Pre-Feasibility Report

Of

"River Sand Quarry"

In

Hirebidari Cluster No. 1

1. Over an extent of 21.25 Acres in Tungabhadra River Bed in Block No. 1 Adjacent to Sy. No. 276P, 277, 278, 279 of Hirebidari village, Ranibennur taluk, Haveri district

2. Over an extent of 20.625 Acres in Tungabhadra River Bed in Block No. 2 Adjacent to Sy. No. 280P, 281, 282, 283, 284, 286P of Hirebidari village, Ranibennur taluk, Haveri district

3. Over an extent of 21.25 Acres in Tungabhadra River Bed in Block No. 3 Adjacent to Sy. No. 291, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 309 P of Hirebidari village, Ranibennur taluk, Haveri district

Pre-Feasibility Report

1. Executive Summary:

The proposed project is River Sand mining having lease area of 21.25 Acres in Block No. 1, 20.625 Acres in Block No. 2 and 21.25 Acres and falls under Category- "A" as per EIA Notification 2006 and its amendments of the Ministry of Environment and Forests, New Delhi due to the applicability of general condition.

Salient features of the Project:

Name of the project	Hirebidari Cluster No. 1 Open Quarrying Excavation Sand Block.
Name of the Applicant	District Sand Monitoring Committee, Haveri.
Location	Hirebidari Cluster No. 1 Ranibennur Taluk, Haveri District, Karnataka.
Maximum production capacity	Hirebidari Block No. 1 - 27926 tones/annum Hirebidari Block No. 2 - 27774 tones/annum Hirebidari Block No. 3 - 24492.6 tones/annum
Mining method	Manual Open quarrying excavation
Extent of Sand Block area	Hirebidari Block No. 1 – 21.25Acres Hirebidari Block No. 2 – 20.625 Acres Hirebidari Block No. 3 – 21.25 Acres

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 Extent: Hirebidari Block No. 1 – 21.25Acres Hirebidari Block No. 2 – 20.625 Acres Hirebidari Block No. 3 – 21.25 Acres "River Sand Quarry" at Block No. 1 in Tungabhadra River Bed Adjacent to Sy. No. 276P, 277, 278, 279 of Hirebidari village, Ranibennur taluk, Haveri district Block No. 2 in Tungabhadra River Bed in Block No. 2 Adjacent to Sy. No. 280P, 281, 282, 283, 284, 286P of Hirebidari village, Ranibennur taluk, Haveri district Block No. 3 in Tungabhadra River Bed in Block No. 3 Adjacent to Sy. No. 291, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 309 P of Hirebidari village, Ranibennur taluk, Haveri district	The Chairman, District Sand Monitoring Committee & District Commissioner, Haveri. (On behalf of the Government of Karnataka) Address for correspondence: Dept. of Mines and Geology, Haveri - 581110

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. The sediments are river borne. Running river is main agent responsible for weathering. It is significant at the time of rainy season and generates a huge quantity of river sand which deposits at the bottom of the river. The entire riverbed has ample quantity of River Sand of uniform grade.

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.

Hirebidari Block No. 1: About 28 people will get direct employment and equal number will get indirect employment.

Hirebidari Block No. 2: About 28 people will get direct employment and equal number will get indirect employment

Hirebidari Block No. 3: About 25 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.

Hirebidari Block No. 1:

Toposheet No :47 N/14

Latitude : N 14°39’27.4” to N 14°39’50.9”

Longitude: E 75°48’08.6” to E75°48’28.8”

Hirebidari Block No. 2:

Toposheet No :47 N/14

Latitude : N 14°39’03.1” to N 14°39’29.2”

Longitude: E 75°48’26.5” to E75°48’46.3”

Hirebidari Block No. 3:

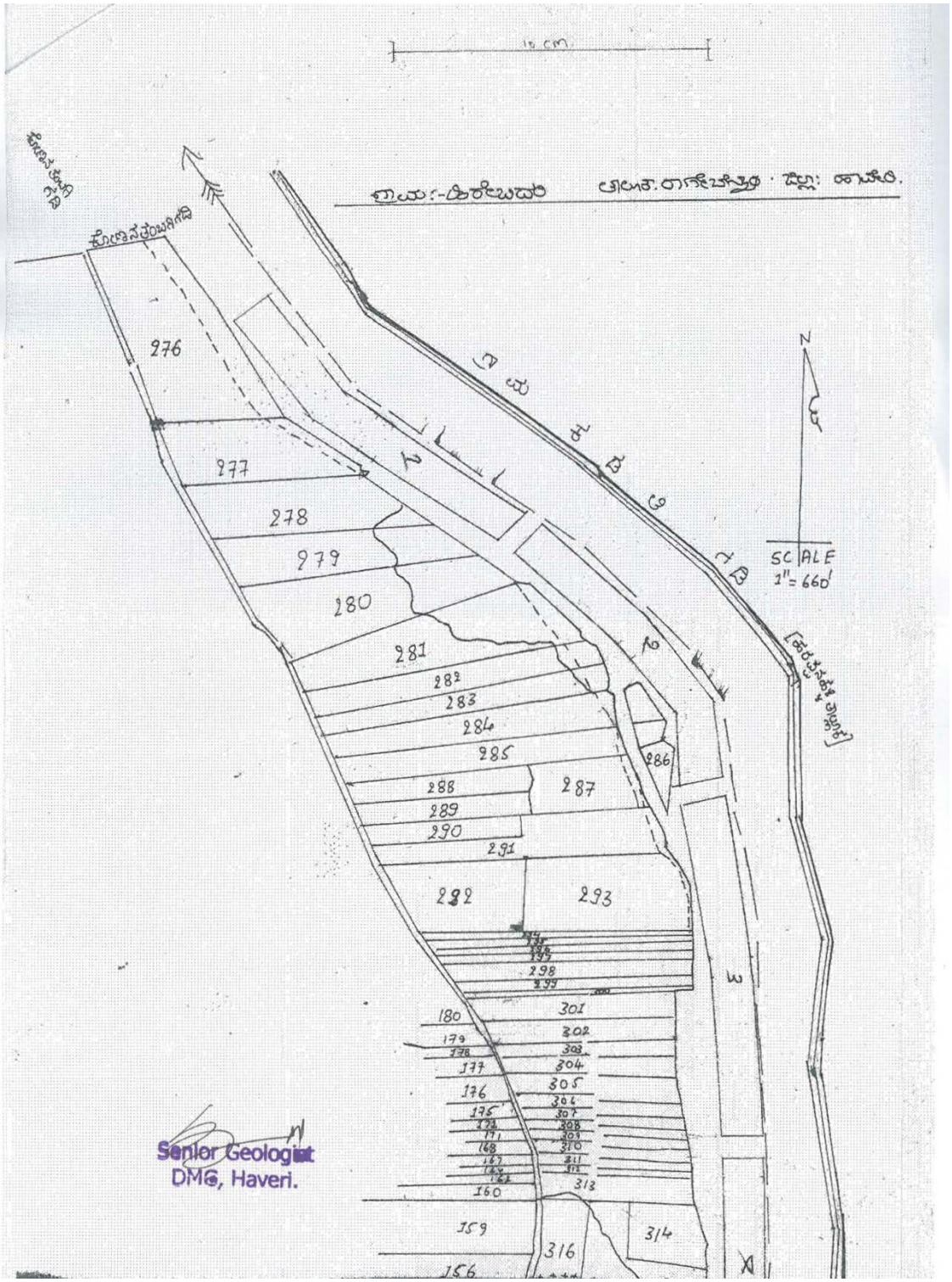
Toposheet No :47 N/14

Latitude : N 14°38’33.9” to N 14°39’01.2”

Longitude: E 75°48’38.6” to E75°48’43.1”

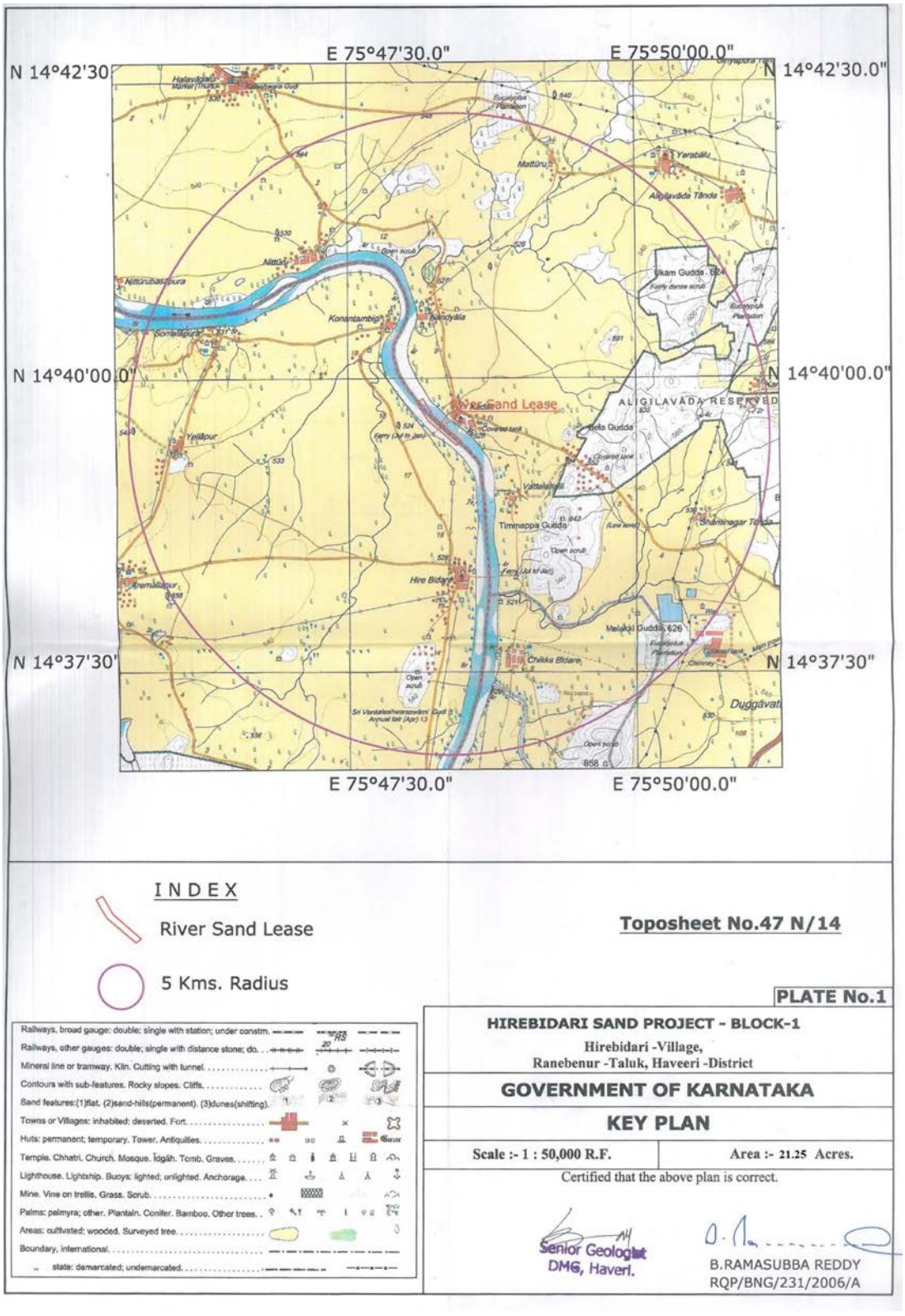
Lease sketch

Of Hirebidari Cluster No. 1

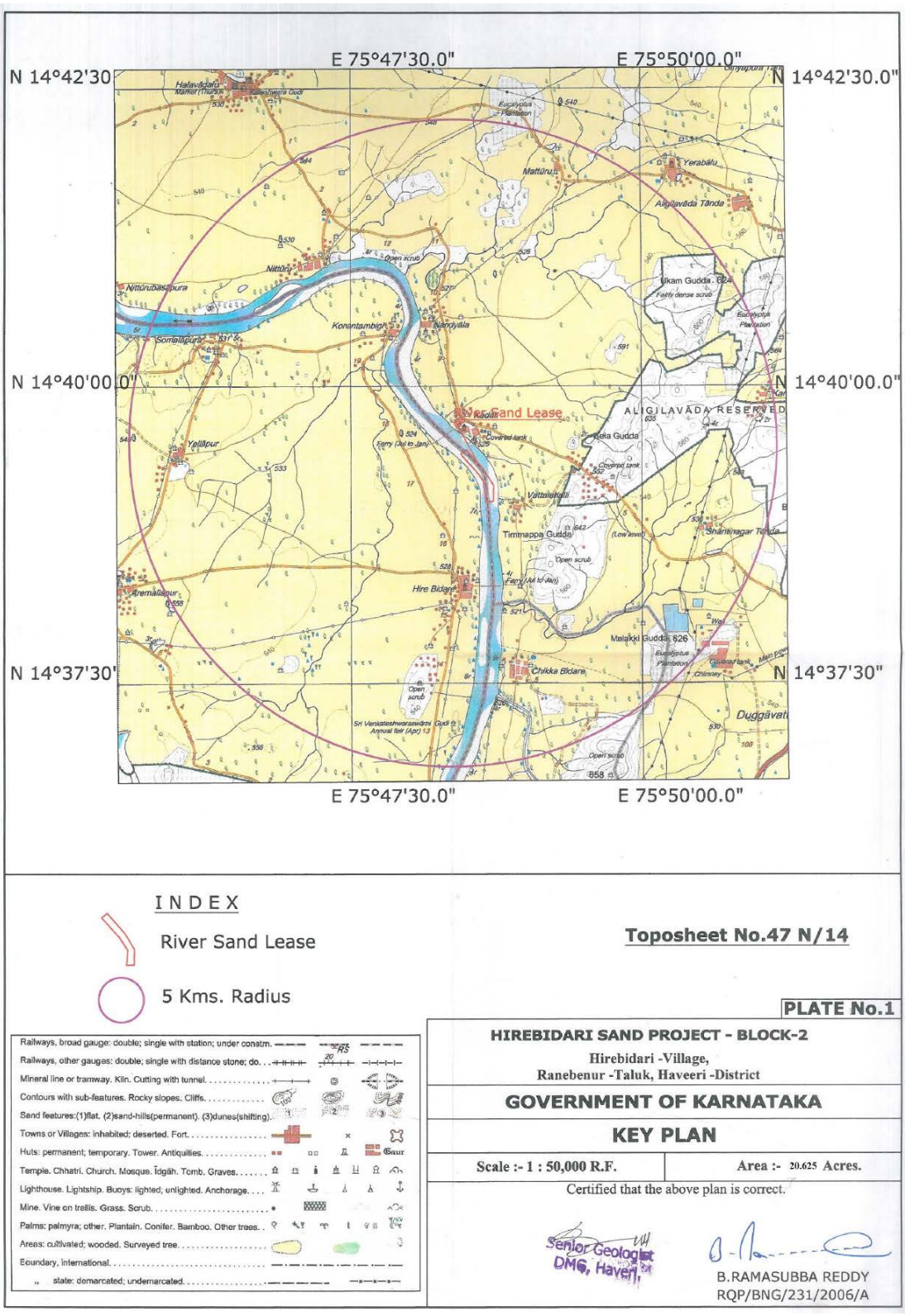


Location of quarry area on Toposheet

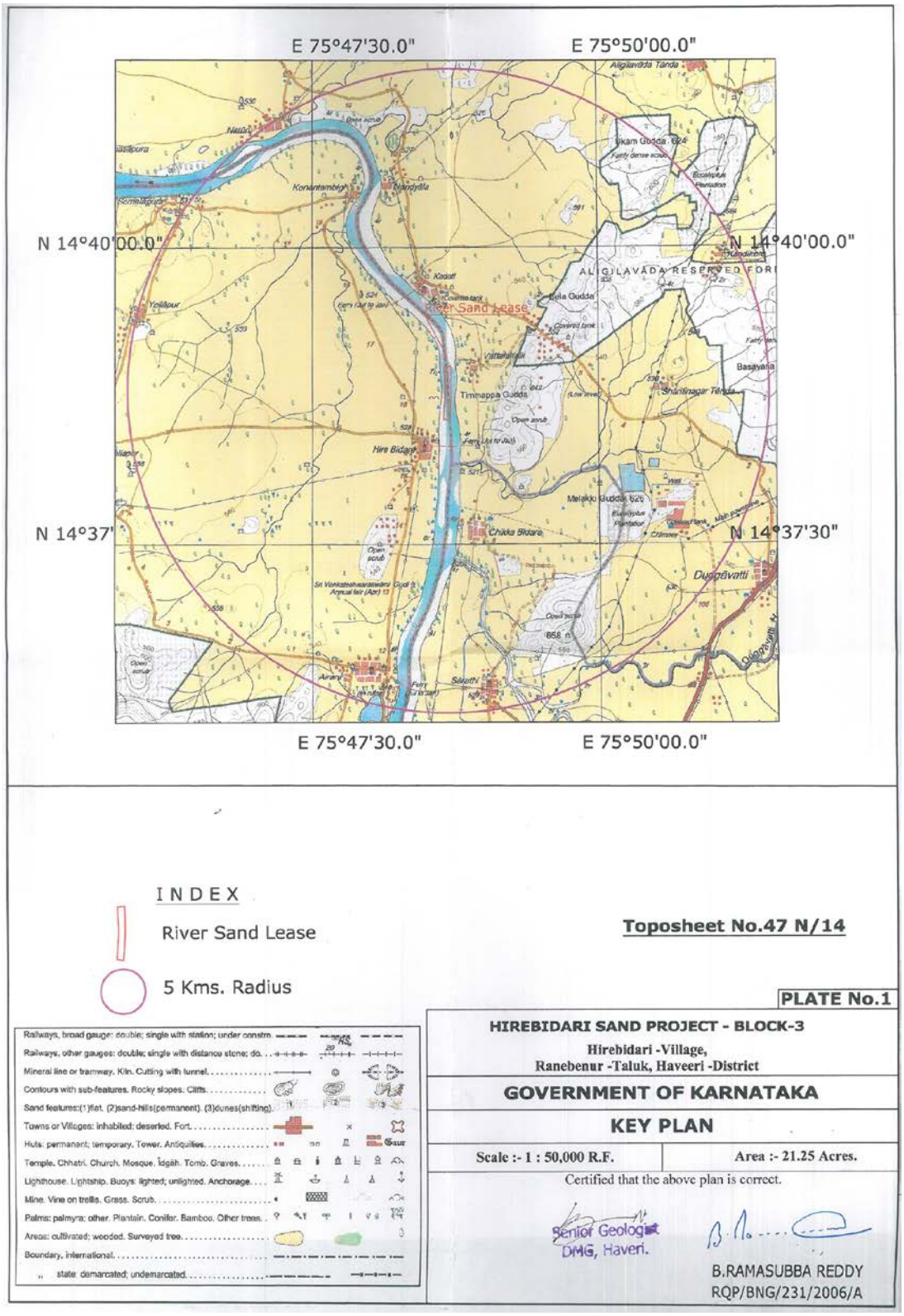
of Hirebidari Block No. 1



of Hirebidari Block No. 2



of Hirebidari Block No. 3



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 maximum capacity of

Hirebidari Block No. 1 - 27926 tones/annum

Hirebidari Block No. 2 - 27774 tones/annum

Hirebidari Block No. 3 - 24492.6 tones/annum

Year wise development:

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

Hirebidari Block No. 1:

A worksheet showing the production schedule during the plan period							
YEAR	PLAN AREA	DEPTH	VOLUME	BULK DENSITY	TOTAL	RECOVERY OF ORDINARY SAND @ 50%	REJECTION
	Sq. m.	in m.	Sq. m.	inCu.m.	in tonnes	in tones	in tones
I	41067.67	0.40	16427	1.70	27926	13963	13963
II	41067.67	0.40	16427	1.70	27926	13963	13963
TOTAL	82135.34				55852	27926	27926

Hirebidari Block No. 2:

A worksheet showing the production schedule during the plan period							
YEAR	PLAN AREA	DEPTH	VOLUME	BULK DENSITY	TOTAL	RECOVERY OF ORDINARY SAND @ 50%	REJECTION
	Sq. m.	in m.	Sq. m.	inCu.m.	in tonnes	in tones	in tones
I	40844	0.40	16338	1.70	27774	13887	13887
II	40844	0.40	16338	1.70	27774	13887	13887
TOTAL	82135.34				55548	27774	27774

Hirebidari Block No. 3

A worksheet showing the production schedule during the plan period							
YEAR	PLAN AREA	DEPTH	VOLUME	BULK DENSITY	TOTAL	RECOVERY OF ORDINARY SAND @ 50%	REJECTION
	Sq.m.	In.m.	Sq.m.	inCu.m.	In tonnes	In tones	In tones
I	36018.62	0.40	14407	1.70	24492.66	12246.33	12246.33
II	36018.62	0.40	14407	1.70	24492.66	12246.33	12246.33
TOTAL					**48985.32**	**24492.66**	**24492.66**

Proposed method of quarrying: Quarrying will be carried out by open cast manual method. No Machinery shall be deployed in the quarry. Only the manual operations will be continued for extraction of ordinary sand, screening and stacking 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 trucks. No drilling is required as material is non compact in nature and easily dig able by spades and crow bars manually.

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:

No raw materials required. Loaders, Tippers depending on the requirement of dispatches will be used for transportation of river sand.

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 :

During the plan period, the waste generated is 50 % of the total sand. i.e,

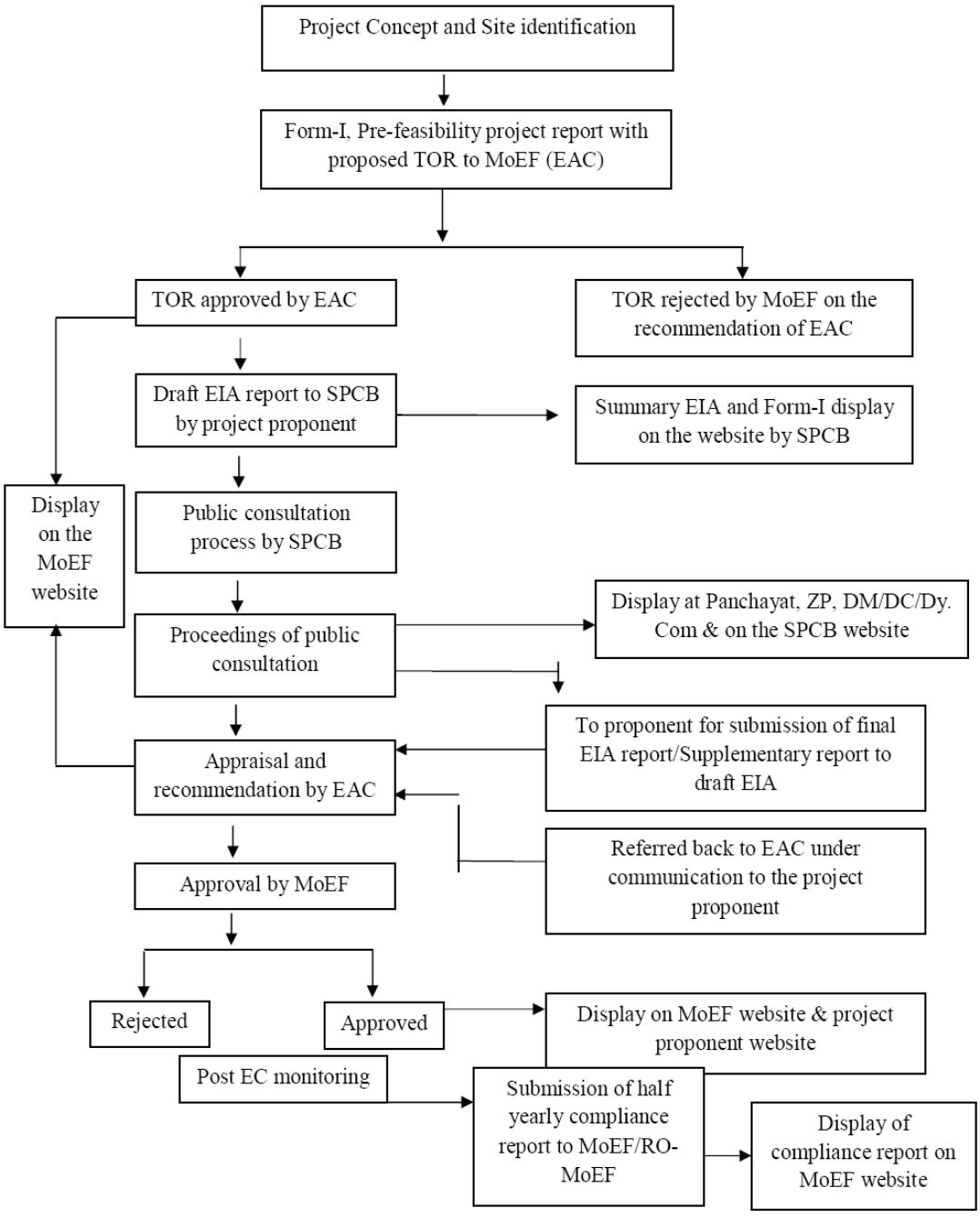
Hirebidari Block No. 1 - 27926 tones/annum

Hirebidari Block No. 2 - 27774 tones/annum

Hirebidari Block No. 3 - 24492.6 tones/annum

This will be removed/ excavated and the same will be dumped back in the worked out areas as a part of reclamation.

x) Schematic representations of the feasibility drawing which give information of EIA purpose:


Project Concept and Site identification
Form-I, Pre-feasibility project report with proposed TOR to MoEF (EAC)
TOR approved by EAC
TOR rejected by MoEF on the recommendation of EAC
Draft EIA report to SPCB by project proponent
Summary EIA and Form-I display on the website by SPCB
Display on the MoEF website
Public consultation process by SPCB
Proceedings of public consultation
Display at Panchayat, ZP, DM/DC/Dy. Com & on the SPCB website
To proponent for submission of final EIA report/Supplementary report to draft EIA
Appraisal and recommendation by EAC
Referred back to EAC under communication to the project proponent
Approval by MoEF
Rejected
Approved
Display on MoEF website & project proponent website
Post EC monitoring
Submission of half yearly compliance report to MoEF/RO-MoEF
Display of compliance report on MoEF website

4 Site Analysis

i) Connectivity:

Component	Description
Road	Hirebidari Block No. 1: The applied sand block area is approachable by road from Haveri to Hirebidari block 1 through NH 4 and Doddapete road with total distance of 65 kms. Hirebidari Block No. 2: The applied sand block area is approachable by road from Haveri to Hirebidari block 1 through NH 4 and Doddapete road with total distance of 65.4 kms. Hirebidari Block No. 3: The applied sand block area is approachable by road from Haveri to Hirebidari block 1 through NH 4 and Doddapete road with total distance of 66 kms.
Rail	Hirebidari Block No. 1: Chalageri railway station, which is at 13.16 Km south. Hirebidari Block No. 2: Chalageri railway station, which is at 12.76 Km south. Hirebidari Block No. 3: Chalageri railway station, which is at 12.04 Km south.
Air port	Mangalore International Air Port (W) at a distance of about 150 Kms

ii) Land Form, Land use and Land ownership:

It is a River Sand block area.

iii) Topography(along with map):

Hirebidari Block No. 1:

In the Topo sheet No 48 N/14 where proposed quarry is located, the following topographic features can be observed.

- The applied area is Block number 1 with in the village limits of Hirebidari in the river Tungabhadra.
- The terrain is a Plain area with very mild slope from South-East to North West direction.
- No major roads pass through the Lease area.
- No human settlements with in or in the vicinity of the lease area. The nearest village Hirebidari is at a distance of 3.1 Km.
- The drainage pattern of the buffer zone is dendritic to sub-dendritic in nature.
- No perennial nallah or streams in the buffer zone. Only during Monsoon for about 5 months the water flows in the River.

- The highest elevation in South-East portion and lowest elevation in North West portion of the block with in the area are hav ing an elevation of 521 and 519m above mean sea level. The difference in altitude is 2m.

Hirebidari Block No. 2:

In the Topo sheet No 48 N/14 where proposed quarry is located, the following topographic features can be observed.

- The applied area is Block number 2 with in the village limits of Hirebidari in the river Tungabhadra.
- The terrain is a Plain area with very mild slope from South to North-West direction.
- No major roads pass through the Lease area.
- No human settlements within or in the vicinity of the lease area. The nearest village Hirebidari is at a distance of 2.8 Km.
- The drainage pattern of the buffer zone is dendritic to sub-dendritic in nature.
- No perennial nallah or streams in the buffer zone. Only during Monsoon for about 5 months the water flows in the River.
- The highest elevation in South portion and lowest elevation in North-West portion of the block within the area are having an elevation of 523 and 521 m above mean sea level. The difference in altitude is 2m.

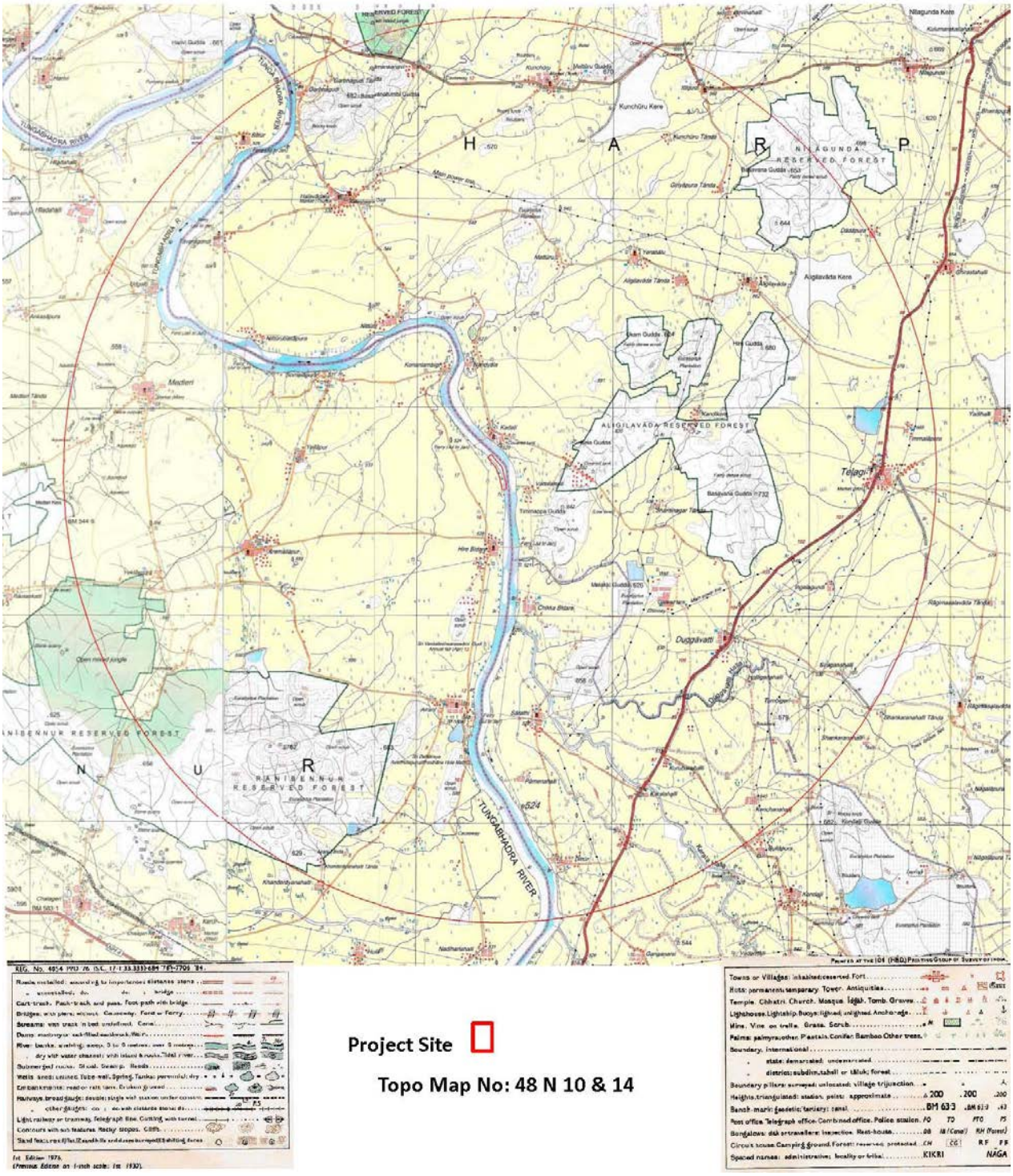
Hirebidari Block No. 3:

In the Topo sheet No 48 N/14 where proposed quarry is located, the following topographic features can be observed.

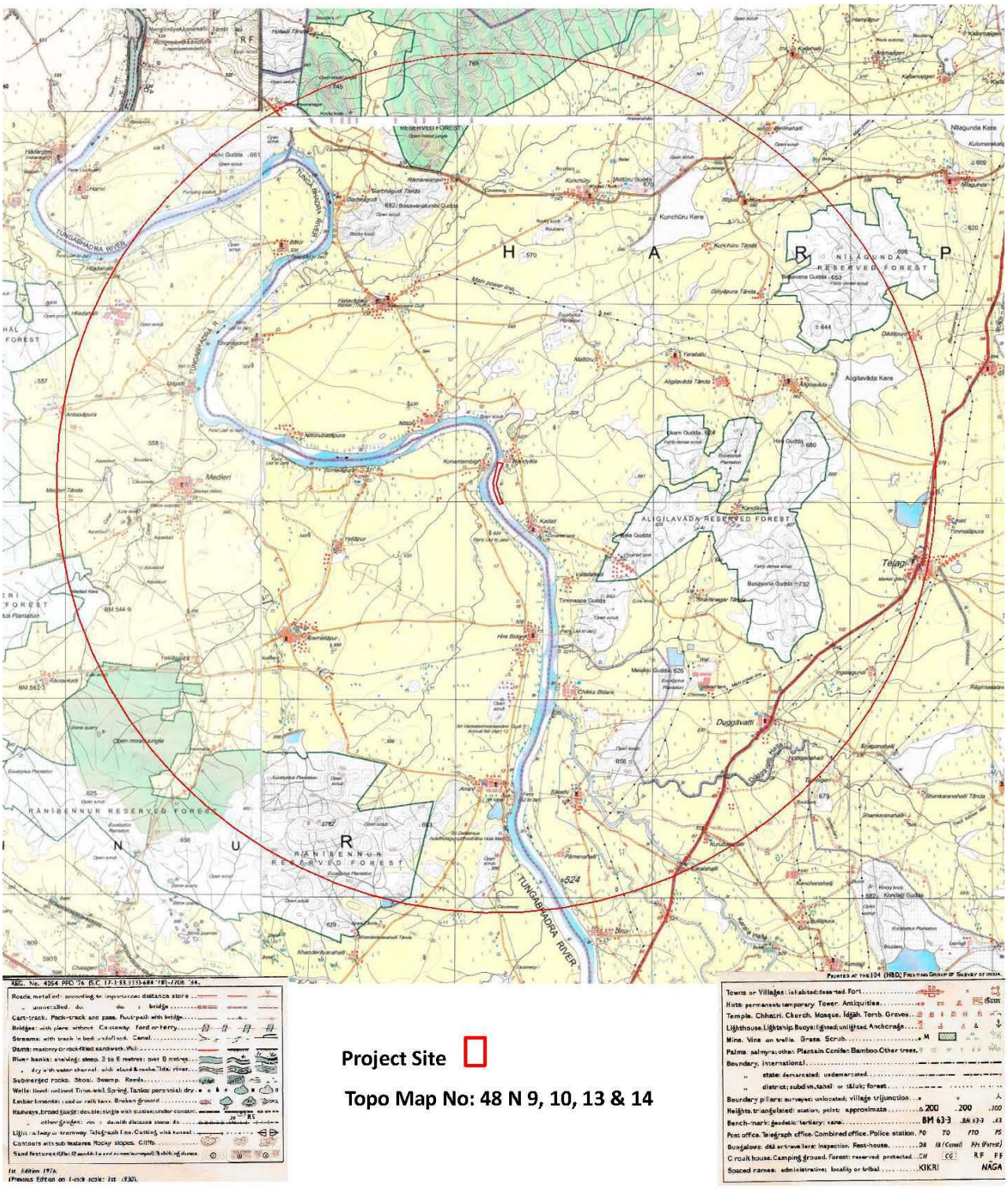
- The applied area is Block number 3 with in the village limits of Hirebidari in the river Tungabhadra.
- The terrain is a Plain area with very mild slope from South to North direction.
- No major roads pass through the Lease area.
- No human settlements within or in the vicinity of the lease area. The nearest village Hirebidari is at a distance of 1.3 Km.
- The drainage pattern of the buffer zone is dendritic to sub-dendritic in nature.
- No perennial nallah or streams in the buffer zone. Only during Monsoon for about 5 months the water flows in the River.
- The highest elevation in South portion and lowest elevation in North portion of the block within the area are having an elevation of 520 and 519 m above mean sea level. The difference in altitude is 1 m.

Topo map of the quarry site with 10 km radius:

Of Hirebidari Block No. 1



Of Hirebidari Block No. 2



Of Hirebidari Block No. 3

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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

Of Hirebidari Block No. 1

Sl. No.	Item	Existing / present (Ha)	End of lease Ha
1.	Area under mining	-	8.21
2.	Storage of Top soil	--	--
3.	OB/ dump	--	--
4.	Mineral Storage	--	-
5.	Infrastructure	--	--
6.	Roads	-	-
7.	Railways	--	--
8.	Green Belt	--	0.39
9.	Tailing Pond	--	--
10.	Effluent Treatment Plant	--	--
11.	Mineral Separation Plant	--	--
12.	Township Area	--	--
13.	Others	-	-
	Total	-	8.60

Of Hirebidari Block No. 2

Sl. No.	Item	Existing / present (Ha)	End of lease Ha
1.	Area under mining	-	8.16
2.	Storage of Top soil	--	--
3.	OB/ dump	--	--
4.	Mineral Storage	--	-
5.	Infrastructure	--	--
6.	Roads	-	-
7.	Railways	--	--
8.	Green Belt	--	0.18
9.	Tailing Pond	--	--
10.	Effluent Treatment Plant	--	--
11.	Mineral Separation Plant	--	--
12.	Township Area	--	--
13.	Others	-	-
	Total	-	8.34

Of Hirebidari Block No. 3

Sl. No.	Item	Existing / present (Ha)	End of lease Ha
1.	Area under mining	-	7.20
2.	Storage of Top soil	--	--
3.	OB/ dump	--	--
4.	Mineral Storage	--	-
5.	Infrastructure	--	--
6.	Roads	-	-
7.	Railways	--	--
8.	Green Belt	--	1.39
9.	Tailing Pond	--	--
10.	Effluent Treatment Plant	--	--
11.	Mineral Separation Plant	--	--
12.	Township Area	--	--
13.	Others	-	-
	Total	-	8.59

v) Existing Infrastructure:

Nil.

vi) Soil classification:

The soil found in the study area can be classified as Medium black soil in the agricultural field. There is no topsoil to be produced in the lease.

vii) Climatic data from secondary sources:

The district enjoys sub tropical climate with temperatures ranging in between 18° and 40° C. The rainfall varies in the district from over 903 mm in west (Hangal) to less than 592 mm in east (Ranebennur). October is the wettest month.

viii) Social Infrastructure available:

All the social infrastructural facilities like hospitals, schools, colleges & etc. are available in Ranebennur 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, Haveri.

Proposed Production:

Hirebidari Block No. 1 - 27926 tones/annum

Hirebidari Block No. 2 - 27774 tones/annum

Hirebidari Block No. 3 - 24492.6 tones/annum

ii) Population Projection:
About 81 (i.e. 28+28+25) 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 2 years.

iv) Social Infrastructure Connectivity (Traffic and Transportation Road/Rail/Metro/Water ways etc):
Nearest Railway Station:
Hirebidari Block No. 1: Chalageri railway station, which is at 13.16 Km south.

Hirebidari Block No. 2: Chalageri railway station, which is at 12.76 Km south.

Hirebidari Block No. 3: Chalageri railway station, which is at 12.04 Km south.

Road: NH4 – 14.3 km (SW), SH 25 – 7.5 kms (E)

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 manual 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 45 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 81 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.