



## ନୋଟିସ

No. 227 dt. 09/04/2021

### ଜିଲ୍ଲାପାଳଙ୍କ କର୍ଯ୍ୟାଳୟ, ନୟାଗଡ଼

ଏତଦ୍ୱାରା ନୂଆପଲ୍ଲୀ ଓ ମାଧପୁର ଗ୍ରାମ ତଥା ଏହାର ପଡୋଶୀ ଗ୍ରାମର ସର୍ବସାଧାରଣମାନଙ୍କୁ(ଭାପୁର ତହସିଲ ଅନ୍ତର୍ଗତ) ଅବଗତ କରିଦିଆଯାଉଅଛି କି ଆସନ୍ତା ତା- ୧୭.୦୪.୨୦୨୧ ରିଖ ସମୟ ସକାଳ ୧୦.୦୦ ଘ.୦ାରୁ ଜନଶୁଣାଣୀ ଶେଷ ପର୍ଯ୍ୟନ୍ତ, ଭାପୁର ତହସିଲ ପ୍ରାଙ୍ଗଣରେ ନୂଆପଲ୍ଲୀ ଓ ମାଧପୁର ବାଲିଘାଟ କୁ ପରିବେଶ ମଞ୍ଜୁରୀ ସଂପର୍କରେ ଏକ ଜନଶୁଣାଣୀ ନିମନ୍ତେ ସ୍ଥିର କରାଯାଇଅଛି । ଯଦି କାହାର କୌଣସି ଆପତି ଅଭିଯୋଗ ଥାଏ ତେବେ ସେହିବ୍ୟକ୍ତି ଓ ଅନୁଷ୍ଠାନ ସ୍ୱୟଃ ଉପସ୍ଥିତ ହୋଇ ନିର୍ଦ୍ଧାରିତ ଦିନ ଲିଖିତ ଭାବରେ ଅଭିଯୋଗ ପତ୍ର ଉପସ୍ଥିତ ଥିବା କ୍ଷମତାପ୍ରାପ୍ତ ଅଧିକାରୀଙ୍କୁ ପ୍ରଦାନ କରିବା ନିମନ୍ତେ ଅନୁରୋଧ କରାଗଲା ।

ସବିଶେଷ ବିବରଣୀ ପାଇଁ ଏହି ବିଜ୍ଞାପନରେ ନୂଆପଲ୍ଲୀ ଓ ମାଧପୁର ବାଲି ଉତ୍ସର (EIA/EMP) ର ସାରାଂଶ ଉଭୟ ଓଡିଆ ଓ ଇଂରାଜୀ ରେ ସଂଲଗ୍ନ କରାଗଲା

m21/18

ଅତିରିକ୍ତ ଜିଲ୍ଲାପାଳ, ନୟାଗଡ଼

**Addl. Dist. Magistrate  
NAYAGARH**

ଜ୍ଞାପକ ସଂ 228 ତା. 09.04.2021

ଏହାର ଏକକିତା ନକଲ DIO,(NIC),Nayagarh କୁ ନିକଟକୁ ପ୍ରେରଣ କରାଗଲା କି .District website ରେ ସର୍ବସାଧାରଣଙ୍କ ଅବଗତି ନିମନ୍ତେ upload କରିବେ ।

m21/18

ଅତିରିକ୍ତ ଜିଲ୍ଲାପାଳ, ନୟାଗଡ଼

**Addl. Dist. Magistrate  
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ଜ୍ଞାପକ ସଂ 229 ତା. 09/04/2021

ଏହାର ଏକକିତା ନକଲ ତହସିଲଦାର ଭାପୁରଙ୍କୁ ନିକଟକୁ ପ୍ରେରଣ ଓ ସମସ୍ତଙ୍କ ଅବଗତି ନିମନ୍ତେ ପଦକ୍ଷେପ ନେବାକୁ ଅନୁରୋଧ କରାଗଲା ।

m21/18

ଅତିରିକ୍ତ ଜିଲ୍ଲାପାଳ, ନୟାଗଡ଼

**Addl. Dist. Magistrate  
NAYAGARH**

# EXECUTIVE SUMMARY

**“Environmental Clearance for Madhapur sand Quarry (Lease Area 5.059 Ha) village Madhapur under Bhapur Tahasil of Nayagarh District, Odisha of Sri Benudhar Pradhan, At/Po-Fatehgarh, PS- Bhapur, in the district of Nayagarh”**

By

**Sri Benudhar Pradhan”**

Prepared By:

**Ardra Consulting Services Pvt. Ltd.**

**A/79,Saheed Nagar,Bhubaneswar,Odisha-751007**

**NABET Certificate No:-NABET/EIA/1922/IA0055**

## EXECUTIVE SUMMARY

The project has been proposed for the Mining of Sand from the Government Land by open cast manual extraction mining method. Mining will be confined to the allotted lease area which lies on the Kusumi River bed from which approximately 4000.00 cum (Max) during the five year plan period i.e. 14730 Cu.m/Annum by Open Cast Manual method and the estimated project cost is Rs. 25.00 Lakhs.

The mining lease has been granted in favor of Sri Benudhar Pradhan, At/Po-Fategarh, PS- Fategarh in the district of Nayagarh over an area of 5.059Ha Khata no-1237, Plot no- 2 situated at Village- Madhapur, Tahasil- Bhapur of Nayagarh District, Odisha. Mining has been carried out on the basis of govt. consent order to continue mining operations for 05 years.

The proposed project is an opencast manual mining project, where mining of sand will be done. An Excavator shall be deployed for the removal of overburden & interburden but its deployment will be rarely & occasionally for 4-5 days in a month. Methods of mining will be open cast manual and manual. Mining will be confined to the allotted lease area which lies on the Kusumi River bed from which approximately 14730.00 cum of Sand will be excavated. Drilling and Blasting is not proposed in this mining activity.

### Salient features of the project

Project Name	Sand mine project at Kusumi River Bed at village - Madhapur, Thasil - Bhapur, District- Nayagarh, Odisha. Lessee- Mr. Benudhar Pradhan, At/Po/PS- Fategarh, Nayagarh, Odisha.		
Latitude & Longitude	<b>Corner</b>	<b>Latitude</b>	<b>Longitude</b>
	A	20°21'19.31"N	85°13'49.07"E
	B	20°21'16.69"N	85°13'56.04"E
	C	20°21'24.90"N	85°13'56.17"E
	D	20°21'27.62"N	85°13'39.42"E
Total Geological Reserve	30200 Cu.m		
Total Mineable Reserve in LOI	22800 Cu.m		
Total Production in 5 years	14730 Cu.m		
Sanctioned period of Mining Lease	2017-18 to 2021-22		
Method of Mining	Open cast & Manual		
No. of working days in a year	240		

No. of workers	10
Type of Land	Govt./ Non forest, Kisam- Nadi
Ultimate Depth of Mining	3m
No. of trees to be planted in 5years	300
Water Requirement	1KLDs
Proposed CSR	20,000/-
CER	50,000/-
Proposed EMP	70,000/-

### **Mining Methodology**

Sand from river bed within the lease area will be extracted by manual method and the sand will be collected in dry river bed in the lease area.

Mining will be started from center and advanced towards the banks across the river uniformly.

Sand will be transported to the buyer's location by 3-4tonne capacity tractor trolleys and 8/10tonne trucks. About 20trips/day of 10tonne trucks will be required for transportation of the sand from the mine.

No mining operations shall be carried out in proximity of any bridge and/or embankment and during monsoon season.

### **Baseline Data**

Primarily as the IMD based wind rose diagram indicates the resultant wind blowing from SW to NE direction, therefore 6 locations were chosen in the wind ward side of the project location and 2 locations were chosen in lee wand side within 5km radius distance from the project boundary inward direction to the resultant wind direction is expected to carry the total pollution load.

PM<sub>10</sub> ranges within 37.2- 75.4 µg/m<sup>3</sup>, PM<sub>2.5</sub> ranges within 13.5 – 39.0 µg/m<sup>3</sup>, SO<sub>2</sub> ranges within 4.0-9.1 µg/m<sup>3</sup> & NO<sub>x</sub> ranges within 9.0-15.1 µg/m<sup>3</sup>. The parameters monitored at the project area as per NAAQ standards are found to be within limits. It may be observed that the all parameters at all stations are well within the limits prescribed by Central pollution control Board.

Surface water analysis data it interpreted that mostly all parameters are within the permissible limit and the water is suitable for agricultural use.

For Baseline study of ground water, resources are selected from different nearby open well and bore well within 5km radius from the project site to know the ground water quality. The locations of the bore wells were chosen from as near as 0.83 Km to as far as 3.78 km from the project site. Due to presence of 3 open wells only 2 identifiable operating public bore wells were chosen for the sampling. Ground Water Analysis Data it interpreted typically that pH is neutral within 7 and all parameter within the permissible limit as per IS 10500. The water is portable at each location.

Noise is an unwanted sound without musical quality. Artificial noise impact on environment, grown apace is with advancing human civilization. Noise pollution is equally hazardous to environment as air, water and other forms of pollution. Various noise measurement units have been introduced to describe, in a single number, the response of an average human to a complex sound made up of various frequencies at different loudness levels. The most common scale is, weighted decibel dB (A), and measured as the relative intensity level of one sound with respect to another sound (reference sound).

The impact of noise depends on its characteristics (instantaneous, intermittent or continuous in nature), time of day and location of noise source. The environmental impact of noise can have several effects varying from noise induced hearing loss to annoying depending on noise levels.

As the project area falls in Nayagarh District, The core zone having Loose soil. The project is of sand mining where the loose soil mining is carried out. The buffer zone of the area consists of Sandy loam, Sandy Clay loam, Sandy Clayc, Clay Loam & Clay. In order to assess the impact on soil due to operation phase soil quality analysis is carried out from 5 locations within the 5km radius from the project location. Soils were taken from the location similar to the Groundwater location. Soil Samples collected from identified locations indicate the soil is Sand Loamy type and the pH value ranging from 6.58 to 7.88 which indicating that soil samples is neutral in nature.

### **Anticipated Environmental Impacts**

The mine working will remain confined to river bed lot only and in no case disturbing any surface area outside which may affect topography or drainage.

The proposed dry sand mining project may impact the ambient air quality due to mining and transportation activities. The increase in particulate matter will not be more than 2µg/m<sup>3</sup> over the baseline levels and no gaseous pollutants are expected to be generated other than vehicular emissions.

Trucks carrying the sand are the only sources of noise pollution. With the incremental value being less than the ambient noise levels, there is no likelihood of excess addition of noise, from the mine operation, on the surrounding background noise level.

There are no effluents generated from the proposed mining operations, the surface and ground water quality will not be impacted by proposed dry sand mining.

Excavation in the mining area and construction of roads, offices etc. does not affect the flora in the area where these operations are carried out. Plantation will be carried out on approach roads and nearby vicinity will, over a period of time, upgrade the flora.

### **Environmental Management Plan (EMP)**

Proper environmental management plan is proposed for "Sand" mining project to mitigate the impact during the mining operation.

- No labour camps will be established on river bed.
- No cooking, or burning of woods will be allowed in the nearby area.
- Prior to commencement of mining, a short awareness program will be conducted for labours to make them aware of way of working and various precautions to be taken while at work. Such program will be repeated occasionally.
- In the event of any some causality or injury to any animal occurs, proper treatment will be given.
- No tree cutting, chopping, lumbering, uprooting of shrubs and herbs will be allowed.
- Corridor movement of wild animals, if exists mining operations will be avoided in the area.
- It will be ensured that noise produced due to vehicles movement while carrying sand is within the permissible noise level.
- No piling of River Bed Material will be done in adjoining area.

- If wild animals are noticed crossing the river bed, they will not be disturbed or chased away, instead the labors will move away from their path

<b>Sl. No</b>	<b>Particulars</b>	<b>Capital cost (in Rs.)</b>
1	Environmental Monitoring(Ambient Air Quality Monitoring PM10 and PM2.5 SO <sub>2</sub> , NO <sub>x</sub> and CO & Other Parameters as per regulatory norms))	30,000
2	Water Sprinkling ,Plantation and maintenance	5,000
3	CSR activities	20,000
4	Miscellaneous Activities	15,000
<b>Total Capital Cost in Rs.</b>		<b>70,000</b>
<b>Total Recurring Cost in Rs.</b>		<b>30,000</b>

## Environmental Monitoring Program

Sl. No.	Activity	Schedule
<b>Air Pollution Monitoring</b>		
1	Ambient air monitoring of parameters specified by MoEF & CC (PM <sub>10</sub> , SO <sub>2</sub> & NO <sub>2</sub> ).	Once in every season except monsoon
<b>Water Quality Monitoring</b>		
2	Monitoring water quality surface water from the river	Once in every season except monsoon
3	Monitoring of one sample of tube well and open well at mine / nearby location. Parameters are essential parameters as per IS: 10500:1991	Once in every season except monsoon
4	Monitoring of water spray requirements	Log-sheet of water spray will be maintained on daily basis
<b>Noise Quality Monitoring</b>		
5	Noise in the ambient atmosphere in mining lease	Once in every season except monsoon
<b>Greenbelt Maintenance</b>		
6	Monitoring schedule for Greenbelt development as per mining plan	Yearly
<b>Soil Quality Monitoring</b>		
7	Soil at six locations	Once in every year

The proposed project is expected to provide employment to local people in different activities such as mining, sizing (sieving) transportation and plantation activities. The revenue generated from the production and sale of mineral will also add to the exchequer of government, which in turn will help in the growth of state economy. Also, as the proposed mine area lies in the flood plain, hence the removal of extracted material will minimize the chances of flood disaster in the area. Land outside the river bed will be made utilizable for the purpose of agriculture; hence the mining will help in improving the fertility of soil. Excavated material will cater the huge increasing demand of mineral in the fast growing construction industry of nearby areas. The project is not expected to have any major adverse impact on the environment and whatever impacts are anticipated during the EIA study will be minimized with the help of suitable mitigation measures.





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## **EXECUTIVE SUMMARY**

**“Environmental Clearance for Nuapalli Sand Quarry (Lease Area 7.867 Ha) village Nuapalli under Bhapur Tahasil of Nayagarh District, Odisha of Sri Rajesh Kumar Pradhan, At/Po-Fategarh, PS- Fategarh in the district of Nayagarh”**

**By**

**Sri Rajesh Kumar Pradhan”**

**Prepared By:**

**Ardra Consulting Services Pvt. Ltd.**

**A/79,Saheed Nagar,Bhubaneswar,Odisha-751007**

**NABET Certificate No:-NABET/EIA/1922/IA0055**

## EXECUTIVE SUMMARY

The project has been proposed for the Mining of Sand from the Government Land by open cast manual extraction mining method. Mining will be confined to the allotted lease area which lies on the Kusumi River bed from which approximately 12,000 cum (Max) during the five year plan period i.e. 12000 Cu.m/Annum by Open Cast Manual method and the estimated project cost is Rs. 25.00 Lakhs.

The mining lease has been granted in favor of Sri Rajesh Kumar Pradhan, At/Po- Fategarh, PS- Fategarh in the district of Nayagarh over an area 19.44 acres (7.867 ha.) Khata no-231, Plot no- 1& 859 situated at Village- Nuapalli, Tahasil- Bhapur of Nayagarh District, Odisha. Mining has been carried out on the basis of govt. consent order to continue mining operations for 05 years.

The proposed project is an opencast manual mining project, where mining of sand will be done. An Excavator shall be deployed for the removal of overburden & interburden but its deployment will be rarely & occasionally for 4-5 days in a month. Methods of mining will be open cast manual and manual. Mining will be confined to the allotted lease area which lies on the Kusumi River bed from which approximately 12000 cum of Sand will be excavated. Drilling and Blasting is not proposed in this mining activity.

### Salient features of the project

Project Name	Sand mine project at Kusumi River Bed at village – Nuapalli, Thasil – Bhapur, District- Nayagarh, Odisha. Lessee- Mr. Rajesh Kumar Pradhan, At/Po/PS- Fategarh, Nayagarh, Odisha.		
Latitude & Longitude	<b>Corner</b>	<b>Latitude</b>	<b>Longitude</b>
	A	20°14'51.42"N	85°10'54.96"E
	B	20°14'50.34"N	85°10'55.56"E
	C	20°14'08.64"N	85°10'42.72"E
D	20°14'07.74"N	85°10'41.58"E	
Total Geological Reserve	48840 Cu.m		
Total Mineable Reserve in LOI	26017 Cu.m		
Total Production in 5 years	12000 Cu.m		
Sanctioned period of Mining Lease	2018-19 to 2022-23		
Method of Mining	Open cast & Manual		
No. of working days in a year	240		

No. of workers	8
Type of Land	Govt./ Non forest, Kisam- Nadi
Ultimate Depth of Mining	3m
No. of trees to be planted in 5years	300
Water Requirement	1.5KLDs
Proposed CSR	20,000/-
CER	50,000/-
Proposed EMP	70,000/-

## **Mining Methodology**

Sand from river bed within the lease area will be extracted by manual method and the sand will be collected in dry river bed in the lease area.

Mining will be started from center and advanced towards the banks across the river uniformly.

Sand will be transported to the buyer's location by 3-4tonne capacity tractor trolleys and 8/10tonne trucks. About 20trips/day of 10tonne trucks will be required for transportation of the sand from the mine.

No mining operations shall be carried out in proximity of any bridge and/or embankment and during monsoon season.

## **Baseline Data**

PM<sub>10</sub> ranges within 77.0-38.0 µg/m<sup>3</sup>, PM<sub>2.5</sub> ranges within 38.0-13.0µg/m<sup>3</sup>, SO<sub>2</sub> ranges within 7.3-4.1 µg/m<sup>3</sup> & NO<sub>x</sub> ranges within 14.9-9.5 µg/m<sup>3</sup>. The parameters monitored at the project area as per NAAQ standards are found to be within limits. It may be observed that the all parameters at all stations are well within the limits prescribed by Central pollution control Board.

Noise is an unwanted sound without musical quality. Artificial noise impact on environment, grown apace is with advancing human civilization. Noise pollution is equally hazardous to environment as air, water and other forms of pollution. Various noise measurement units have been introduced to describe, in a single number, the response of an average human to a complex sound made up of various frequencies at different loudness levels. The most common scale is, weighted decibel dB (A), and measured as the relative intensity level of one sound with respect to another sound (reference sound).

The impact of noise depends on its characteristics (instantaneous, intermittent or continuous in nature), time of day and location of noise source. The environmental impact of noise can have several effects varying from noise induced hearing loss to annoying depending on noise levels. 8 location are chosen for assessing Noise Quality of the project area.

For Surface Water Analysis 7 location are chosen to know the surface water quality. Surface water analysis data it interpreted that mostly all parameters are within the permissible limit and the water is suitable for agricultural use.

For Baseline study of ground water, resources are selected from different nearby open well and bore well within 5km radius from the project site to know the ground water quality. The locations of the bore wells were chosen from as near as 0.24 Km to as far as 2.52 km from the project site. Due to presence of open wells only 2 identifiable operating public borewells were chosen for the sampling. Ground Water Analysis Data it interpreted typically that pH is neutral within 7 and all parameter within the permissible limit as per IS 10500. The water is portable at each location.

Project buffer and core zone consist of Sand; Coarse loamy, Typic Ustochrepts; Fine Loamy Typic Ustochrepts; Fine loamy, Fluventic Ustochrepts; Fine loamy, Udifluventic Ustochrepts; Fine Typic Endoaquepts; Fine Vertic Ustochrepts; Fine, Aeris Haplaquepts; Fine- mixed- hyperthermic, Anthreptic Ustochrepts; Loamy Skeletal, Fluventic Ustochrepts; Loamy Skeletal, Lithic Ustochrepts & Loamy Skeletal, Lithic Ustochrepts.

Soil Samples collected from 5 identified locations indicate the soil is Sand Loamy type and the pH value ranging from 6.21 to 7.11 which indicating that soil samples is neutral in nature.

### **Anticipated Environmental Impacts**

The mine working will remain confined to river bed lot only and in no case disturbing any surface area outside which may affect topography or drainage.

The proposed dry sand mining project may impact the ambient air quality due to mining and transportation activities. The increase in particulate matter will not be more than 2µg/m<sup>3</sup> over the baseline levels and no gaseous pollutants are expected to be generated other than vehicular emissions.

Trucks carrying the sand are the only sources of noise pollution. With the incremental value being less than the ambient noise levels, there is no likelihood of excess addition of noise, from the mine operation, on the surrounding background noise level.

There are no effluents generated from the proposed mining operations, the surface and ground water quality will not be impacted by proposed dry sand mining.

Excavation in the mining area and construction of roads, offices etc. does not affect the flora in the area where these operations are carried out. Plantation will be carried out on approach roads and nearby vicinity will, over a period of time, upgrade the flora.

### **Environmental Management Plan (EMP)**

Proper environmental management plan is proposed for "Sand" mining project to mitigate the impact during the mining operation.

- No labour camps will be established on river bed.
- No cooking, or burning of woods will be allowed in the nearby area.
- Prior to commencement of mining, a short awareness program will be conducted for labours to make them aware of way of working and various precautions to be taken while at work. Such program will be repeated occasionally.
- In the event of any some causality or injury to any animal occurs, proper treatment will be given.
- No tree cutting, chopping, lumbering, uprooting of shrubs and herbs will be allowed.
- Corridor movement of wild animals, if exists mining operations will be avoided in the area.
- It will be ensured that noise produced due to vehicles movement while carrying sand is within the permissible noise level.
- No piling of River Bed Material will be done in adjoining area.
- If wild animals are noticed crossing the river bed, they will not be disturbed or chased away, instead the labors will move away from their path.

<b>Sl. No</b>	<b>Particulars</b>	<b>Capital cost (in Rs.)</b>
1	Environmental Monitoring(Ambient Air Quality Monitoring PM10 and PM2.5 SO <sub>2</sub> , NO <sub>x</sub> and CO & Other Parameters as per regulatory norms))	30,000
2	Water Sprinkling ,Plantation and maintenance	5,000
3	CSR activities	20,000
4	Miscellaneous Activities	15,000
<b>Total Capital Cost in Rs.</b>		<b>70,000</b>
<b>Total Recurring Cost in Rs.</b>		<b>30,000</b>

### **Environmental Monitoring Program**

<b>SL No</b>	<b>Activity</b>	<b>Schedule</b>
<b>Air Pollution Monitoring</b>		
1	Ambient air monitoring of parameters specified by MoEF&CC (PM10, SO <sub>2</sub> & No <sub>2</sub> ).	Once in every season except monsoon
<b>Water Quality Monitoring</b>		
2	Monitoring water quality surface water from the river	Once in every season except monsoon
3	Monitoring of one sample of tube well and open well at mine / nearby location. Parameters are essential parameters as per IS: 10500:1991	Once in every season except monsoon
4	Monitoring of water spray requirements	Log-sheet of water spray will be maintained on daily basis
<b>Noise Quality Monitoring</b>		
5	Noise in the ambient atmosphere in mining lease	Once in every season except monsoon
<b>Greenbelt Maintenance</b>		
6	Monitoring schedule for Greenbelt development as per mining plan	Yearly
<b>Soil Quality Monitoring</b>		
7	Soil at six locations	Once in every year

The proposed project is expected to provide employment to local people in different activities such as mining, sizing (sieving) transportation and plantation activities. The revenue generated from the production and sale of mineral will also add to the exchequer of government, which in turn will help in the growth of state economy. Also, as the proposed mine area lies in the flood plain, hence the removal of extracted material will minimize the chances of flood disaster in the area. Land outside the river bed will be made utilizable for the purpose of agriculture; hence the mining will help in improving the fertility of soil. Excavated material will cater the huge increasing demand of mineral in the fast growing construction industry of nearby areas. The project is not expected to have any major adverse impact on the environment and whatever impacts are anticipated during the EIA study will be minimized with the help of suitable mitigation measures.





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