APPENDIX I

(See paragraph – 6)

FORM 1

(I) Basic Information

Serial Number	Item	Details
1	**Name of the project/s**	**" Sand Quarry" at Mushtalli Sand Block - YDG-04** in Mushtalli village
2	S. No. in the schedule	Item - 1(a)
3	Proposed capacity/area/length/tonnage to be handled/command area/lease/number of wells to be drilled	The extent of the Applied Quarry Lease area is 26-00 Acres of Government Revenue Land. The envisaged proposed Production is **1,60,233 tonnes/annum** of sand. Details are furnished in the approved Quarrying Plan.
4	New/Expansion/Modernization	New
5	Existing capacity / Area etc.	Not Applicable
6	Category of Projects i.e. 'A' or 'B'	Category 'B'
7	Does it attract the general condition? If Yes, please specify	The general conditions do not apply to this proposal.
8	Does it attract the specific condition? If Yes, please specify	No
9	Location	The Applied Quarrying Lease area is situated at Mushtalli - Village, Shorapur – Taluk, Yadgir – District, Karnataka.
	Plot /Survey/ Khasra No.	Mushtalli Sand Block - YDG-04 at Sy No.83/2, 87/2, 88/2, 89 & 90
	Village	Mushtalli
	Tehsil	Shorapur
	District	Yadgir District
	State	Karnataka
10	Nearest railway station /Airport along with distance in kms.	Yadgir railway station, which is at 51.35 Km (NE)
11	Nearest Town City, District Headquarters along with distance in kms	Nearest City Shorapur (N) about 10.95 km & District Headquarters is Yadgir 51.40 kms (NE)
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local Body (Complete Postal addresses with telephone nos. to be given)	Village panchayat of Mushtalli , / Yadgir Zilla Parishad,

13	Name of the applicant	Smt. Savitha B Melinamani
14	Registered Address	Smt. Savitha B Melinamani, Kamanakatti Oni, Talikote, Muddebihala Taluk, Vijayapura.
15	Address for correspondence	Smt. Savitha B Melinamani, Kamanakatti Oni, Talikote, Muddebihala Taluk, Vijayapura.
	Name	Smt. Savitha B Melinamani
	Designation (Owner/Partner/CEO)	Owner
	Pin Code	--
	E-Mail	--
	Telephone No.	--
	Fax No.	--
16	Details of alternative Sites examined, if any. Location of these sites should be shown on a toposheet.	Not Applicable
17	Interlinked Projects	Not applicable
18	Whether separate application of interlinked project has been submitted?	Not applicable
19	If yes, date of Submission	Not applicable
20	If no, reason	Stand-alone project
21	Whether the proposal involves approval/clearance under: If yes, details of the same and their status to be given. The Forest Conservation Act, 1980? The Wildlife protection Act, 1975? The C.R.Z Notification, 1991?	Not Applicable
22	Whether there is any Government Order / Policy relevant /relating to the site?	No
23	Forest land involved(hectares)	No forest land is involved.
24	Whether there is any litigation pending against the project and/or land, in which the project is proposed to be set up? Name of the Court Case No Orders/directions of the Court, if any and its relevance with the proposed project	There are no litigations/cases against the Project.

Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area for mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.,

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

Sl. No.	**Information/Checklist confirmation**	**Yes/No**	**Details thereof (with approximate quantities /rates, wherever possible) with source of information data**
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan).	Yes	The Land is Government revenue land. The depth of mining shall be restricted to 1.25m/water level, whichever is less.
1.2	Clearance of existing land, vegetation and buildings?	No	-
1.3	Creation of new land uses?	Yes	The sand mining will be done upto 1.25m/water level, whichever is less. The mined out area will be replenished with sand deposit during monsoons.
1.4	Pre-construction investigations e.g. bore houses, soil testing?	No	Not applicable
1.5	Construction works?	Yes	Since this is an applied quarry, construction/erection of temporary structures for quarry office, rest shelter, first aid station, sanitation etc., are proposed
1.6	Demolition works?	No	Not applicable
1.7	Temporary sites used for construction works or housing of construction workers?	No	Not envisaged.
1.8	Above ground buildings, structures or earthworks including linear	No	Not envisaged.

	structures, cut and fill or excavations		
1.9	Underground works including mining or tunneling?	No	No underground mining or tunneling is envisaged.
1.10	Reclamation works?	No	Not applicable
1.11	Dredging?	No	-
1.12	Offshore structures?	No	-
1.13	Production and manufacturing processes?	Yes	Production is 62,949 tonnes/annum of sand. Process: Open cast quarrying by Semi-Mechanised method.
1.14	Facilities for storage of goods or materials?	No	-
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	No	Not Applicable
1.16	Facilities for long-term housing of operational workers?	No	Not envisaged
1.17	New road, rail or sea traffic during construction or operation?	Yes	During operation phase there will be slight increase in present traffic.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	No other major road, rail, air waterborne transport network is envisaged for the mining project.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Not envisaged.
1.20	New or diverted transmission lines or pipelines?	No	Not envisaged.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not envisaged.
1.22	Stream crossings?	No	Not envisaged.

1.23	Abstraction or transfers of water form ground or surface waters?	No	-
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	Not envisaged.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	No	--
1.26	Long-term dismantling, decommissioning, or restoration works?	No	Not envisaged.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not applicable
1.28	Influx of people to an area in either temporarily or permanently?	No	No influx of people is envisaged. Only local people will be employed.
1.29	Introduction of alien species?	No	Not applicable
1.30	Loss of native species or genetic diversity?	No	No loss of native species or genetic diversity is involved as there is no cutting of trees or forest growth or local flora & fauna is involved.
1.31	Any other actions?	No	Only Quarry & allied activities are proposed

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

Sl. No.	**Information/checklist confirmation**	**Yes/No**	**Details thereof (with approximate quantities /rates, wherever possible) with source of information data**
2.1	Land especially undeveloped or agricultural land (ha)	Yes	Sandy area (Government Land)
2.2	Water (expected source & competing users) unit: KLD	Yes	About 18.5 KL/Day of water is proposed to be utilized for domestic purposes.

			Water Tank/Cans is the source of water. No surface Water sources are available in the Quarry lease area.
2.3	Minerals (MT)	Yes	Not applicable
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	No	-
2.5	Forests and timber (source – MT)	No	Not applicable
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	No	--.
2.7	Any other natural resources (use appropriate standard units)	No	-

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

Sl.No	**Information/Checklist confirmation**	**Yes/No**	**Details thereof (with approximate quantities/rates, wherever possible) with source of information data**
3.1	Use of substances or materials, which are hazardous (as per MSIHC Rules) to human health or the environment (flora, fauna, and water supplies)	No	Substances or materials which are hazardous to human health or the environment are not used in the Quarry. However, Quarry involves manual excavation & haulage activities, which results in a small percentage of change in the environmental parameters namely SPM, RPM, and SO2 & NOX. But the effect on flora & fauna is insignificant, as the subject area comprises of wastelands. There will not be much impact on the water supplies in the region as the water table will not be intercepted and also the Quarry activities do not use/generate any harmful chemicals that can pollute the water sources.

3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	No insect or water borne diseases is likely to occur as there are no liquid effluents or water pollution due to the proposed Quarry activities.
3.3	Affect the welfare of people e.g. by changing living conditions?	No	There will not be any negative effect on the living conditions of people. It is actually expected to improve by way of socio-economic development of the region due to direct & indirect employment.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	There are no chances of vulnerable groups of people who could be affected by the project e.g. hospital patients, children, elderly people etc., as there are no habitations or townships near the Quarry site.
3.5	Any other causes	No	As described, the only causes or effect of the project due to the proposed Quarry activities are dust related diseases to the people exposed for a longer period. This can be minimized by protective measures like suppression of the dust at the source, providing safety gloves, ear muffs, Nose masks, helmets, safety shoes etc.

4. Production of solid wastes during construction or operation or decommissioning (MT/month).

Sl.No.	**Information/Checklist confirmation**	**Yes/No**	**Details thereof (with approximate quantities/rates, wherever possible) with source of information data**
4.1	Soil, overburden or mine wastes	Yes	There is no such reduction of waste / mineral reject processing possibilities are proposed during plan period.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Domestic waste
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	No	-

4.4	Other industrial process wastes	No	-
4.5	Surplus product	No	-
4.6	Sewage sludge or other sludge from effluent treatment	No	-
4.7	Construction or demolition wastes	No	-
4.8	Redundant machinery or equipment	No	-
4.9	Contaminated soils or other materials	No	-
4.10	Agricultural wastes	No	-
4.11	Other solid wastes	No	-

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

Sl.No.	**Information/Checklist confirmation**	**Yes/No**	**Details thereof (with approximate quantities/rates, wherever possible) with source of information data**
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources.	Yes	The emissions are from transportation of sand from river banks to stock yards and the same are very minimum & hence insignificant to cause any adverse effects.
5.2	Emissions from production processes.	No	Not applicable as no production Processes are involved at the quarry site.
5.3	Emissions from materials handling including storage or transport.	Yes	The emissions due to handling or transport will be very minimum & negligible.
5.4	Emissions from construction activities including plant and equipment	No	-
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Generation of dust is expected from the loading & haulage operations within the core zone. The emission of dust levels is negligible due to proposed mechanized method of working.
5.6	Emissions from incineration of waste	No	-

5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	-
5.8	Emissions from any other sources	No	-

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

Sl.No.	**Information/Checklist confirmation**	**Yes/ No**	**Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data**
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	The Noise generation at the Quarry site will be due to transportation vehicles but the noise levels shall be within permissible limits.
6.2	From industrial or similar processes	No	-
6.3	From construction or demolition	No	-
6.4	From blasting or piling	No	
6.5	From construction or operational traffic	Yes	Operational traffic due to movement of trucks for transporting waste from river banks.
6.6	From lighting or cooling systems	No	-
6.7	From any other sources	No	No other source of Noise pollution exists.

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

Sl.No.	**Information/Checklist confirmation**	**Yes/No**	**Details thereof (with approximate quantities/rates, wherever possible) with source of information data**
7.1	From handling, storage, use or spillage of hazardous materials	No	Use of hazardous materials or its storage is not necessary.
7.2	From discharge of sewage or	No	No effluents are generated, there is no

	other effluents to water or the land (expected mode and place of discharge)		sewage discharge or other effluents to water or land.
7.3	By deposition of pollutants emitted to air into the land or into water	Yes	The pollutants emitted to air are mainly dust. There is discharge of fine Particulates to water.
7.4	From any other sources	No	There is no contamination of land or water from releases of pollutants into the ground or into sewers, surface water or groundwater.
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	There is no risk of long-term build up of pollutants in the environment as the mined out area will be backfilled or Scientifically rehabilitated and afforested by plantation.

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment.

Sl.No.	**Information/Checklist confirmation**	**Yes/No**	**Details thereof (with approximate quantities/rates, wherever possible) with source of information data**
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	No	---
8.2	From any other causes	Yes	The other risks of accidents due to operation of the project are a) Loading operations at Quarry site b) Movement of vehicles
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	Not applicable – there is no possibility of the project likely to be affected by natural disasters.

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality.

Sl. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting ancillary development or development stimulated by the project which could have impact on the environment e.g. • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • Housing development • Extractive industries • Supply industries • Other	Yes Yes	The Ordinary sand is used as Construction material. Sand extracted from this quarry will cater the need for the construction activities in and around the Haveri District. Sand from Yadgir is also supplied to the construction sector to all parts of the state based on the demand. Present infrastructure will meet the requirement of the project. The conditions of the roads in the buffer zone will likely have an impact due to the proposed activity. There will not be any requirement of power supply to the Project site.Housing developmental activities in the locality will improve due to the project.
9.2	Lead to after-use of the site, which could have an impact on the environment	No	The Quarry Project site will not have any major impact on the environment, as after use, the site will be suitably reclaimed as per the Quarry Plan.
9.3	Set a precedent for later developments	No	-
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	There will be Positive beneficial aspects by way of creating additional employment opportunities, increase in royalty, taxes, excise duty etc., to the state exchequer & also enhances living standards of the people. The negative aspects will increase in environmental degradation by way of marginal increase in dust levels in the proximity of the lease area.

(III) Environmental Sensitivity

Sl. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	None within 15 Kms
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	This is a river sand mining project. The site is in Krishna River Bed
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	--
4	Inland, coastal, marine or underground waters	Yes	Ordinary sand is excavated from river bed
5	State, National boundaries	No	No
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Yes	SH 61 – 5.75 km (SW) (Lingsugar to Devadurga road)
7	Defense installations	No	-
8	Densely populated or built-up area	Yes	Shorapur - 10.95 Kms.
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	The nearest post and telegraph office, hospital, schools, police station is situated in Shorapur.
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture,	None	None within 15 kms

	fisheries, tourism, minerals)		
11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	No	-
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (Earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	Yes	Area is flood prone area.

(IV) Proposed Terms of Reference for EIA studies: Not applicable

Undertaking:

I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost.

Date: 03-08-2017

Place: Vijayapura

Signature of the applicant

Smt. Savitha B Melinamani,
Kamanakatti Oni, Talikote,
Muddebihala Taluk,
Vijayapura.
(Project proponent)

NOTE:

1. The projects involving clearance under Coastal Regulation Zone Notification, 1991 shall submit with the application a C.R.Z. map duly demarcated by one of the authorized agencies, showing the project activities, w.r.t. C.R.Z. (at the stage of TOR) and the recommendations of the State Coastal Zone Management Authority (at the stage of EC). Simultaneous action shall also be taken to obtain the requisite clearance under the provisions of the C.R.Z. Notification, 1991 for the activities to be located in the C.R.Z.
2. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden thereon (at the stage of EC).
3. All correspondence with the Ministry of Environment & Forests including submission of application for TOR/ Environment Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC Meeting on behalf of the project proponent shall be made by the authorized signatory only. The authorized signatory should also submit a document in support of his claim of being an authorized signatory for the specific project.

Pre-Feasibility Report

Of

"Mushtalli Sand Mining Block - YDG-04"

Over an extent of 26-00 Acres (10.152 Ha)

In Krishna River Bed,

Adjacent to Sy. No - 83/2, 87/2, 88/2, 89 & 90 of

Mushtalli Village,

Shorapur Taluk,

Yadgir District.

Pre-Feasibility Report

1. Executive Summary:

The proposed project is River Sand mining having lease area of 10.52 ha and falls under Category- "B" as per EIA Notification 2006 and its amendments of the Ministry of Environment and Forests, New Delhi.

Salient features of the Project:

Name of the project	Mushtalli Sand Mining Block - YDG-04 Open Quarrying Excavation Sand Block.
Name of the Applicant	Smt. Savitha B Melinamani, Kamanakatti Oni, Talikote, Muddebihala Taluk, Vijayapura.
Location	Adjacent to Sy. No – 83/2, 87/2, 88/2, 89 & 90 in Mushtalli - Village, Shorapur – Taluk, Yadgir – District, Karnataka.
Maximum production capacity	1,60,233 tones/annum
Mining method	Semi Mechanized Open quarrying excavation
Source of water	18.5 KLD of Potable water will be sourced through Borewells of nearby village for 20 workers.
Extent of Sand Block area	26-00 Acres (10.52 Ha).

2 Introduction of the project/ Background information

i) Identification of project and project proponent. In case of mining project, a copy of mining lease/ letter of intent should be given:

Identification of project:	**Project proponent:**
River Sand Quarry at Mushtalli Sand Mining Block - YDG-04 over an extent of 26-00 Acres (10.52 ha) in Krishna River Bed adjacent to Sy. No - 83/2, 87/2, 88/2, 89 & 90 in Mushtalli - Village, Shorapur – Taluk, Yadgir – District, Karnataka	Smt. Savitha B Melinamani, Kamanakatti Oni, Talikote, Muddebihala Taluk, Vijayapura.

It is a River Sand Quarry Lease, and copy of Notification from Department of Mines & Geology is enclosed in Quarry plan.

ii) Brief description of nature of the project:

It is a River Sand Quarry. River Sand is used for construction purpose. It is a project of 26-00 acres with production of capacity of – 1,60,233 TPA.

iii) Need for the project and its importance to the country and or region:

Sand is an extremely needful material for the construction. Different types of sands are used for construction like pit sand, river sand and sea sand. Sand which is used in the construction purpose must be clean, free from waste stones and impurities. River sand is procured from river streams and banks and is fine in quality unlike pit sand. This type of sand has rounded grains generally in white-grey colour. River sand has many uses in the construction purpose such as plastering etc. The source of river sand will be river bed so it can be made available only from mining

iv) Demand- Supply Gap:

There is a good demand for River sand as River sand is much more superior for construction purpose than any other sand used for construction.

v) Imports vs. Indigenous production:

Not applicable.

vi) Export Possibility:

Not applicable

vii) Domestic/ export Markets:

The materials will be sold in nearby Local market for construction and other infrastructure projects.

viii) Employment Generation (Direct and Indirect) due to the project.

About 20 people will get direct employment and equal number will get indirect employment.

3 Project Description

i) Type of project including interlinked and interdependent projects, if any:

It is only quarry and there will not be any interlinked and interdependent projects.

ii) Location (map showing general location, specific location, and project boundary & project site layout) with coordinates:

Location of the project issued by the Department of Mines & Geology and

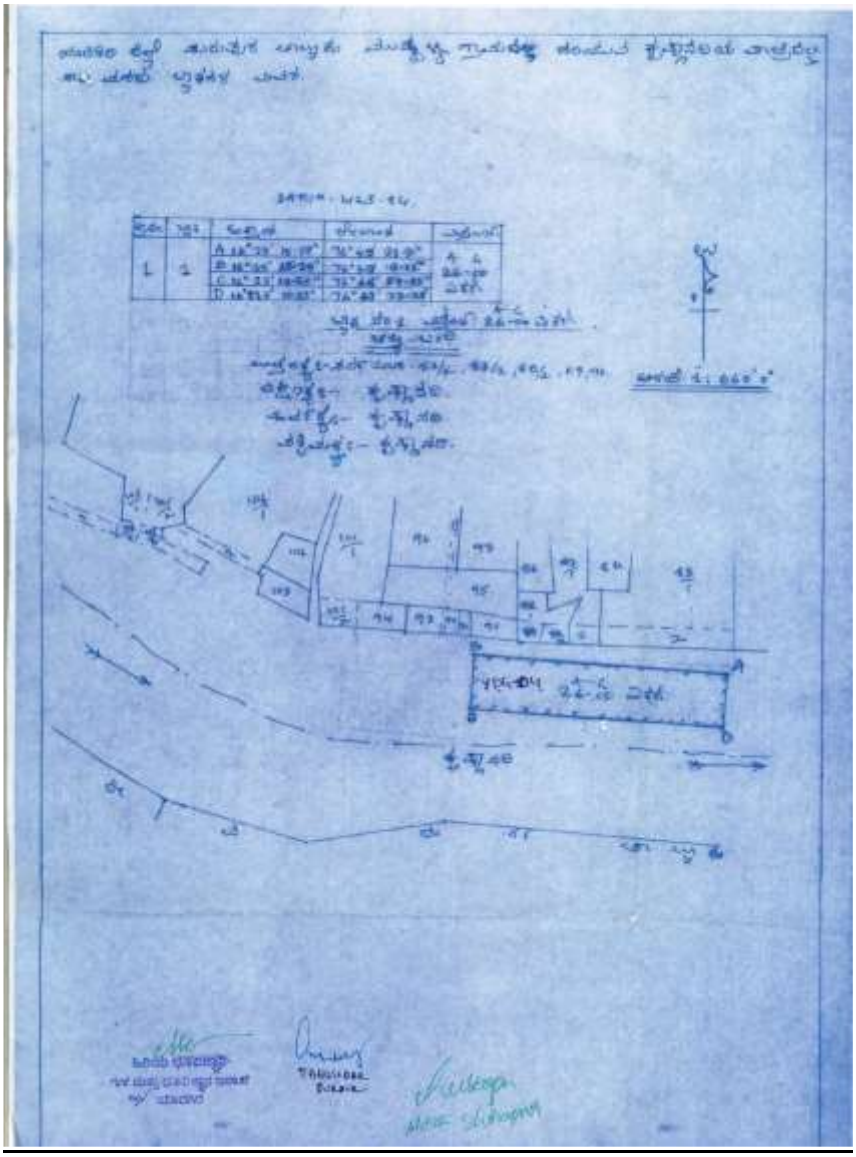
Toposheet on 1:50,000 scale is shown below.

Toposheet No : 556 D/11 & 15

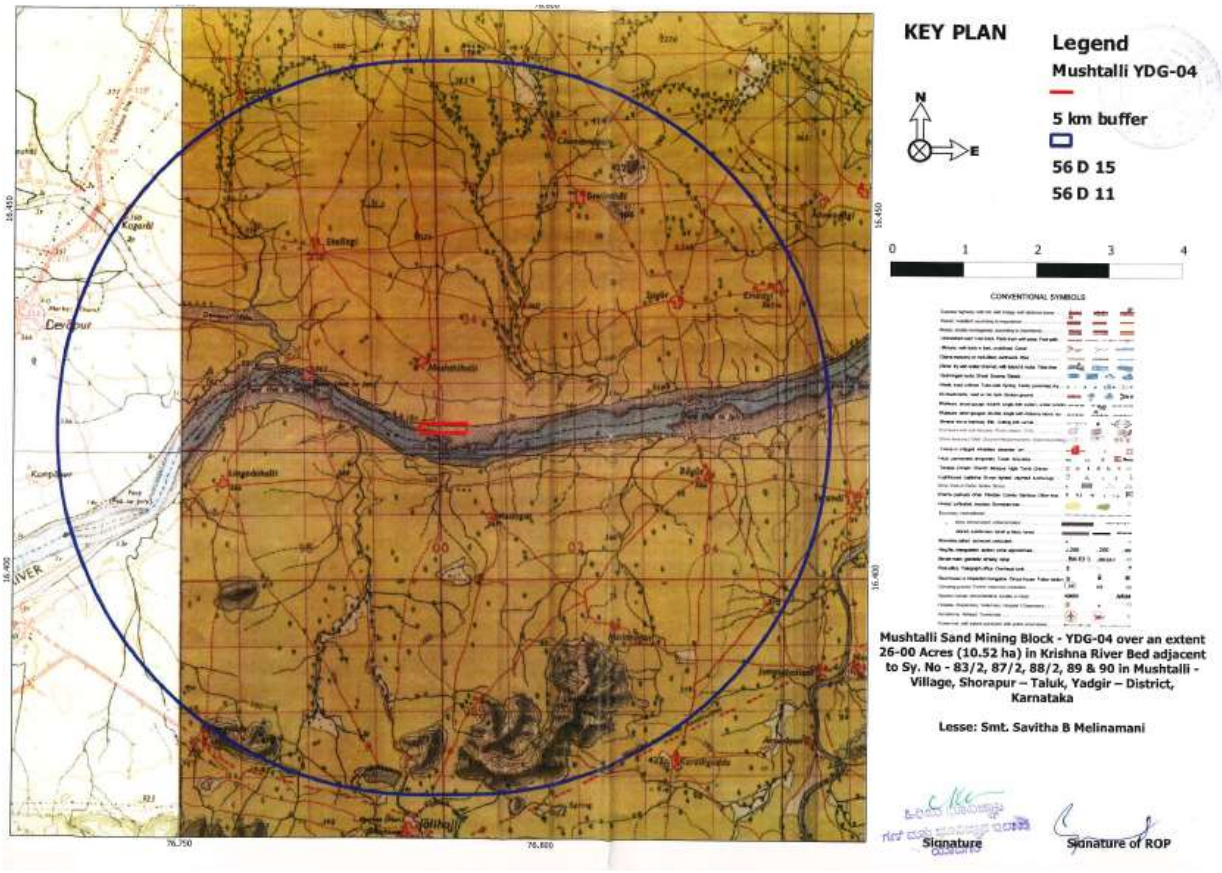
Latitude: N 16^0 25′ 15.58″ to N 16^0 25′ 10.73″

Longitude: E 76^0 47′ 23.71″to E 760 47’ 23.33”

Lease sketch



Location of quarry area on Toposheet



iii) Details of alternate sites, considered and the basis of selecting the proposed site, particularly the environmental considerations gone into should, be highlighted:

River sand quarry is site specific.

iv) Size or magnitude of operation:

It is only River Sand quarrying with capacity of – 62,949 tones/annum.

Year wise development:

The Tonnages of saleable ordinary sand and the rejection during the plan period is as given below.

PRODUCTION & DEVELOPMENT PLAN PROPOSAL FOR FIVE YEARS					
Year	**PLAN AREA In sq. m.**	**AVERAGE DEPTH OF THE BLOCK in m.**	**TOTAL VOLUME In Cu. m.**	**BULK DENSITY Cu.m/Ton**	**TOTAL QUANTITY IN TONNES**
1st Year	94,255	0.40	37,029	1.7	62,949
2nd Year	94,255	0.40	37,029	1.7	62,949
3rd Year	94,255	0.40	37,029	1.7	62,949
4th Year	94,255	0.40	37,029	1.7	62,949
5th Year	94,255	0.40	37,029	1.7	62,949
Total					**3,14,745**

Proposed method of quarrying: An open cast quarrying by semi-mechanized method is adopted for extraction of the ordinary sand. An approach road connecting to each individual block of the Block will be made separately and the same road will be used for transport. The area where significant quantity of water present mining activity will be avoided there. Mining work shall be carried out in one bench of 0.40m deep from surface level of river bed. The mine face will be inclined towards the periphery for safety. Water shall be sprinkled on River Sand to suppress any dust that may be raised during digging and loading operations. Extraction and loading of mineral into dumpers shall be carried out mechanically. Silt extracted if any shall also be loaded mechanically and stacked separate.

v) Project description with process details (a schematic diagram/ flow chart showing the project layout, components of the project etc. should be given):

It is only River Sand quarrying no processing is involved, the details of quarrying is detailed in quarrying plan.

vi) Raw material required along with estimated quantity, likely source, marketing area of final product/s, Mode of transport of raw material and finished product:

Mining is proposed to be carried out by Semi Mechanized open quarrying excavation method. JCB / Excavator/ wheel loader will be utilized for excavation.

vii) Resource optimization /recycling and reuse envisaged in the project , if any, should be briefly outlined:

No recycling and reuse of material is envisaged.

viii) Availability of water its source, Energy /power requirement and source should be given:

Water will be availed from nearby bore wells. No energy /power requirement.

ix) Quantity of wastes to be generated (liquid and solid) and scheme for their Management /disposal :

There is no such reduction of waste / mineral reject processing possibilities are proposed during plan period. There is no proposal of dumping during the proposed ensuing quarrying period, & concurrent backfilling is proposed.

x) Schematic representations of the feasibility drawing which give information of EIA purpose: Not applicable

4 Site Analysis

i) Connectivity:

The lease area is situated at 0.95 Km North of Mushtalli village. The quarry area is 10.95 kms from Shorapur Taluk Head Quarters & 51.40 Km from the district head quarter Yadgir. The nearest railway station is at Yadgir, which is at a distance of 51.35 km from the quarry area. The nearest airport is Hyderabad 215 kms.

ii) Land Form, Land use and Land ownership:
It is a River Sand block area.

iii) Topography(along with map):
In the Topo sheet No. 56 D/11 & 15 where proposed quarry is located, the following topographic features can be observed.

- The river of Krishna is having an almost Flat slope.
- No major roads pass through the Lease area.
- No human settlements within or in the vicinity of the lease area. The nearest village Mushtalli is at a distance of 0.95 km.
- The drainage pattern of the buffer zone is dendritic to sub-dendritic in nature.

- No perennial flow in the river. Only during Monsoon and its adjoining period for about 9 months the water flows in the river. Generally the quarrying will be continued during the non- monsoon period. Details are provided in Quarry plan

iv) Existing land use pattern (agriculture, non agriculture, forest, water bodies (including area under CRZ)), shortest distances from the periphery of the project to periphery of the forests, national park, wild life sanctuary, eco sensitive areas, water bodies(distance from, the HFL of the river), CRZ, In case of notified industrial area, a copy of the Gazette notification should be given: Land and break up is given as follows

Sl No	**Head**	**Area put on use at start of plan (in Ha.)**	**Proposed during plan period (in Ha.)**
		(A)	(B)
1	Area under Mining	---	9.21
2	Storage for top soil	---	---
3	Over burden / dump	---	---
4	Mineral storage	---	---
5	Infrastructure (workshop, administrative building etc.)	---	---
6	Roads	---	---
7	Railways	---	---
8	Buffer Zone	---	1.31
9	Tailing pond	---	---
10	Effluent treatment plant	---	---
11	Mineral separation plant	---	---
12	Township area	---	---
13	Others to specify (Retention wall, check-dams Etc.	---	---
14	Area which will remain un-touched / virgin	**10.52**	---
	Grand Total	**10.52**	**10.52**

v) Existing Infrastructure:
Nil.

vi) Soil classification: The soil found in the study area can be classified Medium black soil in the agricultural field. There is no topsoil to be produced in the lease.

vii) Climatic data from secondary sources:

The climate is tropical in Yadagiri. In winter, there is much more rainfall in Yadagiri than in summer. This climate is considered to be As according to the Köppen-Geiger climate classification. In Yadagiri, the average annual temperature is 27.8 °C. The average annual rainfall is 711 mm.

viii) Social Infrastructure available: All the social infrastructural facilities like hospitals, schools, colleges & etc. are available in Yadgir Town.

5 *Planning Brief*

i) Planning Concept (type of industries, facilities, transportation etc) Town and country Planning/ Development authority classification:
A mining plan has been prepared under the guidelines Department of Mines & Geology, Yadgir.
It is proposed to produce 62,949 TPA of River Sand from the proposed mining lease.

ii) Population Projection:
About 20 persons shall be employed in the proposed mining project. All the people will be sourced from neighboring villages. Thus there will be no increase in population due to the project.

iii) Land use planning (breakup along with green belt etc.)-
The land use of the mine lease area will change temporarily into excavated pits; however the pits will be filled due to sediment inflow and also the rejections will be back filled in the excavated area. Plantation will also be carried along the river banks.
Details are enclosed in the quarry plan

iv) Assessment of Infrastructure Demand (Physical & Social)-NA.

v) Amenities/ Facilities:
The following facilities/amenities will be extended:

- Direct and indirect Employment, of which most will be from nearby villages.

- Arrangements for safe and healthy working conditions.
- Provision of Drinking water.

6 Proposed Infrastructure

i) Industrial Area(Processing Area) :
No infrastructure is proposed

ii) Residential Area (Non Processing Area) :
As the local persons will be given employment, no residential area/ housing is proposed within the mining lease area.

iii) Green Belt:
It is proposed to develop green belt by planting Eucalyptus, Agave, Croton Species which are locally seen, at the banks of the river to prevent the erosion of the adjoining soil banks. Plantation shall be made all along the banks by distributing the area for plan period of 5 years.

iv) Social Infrastructure Connectivity (Traffic and Transportation Road/Rail/Metro/Water ways etc):
Railway: The nearest railway station is at Yadgir, which is at a distance of 50.5 km from the quarry area.
Road: SH 61 – 5.75 km (SW) (Lingsugar to Devadurga road)

v) Drinking Water Management (Source & Supply of water):
Potable Drinking water will be supplied to the mines from bore well through the water cans

vi) Sewerage System:

Sewage generation is minimal. No sewerage system is proposed. However for sanitation purpose portable toilets will be made available.

vii) Industrial Waste Management: Not applicable.

viii) Solid Waste Management: Not Applicable

ix) Power Requirement & Supply /source: Power not required as it is an open cast semi-mechanized Method.

7 Rehabilitation and Resettlement (R & R) Plan

Not applicable.

8 Project Schedule & Cost Estimates

i) Likely date of start of construction and likely date of completion(Time schedule for the project to be given):

Quarrying will start within a month after getting EC clearance depending on the seasons as no mining operations are proposed during rainy season.

The ultimate pit limit is up to 7. 5 meters from lease boundary this is also known as safe zone/green belt. Hence the mining is continued up to distance of 7.5 m from the boundary

ii) Estimated project cost along with analysis in terms of economic viability of the project:

Estimated project cost is 120 lakhs. It is economically viable as it is quarrying of River Sand.

9 Analysis of proposal(Final Recommendation)

i) Financial and social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area:

The Project will bring economic benefits to the state. The mining operations shall be providing employment to approximately 20 persons directly in the excavation and transportation of sand. Most of the local people are likely to be benefited. This project operation will provide livelihood to the poorest section of the society. Mining is expected to have positive impact on socio-economic life of people living in nearby villages.

ENVIRONMENTAL MANAGEMENT PLAN

For

“Mushtalli Sand Block –YDG- 04”

Over an extent of 26-00 Acres (10.52Ha)

In Krishna River Bed,

Adjacent to Sy. No. 83/2, 87/2, 88/2, 89 & 90 of

Mushtalli -Village,

Shorapur -Taluk,

Yadgir -District.

Table of Contents

1. Introduction

1.1 Project Details

The proposed river sand mining is in Sy. No. 83/2, 87/2, 88/2, 89 & 90 Mushtalli Sand Block – YDG-04 which joins River Krishna, Shorapur Taluk, Yadgir district. The Block number –YDG-04 is proposed for ordinary sand Quarrying over an extent of 26-00 Acres.

Importance of Sand:-

Sand has become a very important mineral for our society due to its many uses. It can be used for making concrete, filling roads, building sites, brick-making, making glass, sandpapers, reclamations, and etc. On average, people 'use' over 200kg of sand per person per year. This sand is taken from what are essentially non-renewable resources.

INTRODUCTION

Department of Mines and Geology has given notification which is enclosed in Quarry plan.

1.2 Salient feature of project

Name of the project	Mushtalli Sand Block –YDG-04 Open Quarrying Excavation Sand Block.
Name of the Applicant	Smt. Savitha B Melinamani, Kamanakatti Oni, Talikote, Muddebihala Taluk, Vijayapura.
Location	Adjacent to Sy. No- 83/2, 87/2, 88/2, 89 & 90 in Mushtalli - Village, Shorapur – Taluk, Yadgir – District.
Maximum production	1,60,233 tones/annum
Mining method	Semi Mechanized Open quarrying excavation

Source of water	18.5 KLD of Potable water will be sourced through Borewells of nearby village for 15 workers.
Extent of Sand Block area	26-00 Acres
Connectivity	
Component	**Description**
Road	SH 61 – 5.75 km (SW) (Lingsugar to Devadurga road)
Rail	Yadgir railway station, which is at 51.35 Km (NE)
Air port	Hyderabad Airport (SE) at a distance of about 215 Kms

1.3 Location and area accessibility

Details of the Area:

The lease area is demarcated on the Topo-sheet No 56 D/11 & 15 of the Survey of India and enclosed vide Plate. No. 1 as Key plan.

District	Taluk	Village	Block No	Area in Acres	Ownership
Yadgir	Shorapur	Limit of Mushtalli village.	YDG-04	26-00. Acres (10.56 Ha).	Smt. Savitha B Melinamani, Kamanakatti Oni, Talikote, Muddebihala Taluk, Vijayapura.

Existence of public road / railway line, if any nearby and approximate distance: The lease area is situated at 0.95 Km North of Mushtalli village. The quarry area is 10.95 kms from Shorapur Taluk Head Quarters & 51.40 Km from the district head quarter Yadgir. The nearest railway station is at Yadgir, which is at a distance of 51.35 km from the quarry area. The nearest airport is Hyderabad 215 kms. No wild life sanctuary exists within 15 kms radius from the lease area.

1.4 Topography

In the Topo sheet No 56 D/11 & 15 where proposed quarry is located, the following topographic features can be observed.

The applied quarry lease area.

The river of Krishna is having an almost Flat slope.

No major roads pass through the Lease area.

No human settlements within or in the vicinity of the lease area. The nearest village Mushtalli is at a distance of 0.95 km.

The drainage pattern of the buffer zone is dendritic to sub- dendritic in nature. No perennial flow in the river. Only during Monsoon and its adjoining period for about 9 months the water flows in the river. Generally the quarrying will be continued during the non- monsoon period.

1.5 Estimation of reserves in the area:

The Ordinary sand deposit in this Block from 1.32 metres as proved by way of trial pits as per UNFC Norms. For the purpose of Estimation of Reserves, the volume of the Ordinary sand is arrived by multiplying the plan area by the depth of the sand. Specific gravity of the ordinary sand is considered as 1.7 and then estimated the reserves by multiplying the volume by specific gravity.

Geological Reserves					
LENGTH OF THE SAND BLOCK in m.	*AVERAGE WIDTH OF THE SAND BLOCK in m.*	*DEPTH OF THE SAND IN BLOCK in m.*	*TOTAL VOLUME In Cu. m.*	*BULK DENSITY* ***Cu.m/Ton***	***TOTAL QUANTITY IN TONNES***
700	*144*	*1.32*	*1,33,303*	*1.7*	*2,26,616*
Mineable Reserves					
LENGTH OF THE	*AVERAGE WIDTH OF*	*DEPTH OF THE*	*TOTAL VOLUME*	*BULK DENSITY*	***TOTAL QUANTITY***

SAND BLOCK in m.	*THE SAND BLOCK in m.*	*SAND BLOCK in m.*	*In Cu. m.*	***Cu.m/Ton***	***IN TONNES***
685	*129*	*1.25*	*1,11,086*	*1.7*	*188,847*

2. Quarrying

2.1 Proposed method of quarrying:

The Ordinary sand is well exposed right on the surface, Quarrying will be continued from the downriver of the block to upriver of the Block 1 in the general direction of the lease. An open cast quarrying by semi mechanized method will be adopted to operate the quarry. Quarrying is planned by semi mechanized operation for extraction of Ordinary sand, screening, stacking etc. keeping the productivity and safety in mind. After screening, the rejection will be back filled in the excavated area. Only at the time of dispatches the JCB/ Loader will be used for loading the dumpers. No drilling is required as material is non compact in nature and easily dig gable.

2.2 Year wise production:

The Tonnages of saleable Ordinary sand and the rejection during the plan period is specified in quarry plan.

2.3 Drilling & Blasting:

No Drilling and blasting is proposed in the quarrying process for ordinary sand as the Ordinary sand is course grained and not compacted. It is extracted mechanically by using excavator.

Blasting:

A) As the Ordinary sand is course grained and not compacted, it is removed mechanically using excavator no blasting is required.

B) Whether secondary blasting is needed, if so, describe in brief:

Ordinary sand is removed mechanically by using excavator. No drilling and blasting is proposed.

C) Storage of Explosive:

No explosive is used for the purpose of blasting. Blasting is not required.

2.4 Loading:

Loading will be done by using excavator/JCB/Wheel Loader to the Dumpers.

2.5 Hauling and Transport:

The Ordinary sand extracted by using excavator & is screened by using gravity screens and the saleable product up to 8mm size sand is stacked separately for dispatches by dumpers to the consumer point.

2.6 Disposal of waste

The nature and quality of top-soil, over burden waste and mineral rejects likely to be removed during the next five years:

There is a no top soil to be produced in the plan period. Only the rejection after screening in the form of oversize pebbles and clay shall be used for back filling in the excavated areas.

There is no such reduction of waste / mineral reject processing possibilities are proposed during plan period.

2.7 Employment potential

In all, there will be about 20 workers. Details are provided in Quarry plan.

3. Baseline Environment

3.1 Land environment

In the proposed Mining activity there will not be much impact on the land environment due to the following reasons.

1. There is no removal of vegetation such as plants, bushes in the reach area

2. The proposed sand block area is situated on the surface of river bed. The land is not utilized for any other purposes, as there are no proposals for storage of the mined sand or is there any development involved for the proposed mining of sand.

3. No effluent generation as any further processing of mineral is proposed. Hence no ground water contamination due to the proposed mining activity.

4. The depth of mining shall be restricted to 1.25m/water level, whichever is less.

3.2 Water quality

The quality of ground water is fairly good. There is no liquid waste discharge from mining activity, which is likely to pollute water.

3.3 Noise and vibrations

Since it is small scale quarrying, where there is no drilling and blasting is proposed, there will be no back ground noise levels at the site. The area is away from roads where frequent traffic is encountered. General noise levels are expected to be less than 80 dBA. in the working of the mine.

Vibration levels: Blasting is not adopted in the quarry, Hence no vibration is apprehended in the mine.

3.4 Air Quality

In general the SPM, SO2 and Nox concentration in the region may be within the permissible limits, as it is a small scale quarrying.

b) Ambient noise level :

The noise levels are very low in the vicinity of quarrying.

c) Water quality :

The quality of ground water is fairly good. There is no liquid waste discharge from mining activity, which is likely to pollute water.

3.5 Climatic conditions

The climate is tropical in Yadagiri. In winter, there is much more rainfall in Yadagiri than in summer. This climate is considered to be As according to the Köppen-Geiger climate classification. In Yadagiri, the average annual temperature is 27.8 °C. The average annual rainfall is 711 mm. The driest month is January. There is only 3 mm of precipitation in January. Most precipitation falls in September, with an average of 170 mm. With an average of 33.4 °C, May is the warmest month. In

December, the average temperature is 23.3 °C. It is the lowest average temperature of the whole year.

The precipitation varies 167 mm between the driest month and the wettest month. The average temperatures vary during the year by 10.1 °C

3.6 Socio-Economic environment

There are many villages within the buffer zone and they all depend on agriculture and related activities. Since the quarrying is on small scale, no health problems are anticipated as well as safety due to quarrying operations.

4. Environmental Management Plan

4.1 Introduction

The quarry operations in the study area, needs to be intertwined with judicious utilization natural resources within the limits of permissible assimilative capacity. The assimilative capacity of the study area is the maximum amount of pollution load that can be discharged in the environment without affecting the designated use and is governed by dilution, dispersion and removal due to natural physio-chemical and biological processes. The Environmental Management Plan (EMP) is required to ensure sustainable development in the study area.

This chapter covers the genesis of pollution, the principal sources of pollution, the nature of pollution, the proposed measures required for meeting the prevailing statutory requirements of gaseous emissions, wastewater discharge characteristics, noise levels etc. for environmental management purpose in connection with the quarrying and its related activities in the study area.

This section discusses the management plan for mitigation/abatement impacts and enhancement of beneficial impacts due to quarrying. The Environmental Management Plan (EMP) has been designed within the framework of various Indian legislative and regulatory requirements on environmental and socio-economic aspects.

Environmental Management Plan giving the environmental protection measures at quarry to meet the stipulated norms, are as detailed.

4.2 Environmental Impact Statement & Control measures

4.2.1 Climate

The proposed quarry activities are not likely to contribute to any variation in the climate parameters of the region. The variations observed are on a regional scale and the control factors lie much beyond the small area considered for Quarrying. Hence no management measures are needed and proposed.

4.2.2 Air Environment

No pollution is expected due to the quarry operation as the method adopted is Semi Mechanized in a small scale. Therefore, the SPM count in the air will not increase. Blasting is not adopted in the quarry, hence major air pollution is avoided to the maximum.

NOx, SO2 and CO values are expected to be within the permissible limits due to proposed, m quarrying. Effect of quarrying is minimal.

4.2.2.1 Dust Control

The main source of dust is from transportation.

- The dust generated during the vehicular movement will be controlled by spraying water on village roads for which water tanker fitted with sprayer are proposed.
- Over loading of trucks and consequent spillage on the roads will be avoided.
- Measures such as covering tarpaulins over the loaded material will prevent spreading of sand from the trucks.

4.2.3 Noise Environment

Noise will be produced at the quarry due to movement of tractors only. The noise generated by the quarrying activity is dissipated within a small zone

around the quarry. The lease area is not inhabited by any wild life, as there is no forest cover. Hence there will not be any effect on migration or extinction of wild life from the lease area as the noise created by the quarry operation is insignificant so as to cause any impacts.

As the process involves only extraction of ordinary sand from the riverbed Semi Mechanized, there is no major noise generation; however the following mitigation measures will be followed to mitigate the noise generation

1. Speed of the vehicles in the village area will be restricted to 25 Km/hr
2. Vehicles with good maintenance will be utilized for sand transportation

4.2.4 Water Environment

There will not be any wastewater discharges to water bodies from the mining operations. As proposed sand quarrying will be limited to 1.05m/water level, whichever is less, there will not be any intersection with ground water table. All the stipulations of MoEF for sand mining and guidelines as per the Karnataka Minor Mineral Concession (Amendment) Rules, 2013 will be followed. Hence there will be not be any impact due to the proposed quarrying on the water environment.

WATER REQUIREMENT

The proposed Mining activity requires 18.5 KLD of water. This includes water for domestic purpose. Water required will be sourced from borewells available in surrounding village The depth of mining shall be restricted to 1.25m/water level, whichever is less. Hence there will not be any significant impact on hydrology of the river.

4.2.5 Biological environment:

As the area is devoid of any vegetation, surface sand mining is not going to cause any damage to any plant. There are no Turtle or Crocodile breeding grounds in the

quarry lease area under consideration. Hence the anticipated negative impacts if any are only minor, temporary and easily reversible. Natural restoration to original condition can occur within about one or five years. Hence it can be safely concluded that the proposed ordinary sand quarrying for five years as per rules is safe with very little negative impact.

4.2.6 Land Restoration/Reclamation

The area granted for quarrying of Ordinary sand is purely in the river of Krishna, a tributary to River Krishna, water flows in this tributary river seasonally during monsoon and its spread over for a period of about 5 months and generally dry during rest of the period. In the buffer zone of 5 kms. Major area is covered by Agriculture lands.

There is no such reduction of waste / mineral reject, these mineral rejects like shingle and pebbles at river bed will be dumped back in the worked out areas as a part of reclamation.

4.2.6.1 Topsoil Management:

The area is not having any top soil or fertile soil. The depth of mining shall be restricted to 1.25m/water level, whichever is less.

4.2.7 Occupational Safety and Health:

There is no environmental pollution due to the proposed quarrying as it is proposed to be a manual scooping of ordinary sand on the river bed. However the workers involved in quarrying and loading of sand will be provided with dust masks. Hence there will be no major occupational health hazards

5. Conclusions

- The depth of mining shall be restricted to 1.25m/water level, whichever is less.
- Hydrology of the river will not alter due to the proposed activity.
- The ground water table in the villages also will not be affected as the maximum proposed depth of quarrying will be limited to 1.25m/water level, whichever is less.
- All vehicles used for transport will comply with emission norms & noise level norms of the Ministry of Environment & Forests.
- Vehicles used for transportation of sand will be covered with tarpaulin.
- The quarrying operations will be in accordance with rules and regulations of Karnataka Minor Mineral Concession (Amendment) Rules, 2013
- All environmental rules and regulations will be strictly followed and implemented.