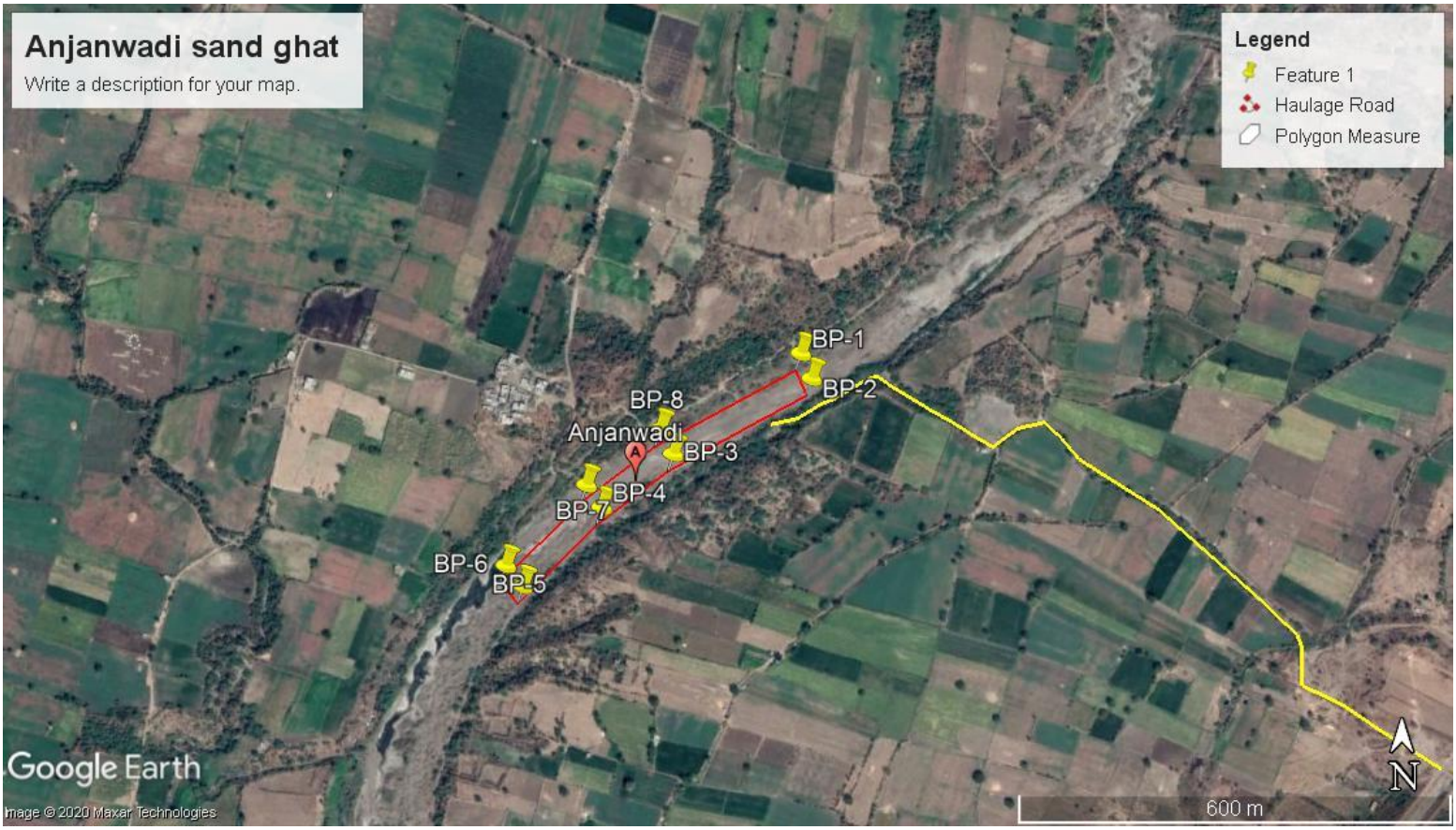

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Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Ankhali	Aundha Na	347, 348, 349, 355, 364, 365, 366, 367	1.14

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Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Ankhali	Purna	0.50	1.14	2014	As per Auction letter / EC granted period.	--

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- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 22 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	21,000/-
		Water Sprinkling	35,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 215 m and Width= 3 m)	20,000/-
3	Plantation	Along River Bank (6)	360/-
		Along haul road (16)	960/-
4	Security	Display Boards and other security measures	8,200/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,07,020/-

Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Ankhali Sand Ghat	Aundha Na	Hingoli	Purna	347, 348, 349, 355, 364, 365, 366, 367	380*30*0.50	11400	1.14	2014	--	**BP1**	19°29'28.83"N	76°56'51.39"E
										BP2	19°29'30.44"N	76°56'54.23"E
										BP3	19°29'31.71"N	76°56'57.56"E
										BP4	19°29'33.11"N	76°57'3.53"E
										BP5	19°29'32.14"N	76°57'3.72"E
										BP6	19°29'30.80"N	76°56'58.00"E
										BP7	19°29'29.56"N	76°56'54.66"E
										BP8	19°29'27.95"N	76°56'51.89"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Bhagwa	Aundha Na	53,54,55	1.19

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Bhagwa	Purna	0.50	1.19	2114	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 76 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	23,000/-
		Water Sprinkling	35,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 762 m and Width= 3m)	28,000/-
3	Plantation	Along River Bank (12)	720 /-
		Along haul road (64)	3,840/-
4	Security	Display Boards and other security measures	8,500/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,20,560/-

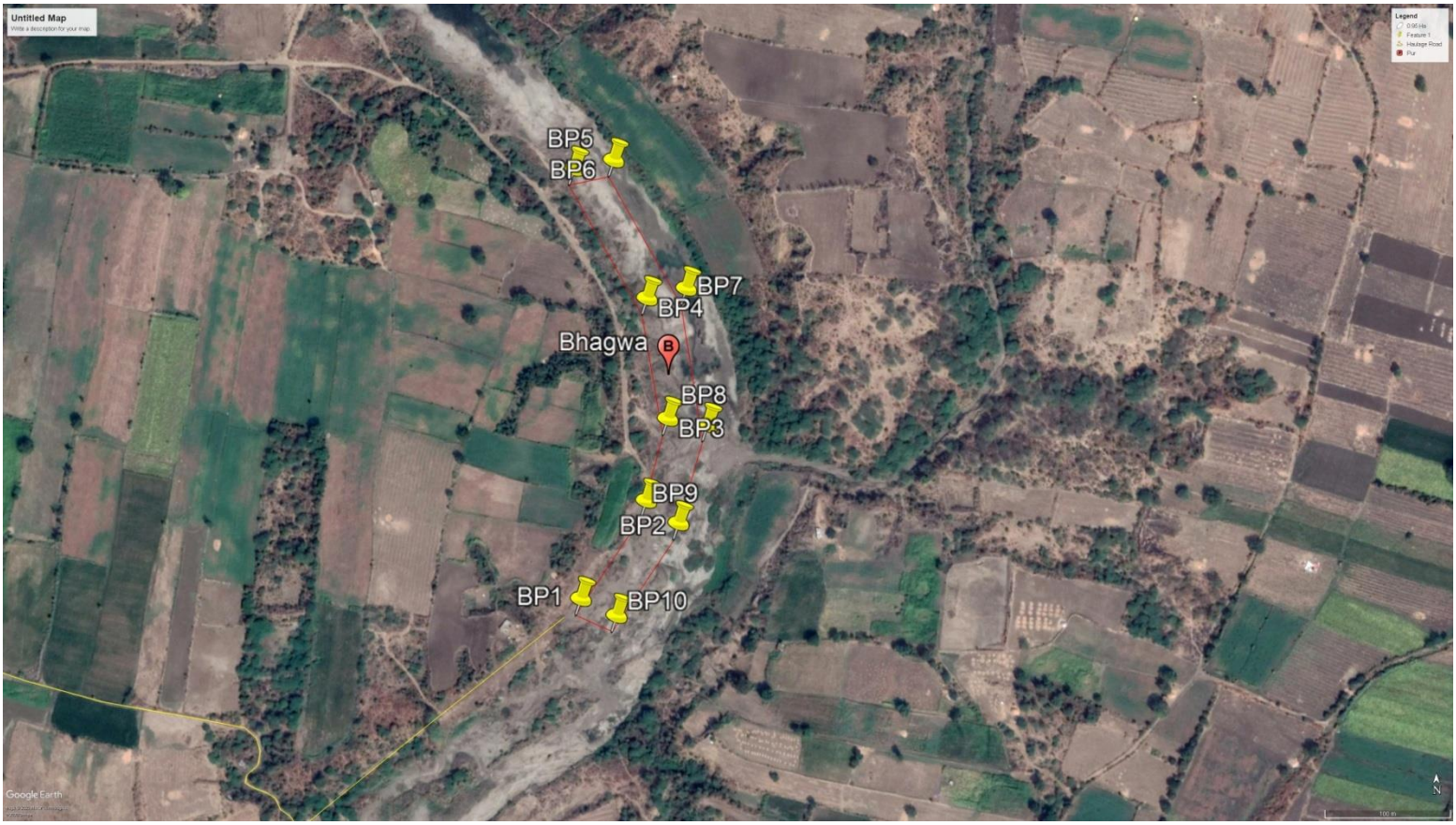
Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Bhagwa Sand Ghat	Aundha Na	Hingoli	Purna	53,54,55	374*32*0.50	11968	1.19	2114	--	**BP1**	19°31'17.25"N	76°58'2.30"E
										BP2	19°31'19.76"N	76°58'4.08"E
										BP3	19°31'21.86"N	76°58'4.67"E
										BP4	19°31'24.95"N	76°58'4.11"E
										BP5	19°31'28.28"N	76°58'2.12"E
										BP6	19°31'28.50"N	76°58'3.20"E
										BP7	19°31'25.20"N	76°58'5.18"E
										BP8	19°31'21.70"N	76°58'5.75"E
										BP9	19°31'19.18"N	76°58'4.96"E
										BP10	19°31'16.81"N	76°58'3.27"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Bramhangaon	Basmat	9,8,7,1,114	1.21

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.60 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Bramhangaon	Purna	0.60	1.21	2555	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

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Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

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Mitigation Measures:

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- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
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The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 44 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

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1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
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3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

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- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

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*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
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		Water Sprinkling	38,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 435 m and Width= 3 m)	25,000/-
3	Plantation	Along River Bank (8)	480/-
		Along haul road (36)	2,160/-
4	Security	Display Boards and other security measures	8,500/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,83,640/-

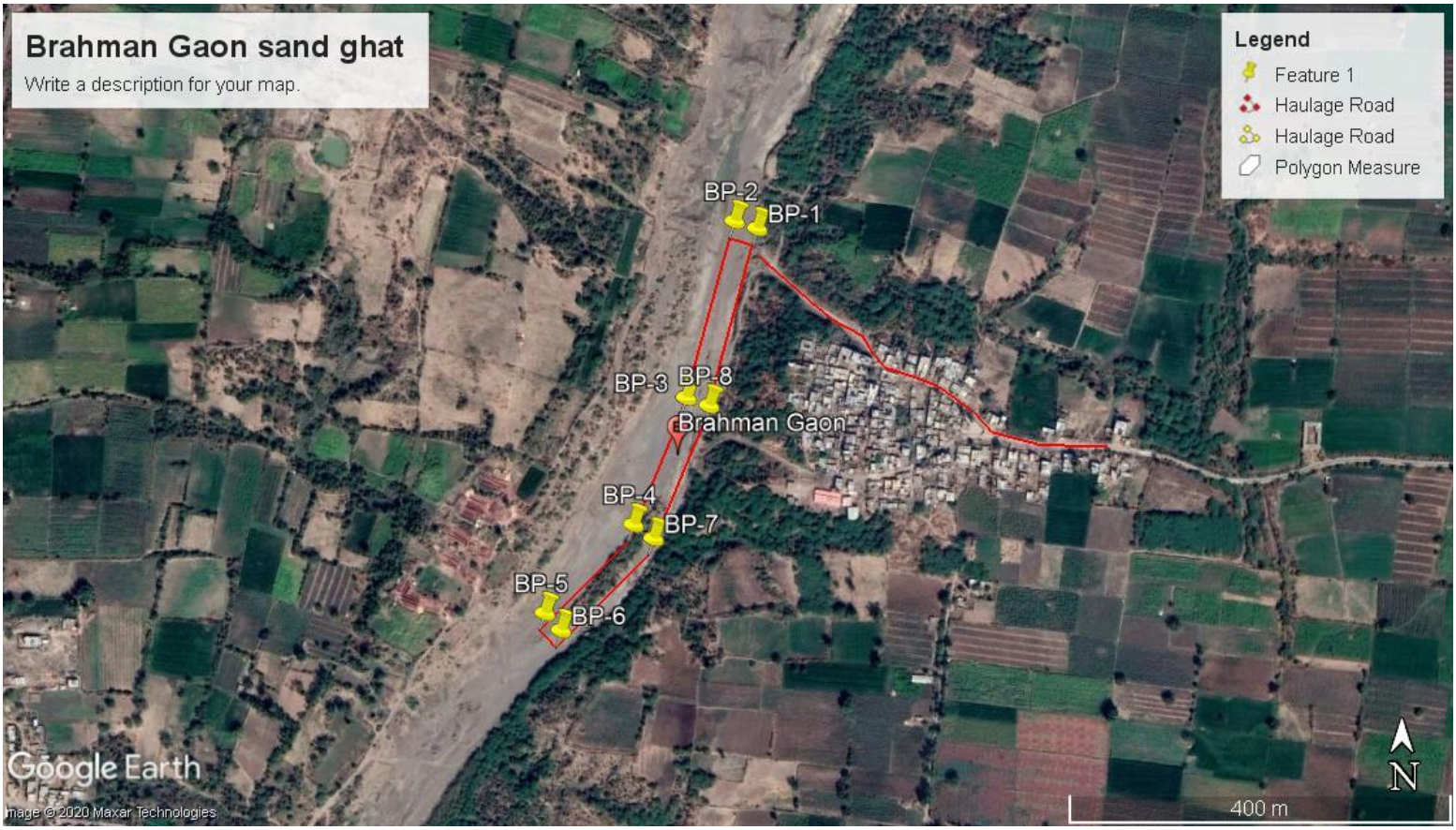
Annexure -1

Details of Sandghat, Tehsil- Basmat, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Bramhangaon Sand Ghat	Basmat	Hingoli	Purna	9,8,7,1,114	482*25*0.60	12050	1.21	2555	--	**BP1**	19°21'45.76"N	76°53'34.40"E
										BP2	19°21'46.01"N	76°53'33.58"E
										BP3	19°21'39.98"N	76°53'31.83"E
										BP4	19°21'35.65"N	76°53'29.92"E
										BP5	19°21'32.63"N	76°53'26.71"E
										BP6	19°21'32.05"N	76°53'27.30"E
										BP7	19°21'35.18"N	76°53'30.65"E
										BP8	19°21'39.71"N	76°53'32.66"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Chaphnath	Kalmanuri	54,55,56,58	1

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.60 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Chaphnath	Kayadhu	0.60	1	2120	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area. Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 125 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	26,000/-
		Water Sprinkling	40,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 1247 m and Width= 3 m)	32,000/-
3	Plantation	Along River Bank (20)	1,200/-
		Along haul road (105)	6,300/-
4	Security	Display Boards and other security measures	9,000/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,36,000/-

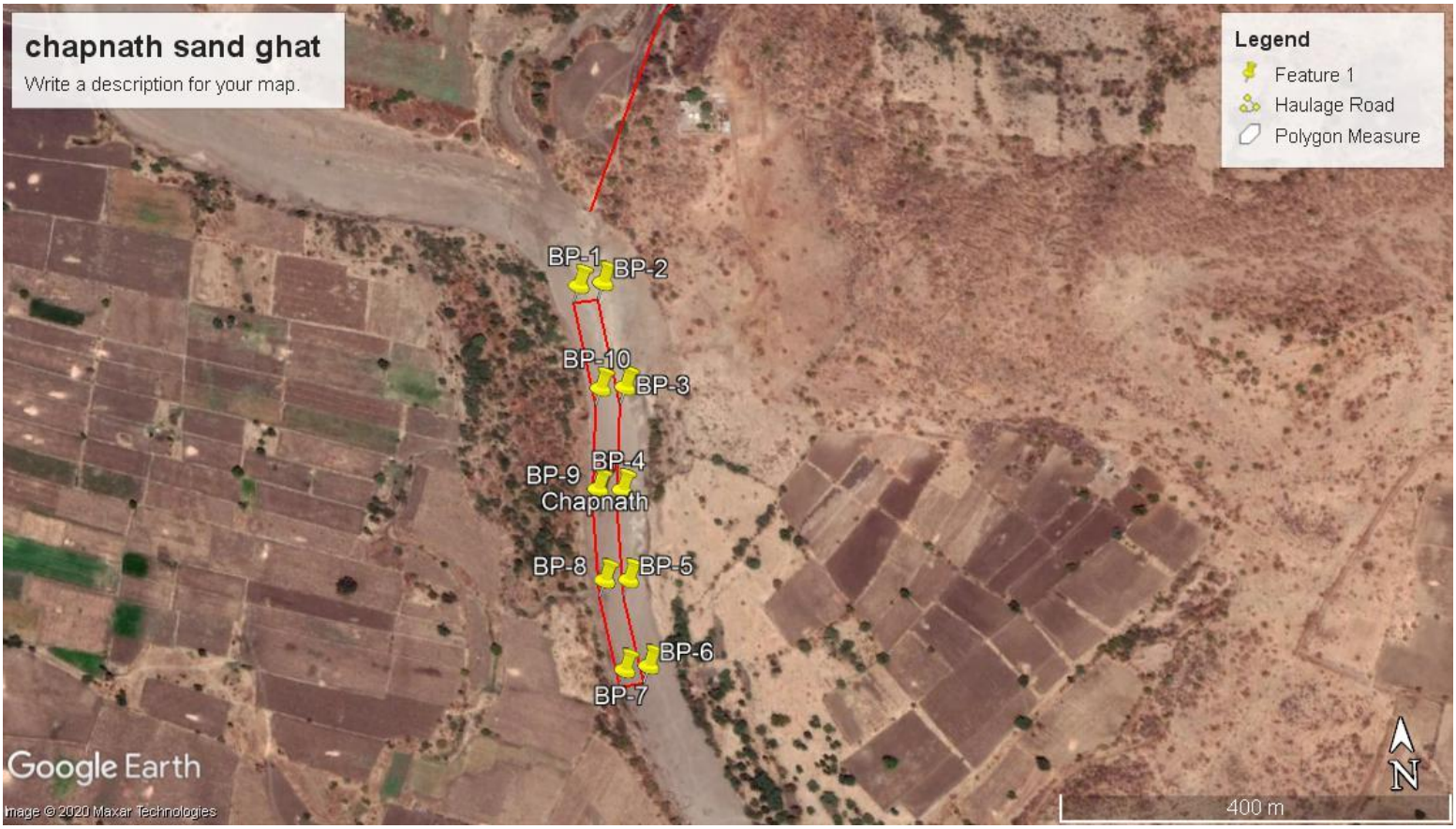
Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Chaphnath Sand Ghat	Kalmanuri	Hingoli	Kayadhu	54,55,56,58	400*25*0.60	10000	1	2120	--	**BP1**	19°35'26.49"N	77°18'15.99"E
										BP2	19°35'26.56"N	77°18'16.85"E
										BP3	19°35'23.04"N	77°18'17.49"E
										BP4	19°35'19.60"N	77°18'17.24"E
										BP5	19°35'16.58"N	77°18'17.34"E
										BP6	19°35'13.69"N	77°18'17.94"E
										BP7	19°35'13.59"N	77°18'17.09"E
										BP8	19°35'16.60"N	77°18'16.49"E
										BP9	19°35'19.66"N	77°18'16.38"E
										BP10	19°35'23.03"N	77°18'16.61"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Chikhli	Kalmanuri	3,2,1,31,32/1,34	1.11

 # Please Refer Annexure I (Details of Sandghat)

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The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

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iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Chikhli	Kayadhu	0.50	1.11	1966	As per Auction letter / EC granted period.	--

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- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
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- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

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Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

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Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

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1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

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1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

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- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
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*Responsibility of implementation of EMP will be of successful bidder.

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		Water Sprinkling	36,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 332m and Width= 3 m)	22,000/-
3	Plantation	Along River Bank (6)	360/-
		Along haul road (27)	1,620/-
4	Security	Display Boards and other security measures	8,300/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,12,780/-

Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Chikhli Sand Ghat	Kalmanuri	Hingoli	Kayadhu	3,2,1,31,32/1,34	530*21*0.50	11130	1.11	1966	--	**BP1**	19°29'39.75"N	77°28'3.30"E
										BP2	19°29'40.20"N	77°28'3.82"E
										BP3	19°29'45.48"N	77°27'58.75"E
										BP4	19°29'48.92"N	77°27'55.95"E
										BP5	19°29'52.94"N	77°27'51.47"E
										BP6	19°29'52.42"N	77°27'51.02"E
										BP7	19°29'48.47"N	77°27'55.41"E
										BP8	19°29'45.08"N	77°27'58.16"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Dhavulgaon	Basmat	1,3,4,8,9,13,14,15,211,212	1.78

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Dhavulgaon	Purna	0.50	1.78	3148	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 40 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	24,000/-
		Water Sprinkling	40,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 402 m and Width= 3 m)	25,000/-
3	Plantation	Along River Bank (8)	480/-
		Along haul road (32)	1,920/-
4	Security	Display Boards and other security measures	8,600/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,85,500/-

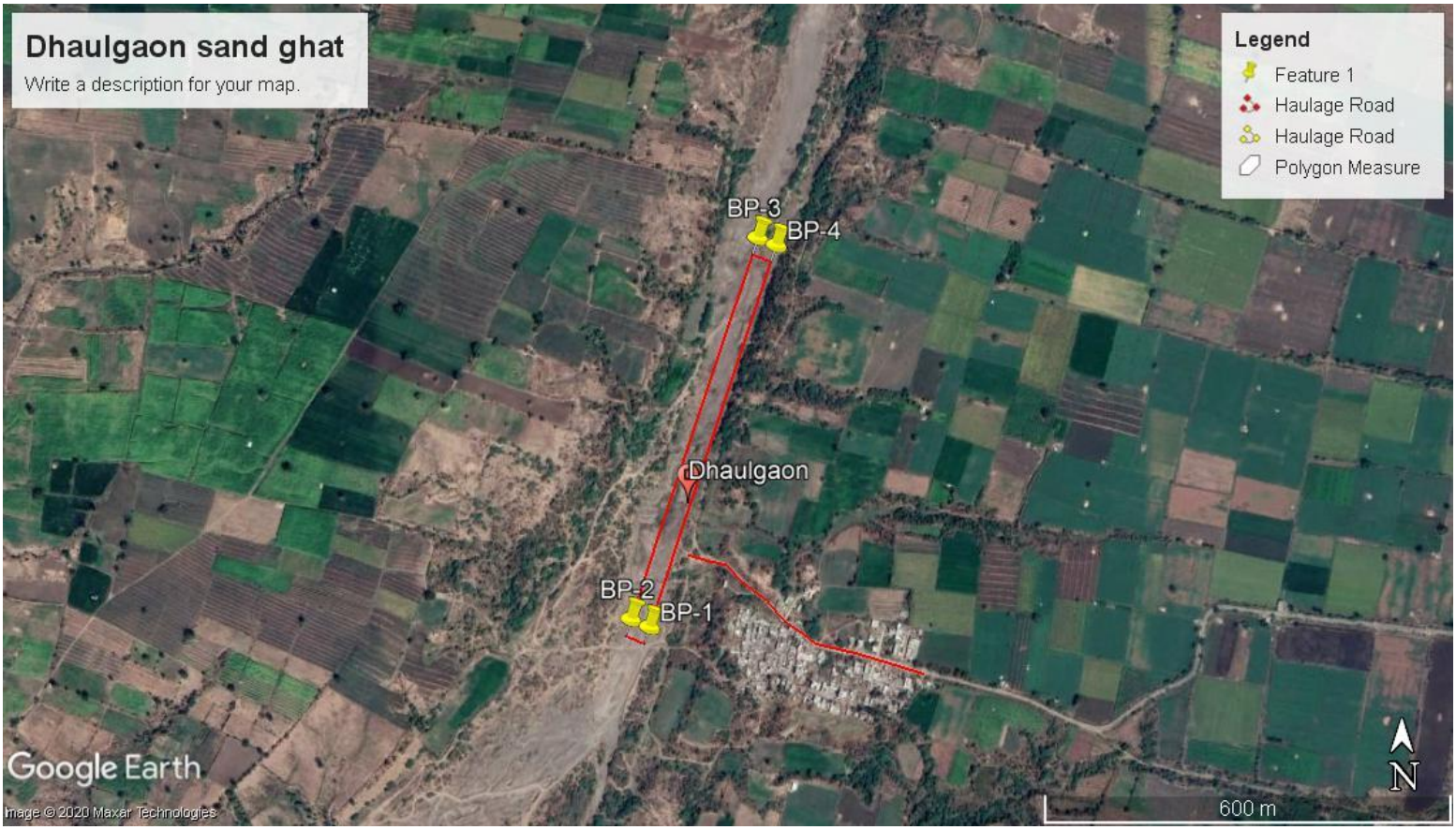
Annexure -1

Details of Sandghat, Tehsil- Basmat, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Dhavulgaon Sand Ghat	Basmat	Hingoli	Purna	1,3,4,8,9,13, 14,15,211,2 12	594*30*0.50	17820	1.78	3148	--	**BP1**	19°23'13.13"N	76°54'3.98"E
										BP2	19°23'13.50"N	76°54'3.03"E
										BP3	19°23'31.81"N	76°54'9.50"E
										BP4	19°23'31.46"N	76°54'10.44"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Digras	Kalmanuri	34,9/1,8/2,89,89/1,88/1	1.2

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Digras	Kayadhu	0.50	1.2	2120	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area. Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 16 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

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- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
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6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
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		Water Sprinkling	35,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 155 m and Width= 3 m)	22,000/-
3	Plantation	Along River Bank (4)	240/-
		Along haul road (12)	720/-
4	Security	Display Boards and other security measures	8,000/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,07,460/-

Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Digras Sand Ghat	Kalmanuri	Hingoli	Kayadhu	34,9/1,8/2, 89,89/1,88 /1	800*15*0.50	12000	1.2	2120	--	**BP1**	19°34'29.73"N	77°19'0.10"E
										BP2	19°34'29.36"N	77°18'59.78"E
										BP3	19°34'39.56"N	77°18'48.74"E
										BP4	19°34'46.73"N	77°18'39.44"E
										BP5	19°34'47.12"N	77°18'39.73"E
										BP6	19°34'39.96"N	77°18'49.06"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Dongargaon Pul	Kalmanuri	16,18	1.02

 # Please Refer Annexure I (Details of Sandghat)

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vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
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xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Dongargaon Pul	Kayadhu	0.50	1.02	1797	As per Auction letter / EC granted period.	--

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8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
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- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	23,000/-
		Water Sprinkling	33,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 565 m and Width= 3 m)	24,000/-
3	Plantation	Along River Bank (12)	720/-
		Along haul road (45)	2,700/-
4	Security	Display Boards and other security measures	8,300/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,13,220/-

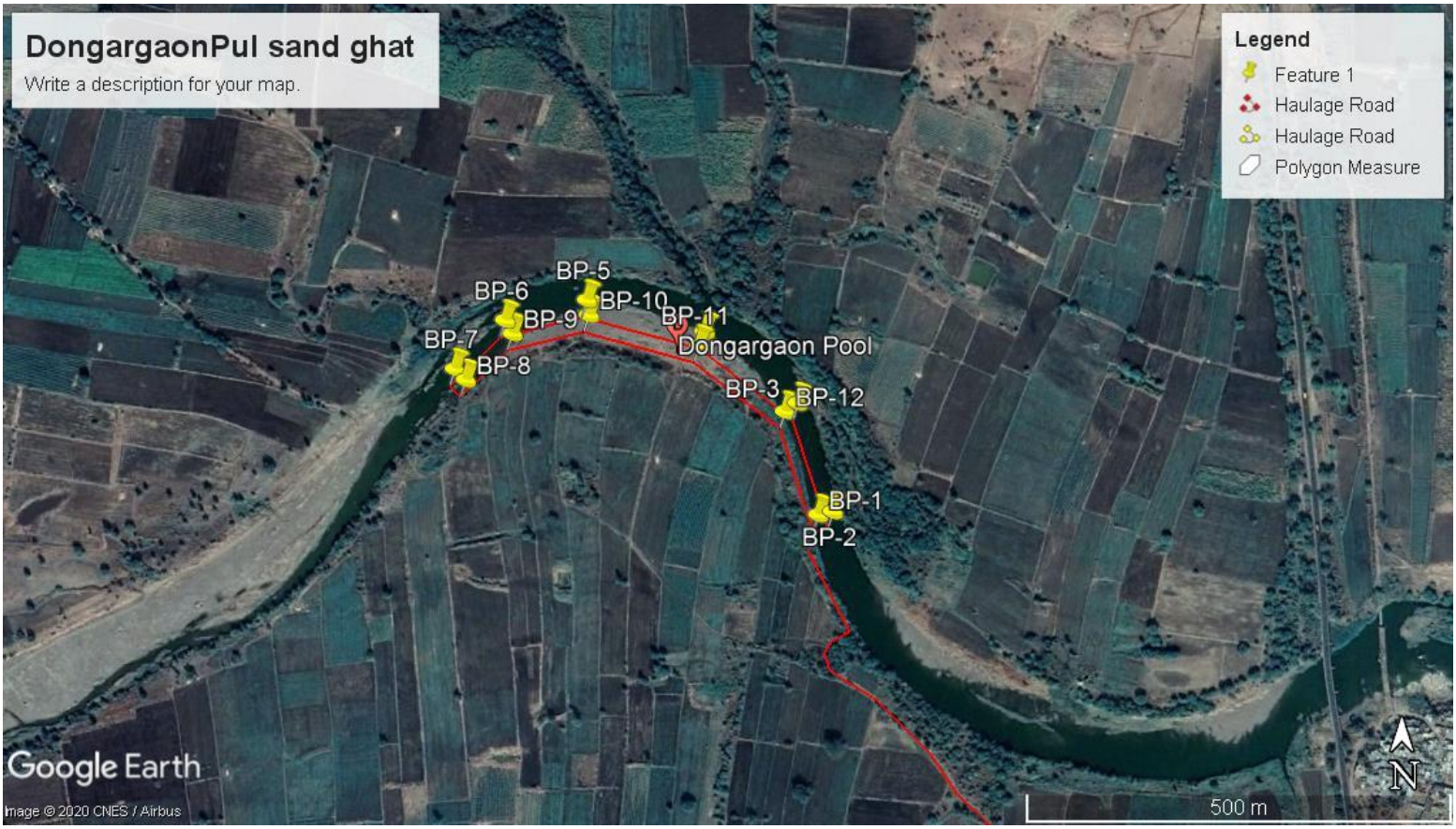
Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Dongargaon Pul Sand Ghat	Kalmanuri	Hingoli	Kayadhu	16,18	565*18*0.50	10170	1.02	1797	--	**BP** 1	19°34'1.73"N	77°23'46.66"E
										BP 2	19°34'1.42"N	77°23'46.14"E
										BP 3	19°34'3.21"N	77°23'44.96"E
										BP 4	19°34'5.24"N	77°23'44.08"E
										BP 5	19°34'8.69"N	77°23'43.04"E
										BP 6	19°34'11.42"N	77°23'41.88"E
										BP 7	19°34'12.47"N	77°23'40.43"E
										BP 8	19°34'13.75"N	77°23'37.22"E
										BP 9	19°34'14.10"N	77°23'35.23"E
										BP 10	19°34'14.68"N	77°23'35.22"E
										BP 11	19°34'14.36"N	77°23'37.24"E
										BP 12	19°34'13.02"N	77°23'40.67"E
										BP 13	19°34'11.92"N	77°23'42.27"E
										BP 14	19°34'8.83"N	77°23'43.69"E
										BP 15	19°34'5.36"N	77°23'44.69"E
										BP 16	19°34'3.45"N	77°23'45.53"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Hingni	Hingoli	266, 265, 269, 271, 273, 274, 314, 330, 329, 326, 311, 312, 314	1.26

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.60 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Hingni	Kayadhu	0.60	1.26	2679	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 33 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

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1	Air Pollution	Air monitoring near Haulage Road	22,000/-
		Water Sprinkling	36,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 330 m and Width= 3 m)	24,000/-
3	Plantation	Along River Bank (8)	480/-
		Along haul road (25)	1,500/-
4	Security	Display Boards and other security measures	8,500/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,77,980 /-

Annexure -1

Details of Sandghat, Tehsil- Hingoli, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Hingni Sand Ghat	Hingoli	Hingoli	Kayadhu	266, 265, 269, 271, 273, 274, 314, 330, 329, 326, 311, 312, 314	486*26*0.60	12636	1.26	2679	--	**BP1**	19°37'55.69"N	77°11'50.87"E
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										BP4	19°38'3.58"N	77°11'57.45"E
										BP5	19°38'8.46"N	77°12'0.20"E
										BP6	19°38'8.02"N	77°12'0.96"E
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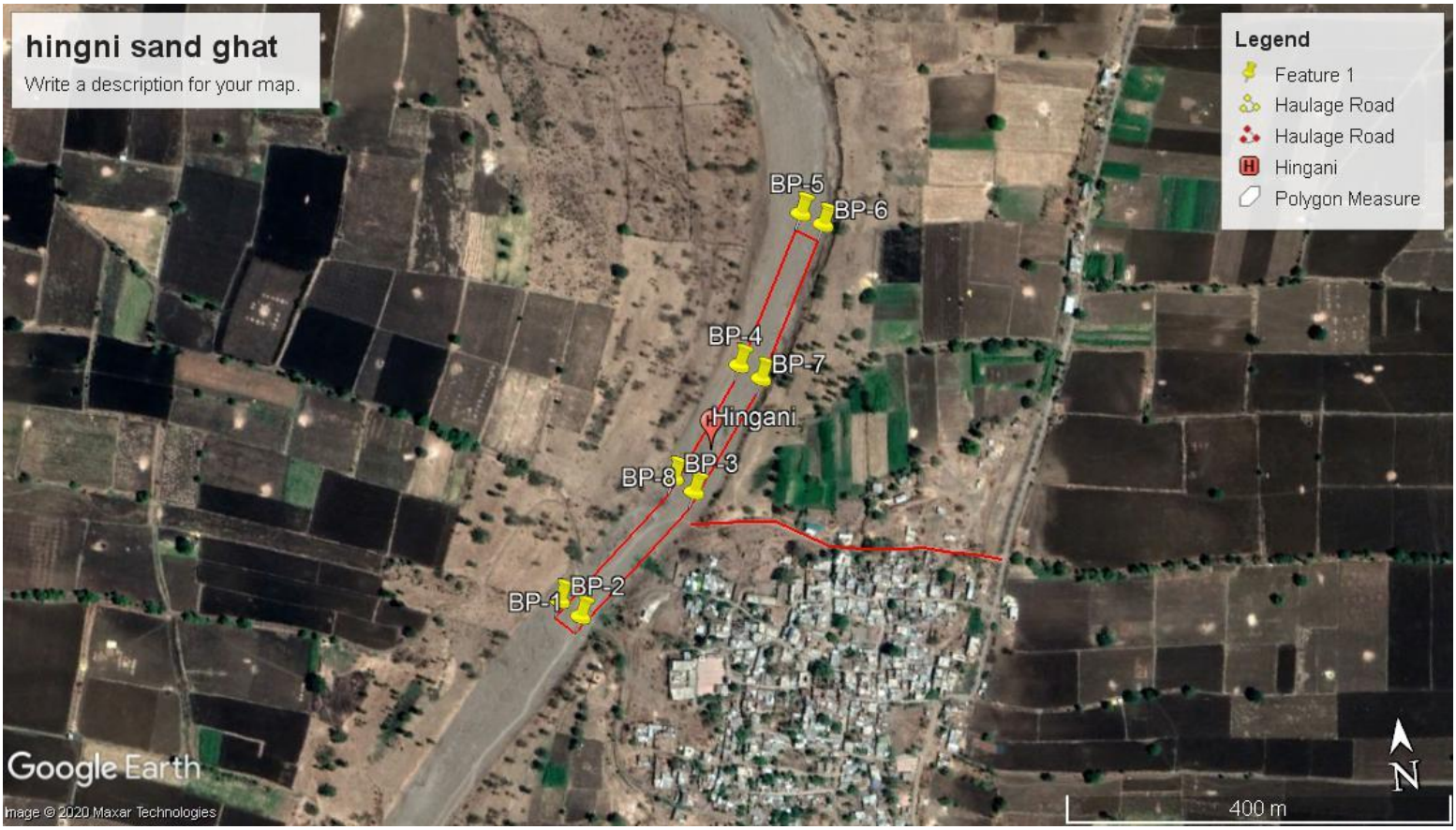
District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



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Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Kanhegaon	Kalmanuri	6,26,27	1.08

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ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Kanhegaon	Kayadhu	0.50	1.08	1905	As per Auction letter / EC granted period.	--

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3	Plantation	Along River Bank (12)	720/-
		Along haul road (56)	3,360/-
4	Security	Display Boards and other security measures	8,500/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,16,080/-

Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Kanhegaon Sand Ghat	Kalmanuri	Hingoli	Kayadhu	6,26,27	490*22*0.50	10780	1.08	1905	--	**BP1**	19°30'24.95"N	77°26'47.14"E
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										BP4	19°30'14.25"N	77°26'52.76"E
										BP5	19°30'12.43"N	77°26'55.73"E
										BP6	19°30'11.79"N	77°26'55.42"E
										BP7	19°30'13.68"N	77°26'52.27"E
										BP8	19°30'16.51"N	77°26'50.03"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Kasbe Dhawanda	Kalmanuri	56,57,38/2,39,40,41,42,43,48	1.32

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.60 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Kasbe Dhawanda	Kayadhu	0.60	1.32	2790	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area. Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 92 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	26,000/-
		Water Sprinkling	38,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 923 m and Width= 3 m)	30,000/-
3	Plantation	Along River Bank (22)	1,320/-
		Along haul road (70)	4,200/-
4	Security	Display Boards and other security measures	9,000/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,94,020/-

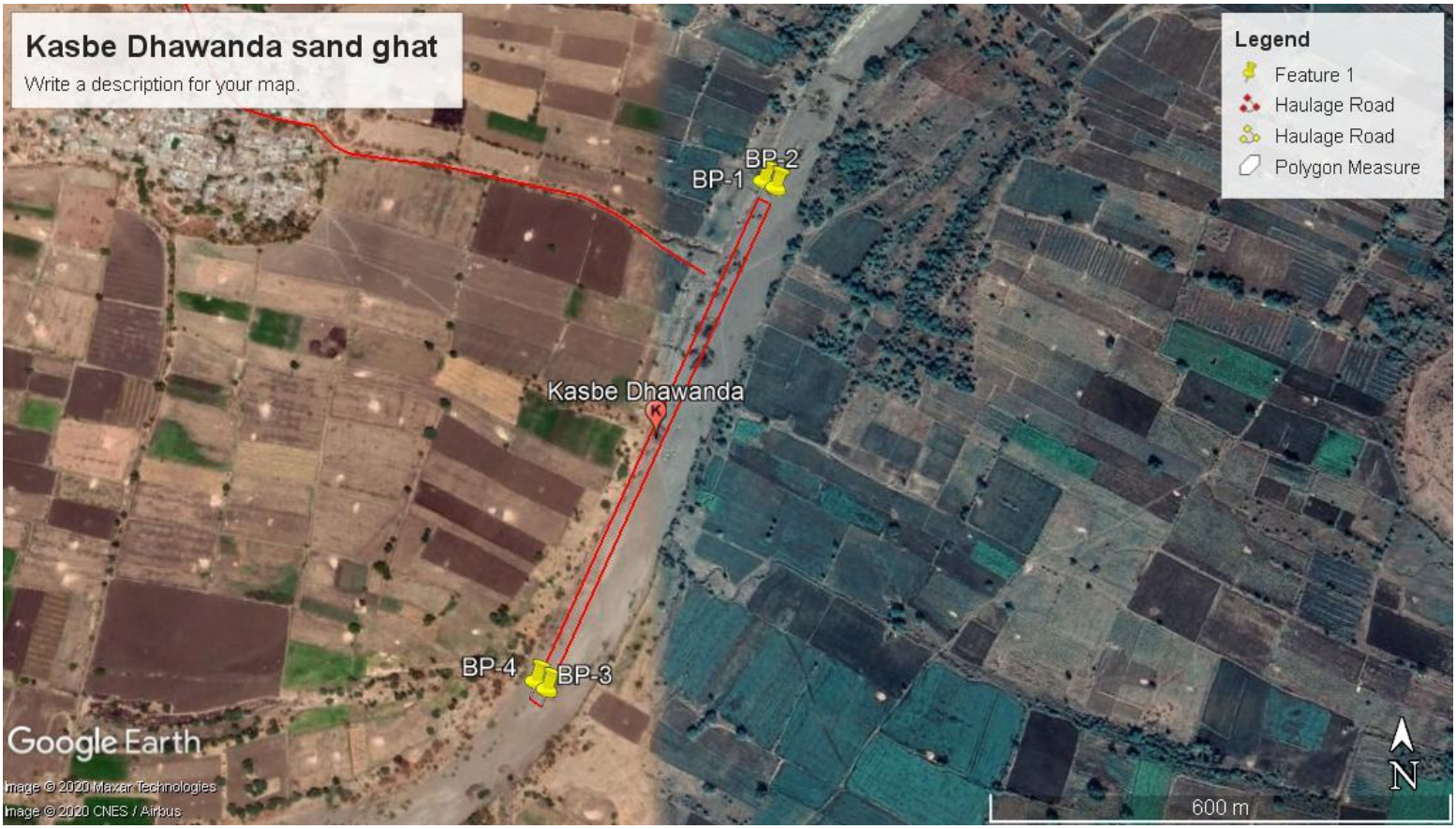
Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Kasbe Dhawanda Sand Ghat	Kalmanuri	Hingoli	Kayadhu	56,57,38/2,39,40,41, 42,43,48	731*18*0.60	13158	1.32	2790	--	**BP1**	19°33'10.76"N	77°21'34.85"E
										BP2	19°33'10.47"N	77°21'35.41"E
										BP3	19°32'48.76"N	77°21'24.99"E
										BP4	19°32'49.10"N	77°21'24.48"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Kondur	Kalmanuri	140,141,142,143,144,000	1.33

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Kondur	Kayadhu	0.50	1.33	2350	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
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Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

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- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
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3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area. Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 58 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

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1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

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1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

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*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	23,000/-
		Water Sprinkling	34,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 580 m and Width= 3 m)	24,000/-
3	Plantation	Along River Bank (12)	720/-
		Along haul road (46)	2,760/-
4	Security	Display Boards and other security measures	8,400/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,78,380/-

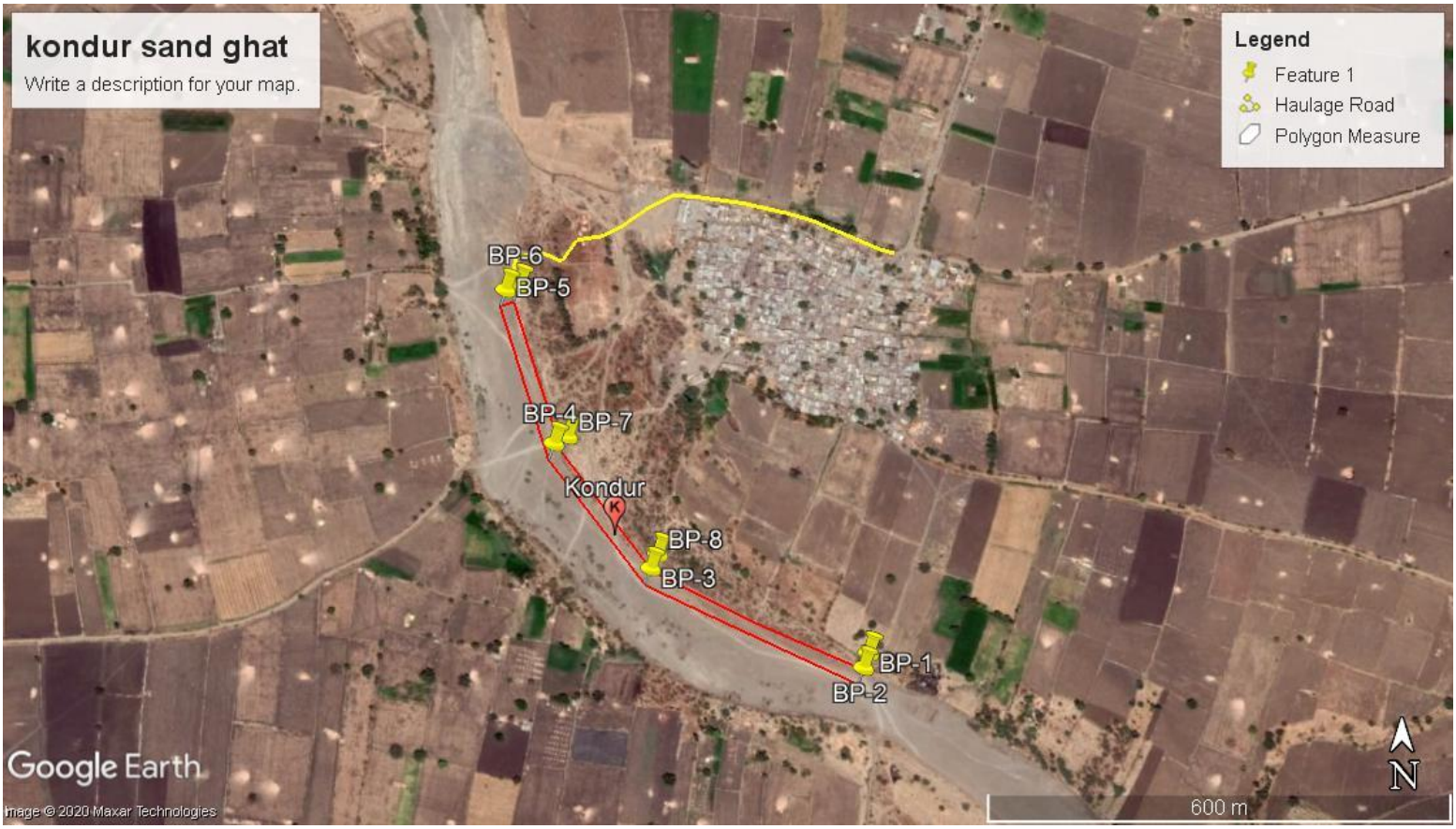
Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Kondur Sand Ghat	Kalmanuri	Hingoli	Kayadhu	140,141,142,143,144,000	700*19*0.50	13300	1.33	2350	--	**BP1**	19°33'51.71"N	77°19'24.38"E
										BP2	19°33'51.09"N	77°19'24.16"E
										BP3	19°33'55.27"N	77°19'14.66"E
										BP4	19°34'0.52"N	77°19'10.35"E
										BP5	19°34'6.98"N	77°19'8.17"E
										BP6	19°34'7.18"N	77°19'8.78"E
										BP7	19°34'0.81"N	77°19'10.96"E
										BP8	19°33'55.87"N	77°19'14.97"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



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Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Mategaon	Basmat	2,3,4,220,222	1.62

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vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
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x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Mategaon	Purna	0.50	1.62	2859	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

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- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 60 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

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6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	24,000/-
		Water Sprinkling	36,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 603 m and Width= 3 m)	25,000/-
3	Plantation	Along River Bank (12)	720/-
		Along haul road (48)	2,880/-
4	Security	Display Boards and other security measures	8,500/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,82,600/-

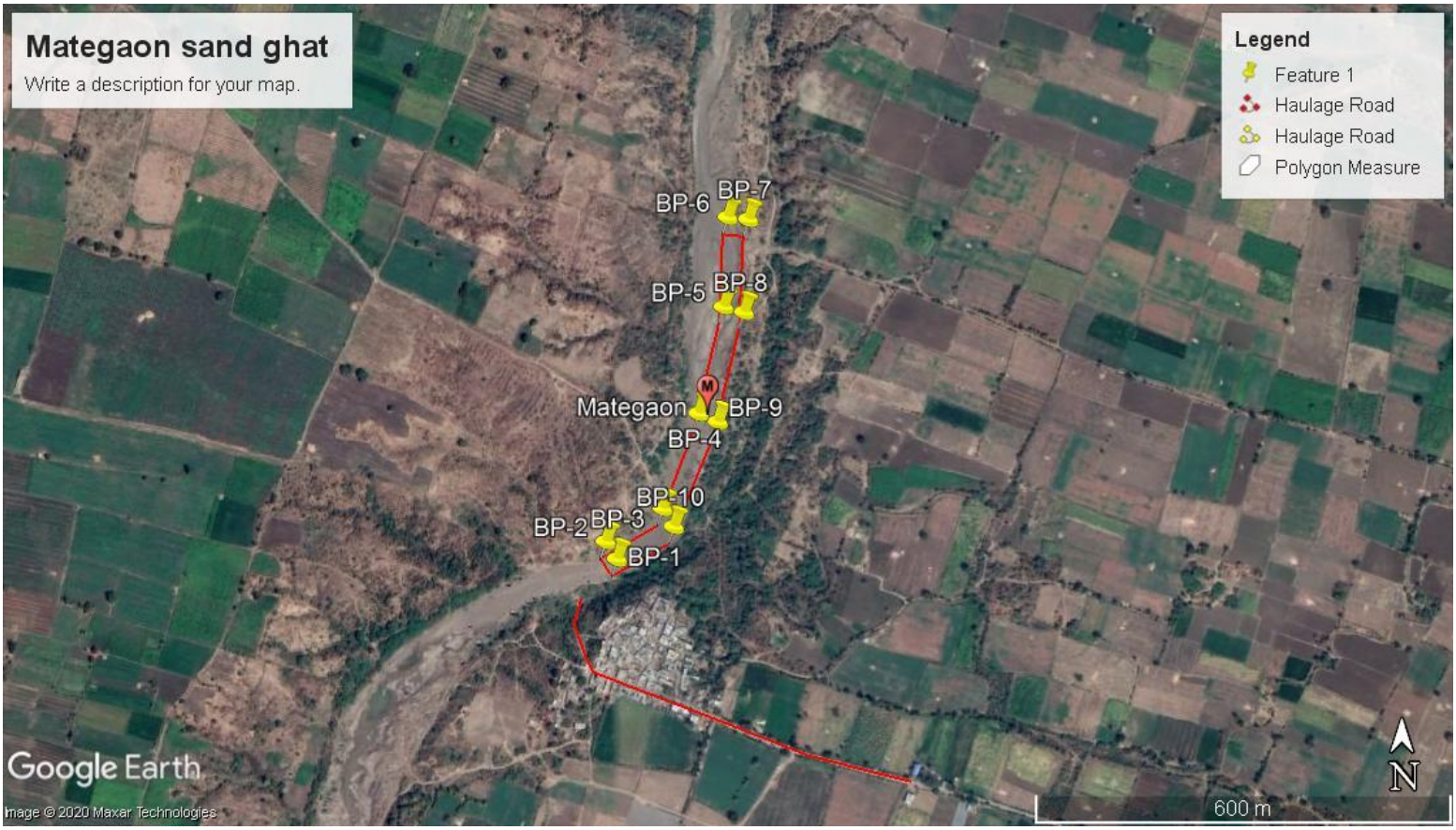
Annexure -1

Details of Sandghat, Tehsil- Basmat, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Mategaon Sand Ghat	Basmat	Hingoli	Purna	2,3,4,220,222	558*29*0.50	16182	1.62	2859	--	**BP1**	19°24'3.48"N	76°54'29.33"E
										BP2	19°24'4.29"N	76°54'28.76"E
										BP3	19°24'5.84"N	76°54'31.60"E
										BP4	19°24'10.33"N	76°54'33.40"E
										BP5	19°24'15.35"N	76°54'34.65"E
										BP6	19°24'19.58"N	76°54'34.86"E
										BP7	19°24'19.48"N	76°54'35.89"E
										BP8	19°24'15.10"N	76°54'35.68"E
										BP9	19°24'9.93"N	76°54'34.36"E
										BP10	19°24'5.00"N	76°54'32.17"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Matha	Aundha Na	291, 292, 293, 298, 312, 313, 314	1.63

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.40 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Matha	Purna	0.40	1.63	2310	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 46 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

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6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	22,000/-
		Water Sprinkling	34,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 456 m and Width= 3 m)	22,000/-
3	Plantation	Along River Bank (8)	480/-
		Along haul road (38)	2,280/-
4	Security	Display Boards and other security measures	8,400/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,74,660/-

Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Matha Sand Ghat	Aundha Na	Hingoli	Purna	291, 292, 293, 298, 312, 313, 314	545*30*0.40	16350	1.63	2310	--	**BP1**	19°32'51.17"N	76°58'9.38"E
										BP2	19°32'50.76"N	76°58'8.41"E
										BP3	19°32'55.98"N	76°58'6.74"E
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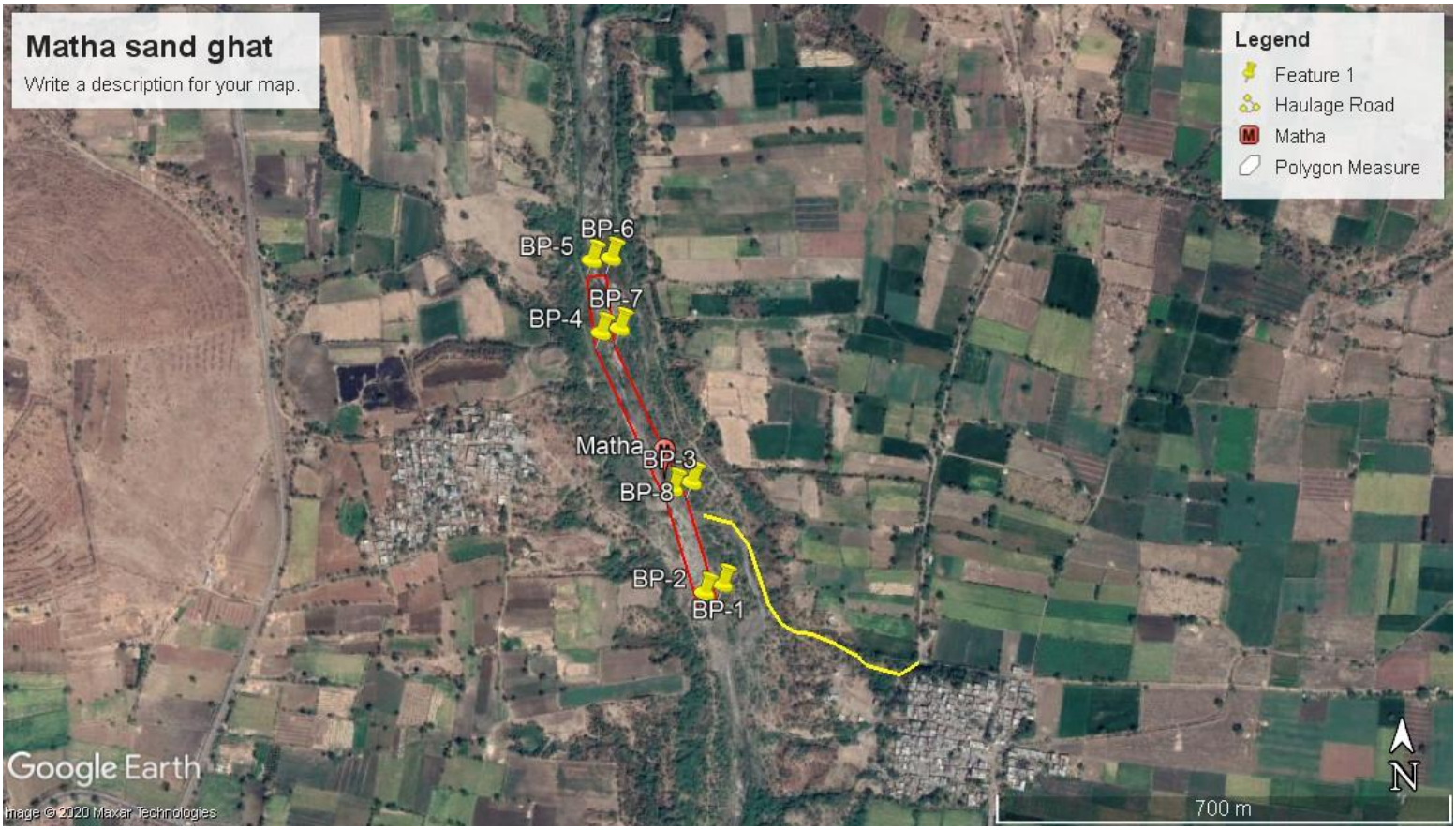
										BP5	19°33'7.41"N	76°58'2.41"E
										BP6	19°33'7.53"N	76°58'3.44"E
										BP7	19°33'4.01"N	76°58'3.90"E
										BP8	19°32'56.31"N	76°58'7.73"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



District Mining Officer, Hingoli.

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Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Nalegaon	Aundha Na	2,18,255,252, 253,24,233,232,231	1.38

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vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.40 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Nalegaon	Purna	0.40	1.38	1950	As per Auction letter / EC granted period.	--

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Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

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No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

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3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
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*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
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		Water Sprinkling	34,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 208 m and Width= 3 m)	20,000/-
3	Plantation	Along River Bank (5)	300/-
		Along haul road (16)	960/-
4	Security	Display Boards and other security measures	8,200/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,05,960/-

Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Nalegaon Sand Ghat	Aundha Na	Hingoli	Purna	2,18,255,252, 253,24,233, 232,231	460*30*0.40	13800	1.38	1950	--	**BP1**	19°28'36.68"N	76°56'26.56"E
										BP2	19°28'35.80"N	76°56'26.94"E
										BP3	19°28'32.65"N	76°56'20.64"E
										BP4	19°28'27.62"N	76°56'14.58"E
										BP5	19°28'28.17"N	76°56'13.73"E
										BP6	19°28'33.47"N	76°56'20.00"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Nandapur	Kalmanuri	405,406,422,426	1.16

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Nandapur	Kayadhu	0.50	1.16	2054	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area. Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 85 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	24,000/-
		Water Sprinkling	38,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 845 m and Width= 3 m)	26,000/-
3	Plantation	Along River Bank (15)	900/-
		Along haul road (70)	4,200/-
4	Security	Display Boards and other security measures	8,500/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,23,100/-

Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Nandapur Sand Ghat	Kalmanuri	Hingoli	Kayadhu	405,406,422,426	465*25*0.50	11625	1.16	2054	--	**BP1**	19°36'3.19"N	77°14'25.34"E
										BP2	19°36'3.97"N	77°14'25.61"E
										BP3	19°36'1.46"N	77°14'32.84"E
										BP4	19°36'0.94"N	77°14'40.76"E
										BP5	19°36'0.12"N	77°14'40.79"E
										BP6	19°36'0.63"N	77°14'32.80"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Nandkheda	Aundha Na	3, 4, 5	2.01

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Nandkheda	Purna	0.50	2.01	3562	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 33 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	22,000/-
		Water Sprinkling	44,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 329 m and Width= 3 m)	28,000/-
3	Plantation	Along River Bank (8)	480/-
		Along haul road (25)	1,500 /-
4	Security	Display Boards and other security measures	8,200/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,89,680/-

Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Nandkheda Sand Ghat	Aundha Na	Hingoli	Purna	3, 4, 5	576*35*0.50	20160	2.01	3562	--	**BP1**	19°27'48.61"N	76°55'50.36"E
										BP2	19°27'49.04"N	76°55'51.46"E
										BP3	19°27'46.57"N	76°55'52.73"E
										BP4	19°27'42.83"N	76°55'53.29"E
										BP5	19°27'37.73"N	76°55'51.58"E
										BP6	19°27'34.23"N	76°55'49.90"E
										BP7	19°27'30.69"N	76°55'47.46"E
										BP8	19°27'31.41"N	76°55'46.57"E
										BP9	19°27'34.95"N	76°55'48.98"E
										BP10	19°27'38.32"N	76°55'50.69"E
										BP11	19°27'42.92"N	76°55'52.11"E
										BP12	19°27'46.30"N	76°55'51.53"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Parli	Basmat	345,356,358,342	1.33

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Parli	Purna	0.50	1.33	2350	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 59 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

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- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	25,000/-
		Water Sprinkling	36,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 593 m and Width= 3 m)	24,000/-
3	Plantation	Along River Bank (12)	720/-
		Along haul road (47)	2,820/-
4	Security	Display Boards and other security measures	8,500/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,82,540/-

Annexure -1

Details of Sandghat, Tehsil- Basmat, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Parli Sand Ghat	Basmat	Hingoli	Purna	345,356,358 ,342	532*25*0.50	13300	1.33	2350	--	**BP1**	19°24'50.02"N	76°55'4.45"E
										BP2	19°24'50.75"N	76°55'3.96"E
										BP3	19°24'53.37"N	76°55'8.11"E
										BP4	19°24'55.72"N	76°55'10.59"E
										BP5	19°24'59.53"N	76°55'11.49"E
										BP6	19°25'3.84"N	76°55'10.89"E
										BP7	19°25'3.98"N	76°55'11.77"E
										BP8	19°24'59.33"N	76°55'12.33"E
										BP9	19°24'55.14"N	76°55'11.31"E
										BP10	19°24'52.63"N	76°55'8.62"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Pimpri Bu.	Kalmanuri	197,196,195,194,193	1.01

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Pimpri Bu.	Kayadhu	0.50	1.01	1781	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area. Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 28 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

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6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	20,000/-
		Water Sprinkling	33,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 277 m and Width= 3 m)	22,000/-
3	Plantation	Along River Bank (8)	480/-
		Along haul road (20)	1,200/-
4	Security	Display Boards and other security measures	8,200/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,06,380/-

Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Pimpri Bu. Sand Ghat	Kalmanuri	Hingoli	Kayadhu	197,196,195,194,193	560*18*0.50	10080	1.01	1781	--	**BP1**	19°33'23.03"N	77°25'44.06"E
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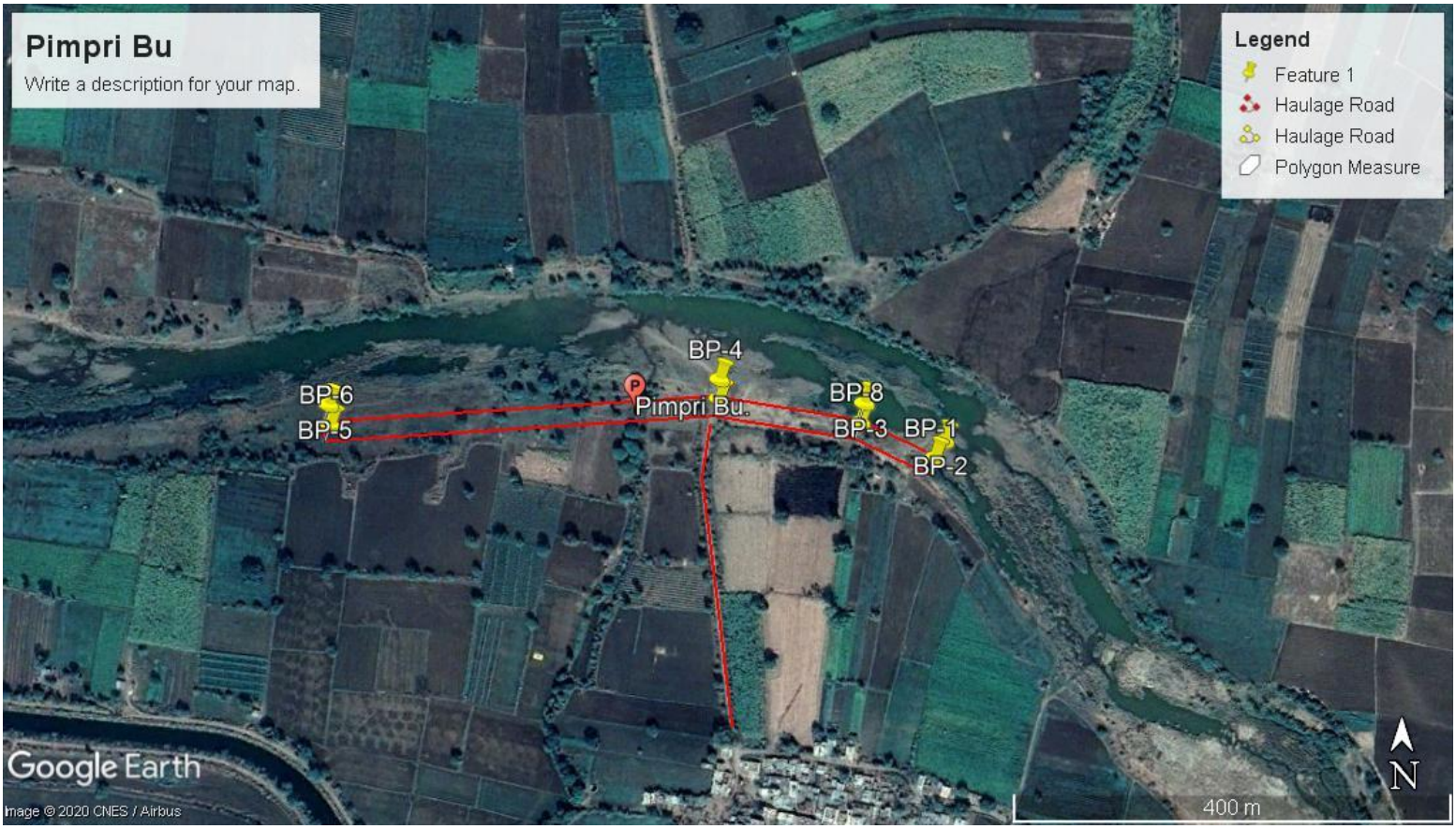
										BP3	19°33'24.64"N	77°25'41.85"E
										BP4	19°33'25.34"N	77°25'37.32"E
										BP5	19°33'24.59"N	77°25'25.12"E
										BP6	19°33'24.01"N	77°25'25.17"E
										BP7	19°33'24.77"N	77°25'37.31"E
										BP8	19°33'24.08"N	77°25'41.72"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Pota Bu.	Aundha Na	4, 5, 6, 7, 46, 48, 47, 50, 53, 55, 56, 57, 58	1.3

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The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

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ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
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Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Pota Bu.	Purna	0.50	1.3	2305	As per Auction letter / EC granted period.	--

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Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

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It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

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- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

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3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
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*Responsibility of implementation of EMP will be of successful bidder.

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		Water Sprinkling	36,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 872 m and Width= 3 m)	26,000/-
3	Plantation	Along River Bank (15)	900/-
		Along haul road (72)	4,320/-
4	Security	Display Boards and other security measures	8,700/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,86,420/-

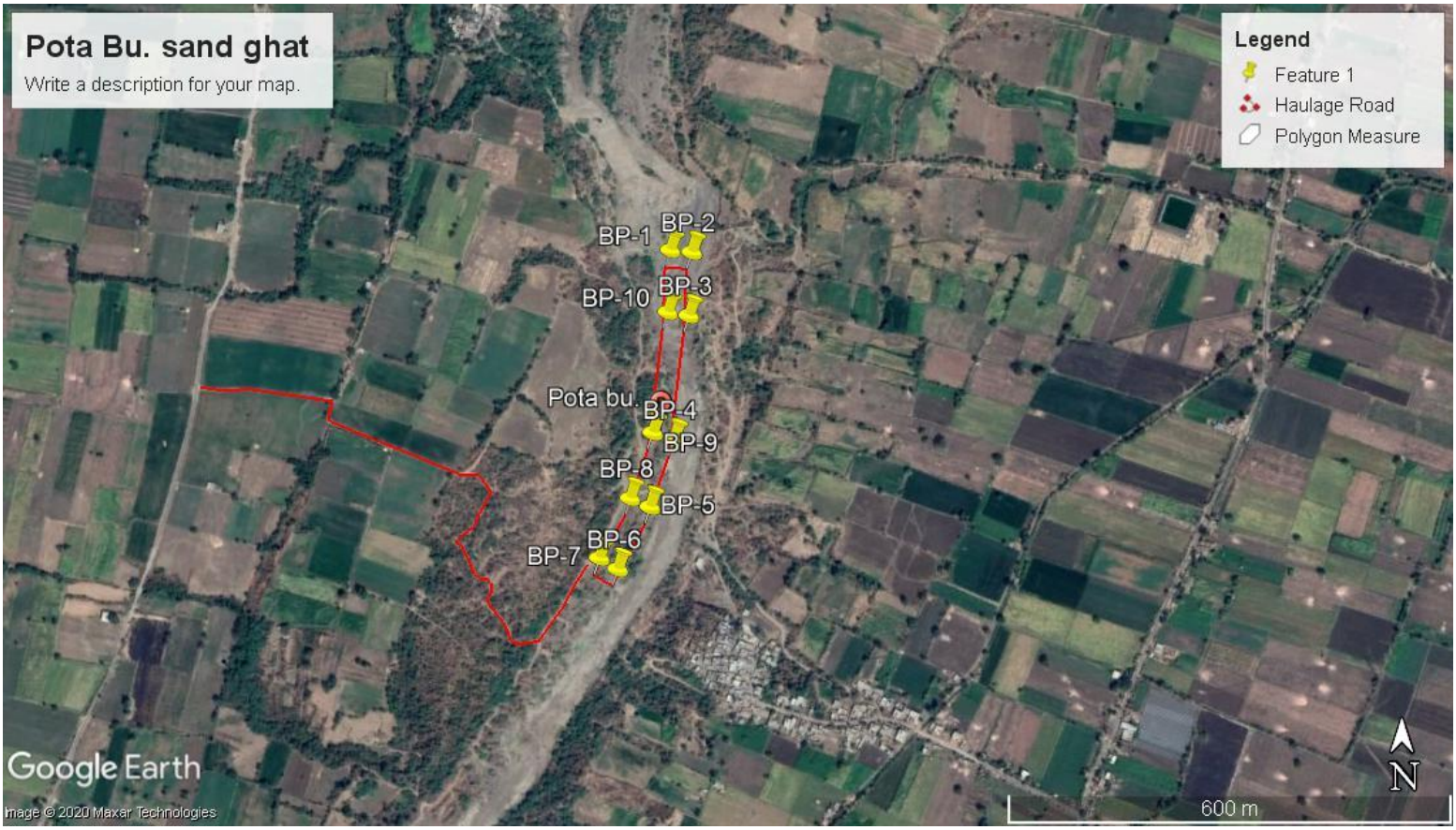
Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Pota Bu. Sand Ghat	Aundha Na	Hingoli	Purna	4, 5, 6, 7, 46, 48, 47, 50, 53, 55, 56, 57, 58	435*30*0.50	13050	1.3	2305	--	**BP1**	19°29'12.73"N	76°56'51.73"E
										BP2	19°29'12.64"N	76°56'52.74"E
										BP3	19°29'9.84"N	76°56'52.60"E
										BP4	19°29'4.36"N	76°56'51.90"E
										BP5	19°29'1.38"N	76°56'50.78"E
										BP6	19°28'58.64"N	76°56'49.27"E
										BP7	19°28'59.13"N	76°56'48.41"E
										BP8	19°29'1.76"N	76°56'49.85"E
										BP9	19°29'4.66"N	76°56'50.91"E
										BP10	19°29'9.99"N	76°56'51.61"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Pur	Aundha Na	226,234,235,237,238,239,229,230,231,233.	0.95

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.40 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Pur	Kayadhu	0.40	0.95	1343	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 66 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	19,000/-
		Water Sprinkling	28,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 658 m and Width= 3m)	25,000/-
3	Plantation	Along River Bank (10)	600 /-
		Along haul road (56)	3,360/-
4	Security	Display Boards and other security measures	8,100/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,05,560/-

Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Pur Sand Ghat	Aundha Na	Hingoli	Kayadhu	226,234,235,237,238,239,229,230,231,233.	380*25*0.40	9500	0.95	1343	--	**BP1**	19°36'47.65"N	77°12'34.51"E
										BP2	19°36'40.41"N	77°12'45.09"E
										BP3	19°36'41.13"N	77°12'45.47"E
										BP	19°36'48.35"N	77°12'34.94"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Salegaon (W)	Kalmanuri	186,187,188	1.02

 # Please Refer Annexure I (Details of Sandghat)

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The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

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iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
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x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Salegaon (W)	Kayadhu	0.50	1.02	1802	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

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Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

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Mitigation Measures:

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- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
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2. First Aid Facility at the proposed mining Site.

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1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
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8. Adequate provision for collection and disposal of domestic solid waste.
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		Water Sprinkling	33,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 510 m and Width= 3 m)	23,000/-
3	Plantation	Along River Bank (8)	480/-
		Along haul road (43)	2,580/-
4	Security	Display Boards and other security measures	8,300/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,11,860/-

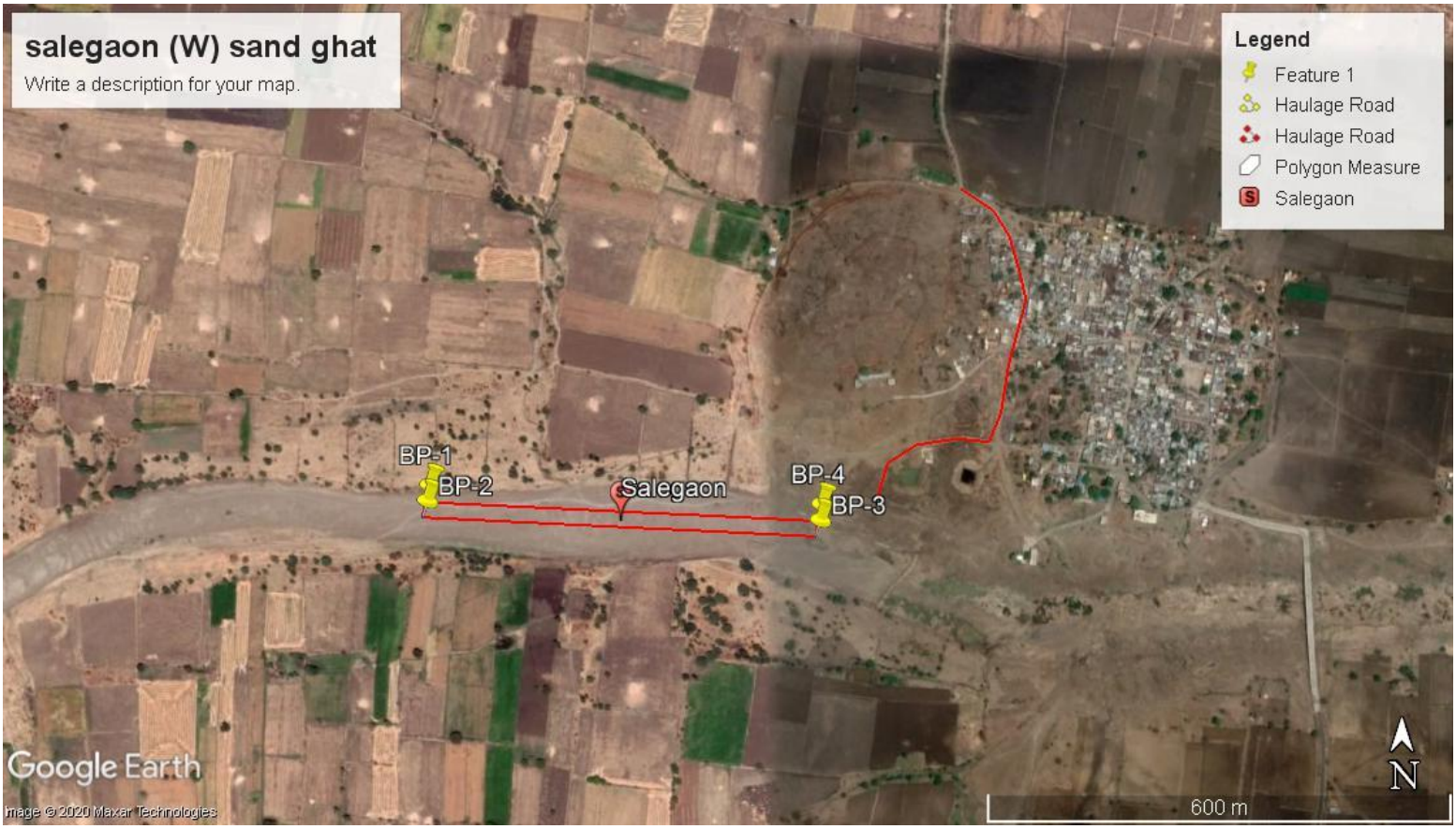
Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Salegaon (W) Sand Ghat	Kalmanuri	Hingoli	Kayadhu	186,187,188	510*20*0.50	10200	1.02	1802	--	**BP1**	19°36'17.37"N	77°16'21.94"E
										BP2	19°36'16.73"N	77°16'21.97"E
										BP3	19°36'16.81"N	77°16'31.26"E
										BP4	19°36'15.82"N	77°16'39.29"E
										BP5	19°36'16.45"N	77°16'39.37"E
										BP6	19°36'17.47"N	77°16'31.29"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Sapali	Kalmanuri	4,5,6,7,8	1.06

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iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Sapali	Kayadhu	0.50	1.06	1873	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 81 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	23,000/-
		Water Sprinkling	32,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 805 m and Width= 3 m)	23,000/-
3	Plantation	Along River Bank (11)	660/-
		Along haul road (70)	4,200/-
4	Security	Display Boards and other security measures	8,600/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,12,960/-

Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Sapali Sand Ghat	Kalmanuri	Hingoli	Kayadhu	4,5,6,7,8	530*20*0.50	10600	1.06	1873	--	**BP1**	19°33'36.38"N	77°22'10.64"E
										BP2	19°33'35.91"N	77°22'11.11"E
										BP3	19°33'34.11"N	77°22'8.59"E
										BP4	19°33'30.94"N	77°22'1.35"E
										BP5	19°33'27.13"N	77°21'55.55"E
										BP6	19°33'27.71"N	77°21'55.21"E
										BP7	19°33'31.52"N	77°22'1.03"E
										BP8	19°33'34.63"N	77°22'8.16"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Savangi Bu.	Basmat	1,3,367,368,360	1.45

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Savangi Bu.	Purna	0.50	1.45	2562	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 69 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

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- The Environment (Protection) Act, 1986
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- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	24,000/-
		Water Sprinkling	36,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 691 m and Width= 3 m)	26,000/-
3	Plantation	Along River Bank (15)	900/-
		Along haul road (54)	3,240/-
4	Security	Display Boards and other security measures	8,800/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,84,440/-

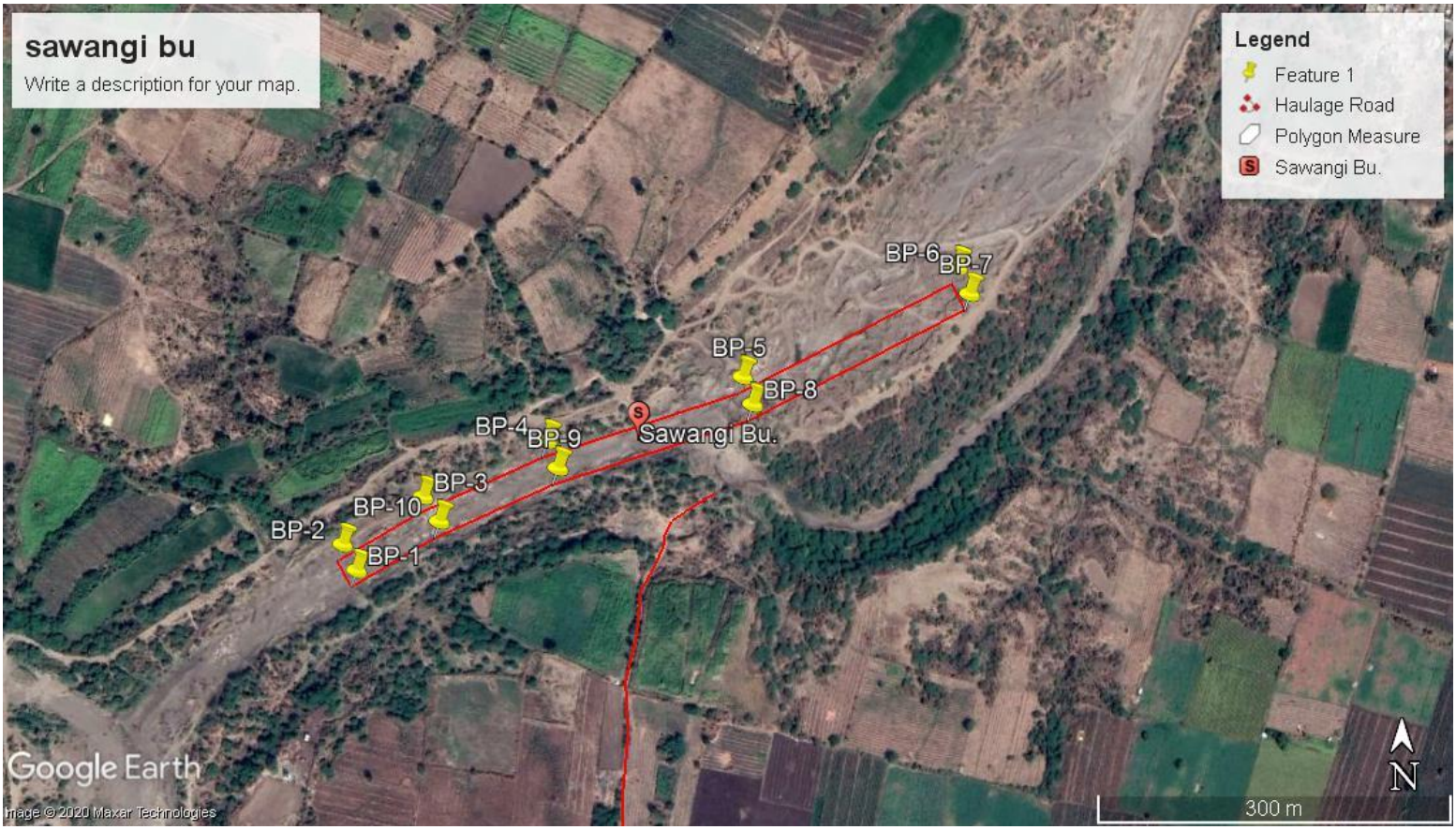
Annexure -1

Details of Sandghat, Tehsil- Basmat, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Savangi Bu. Sand Ghat	Basmat	Hingoli	Purna	1,3,367,368, 360	580*25*0.50	145000	1.45	2562	--	**BP1**	19°22'56.43"N	76°53'39.04"E
										BP2	19°22'57.15"N	76°53'38.62"E
										BP3	19°22'58.47"N	76°53'41.00"E
										BP4	19°23'0.03"N	76°53'44.65"E
										BP5	19°23'1.80"N	76°53'50.42"E
										BP6	19°23'4.85"N	76°53'56.75"E
										BP7	19°23'4.11"N	76°53'57.11"E
										BP8	19°23'1.04"N	76°53'50.71"E
										BP9	19°22'59.27"N	76°53'44.97"E
										BP10	19°22'57.79"N	76°53'41.48"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Savangi Bhu.	Kalmanuri	38,55,56,59,61,62,64,65	1.12

 # Please Refer Annexure I (Details of Sandghat)

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The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

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viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Savangi Bhu.	Kayadhu	0.50	1.12	1981	As per Auction letter / EC granted period.	--

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Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

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It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

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- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

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Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

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The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area. Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 53 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

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2. First Aid Facility at the proposed mining Site.

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1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.
6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

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6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	23,000/-
		Water Sprinkling	34,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 529 m and Width= 3 m)	23,000/-
3	Plantation	Along River Bank (8)	480/-
		Along haul road (45)	2,700/-
4	Security	Display Boards and other security measures	8,300/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,12,980/-

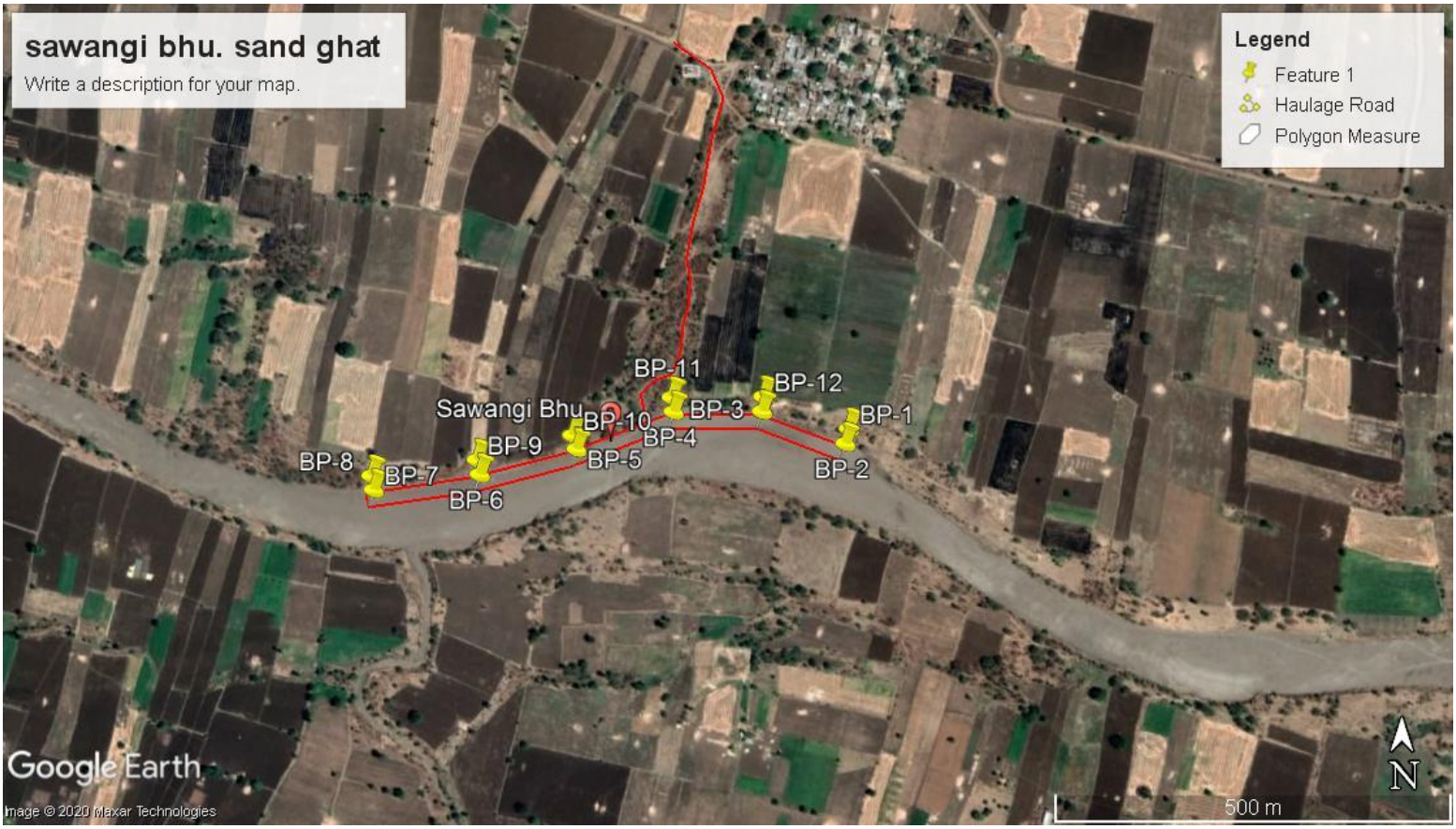
Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Savangi Bhu. Sand Ghat	Kalmanuri	Hingoli	Kayadhu	38,55,56,59,61,62,64,65	623*18*0.50	11214	1.12	1981	--	**BP1**	19°36'14.47"N	77°13'42.64"E
										BP2	19°36'13.87"N	77°13'42.49"E
										BP3	19°36'15.18"N	77°13'38.88"E
										BP4	19°36'15.16"N	77°13'35.06"E
										BP5	19°36'13.64"N	77°13'30.86"E
										BP6	19°36'12.61"N	77°13'26.68"E
										BP7	19°36'11.98"N	77°13'22.09"E
										BP8	19°36'12.55"N	77°13'21.99"E
										BP9	19°36'13.20"N	77°13'26.55"E
										BP10	19°36'14.20"N	77°13'30.68"E
										BP11	19°36'15.74"N	77°13'34.98"E
										BP12	19°36'15.77"N	77°13'38.94"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Shewala	Kalmanuri	8,19	1.14

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.60 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 26 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Shewala	Kayadhu	0.60	1.14	2417	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area. Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 43 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

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*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
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		Water Sprinkling	35,000/-
		Sand carrying trollies will be Covered with Tarpaulin	22,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 433 m and Width= 3 m)	22,000/-
3	Plantation	Along River Bank (8)	480/-
		Along haul road (35)	2,100/-
4	Security	Display Boards and other security measures	8,400/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	13,000/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 2,75,480/-

Annexure -1

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Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
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Shewala Sand Ghat	Kalmanuri	Hingoli	Kayadhu	8,19	570*20*0.60	11400	1.14	2417	--	**BP1**	19°32'1.73"N	77°26'27.94"E
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										BP3	19°32'5.12"N	77°26'30.15"E
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										BP5	19°32'20.00"N	77°26'30.32"E
										BP6	19°32'19.93"N	77°26'29.66"E
										BP7	19°32'11.03"N	77°26'30.21"E
										BP8	19°32'5.27"N	77°26'29.48"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

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Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Sodegaon	Kalmanuri	440,441,404,391	1.08

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x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 16 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Sodegaon	Kayadhu	0.50	1.08	1905	As per Auction letter / EC granted period.	--

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3	Plantation	Along River Bank (14)	840/-
		Along haul road (70)	4,200/-
4	Security	Display Boards and other security measures	8,500/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,21,040/-

Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
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Sodegaon Sand Ghat	Kalmanuri	Hingoli	Kayadhu	440,441,404,391	490*22*0.50	10780	1.08	1905	--	**BP1**	19°35'55.47"N	77°15'14.30"E
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										BP3	19°35'53.09"N	77°15'18.71"E
										BP4	19°35'52.29"N	77°15'23.59"E
										BP5	19°35'54.44"N	77°15'30.55"E
										BP6	19°35'55.12"N	77°15'30.34"E
										BP7	19°35'52.99"N	77°15'23.48"E
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District Mining Officer, Hingoli.

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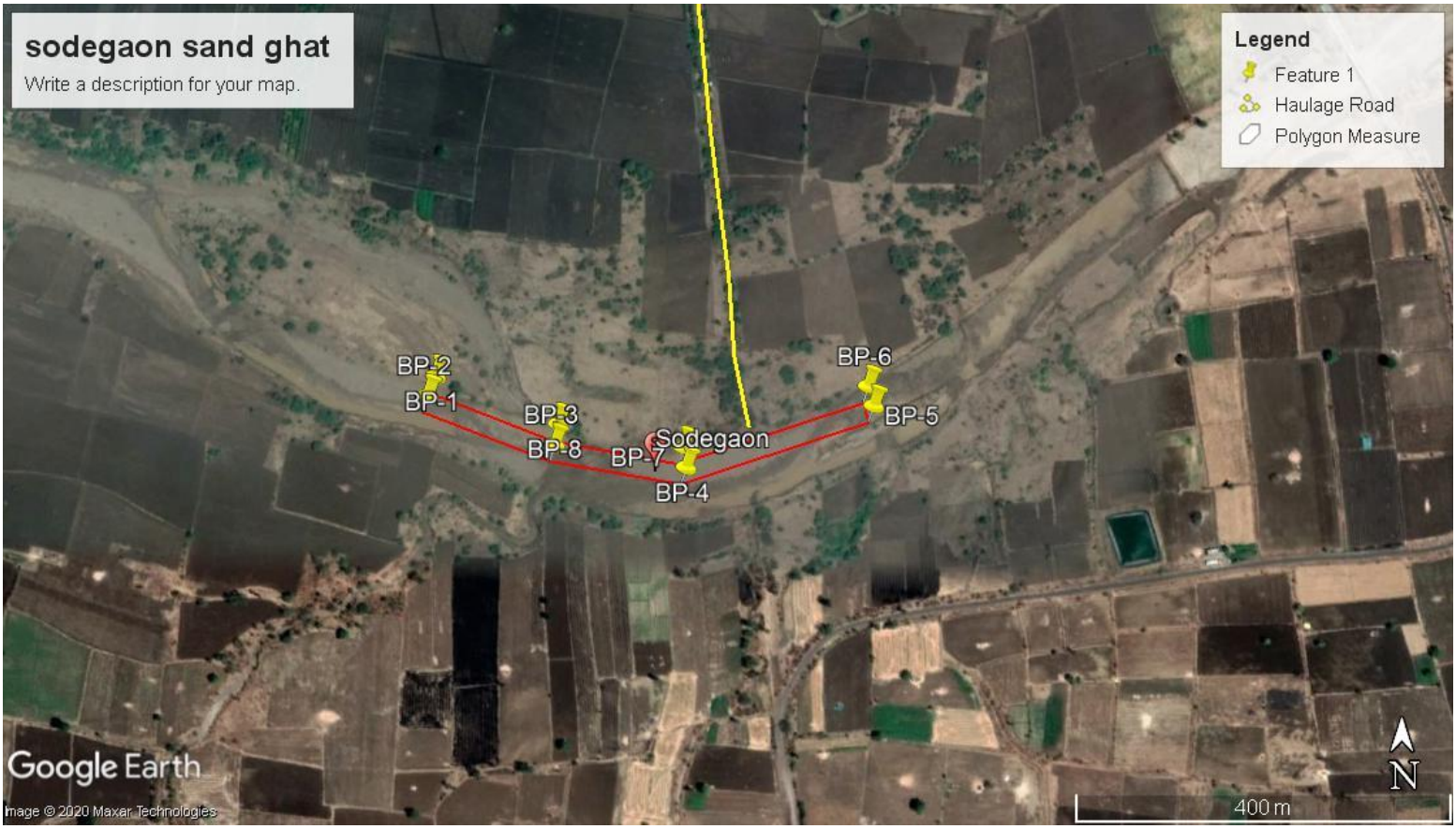
Details of Approach Road and Map on Google Image



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Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Takalgavhan	Aundha Na	13,14,15,16,17,18	1.06

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2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 32 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	**River**	**Depth of available sand in (m)**	**Area Ha.**	**Mineable Quantity of Sand (Brass)**	**Lease Period**	**Approximate working Days**
Takalgavhan	Purna	0.50	1.06	1874	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 32 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	22,000/-
		Water Sprinkling	32,000/-
		Sand carrying trollies will be Covered with Tarpaulin	13,500/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 322 m and Width= 3 m)	22,000/-
3	Plantation	Along River Bank (8)	480/-
		Along haul road (24)	1,440/-
4	Security	Display Boards and other security measures	8,300/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	8,000/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,07,720/-

Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Takalgavhan Sand Ghat	Aundha Na	Hingoli	Purna	13,14,15,16, 17,18	408*26*0.50	10608	1.06	1874	--	**BP1**	19°28'49.46"N	76°56'44.14"E
										BP2	19°28'44.82"N	76°56'40.15"E
										BP3	19°28'40.21"N	76°56'33.99"E
										BP4	19°28'40.83"N	76°56'33.43"E
										BP5	19°28'45.41"N	76°56'39.52"E
										BP6	19°28'49.98"N	76°56'43.47"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image

1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Tapovan	Aundha Na	13, 21, 25 To 31, 284, 287 To 290, 476	2.03

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.80 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 31 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Tapovan	Purna	0.80	2.03	5738	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 182 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	30,000/-
		Water Sprinkling	50,000/-
		Sand carrying trollies will be Covered with Tarpaulin	27,000/-
2	Road and River bank maintenance	Proper Maintenance of haul road(length= 1820 m and Width= 3 m)	38,000/-
3	Plantation	Along River Bank (30)	1,800/-
		Along haul road (152)	9,120/-
4	Security	Display Boards and other security measures	10,000/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	15,500/-
6	Mobile toilets, Sewage handling and treatment		1,50,000/-
			Total= 3,31,420/-

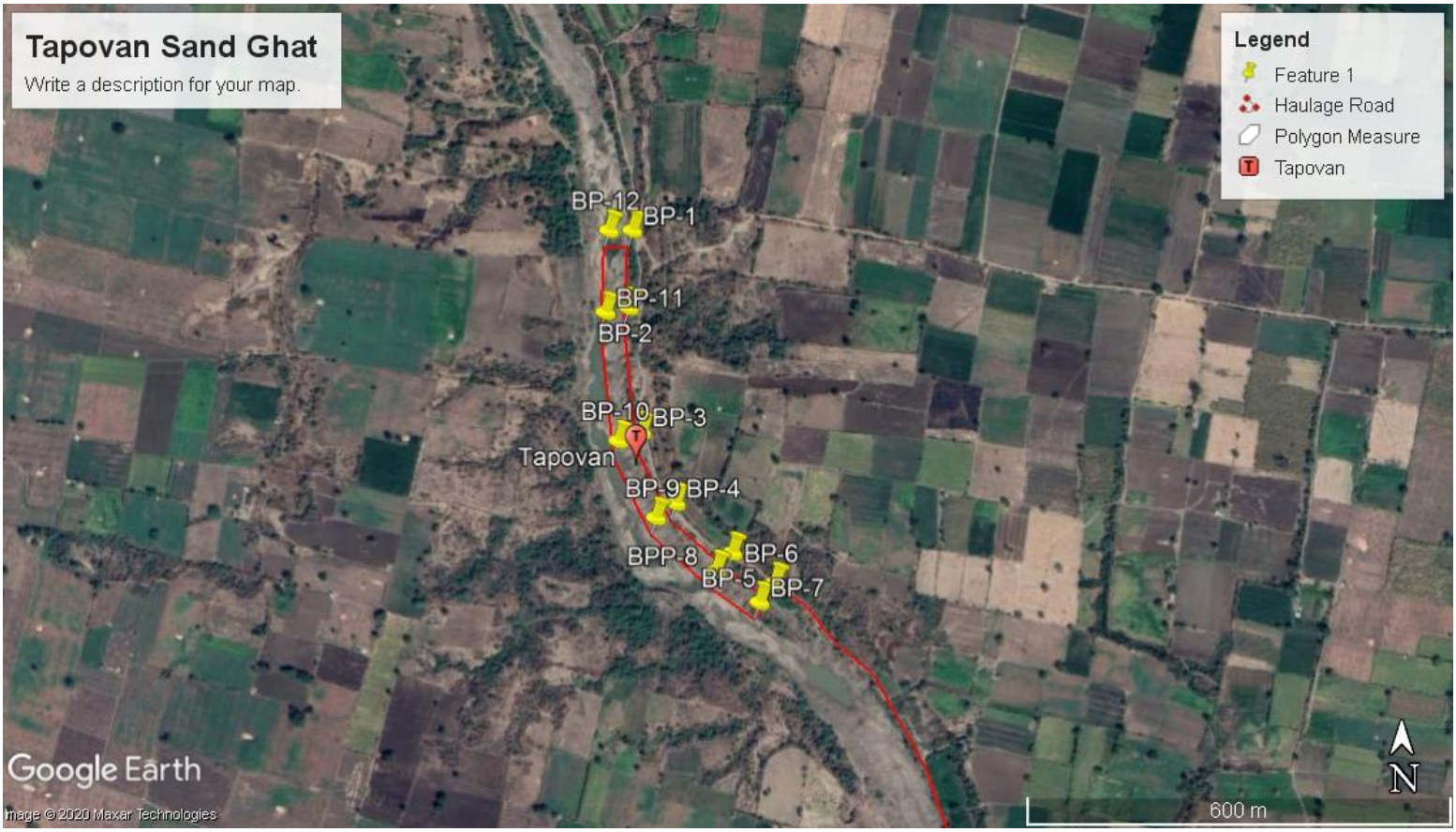
Annexure -1

Details of Sandghat, Tehsil- Aundha Na, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Tapovan Sand Ghat	Aundha Na	Hingoli	Purna	13, 21, 25 To 31, 284, 287 To 290, 476	580*35*0.80	20300	2.03	5738	--	**BP1**	19°26'41.93"N	76°55'15.08"E
										BP2	19°26'38.37"N	76°55'14.90"E
										BP3	19°26'32.65"N	76°55'15.53"E
										BP4	19°26'29.37"N	76°55'17.20"E
										BP5	19°26'27.09"N	76°55'19.98"E
										BP6	19°26'25.70"N	76°55'22.06"E
										BP7	19°26'24.81"N	76°55'21.31"E
										BP8	19°26'26.26"N	76°55'19.18"E
										BP9	19°26'28.69"N	76°55'16.24"E
										BP10	19°26'32.23"N	76°55'14.41"E
										BP11	19°26'38.15"N	76°55'13.77"E
										BP12	19°26'41.92"N	76°55'13.94"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image



1.0 INTRODUCTION

This Report has been prepared for the Proposed Sand Ghat located in Hingoli District, Maharashtra**,** in accordance with the Notification of MoEF & CC, S.O. 1533 dated 14th September 2006. The Ministry of Environment, Forest and Climate Change amended Principal Notification vide 141 (E) dated 15th January 2016 and included Minor Minerals from 0 Ha to 50 Ha in the Principal Notification S.O. 1533 (E) dated 14.09.2006. Central Government made further amendments to the notification vide S.O. 2269 (E) dated 01.07.2016. In obedience all relevant notifications to the principal Notification dated 14th September 2006, application for the excavation of sand from proposed sand ghat is being submitted to SEIAA.

Sand ghat/ Village	**Tehsil**	**Adjacent to Survey No.**	**Area (Ha.)**
Yegaon	Kalmanuri	43,45	1.23

 # Please Refer Annexure I (Details of Sandghat)

2.0 SALIENT FEATURES OF THE PROPOSED SAND GHAT MINING

The mining will be carried out manually with open cast method of mining by engaging labours with help of crow bars, hand shovel, pick axes and baskets. Loading is proposed to be carried out manually and transportation of mineral from the mine to the depot is proposed through tractor with trolley arrangement. As the mineral is dry, loose in nature, no drilling and blasting are required and hence not proposed. Sand excavated manually will be loaded directly into vehicles.

Mining of sand is proposed to be carried out by the manual method. It involves following steps -

i. River Bed Mining activities do not involve top soil excavation.
ii. Excavation of sand is done by using spade and bucket.
iii. Drilling and blasting is not required.
iv. Mining will be carried out during Auction allotted period or as per EC letter.
v. Transport of sand from the river bed to destination will be carried out by tractor-trolley
vi. No machinery will be used during mining operations
vii. No pumping of water from river bed is envisaged as the sand ghat proposed is completely dry and their approach roads are also dry and accessible.
viii. The deposits occur at the middle/bottom of the river. During the entire lease period, the deposit will be worked from the top surface to 0.50 m.
ix. The entire quantity of sand excavated will be transported and will be used for infrastructure development purpose. Thus, there will not be generations of any solid waste.
x. Mining will be carried out as per the approved Mining Plan.

xi. It is proposed to employ the local people wherever possible in the proposed project activities. Direct employment from this proposed sand ghat will be 21 Persons (per sand ghat) and there will be indirect employment generation also in-service sector.

Details of Mining

Name of Sand ghat	River	Depth of available sand in (m)	Area Ha.	Mineable Quantity of Sand (Brass)	Lease Period	Approximate working Days
Yegaon	Kayadhu	0.50	1.23	2170	As per Auction letter / EC granted period.	--

3.0 IMPACT ON SURROUNDING ENVIRONMENT& MITIGATION MEASURES

3.1 GENERAL:

Mining projects may have likely impacts on the various environmental components viz. Air, Water, Noise, Land, Biological Environment and Socio-economics. The magnitude of impact in sand ghat projects and their mitigation measures are provided as follows.

3.2 LAND ENVIRONMENT:

Deviation from planned mining procedure can lead to bank erosion /cutting and thereby river channel shifting degradation of land, causing loss of properties and degradation surrounding of landscape.

Mitigation Measures:

- Sand will be mined out in lease area as per the mining plan.
- The mining will remain confined to river bed only and in no case disturb any surface area outside which may affect topography or drainage.
- No stream should be diverted for the propose of sand mining.
- All the provisions stipulated in the Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, will be meticulously followed.

It is ensured to compliance of the various point mentioned in sustainable Sand Mining Guidelines issued by MoEF&CC.

3.3 WATER ENVIRONMENT

Disturbance of natural drainage, flow of water and ground water table due to excavation of sand from river in absence of scientific mining. If excess excavation of sand done in the project area then depletion of ground water level causes the drought in summer season & effect on public life in all respect like farming, drinking water issue etc. Adverse Effect on aquatic life like fish, prawn and other living organism.

Mitigation Measures:

- In the projects, it is not proposed to divert or truncate any stream.
- No proposal is envisaged for pumping of water either from the river or tapping the ground water.

- In the lean months, the proposed sand mining will not expose the base flow of the river and hence, there will not be any adverse impact on surface hydrology and ground water regime due to this project.
- The proponent will adhere all guidelines and rules for proper and scientific method of mining during the period of extracting the sand.
- Sand mining will be carried out in dry river bed portion only.
- The excavation of sand will be scientifically carried out up the permissible thickness of sand in line with Joint Survey Report. There will not be any intersection with ground water table.

3.4 AIR ENVIRONMENT:

In river bed mining activities, vehicle is the source of both particulate and gaseous pollutants while the dust particles of sand act as particulate pollutants especially during loading and transportation. In general SPM (Suspended particulate matters PM10) and to a limited extent of Sulphur dioxide (SO2) and Nitrous Oxides (NOx) will be due to fossil fuel-based vehicles, in the region which may be within the permissible limits, as it is a small-scale quarrying. The dust liberated in mining and other related operations is injurious to health if inhaled. The fugitive dust generation during mining and transportation requires some mitigation.

Mitigation Measures:

- Proper mitigation measures like water sprinkling on haul roads approaching the lease area and up to river bank will be adopted to control fugitive dust emission.
- Over loading of tractor trollies and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded trollies will prevent spreading of sand.
- It will be ensured that all transportation vehicles will carry a valid PUC certificate.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- Periodic air monitoring will be proposed to monitor the ambient air quality.

3.5 NOISE ENVIRONMENT

Sand mining will be done by manual method, so no noise generated during mining, however noise will be generated at Ghat from movements of tractors which is used for transportation.

Mitigation Measures

- Manual excavation is allowed in project site, No Machinery will be deployed inside the river bed.
- Noise arising out due to transportation shall be abated and controlled at source to keep within permissible limit.
- Restricted working hours. Sand mining operation has to be carried out between 6 am to 6 pm.

3.6 BIOLOGICAL ENVIRONMENT

Excessive and unscientific riverbed sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology.

- **Terrestrial Ecology**

Flora: The area is completely barren and devoid of any significant vegetation in the river. The lease area is totally covered by sand and not having any tree species, only some grasses observed in patches. So, there is no chance of cutting of any tree due to mining operation

Fauna: As there is no forest cover in sand ghat area, no significant wild life observed in this area. Thus, there will be no significant impact of the river quarry mining project on the biological environment in lease area.

- **Aquatic Ecology**

No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and not disturbing the water table.

Mitigation Measures:

- No mining will be carried out during the monsoon season i.e. from 10th June to 30th September to minimize impact on aquatic life, which is mainly breeding season.
- Mining will be carried out on the dry part of the river bed to avoid disturbance to the aquatic habitat and movement of fish species.
- No adverse impacts will be envisaged on the existing aquatic fauna, on downstream side (away from site) as the mining confined to above water level only and at all touching/disturbing water table.

3.7 PLANTATION

The entire mining area falls within river course and gets flooded during monsoons; therefore, no plantation is possible within this area.Plantation will mainly be done along the haulage road and along the length of the river bank or approach road to depot or places as recommended by Gram Panchayat. 100 trees will be planted with various types of species. Native plants like Mango, Neem, Eucalyptus, Peepal, Gulmohar, and other local species will be selected in suitable combination, so that they can grow fast and also have good leaf cover.

3.8 OCCUPATIONAL HEALTH

1. Occupational health surveillance program for workers is undertaken periodically.
2. First Aid Facility at the proposed mining Site.

4.0 OTHER SAFETY PRECAUTIONS

1. Fencing of approach road for avoiding un-authorized entry to the active sand ghat.
2. Provision of Boards displaying all information as regards to mining of sand including quantity, period of mining activity and details of project proponent.
3. Display of warning signal boards at prominent locations.
4. Maintenance of approach road to sand ghat.
5. Deployment of adequate security arrangement.

6. Provision of safety equipment to workers.
7. Strict prohibition of use of any fuel for cooking or burning of waste or any other material.
8. Adequate provision for collection and disposal of domestic solid waste.
9. Awareness for safety and health to the workers deployed at sand ghat.

5.0 STATUTORY REQUIREMENTS

It is accepted that effective resource management cannot be done in isolation. The Department therefore vigorously pursues approaches towards coordination and integration where possible, so as to lead to coordinated regulatory systems.

A regulatory system consists of both statutory and non-statutory components. In the Sectoral-specific strategy for prospecting and mining, the Department participates within an integrated environmental management system which is administered in terms of the Acts and Rules. Other Acts dealing with matters relating to the conservation and protection of the environment and which a holder of a mining authorization must also take cognizance of, include inter alia, the following:

- Maharashtra State Sand Policy 2019
- Sustainable sand guidelines, MoEF&CC, 2016
- Maharashtra Minor Mineral Extraction Development and Regulation) Rules,2013.
- The Environment (Protection) Act, 1986
- Enforcement and Monitoring Guidelines for Sand mining, MoEF&CC, 2020
- Hon. NGT's decisions and Hon. Supreme Court of India's Decisions.

6.0 ENVIRONMENT MANAGEMENT PLAN ALONG WITH BREAKUP OF COST FOR IMPLEMENTATION

*Responsibility of implementation of EMP will be of successful bidder.

Sr. No	Items	Control Measures	Budget/ Cost in Rs.
1	Air Pollution	Air monitoring near Haulage Road	24,000/-
		Water Sprinkling	36,000/-
		Sand carrying trollies will be Covered with Tarpaulin	18,000/-
2	Road and River bank maintenance	Proper Maintenance of haul road (length= 996 m and Width= 3 m)	30,000/-
3	Plantation	Along River Bank (15)	900/-
		Along haul road (85)	5,100/-
4	Security	Display Boards and other security measures	8,800/-
5	Occupational Health	Provision of Dust Mask and Periodic health check-up	10,500/-
6	Mobile toilets, Sewage handling and treatment		1,00,000/-
			Total= 2,33,300/-

Annexure -1

Details of Sandghat, Tehsil- Kalmanuri, District- Hingoli.

Name of Sand Ghat	Taluka	District	Name of River Bed	Gat No./Survey No./Khasra No. etc.	Length X Width X Depth (all in meter.)	Area in Sq. Mtrs.	Area in Ha.	Quantity of sand in proposed ghat (In Brass)	Whether reserved for Govt. work (Yes/No)	Coordinates		
										BP	Latitude	Longitude
Yegaon Sand Ghat	Kalmanuri	Hingoli	Kayadhu	43,45	585*21*0.50	12285	1.23	2170	--	**BP1**	19°32'43.70"N	77°26'5.81"E
										BP2	19°32'44.02"N	77°26'6.39"E
										BP3	19°32'42.31"N	77°26'7.58"E
										BP4	19°32'40.52"N	77°26'9.49"E
										BP5	19°32'38.84"N	77°26'12.34"E
										BP6	19°32'37.29"N	77°26'17.38"E
										BP7	19°32'34.09"N	77°26'23.02"E
										BP8	19°32'33.49"N	77°26'22.64"E
										BP9	19°32'36.68"N	77°26'17.07"E
										BP10	19°32'38.21"N	77°26'12.05"E
										BP11	19°32'39.98"N	77°26'9.07"E
										BP12	19°32'41.89"N	77°26'7.01"E

District Mining Officer, Hingoli.

Annexure - II
Details of Approach Road and Map on Google Image