

EXECUTIVE SUMMARY



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1.00 INTRODUCTION

In order to maintain the Demand and supply gap and control illegal sand mining, MOEF&CC GoI has issued **Sustainable Sand Mining Management Guidelines-2016 and Enforcement & Monitoring Guidelines for Sand Mining -2020.**

Accordingly , GoK constituted District Sand Monitoring Committee (DSMC) in each district for grant of sand blocks. The Koppal District Sand Monitoring Committee, has issued notification for Bedawatti sand block for an area of 16.00Acres in favor of HGML and advised to obtain all statutory clearance.

1.01 LOCATION

Location with reference to the village map is given below

Plot/Survey/Khasra No.	14, 15, 55, 60, 65, 66, 67, 68, 69, 70 & 71
Village	Bedawatti
Tehsil	Kukanur
District	Koppal
State	Karnataka

Location of the project site GPS Coordinates are tabulate below.



Map Datum:- WGS84

Points	Longitude	Latitude
A	E-76 ⁰ 04' 34.3"	N-15 ⁰ 30' 22.7"
B	E-76 ⁰ 04' 41.9"	N-15 ⁰ 30' 23.5"
C	E-76 ⁰ 04' 48.1"	N-15 ⁰ 30' 22.2"
D	E-76 ⁰ 04' 53.3"	N-15 ⁰ 30' 18.3"
E	E-76 ⁰ 04' 56.7"	N-15 ⁰ 30' 13.3"
F	E-76 ⁰ 04' 00.6"	N-15 ⁰ 30' 05.8"
G	E-76 ⁰ 04' 58.7"	N-15 ⁰ 30' 05.2"
H	E-76 ⁰ 04' 54.5"	N-15 ⁰ 30' 12.9"
I	E-76 ⁰ 04' 52.3"	N-15 ⁰ 30' 16.6"
J	E-76 ⁰ 04' 42.6"	N-15 ⁰ 30' 21.5"
K	E-76 ⁰ 04' 34.6"	N-15 ⁰ 30' 20.3"

2.00 PROJECT DESCRIPTION

The nature of the project involves extraction of ordinary sand from the Krishna river bed for the production of 30070TPA in an area of 16.00 Acre. The salient points of the project are given below

Sl. No	Particulars	Units	Proposed
1	Geological reserve	tonne	1,11,370
2	Minable reserves	tonne	33,411
3	Recovery	%	90 %
4	Method of mining	OCM	Open cast mining
5	Max Production	TPA	30070



6	Max waste	TPA	3341
7	Total handling	TPA	33411
8	Sand and waste	ratio	1:0.11
9	Cost of the project	Rs. in Lakhs	75.00
9	Water requirement	KLD	3.00

2.01 Method of Mining

- Mining will be restricted within the leased area.
- Opencast semi-mechanized mining method will be adopted for extraction of sand.
- Mining will be avoided where water present in the sand block.
- Mining depth proposed to be restricted to 1 meter.
- Mining will be continued from the downstream towards upstream.
- No drilling and blasting is involved in this project.
- JCB/Loader (light weight) will be deployed for excavation and loading.
- Sand mining will be discontinued during rainy season.
- Mining will be done during day time only with one working shift.
- The waste material will be used for back filling of excavated area and strengthening of river bank.

2.02 Waste generation and Disposal

About 33411TPA waste likely to be generated, the entire quantity proposed to be used for backfilling of excavated area and strengthen of river bank concurrent to mining.



2.03 Man power requirement

The proposed project provides 20 direct employment generation and 100 indirect employment generation. About 90% of the employment preference will be given to the local peoples as per their eligibility.

2.04 Site Infrastructures:

The Bedawatti sand block will have own office premises, canteen, first aid station, site office, maralu mitra app facilities, telephone facilities, internet facilities, toilet facilities, Creech facilities etc..

3.00 BASE LINE ENVIRONMENTAL STUDIES

Climate

Rainfall: The normal annual rainfall of the district is 699 mm and rainy days 45 days, particularly during june to september. Nearly 67% of the rain is received during the southwest monsoon period.

Temperature: The highest maximum temperature ever recorded was 45.6 C (114.1F) during May month and the lowest minimum was 10.0 C (50.0F) during December-January.

Wind speed: The average maximum wind speed recorded was less than 25km/hr in the month of july and august and minimum is 15 kms/hr in the month of jan, feb & march. The dominant wind direction is western and north western. The calm wind conditions are during October to February.



Land use and land cover (LU/LC)

The study area of 10 kms radius LU and LC data collected. Its abstracts are given below

Land use pattern of the study area

S. No	Land category	Area (ha)	Land cover (%)
1	Buildup (urban)	236.5	0.75
2	Buildup (rural)	614.4	1.95
3	Agriculture land	25138.5	79.98
4	Barren land	2960.2	9.42
5	Forest	125.6	0.41
6	Water body	2324.6	7.40
7	Mining	28.2	0.09
Total		31428	100

Air:

In order to know the baseline status of the AAQ level, six locations are identified and samples were drawn and analysed for PM10, PM2.5, SO2, NOX as per the prescribed norms. From the results, it has been concluded all the parameters within the permissible limit as specified by CPCB.

Noise:

In order to know the baseline status of noise level, six locations are identified and samples were drawn. From the results, it has been concluded all the parameters within the permissible limits.



Biological Environment:

There is no national park, wild life sanctuary and biosphere reserve within 10kms radius from the project. There is no impact on aquatic flora and fauna, due to the sand mining activities.

Socio Economic status:

There is no any patta land , R&R plan,mining activity in the region will have positive impact on the social economic condition.

4.00 ANTICIPATED IMPACTS AND MITIGATION

Impact on Land:

There is no any change in their land use except broken on sand deposited area.

Mitigation:

The land used for mining will come back to the original stage every year after replenishment. As per the mine plan the river bed area will be replenished by sediments during rainy season. This practice will be continuous and simultaneous. Hence there is no impact on land.

Impact on Air:

The major sources of air pollution in the proposed mine is dust generation due to extraction, loading and haulage of mineral (sand) and wind erosion of exposed material.

Mitigation:

Water sprinkling will be done on the roads regularly, avenue plantation, loaded vehicle will be covered with tarpaulin, regular road maintenance, green belt formation etc..



Impact on Noise:

The source of Noise pollution will be the vehicular movements, Noise will be generated by the digging of mine area using shovels, crowbars etc.

Mitigation Measures:

Regular maintenance of vehicle, green belt development, proper road gradient maintenance etc.. Awareness will be imparted to the workers about the permissible noise levels & maximum exposure to those levels.

Impact on Water:

The proposed mining depth is only one meter and away from the water body. The existing ground water level in the area is deeper than proposed mining. Surface water does also not diverted or disturbed. Therefore, there would not be any impact on surface water and ground water quality.

Mitigation:

Ground water recharging pit in consultation with the land owner will be undertaken, Rain water harvesting work, Rejuvenation of catchment area towards up stream of the sand block, gully plug and check dam proposed to be undertaken. The surface water path will not be diverted. All along the lease boundary garland drain will be formed to avoid rain water into working place and allowed water into natural water course.

Impact on Biological Environment:

There is no forest area diversion required for the project. No plant will be cut during operational phase of the mine. The nearby area of project is moderately populated with a number of villages. The fauna in the vicinity of the mine is



restricted to few common small species. There will be no impact on flora & fauna due to this mining project.

Mitigation:

The mining activity shall be restricted to one meter only, no tree cuttings, massive afforestation, dust suppression in the area.

Impact on socio-economics:

There is no any patta land , R&R plan,mining activity in the region will have positive impact on the social economic condition

Mitigation:

The HGML Management will provide direct and indirect employment, social works, up liftment of poor section, CER activities, massive afforestation, local road maintenance, education facilities, create demand for the local products etc..

5.00 ANALYSIS OF ALTERNATIVES

Sand (minor mineral) deposits are site specific and will be done by open cast mining method. The mined out in river bed area will get replenished annually after monsoon.

Therefore, no alternate site is suggested as existing land use of mine lease classified as “River body” and shall continue to be so even after the current mining project is over.



6.00 ENVIRONMENTAL MONITORING PROGRAMM

Monitoring Schedule and Parameters		
S.No.	Activity	Schedule
Air Pollution Monitoring		
1	Ambient air monitoring of parameters specified by MoEF (PM10, SO2 & No2).	Once in every season except monsoon
Water Quality Monitoring		
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
Noise Quality Monitoring		
5	Noise in the ambient atmosphere in mining lease	Once in every season except monsoon
Greenbelt Maintenance		
6	Monitoring schedule for Greenbelt development as per mining plan	Yearly
Soil Quality Monitoring		
7	Soil at six locations	Once in every year

7.00 ADDITIONAL STUDIES

Public consultation:

The public hearing will be conducted by SPCB as per the EIA Notification and the public hearing points raised and commitment of the project proponent is to be incorporated in the final report.



Risk Assessment

- Unauthorized driving of vehicles, mostly by helpers should be prohibited.
- Overloading a vehicle can be a cause of mishaps.
- Driving vehicles in an intoxicated stage should be prohibited.
- Use of sub standard equipment's or machinery parts can result in accidents or break down. Standard machinery with authorized spare parts must be used.
- Managerial, supervisory and competent persons of the mine would be engaged for supervising machinery, maintenance & housekeeping of the mine areas, as per needs.

8.00 PROJECT BENEFITS

- The management will recruit the semi-skilled and unskilled workers from the nearby villages.
- Assistance for the development of public amenities in this region.
- Massive afforestation in the suitable areas.
- Corporate Environment Responsibilities(CER) activities providing to the locals.
- Corporate Social Responsibilities(CSR) activities providing to the locals.
- Training programs for the improvement of lifestyle.
- Supporting for the economically weaker students for their education.

9.00 ENVIRONMENTAL MANEGEMENT PLAN

Following provisions are proposed to be taken for improving, control and monitoring of environment protection measures.



Table 9.01 – EMP Measure Cost

Protective measures	Unit	Proposed	Specification	Capital (Rs.Lakh)	Recurring (Rs.Lakh)
Dust control	Ls	Regular	Water spray	-	0.75
Environmental Monitoring	/year	Ls	Regular	-	0.40
Avenue Plantation (1 km)	Ha	1.00	approach road (Bedawatti to S B)	2.00	-
Total				2.00	1.15
Total = Rs. 2.00 + Rs. 1.15 * 5 yrs = 7.75 lakhs					

Under Corporate Environment Responsibilities(CER)

Year	CER Activities	Budget (Rs in Lakhs)
2022-23	Afforestation on both side of Hirehalla river west of Bedawatti sand block for 1 kms (5 mtrs on each side = 1Ha)	2.00
2024-25	Afforestation on both side of Hirehalla river east of Bedawatti sand block for 1 kms (5 mtrs on each side = 1Ha)	2.00
Total		4.00

Under Corporate Social Responsibilities(CSR)

Year	CSR Activities	Budget in Lakhs.
2023-24	Upliftment of SC / ST colony at Bedawatti village	3.00
2024-25	Drinking water unit at Bedawatti village	3.00
Total		6.00



Under Green Belt development

Year	Location	Budget in Lakhs.	Types of species
2022-23	1.00 Acre (total length 810 mtrs = 162 mtrs/annum) plantation on the south bank of Hirehalla river of Bedawatti village (South of S B). About 200 plants per annum	1,00,000	Soil erosion control species in consultation with local forest dept.
2023-24	Avenue planation of 0.25 kms proposed on approach road from Bedawatti village to Sand block.	1,00,000	

10.00 SUMMARY AND CONCLUSION

- The proposed sand mining project will be beneficial for the development of nearby villages.
- The air, water, noise will have controlled within the permissible limit to avoid impacts on surrounding environment.
- The necessary pollution control tools will be provided such as plantation, personal protective equipment's in a regular manner.
- The rain water harvesting and ground water recharging practices will be adopted around the proposed mining area.
- Local road, temples etc... maintenance will be taken.
- The CER and CSR works proposed to be adopted by quarry management.
- The overall impact will be positive from this project.