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State Level Environment Impact Assessment Authority, Jharkhand
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पत्रांकः– 52 दिनांकः– 28.04.2023

प्रेषकः

सदस्य सचिव,
राज्य स्तरीय पर्यावरण समाघात निर्धारण
प्राधिकरण (SEIAA), झारखण्ड।

सेवा में,

उपायुक्त,
जिला : खुंटी।

विषय : खुंटी जिला का बालू खनिज से संबंधित DSR के अनुमोदन के संबंध में।

प्रसंग : आपका कार्यालय का पत्रांक–219/एम०, दि0–16.04.2023।

महाशय,

उपर्युक्त विषयक आपके कार्यालय के प्रासंगिक पत्र दिनांक 16.04.2023 द्वारा खुंटी जिला का बालू खनिज से संबंधित DSR की एक प्रति अनुमोदन हेतु दिनांक 16.04.2023 को SEIAA कार्यालय में समर्पित किया गया।

तद्अनुसार SEAC, झारखण्ड की 103वीं बैठक दिनांक 14.04.2023 से दिनांक 18.04.2023 में Md. Nadeem Shafi, DMO, Khunti एवं Smt. Anima Xess, Assistant Director, Geology, Ranchi की उपस्थिति में M/s Crystal Consultants, Ranchi, Jharkhand consultant द्वारा दिनांक 17.04.2023 में SEAC के समक्ष Presentation दिया गया, जिसमें DSR के Salient Feature निम्नवत् बताये गये :–

1. The final DSR submitted is duly signed by all members of the Sub Divisional Committee and the Consultant. All the pages of the DSR are signed by the authorized officer of the Sub Divisional Committee.
2. The final DSR consists of the complete potential area and is demarcated as Potential Resource Area (PRA) / Sand Leases / Ghats as per Enforcement and Monitoring Guidelines for Sand Mining (EMGSM), 2020.
3. The replenishment study of pre & post monsoon period is included in final DSR.

4. The final DSR had been placed in the public domain for 01 (One) month from the 17.03.2023. As per the Sub Divisional Committee no comments / observations were obtained.
5. Demand and supply of the river bed material has been provided. The future demand for next 05 years is included in the final DSR.
6. The PRA / Sand Leases / Ghats have not been proposed on the confluence / meanders / concavieties /active channels of the river.
7. Khata & Khasra numbers of the lease area certified by the concerned Circle Officer (CO) are incorporated in the final DSR.
8. The distance of PRA / Sand Leases / Ghats from the Forest / Wildlife Protected area / Birds Sanctuary/ Wildlife Sanctuary / National Park / Eco Sensitive Zone has been verified and certified by the concerned DFOs of the respective Territorial and Wildlife division.
9. A report detailing the presence of aquatic animal in the river in proximity of the proposed PRA / Sand Leases / Ghats is included in the final DSR.
10. The proposed PRA / Sand Leases / Ghats meet the siting criteria of State Pollution Control Board / SEIAA.
11. High resolution color satellite images of the proposed potential sand mining areas are included in final DSR.
12. Bulk density and specific gravity of sand sample data has been provided by NABL accredited laboratory.
13. Cluster and contiguous cluster formation as per EMGSM guidelines, 2020 has been included in the Annexures.
14. Mining is restricted to 3/4th of the river width and 60% of the mineable reserve.
15. Transportation routes for movement of sand are provided in the final DSR.
16. All the annexures as per EMGSM guidelines, 2020 are included in the final DSR.
17. An undertaking with reference to Point no. 9.3 of the EMGSM guidelines, 2020 regarding monitoring of mining near inter-district or inter-state boundary has been provided.
18. The representative of the Sub Divisional Committee along with the Consultants have affirmed that all the guidelines of EMGSM guidelines, 2020 / Hon'ble Apex Court in Civil Appeal no. 3661-3662/2020, Pawan Kumar vs State of Bihar & ors, Hon'ble NGT in O.A. no. 54/2022/EZ, Bhumi Adhigrahan Visthapan Avam Punarvas Kisan Samiti vs State of Jharkhand & ors have been followed in preparation of the final DSR.

SEAC द्वारा उपरोक्त तथ्यों के आलोक में सर्वसम्मति से आपके द्वारा समर्पित DSR को अनुमोदन हेतु SEIAA को अपनी अनुशंसा भेजी गयी।

SEAC की DSR Khunti को अनुमोदन हेतु भेजी गयी अनुशंसा के आलोक में SEIAA, झारखण्ड की 104वी बैठक दिनांक 27.04.2023 एवं दिनांक 28.04.2023 में विचार किया गया।

विचारोपरांत SEAC द्वारा की गयी अनुशंसा के आलोक में SEIAA द्वारा सर्वसम्मति से खुंटी जिला का बालू खनिज से संबंधित DSR का अनुमोदन किया गया।

खुंटी जिला का बालू खनिज से संबंधित अनुमोदित DSR की एक मूल प्रति अत्र–सह–संलग्न कर आपको अग्रेतर कार्रवाई हेतु भेजी जा रही है।

अनु० यथोक्त।

विश्वासभाजन,

28/04/2023

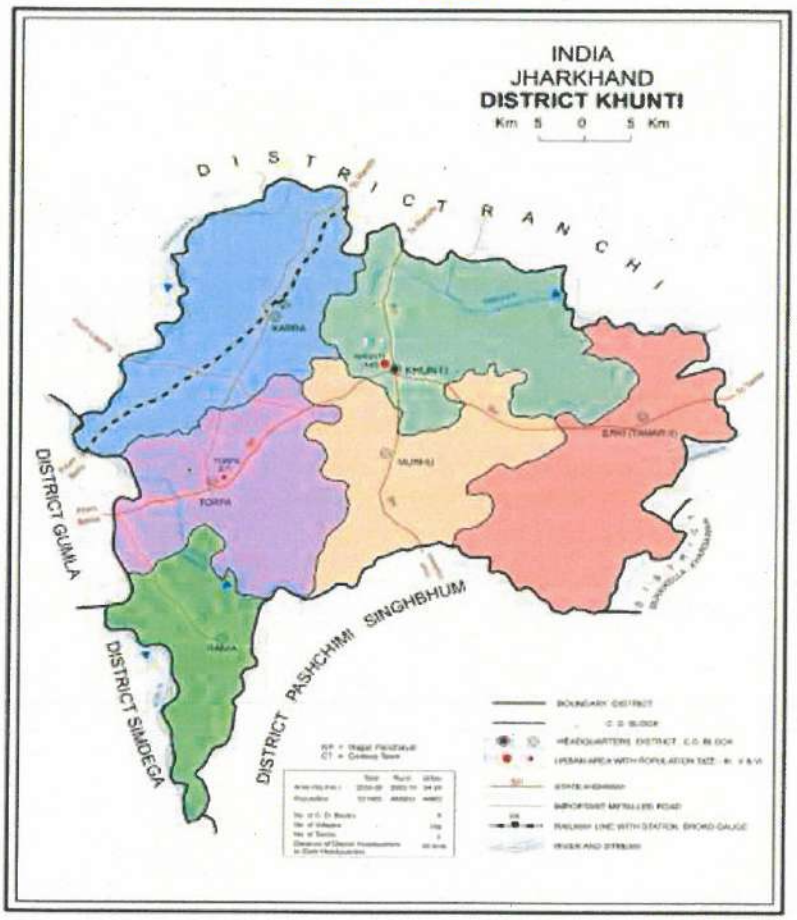
सदस्य सचिव,
राज्य स्तरीय पर्यावरण समाघात निर्धारण
प्राधिकरण (SEIAA), झारखण्ड।

DISTRICT SURVEY REPORT (DSR)
OF
SAND MINERAL

District : Khunti (Jharkhand)

As per Notification No.- S.O.141 (E), 15th January, 2016 &S.O.3611 (E), 25th July, 2018, of Ministry of Environment Forest and Climate change, Government of India, New Delhi

YEAR – 2023



PREPARED BY :	*SIGMA RESOURCE DEVELOPMENT CONSULTANTS PRIVATE LIMITED*
	Consortium with
	M/s CRYSTAL CONSULTANTS *A QCI (NABET) ACCREDITED CONSULTANTS* CERTIFICATE NO. : NABET/EIA/2124/RA 0232 VALIDITY : 16/08/2024

CONTENTS

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Table of Contents

CHAPTER – I :: INTRODUCTION 10

1.1 Regulatory Frame Work 10

1.2 Preparation Of District Survey Report 10

1.3 Structure of DSR 12

1.4 Demand and Supply 13

1.5 Aquatic Animal Resource in the Area 13

1.6 SEAC while apprising draft DSR for sand mining has raised certain observations & directed that final DSR should address all point raised. 14

1.7 PRAs located near inter district / interstate boundary 14

1.8 This report has been prepared based on following guideline laid down in two documents .. 14

1.9 Transport Route 14

CHAPTER – III THE LIST OF MINING LEASES IN THE DISTRICT WITH LOCATION, AREA & PERIOD OF VALIDITY 16

CHAPTER – IV DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS 17

CHAPTER – V DETAIL OF PRODUCTION OF SAND OR BAJRI OR MINOR MINERAL IN LAST THREE YEARS 18

CHAPTER – VI :: PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT 19

6.1 Introduction 19

6.2 Bedload 19

6.3 Suspended Load 20

6.4 Wash Load 21

6.5 Settleable Solids 22

6.6 Sediment Deposition 23

CHAPTER – VII GENERAL PROFILE OF THE DISTRICT 25

7.1 Introduction 25

7.2 Drainage 26

7.3 Geomorphology 27

7.4 Soil 27

7.5 Hydrogeology 50

7.6 Depth to Water Level 52

7.7 Ground Water Resource 55

7.8 Ground Water Quality 55

7.9 Status of Ground Water Development 55

CHAPTER – VIII LAND UTILIZATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURE, HORTICULTURE, MINING ETC. 59

CHAPTER – IX Physiography of the District 60

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9.1 Introduction 60
9.2 Slope 60
9.3 Altitude 60
CHAPTER – X RAINFALL: MONTH-WISE 62
CHAPTER – XI GEOLOGY & MINERAL WEALTH 63
11.1 Regional Geology 63
11.2 Methodology for Preparation of District Survey Report: 64
CHAPTER – XII COMPLIANCE OF REGULATION 159
12.1 Introduction 159
12.2 Compliance to provisions in Gazette notification no. S.O 3611 dated 25.07.2018 & sustainable sand mining guideline (SSMG) 2016. 159
12.3 Compliance to Environment Monitoring Guideline for Sand mining 2020 162
12.4 Compliance to observation of state Environment Assessment Committee SEAC, while appraising Draft DSR for sand mining have recorded their observations in Minutes of Meeting Status of compliance to above observations are given in table below: 168

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State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

LIST OF TABLES

Table 1 List of Mining Lease....16
Table 2 Details of Royalty or Revenue Received in last three years....17
Table 3 Details of production of Sand or Bajri....18
Table 4 General Profile of the District....25
Table 5 Physiography, Soils, Land Capability and Land Irrigability Classes:....28
Table 6 Major chemical parameters of ground water samples of GWMS collected during May 2011....56
Table 7 Dynamic Ground Water Resource of Khunti district as on 31st March 2009 as per GEC 97 (ham)....57
Table 8 Classification of Land Utilisation Statistics in the district of Khunti....59
Table 9 Distribution of Slope Categories in Khunti District....60
Table 10 Rainfall Data....62
Table 11 Name of Bridge....65
Table 12 Salient Features of Important Rivers and Streams:....66
Table 13 Drainage system with description of main rivers....66
Table 14 Table for TBM....69
Table 15 List of Potential Sand Area of Khunti (Category-2)....70
Table 16 Strange Table....82
Table 17 Catchment Yield and Peak Flood Discharge....83
Table 18 Catchment Yield and Peak Flood Discharge....84
Table 19 Catchment Yield and Peak Flood Discharge....85
Table 20 Catchment Yield and Peak Flood Discharge....86
Table 21 Catchment Yield and Peak Flood Discharge....87
Table 22 Catchment Yield and Peak Flood Discharge....88
Table 23 Catchment Yield and Peak Flood Discharge....89
Table 24 River wise rate of replenishment using Sandy – Bolton equation....90
Table 25 Compliance MoEF & CC, GoI notification S.O. 3611 (E) dated 25/07/2018 & SSMG – 2016 Guidelines Applicable to Preparation of D.S.R for Sand Mining....159

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Approved

LIST OF FIGURES

Figure 1 *Mineral Map of the District (Source – JSAC)* 15
Figure 2 Sediment can be carried downstream by water flow 19
Figure 3 Bedload 20
Figure 4 Sediment Transport Mode 21
Figure 5 Wash Load 22
Figure 6 Settleable Solid 23
Figure 7 Sediment Deposition (Source-CGWB) 24
Figure 8 Drainage Map of Khunti District (Source-CGWB) 26
Figure 9 Soil map of the study area on the scale 1:50,000 33
Figure 10 Hydrogeology Map of Khunti District 51
Figure 11 Pre Monsoon Depth of Water Level (2012) Map of Khunti District 53
Figure 12 Post Monsoon Depth of Water Level (2012) Map of Khunti District 54
Figure 13 Stage of Ground Water Development in in Khunti District 58
Figure 14 Slope Aspect and Altitude Map (Source-JSAC) 61
Figure 15 Altitudinal Zonal Map of District (Source-JSAC) 61
Figure 16 Geological Map of Khunti District 64

State Level Environment Impact Assessment Authority
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Jharkhand, Ranchi

LIST OF ANNEXURE

Annexure	Particular
A	Annexure as per 2020
I	Details of Sand/M-Sand Sources
II	List of Potential Mining Leases (existing & proposed) Rivers
III	Cluster & Contiguous Cluster details Clusters:
IV	Transportation Routes for individual leases and leases in Cluster
V	Final List of Potential Mining Leases (existing & proposed) Rivers
VI	Final List of Cluster & Contiguous Cluster Clusters:
VII	Final Transportation Routes for individual leases and leases in Cluster
B	Pre monsoon data (certified by DMO)
C	Sand analysis report
D	NOC from CO
E	NOC from DFO(T)
F	NOC from DFO(WL)
G	Report from District Fisheries Office (Khunti)
H	Minutes of sub-Divisional committee meeting
I	Geotag Photograph
J	Replenshment Study with Pre & Post Monsoon RL Graph
K	Public Consultation (Advertisment & NIC Portal)
L	Siting Criteria of JSEIAA & JSPCB

LIST OF PLATE

Table	Particular
1	Index Plan
2	Master Plan (on Toposheet)
3	Cadastral map (26 in No.)
4	Transportation route shown on toposheet including potential resource area (PRA) (26 in No.)
5	KML map (26 in No.)
6	Stream Order Map

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CERTIFICATE

The District Survey Report (DSR) for River Bed Sand Mining of Khunti District has been prepared by SIGMA Resource Development Consultants Private Limited in association with M/s Crystal Consultants, a QCI (NABET) accredited consultancy firm *(Certificate No. : NABET/EIA/2124/RA 0232 & Validity : 16/08/2024).*

District Survey Report of River Bed Sand Mining in the district is prepared under;

- ✓ MoEF & CC, GoI notification S.O. 141 (E) dated 15/01/2016
- ✓ Sustainable Sand Mining Guidelines, 2016
- ✓ Sand Policy of Govt. of Jharkhand, 2017
- ✓ MoEF & CC, GoI notification S.O. 3611 (E) dated 25/07/2018
- ✓ Enforcement and Monitoring Guidelines for Sand Mining 2020
- ✓ Jharkhand Minor Mineral Concession Rule, 2021

The information mentioned in the District Survey Report for River Bed Sand Mining of Khunti District, Jharkhand are correct to the best of our knowledge and behalf.

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SIGNATURE OF DISTRICT AUTHORITIES

Assistant Director (Geology), Khunti	
District Mining Officer, Khunti	
SUB-DIVISIONAL COMMITTEE	
Sub-Divisional Magistrate, Khunti	
Executive Engineer, Minor Irrigation Circle, Khunti	
Regional Officer, Jharkhand State Pollution Control Board, Khunti	
Divisional Forest, Officer, Khunti	
DEPUTY COMMISSIONER, Khunti	
MEMBER SECRETARY, STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, JHARKHAND	

Member
State Level Environment Impact Assessment Authority, Jharkhand

Approved
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Member Secretary
State Level Environment Impact Assessment Authority
Jharkhand

Chairman
State Level Environment Impact Assessment Authority, Jharkhand

CHAPTER-I

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CHAPTER – I :: INTRODUCTION

1.1 Regulatory Frame Work

EIA notification 1994 published by MoEF & CC mandated that all mining project of all major minerals having lease area more than 5Ha. will have to obtain Environment clearance from designated regulatory authority. Mining projects for minor minerals were exempted from obtaining environment clearance.

EIA notification No. 1533 dated 14/09/2006 mandates that all activities listed in the schedule attached with the notification are required to obtain environment clearance from competent regulators. Mining activities are listed at Sl. No. 1(a) in the schedule. This notification exempted mining activities having lease area less than 5 Ha. from obtaining environment clearance.

Hon'ble Supreme Court in its judgement at 27th February, 2012 in 1A No. 12-13 of 2011 in special leave petition (C) No. 10628-19629 of 2009 in the matter of Deepak Kumar VS State of Haryana & other made prior environment clearance mandatory for minor minerals irrespective of area of mining lease. In order to comply with judgment of Hon'ble Supreme Court the MoEF & CC issued SO 141(E) dt. 15/01/2016. Further MoEF & CC published Sustainable Sand Mining Management Guidelines 2016 for scientific and sustainable sand mining in the Country. The recommendations for the management of sustainable sand extraction are the key objective of the Guidelines. This guideline recommended preparation of District Survey Report for potential sand mining lease in the District. Further the MoEF & CC vide notification SO 3611 (E) dt. 25/07/2018 provided the details on structure of DSR for sand mining projects.

1.2 Preparation Of District Survey Report

"Sustainable Sand Mining Guidelines, 2016" issued by MoEF & CC recommends preparation of District Survey Report (DSR), which is an important initial step before grant of mining lease/LoI. The guidelines emphasize detailed procedure to be followed for the purpose of identification of areas of aggradation/ deposition where mining can be allowed and identification of areas of erosion and proximity to infrastructural structures and installation where mining should be prohibited. Calculation of annual rate of replenishment, allowing time for replenishment after mining, identification of ways of scientific and systematic mining; identifying measures for protection of environment and ecology and determining measures for protection of bank erosion fixing, benchmark (BM) with respect to Mean Sea Level (MSL) should be made essential in mining channel reaches (MCR) below which no mining shall be allowed.

Therefore, preparation of District Survey Report is a very important step and sustainable sand mining in any part of the country will depend on the quality of District Survey Report. Considering the importance of District Survey Report (DSR), the Ministry of Environment Forest and Climate Change, after consultation with experts dealing with mining-related matters, formulated the following guidelines for the preparation of comprehensive District Survey Report for sand mining.

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a) District Survey Report for sand mining shall be prepared before the auction/e-auction/grant of the mining lease/Letter of Intent (LoI) by Mining department or department dealing the mining activity in respective states.

b) The first step is to develop the inventory of the River Bed Material in the District. In order to make the inventory of River Bed Material, a detailed survey of the district needs to be carried out, to identify the source of River Bed Material.

c) District Survey Report is to be prepared in such a way that it not only identifies the mineral-bearing area but also define the mining and no mining zones considering various environmental and social factors.

d) Defining the sources of Sand in the district is the next step for identification of the potential area of deposition/aggradation wherein mining lease could be granted. Detailed survey needs to be carried out for quantification of minerals. The purpose of mining in the river bed is for channelization of rivers so as to avoid the possibility of flooding and to maintain the flow of the rivers. For this, the entire river stretch needs to be surveyed and original ground level (OGL) to be recorded. Once the area of aggradation/deposition are identified, then the quantity of River Bed Material available needs to be calculated. The next step is channelization of the river bed and for this central ¾th part of the river, width needs to be identified on a map. Out of the ¾th part area, where there is a deposition/aggradation of the material needs to be identified. The remaining ¼th area needs to be kept as no mining zone for the protection of banks. The specific gravity of the material also needs to be ascertained by analysing the sample from a NABL accredited lab. Thus, the quantity of material available in metric ton needs to be calculated for mining and no mining zone.

e) Identifying the mining and no mining zone shall follow with defining the area of sensitivity by ascertaining the distance of the mining area from the protected area, forest, bridges, important structures, habitation etc. and based on the sensitivity the area needs to be defined in sensitive and non-sensitive area.

f) It is suggested that as far as possible the sensitive areas should be avoided for mining, unless local safety condition arises. Such deviation shall be temporary & shall not be a permanent feature.

g) The final area selected for the mining should be then divided into mining lease as per the requirement of State Government. It is suggested the mining lease area should be so selected as to cover the entire deposition area. Dividing a large area of deposition/aggradation into smaller mining leases should be avoided as it leads to loss of mineral and indirectly promote illegal mining.

h) Cluster situation shall be examined. A cluster is formed when one mining lease of homogenous mineral is within 500 meters of the other mining lease. In order to reduce the cluster formation mining lease size should be defined in such a way that distance between any two clusters preferably should not be less than 2.5 Km. Mining lease should be defined in such a way that the total area of the mining leases in a cluster should not be more than 10 Ha.

ij) The number of a contiguous cluster needs to be ascertained. Contiguous cluster is formed when one cluster is at a distance of 2.5 Km from the other cluster.

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j) The State Government should define the transportation route from the mining lease considering the maximum production from the mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely etc. is available with the State Government. It is suggested that the transportation route should be selected in such a way that the movement of trucks/tippers/tractors from the villages having habitation should be avoided. The transportation route so selected should be verified by the State Government for its carrying capacity.

k) Potential site for mining having its impact on the forest, protected area, habitation, bridges etc, shall be avoided. For this, a sub-divisional committee may be formed which after the site visit shall decide its suitability for mining. The Sub-Divisional Committee after the site visit shall make a recommendation on the site for its suitability of mining and also records the reason for selecting the mining lease in the Patta land.

l) Public consultation-The Comments of the various stakeholders may be sought on the list of mining lease to be auctioned. The State Government shall give an advertisement in the local and national newspaper for seeking comments of the general public on the list of mining lease included in the DSR. The DSR should be placed in the public domain for at least twenty-one days from the date of publication of the advertisement for obtaining comments of the general public.

1.3 Structure of DSR

Ministry of Environment, Forest & Climate Change has formulated "Enforcement and Monitoring Guidelines for Sand Mining 2020" to serve uniform protocol for monitoring & enforcement of regulatory provision prescribed for sustainable sand and gravel mining. Guideline serves as a guideline for collection of critical information for enforcement of regulatory provisions and also highlights the essential infrastructural requirements necessary for effective monitoring for sustainable sand mining. This documents supplement to "Sustainable Sand Mining Management Guideline – 2016"

The structure of DSR suggested by MoEF &CC vide its notification S.O. 3611 (E) dated 25/07/2018 is given below;

1. Introduction
2. Overview of Mining Activity in the District
3. The List of Mining Leases in the District with Location, Area & Period of Validity
4. Details of Royalty or Revenue Received in Last Three Years
5. Detail of Production of Sand or Bajri or Minor Mineral in Last Three Years
6. Process of Deposition of Sediments in the Rivers of the District
7. General Profile of the District
8. Land Utilization Pattern in the District: Forest, Agriculture, Horticulture, Mining etc.
9. Physiography of the District
10. Rainfall: Month-Wise
11. Geology & Mineral Wealth

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1.4 Demand and Supply

SEAC while appraising draft DSR for sand mining observed following:

Demand and supply of the river bed material through market survey needs to be carried out. In addition to this, future demand for the next five year also needs to be considered to justify the number and area of the sandghat to be included in the final DSR.

In this case demand for sand has been estimated as given below:

Ministry of Mines in the Govt. of India circulated a document titled "Sand Mining Framework". This document includes a paragraph on (Para 1.2.2) "demand supply estimation".

This document lays down two methodologies for estimation for demand for sand.

(A) RBI Index Based Methodology

State wise demand for sand in a State may be estimated in following manner

i. Collect India's Construction GVA (RBI Handbook of Statistics on Indian Economy – Rs. 946396 Crore

ii. Collect Jharkhand's construction GVA from RBI Handbook of statistics on Indian Economy – Rs. 20482 Crores.

iii. Ratio of GVA for construction for India is calculated 20482/946396 = 0.0216

iv. Obtain information on total sale of cement in the country during the period – 379MT (Source – website statistics)

v. Obtain quantity of cement sold in Jharkhand = 379 x 0.0216 = 8.1864 x 10^6MT

vi. Quantity of Sand = Qty. of cement x conversion factor 2.5
= 8.1864 x 2.5 = 20.46x 10^6MT
= 20,460,000mt
Bulk Density 1600 Kg/m^3

Volume of Sand = 12,787,500 cum = 12.787 M cum

Projected Rate of growth of Economy World Bank has revised upward its GDP growth forecast for India to 6.9% for 2022-23

Growth of demand in sand will follow the rate of growth in GDP.

Specific demand for sand for the district of Khunti has been estimated taking into consideration the population of Jharkhand and Khunti district. The total demand for sand for Khunti district has been obtained by multiplying the ratio of population of Khunti to population of Jharkhand with total demand of the State. Using this logic total demand of sand for Khunti broughts out to 329887 MT.

Only one sand ghat, as listed in Table-3, Chapter-V. Operated in the past total amount of sand mined from these ghats worked out to 2,25,000 cft

This demand will grow @ 7 % per year in future (as per budget 2023).

Potential Resource Areas have been identified based on estimated demand for sand in future.

1.5 Aquatic Animal Resource in the Area

Jharkhand State Environment Appraisal Committee while appraising draft DSR for the district observed below-

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The undertaking regarding presence of aquatic animal in the river in proximity of the proposed potential area should be verified and certified by concerned Govt. Departments like Zoological Survey of India (ZSI).

Accordingly, a letter has been addressed to Director, Zoological Survey of India with a request to kindly furnish a report on list of aquatic faunal resource found in the area. So far no response has been received from Director ZSI.

Subsequently, a letter has been addressed to District Fishery Department. District Fishery Department furnish a list of aquatic flora & fauna which is attached in Annexure–G.

1.6 **SEAC while apprising draft DSR for sand mining has raised certain observations & directed that final DSR should address all point raised.**

This draft DSR has been prepared compiling all points except points "5" which relates to placing the DSR in public domain. Once public opinion is obtained, same would be incorporated in final DSR which would be submitted to SEAC for approval. A copy of minutes of meeting and status of its compliance given in Chapter - XII.

1.7 **PRAs located near inter district / interstate boundary**

In this district there is no PRA that is located on inter district /interstate boundary.

1.8 **This report has been prepared based on following guideline laid down in two documents**

- Sustainable Sand Mining Guidelines – 2016
- Enforcement & Monitoring guidelines for Sand Mining – 2020

This document has been structured in line with recommendation in Gazette Notification No. 3611 dated 25.07.2018.

In this document Potential Resource Areas for Sand Mining have been identified. These identified PRA's may be split into suitable size for allotment of mining lease. Siting criteria prescribed by Jharkhand Environment Impact Assessment Authority & Jharkhand State Pollution Control Board for mining projects is attached in Annexure – L for ready reference at the time of Splitting the PRA for mining lease.

An advertisement published on local newspaper dated 13 March, 2023. The Draft DSR was uploaded on District Portal from 17th March, 2023 to 17th April, 2023 for public consultation. The final DSR have been submitted to SEIAA after vetted by Sub-Divisional Committee.

1.9 Transport Route

Transport Routes for evacuation of sand mined from different PRAs have been marked for every finalised PRAs. These routes connect a particular PRA's to nearest District Road/State Highway/National Highway. They are enclosed at Annexure – A - VII.

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CHAPTER-II

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CHAPTER – II :: OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

Minor Mineral - Sand, Stone, Granite, Moram & Soil

SOURCE : - WEBSITE OF DEPARTMENT OF MINES & GEOLOGY

Mineral Map of the District is given in fig. 1 below :

Figure 1 ***Mineral Map of the District (Source – JSAC)***

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CHAPTER – III THE LIST OF MINING LEASES IN THE DISTRICT WITH LOCATION, AREA & PERIOD OF VALIDITY

Table 1 List of Mining Lease

Sl. No.	Name of Sandghats	Name of River	Area (Ha.)	Location		Co-ordinate	Issue Date of EC	Remarks
1.	Kudri, Okra, Simla & Dorma Sand Deposit	Chhata River	5.04	Village	Plot No.	*Latitude : 23°0'54.39"N to 23°1'7.92"N*	30/08/2018	Proponent: M/s JSMDC Ltd.
				Kudri	782 & 790 (P)	*Longitude : 85°8'2.71"E to 85°8'24.27"E*		As per Jharkhand Sand Policy 2017
				Okra	3262			
				Simla	1611 (P)			
				Dorma	1 & 389 (P)			
				Tehsil	: Torpa			
				District	: Khunti			
				State	: Jharkhand			

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CHAPTER-IV

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CHAPTER – IV DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS

Royalty received in last three financial years by District Mining Office Khunti:

Table 2 Details of Royalty or Revenue Received in last three years

Mineral	Royalty & Cess		
	2020-2021	2021-2022	2022-2023
Sand	Rs. 1,29,646.00	Rs. 4,26,000.00	Rs. 4,26,000.00
Bajri	NIL	NIL	NIL

Source: Data Received from District Mining Office, Khunti

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CHAPTER-V

CHAPTER – V DETAIL OF PRODUCTION OF SAND OR BAJRI OR MINOR MINERAL IN LAST THREE YEARS

Last 3 year production of sand or bajri in Khunti District;

Table 3 Details of production of Sand or Bajri

Mineral	Production (CFT)		
	2020-2021	2021-2022	2022-2023
Sand	1,19,000 cft	8,050 cft	2,25,000 cft
Bajri	NIL	NIL	NIL

Source : Data Received from District Mining Office, Khunti

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CHAPTER – VI :: PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

6.1 Introduction

Sediment transport is the movement of organic and inorganic particles by water. In general, the greater the flow, the more sediment that will be conveyed. Water flow can be strong enough to suspend particles in the water column as they move downstream, or simply push them along the bottom of a waterway. Transported sediment may include mineral matter, chemicals and pollutants, and organic material.

Another name for sediment transport is sediment load. The total load includes all particles moving as bedload, suspended load, and wash load.

Figure 2 Sediment can be carried downstream by water flow

6.2 Bedload

Bedload particles travel with water flow by sliding or bouncing along the bottom. Bedload is the portion of sediment transport that rolls, slides or bounces along the bottom of a waterway. This sediment is not truly suspended, as it sustains intermittent contact with the streambed, and the movement is neither uniform nor continuous. Bedload occurs when the force of the water flow is strong enough to overcome the weight and cohesion of the sediment. While the particles are pushed along, they typically do not move as fast as the water around them, as the flow rate is not great enough to fully suspend them. Bedload transport can occur during low flows (smaller particles) or at high flows (for larger particles). Approximately 5-20% of total sediment transport is bedload. In situations where the flow rate is strong enough, some of the smaller bedload particles can be pushed up into the water column and become suspended.

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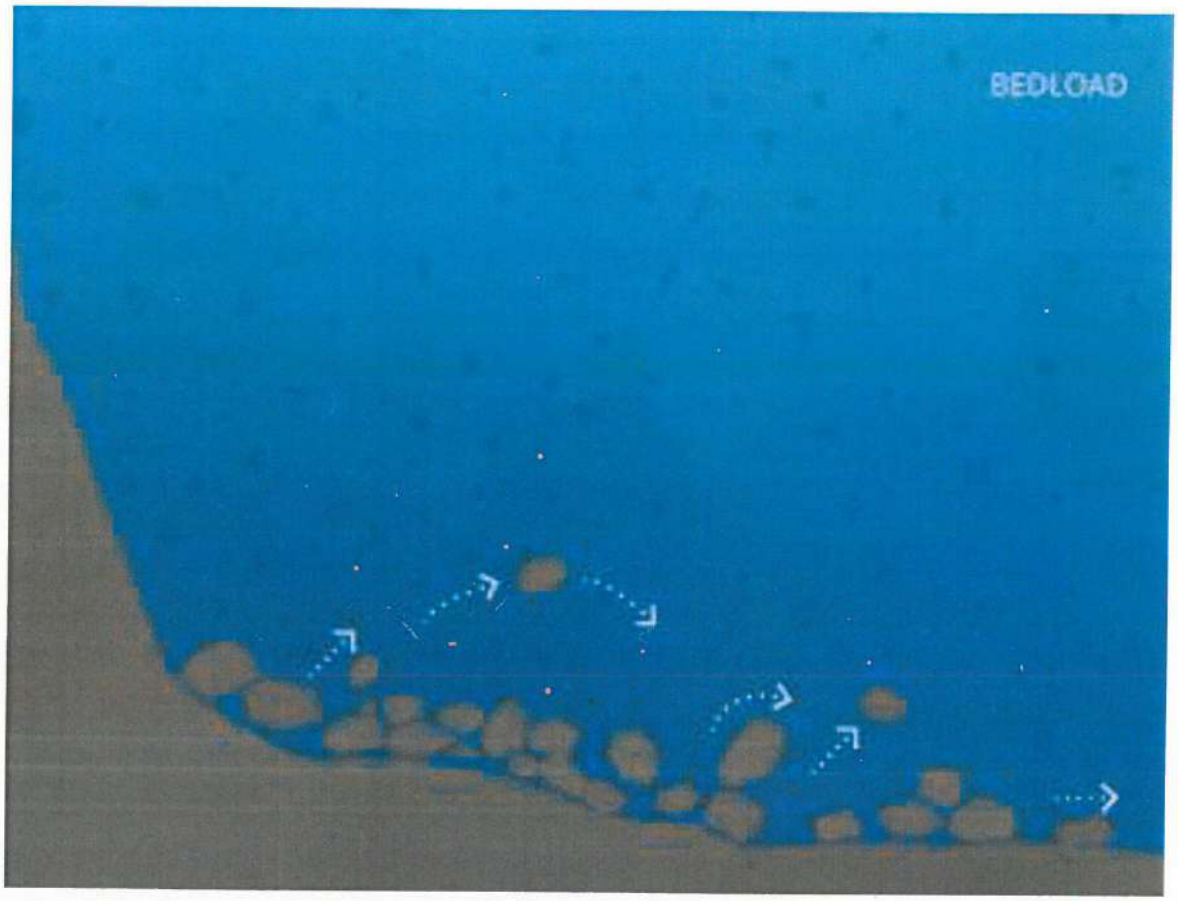

Figure 3 Bedload

6.3 Suspended Load

If the water flow is strong enough to pick up sediment particles, they will become part of the suspended load. While there is often overlap, the suspended load and suspended sediment are not the same thing. Suspended sediment are any particles found in the water column, whether the water is flowing or not. The suspended load, on the other hand, is the amount of sediment carried downstream within the water column by the water flow. Suspended loads require moving water, as the water flow creates small upward currents (turbulence) that keep the particles above the bed. The size of the particles that can be carried as suspended load is dependent on the flow rate. Larger particles are more likely to fall through the upward currents to the bottom, unless the flow rate increases, increasing the turbulence at the streambed. In addition, suspended sediment will not necessarily remain suspended if the flow rate slows.

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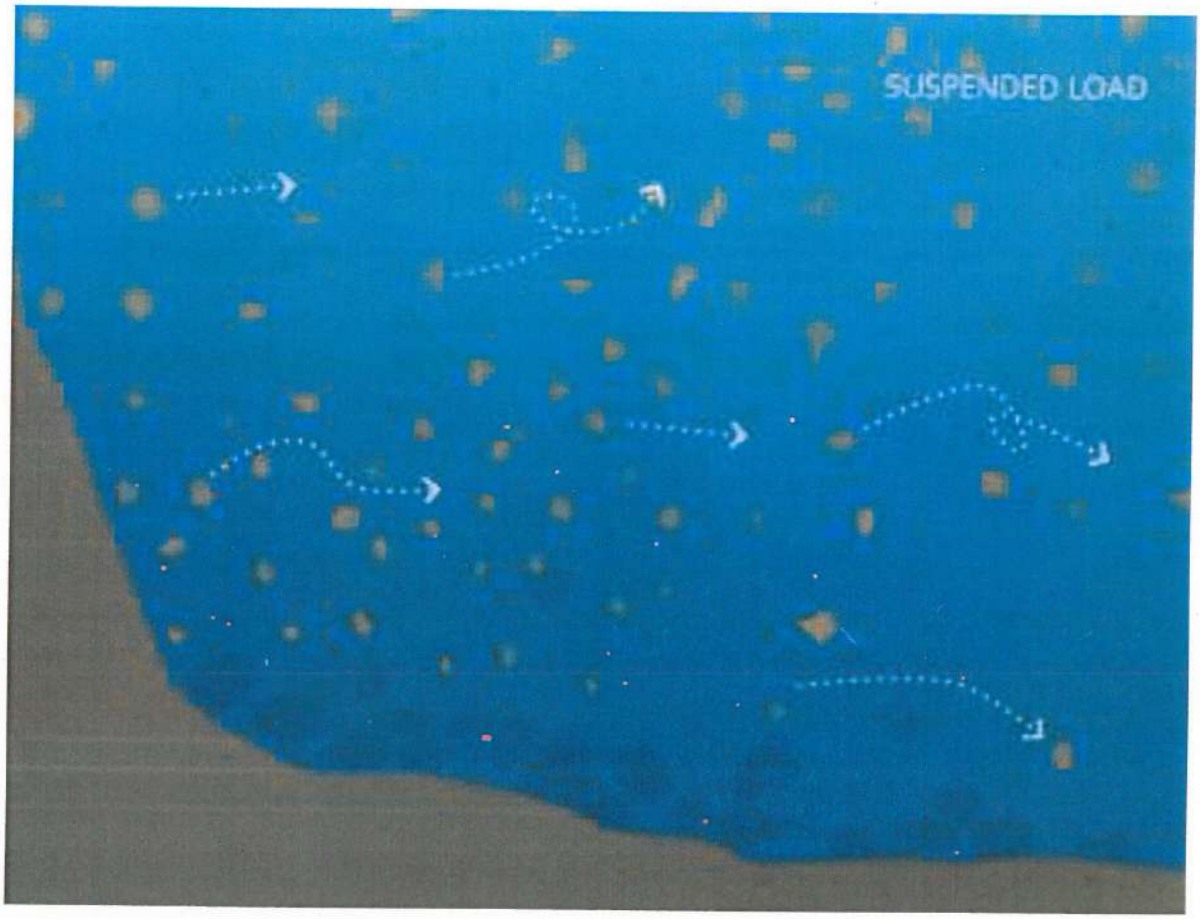

Figure 4 Sediment Transport Mode

6.4 Wash Load

The wash load is the portion of sediment that will remain suspended even when there is no water flow. The wash load is a subset of the suspended load. This load is comprised of the finest suspended sediment (typically less than 0.00195 mm in diameter). The wash load is differentiated from the suspended load because it will not settle to the bottom of a waterway during a low or no flow period. Instead, these particles remain in permanent suspension as they are small enough to bounce off water molecules and stay afloat. However, during flow periods, the wash load and suspended load are indistinguishable. Turbidity in lakes and slow moving rivers is typically due the wash load 8. When the flow rate increases (increasing the suspended load and overall sediment transport), turbidity also increases. While turbidity cannot be used to estimate sediment transport, it can approximate suspended sediment concentrations at a specific location.

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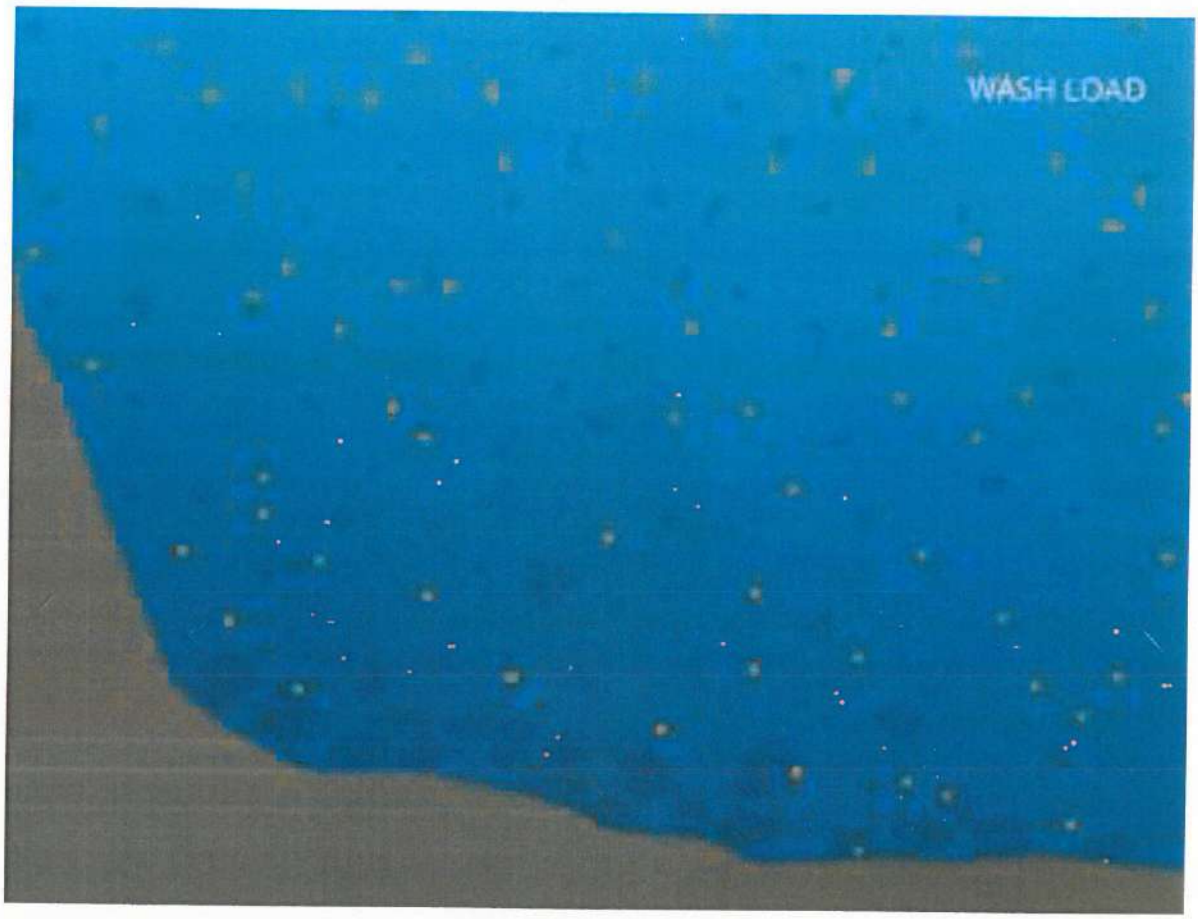

Figure 5 Wash Load

6.5 Settleable Solids

The suspended particles that fall to the bottom of a water body are called settleable solids . As they are found in riverbeds and streambeds, these settled solids are also known as bedded sediment. The size of settleable solids will vary by water system – in high flow areas, larger, gravel-sized sediment will settle out first. Finer particles, including silt and clay, can be carried all the way out to an estuary or delta.

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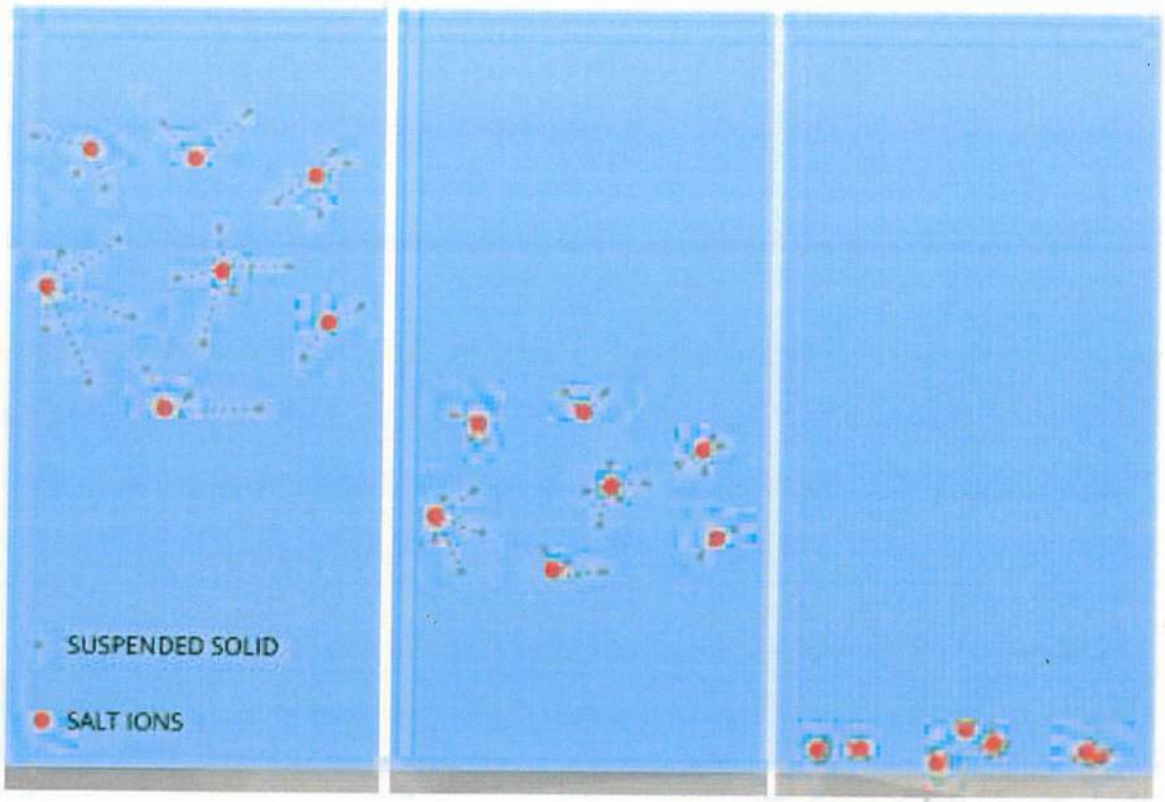

Figure 6 Settleable Solid

6.6 Sediment Deposition

When the flow rate changes, some sediment can settle out of the water, adding to point bars, channel bars and beaches. Sediment is necessary to the development of aquatic ecosystems through nutrient replenishment and the creation of benthic habitat and spawning areas 10. These benefits occur due to sediment deposition – when suspended particles settle down to the bottom of a body of water. This settling often occurs when water flow slows down or stops, and heavy particles can no longer be supported by the bed turbulence. Sediment deposition can be found anywhere in a water system, from high mountain streams, to rivers, lakes, deltas and floodplains. However, it should be noted that while sediment is important for aquatic habitat growth, it can cause environmental issues if the deposition rates are too high, or too low.

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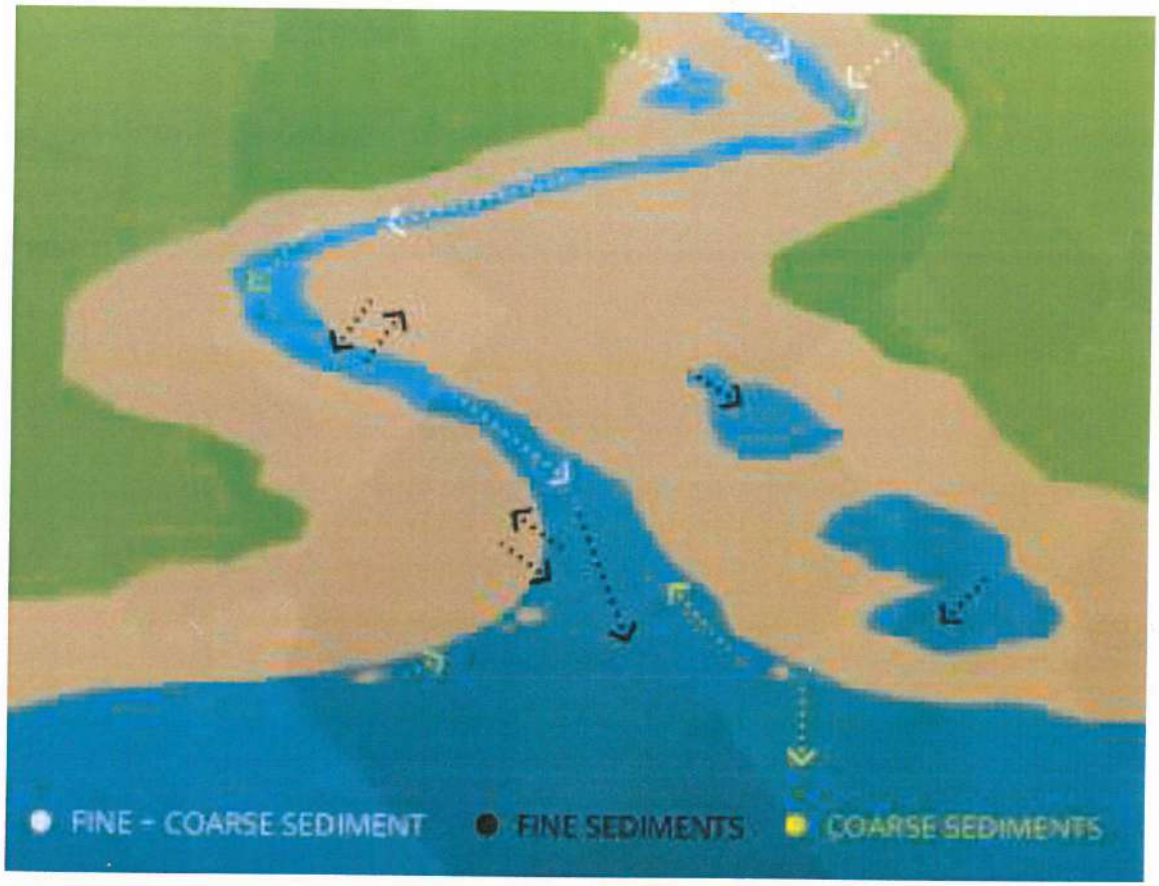

Figure 7 Sediment Deposition (Source-CGWB)

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CHAPTER – VII GENERAL PROFILE OF THE DISTRICT

7.1 Introduction

General Profile of the district is given below in the Table 4;

Table 4 General Profile of the District

District	Khunti	
Headquarter	Khunti	
No. of Sub Division	01	
No. of Blocks	06	
No. of Panchayats	86	
No. of Villages	768	
Area (Sq. Km.)	2,535	
No. of Police Stations	09	
Water Bodies	Karo River Tajna River Banai River Chatta River	Chengarjor River Kanchi River North Koel River Lohagara River North Karkari River
Toposheet	F45B3, F45B4, F45B8, F45B12, F45A16, F45G13, F45H1, F45H2, F45H5 & F45H9	
Co-ordinate	Longitude : 22°34' N to 23°17' N Latitude : 84°56' E to 85°40' E	
Total Population	5,31,885	
Male Population	2,66,335	
Female Population	2,65,550	
Percentage of Rural Population	91.54%	
Percentage of Urban Population	8.46%	
Sex Ratio	997	
Child Sex Ratio (0-6)	964	
Percentage Literacy Male- Female-	 74.08% 53.69%	
ST Population	3,89,626	
SC Population	24,037	
Total Workers	2,59,984	
Total Male Worker	1,41,123	
Total Female Worker	1,18,861	
Total Main Workers	1,53,087	
Total Male Main Workers	93,812	
Total Female Main Workers	59,275	
Total Marginal Worker	1,06,897	
Total Male Marginal Worker	47,311	
Total Female Marginal Worker	59,586	
Total Non-Worker	2,71,901	
Total Male Non-Worker	1,25,212	
Total Female Non-Worker	1,46,689	

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7.2 Drainage

The drainage of the district is mainly controlled by the Major rivers flowing in the district are Tajna, Banai, Chata and Karo (Fig-8).

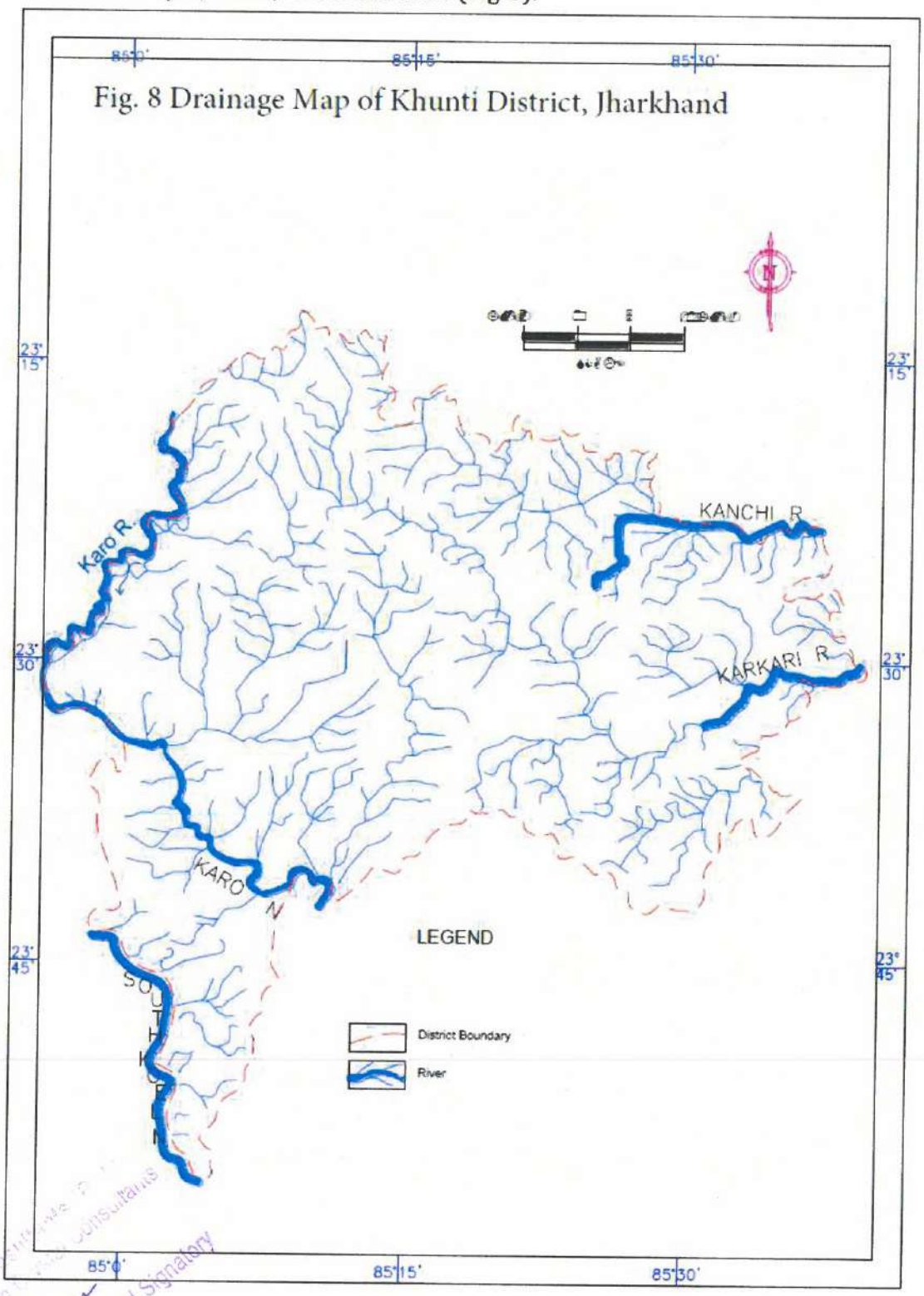

Figure 8 Drainage Map of Khunti District (Source-CGWB)

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7.3 Geomorphology

The northernmost and southernmost parts of the district are covered with hillocks and forests. Altitude of the area varies from 500m to 700m above mean sea level in general. There are many hillocks through the district having altitude 700m above mean sea level. The District is the part of Chotanagpur plateau.

7.4 Soil

Soil Distribution and Classification

During the course of image interpretation and field check, thirty-six soil mapping units have been identified based on the variations in physiography, image characteristics and differences identified during the field traverse. Thirty-five soil series could be associated with these mapping units. The details of mapping units and soil series are given below:

Soil series is broadly defined as a group of soils having soil horizons similar in differentiating characters and arrangement in soil profile, except for the texture of the surface soil, and develop from a particular type of parent material (Soil survey staff, 1966). Soils within a series are essentially homogeneous in all soil profile characters except for texture of the 'A' horizon, topographic position and depth to bed rock where these features do not modify greatly the kind and arrangement of soil horizons. Soil depth, thickness and arrangement of horizons are the main factors that discriminate one series from the other. As the scale of mapping is 1:50,000 and the Remote Sensing technology is deployed in differentiating the mapping units, association of two or three soil series is encountered in most of the cases single series is encountered very rarely. Information on soil depth and slope grade would enable feasibility assessment for levelling, terracing, deep ploughing etc. For example, if soil depth is less than 50cm and slope is over 5%, levelling with heavy machinery would bring subsoil strata to the surface and the precious surface soil would be lost.

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Table 5 Physiography, Soils, Land Capability and Land Irrigability Classes:

Mapping Unit	Physiography	Soil Series	Soil Composition	Land Capability Sub-class	Land Irrigability Sub-class	Area (sq.km.)
Alluvium:						
301	Nearly level plain	Sangur	Fine loamy Fluvaquentic Epiaquepts	IIIs	3d	16.53
302	Very gently sloping plain	Gangatoli	Fine Oxyaquic Haplustalfs	IIs	3d	3.63
Laterite:						
303	Very gently sloping Plateau top	Nawatoli	Fine Kanhaplic Haplustalfs	IIs	3d	5.88
307	Valley / Dipressed land	Sukrahatu	Fine Oxyaquic Ustifluvents	IIIs	3t	0.71
Granite & Granite Gneiss Lanscape Hills:						
310	Denudational hill	Teontoli	Loamy Skeletal Typic Ustorthents	VIt	6t	34.17
311	Residual hill	Tirha	Loamy skeletal Lithic Ustorthents	VIt	6t	15.18

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312	Dissected hills	Karantoli	Loamy skeletal Typic Ustorthents	VIt	6t	75.53
313	Inselberg	Tetra	Loamy skeletal Typic Ustorthents	VIt	6t	22.98
Pediment / Inselberg Complex:						
314	Low lands	Chama, Karantoli	Fine loamy Typic Dystrustepts	IIIt	4t	67.95
315	Pidmont Inselberg Complex	Teontoli, Karantoli	Loamy Skeletal Typic Ustorthents	VIt	6t	75.77
316	Denudational hill	Teontoli	Loamy Skeletal Typic Ustorthents	Vit	6t	15.55
317	Footslopes	Tangartoli, Hundratoli	Fine loamy Typic Haplustepts			

Map ping Unit	Physiography	Soil Series	Soil Composition	Land Capability Sub-class	Land Irrigability Sub-class	Area (sq.km.)
Undulating Pediplain:						
318	Upper Pediplain	Kundo	Fine loamy Ultic Haplustalfs	IIIet	3t	238.20

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319	Middle Pediplains	Balia	Fine loamy Typic Rhodustalfs	IIs	2t	737.65
320	Lower Pediplains-Gently sloping	Lodhma, Jamtoli	Fine Ultic Haplustalfs	IVw	4d	21.66
321	Lower Pediplains	Salangapos	Fine Ultic Haplustalfs	IIIs	3d	29.64
Valleys:						
322	Narrow Valley	Banrotoli, Patrotoli	Fine loamy Typic Endoaquepts	IVw	4d	141.00
323	Broad Valleys	Patrotoli	Fine loamy Oxyaquic Ustifluvents	IIw	4d	3.08
Very gently to gently sloping pediplains:						
324	Plains	Nagri & Bathantoli	Fine loamy Typic Haplustepts	IIs	2d	5.97
325	Narrow Valley	Dolaicha	Fine Ultic Haplustalfs	IIs	2d	77.84
326	Broad valley	Lohana	Fine Ultic Haplustalfs	IIs	2d	8.22
Schist Landscape:						
327	Hills: - Structural hills	Kudda	Fine Typic Haplustepts	VIt	6t	271.93

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328	Uplands	Bartuwa	Loamy skeletal Lithic Ustorthents	VIt	6t	99.48
329	Lowlands	Dumbartoli	Fine loamy Udic Ustorthents	IIs	2d	4.03
Landscape on Phyllite, Mica schist:						
330	Structural hill	Joranga	Loamy skeletal Udic Haplustepts	VIt	6t	67.31
331	Undulating buried pediment	Hemromtoli	Fine loamy Typic dystrustepts	IIs	2s	39.79
332	Deep buried pediment	Rargaon	Fine loamy Udic Haplustepts	IIIs	3d	49.88
334	Broad valley	Tanbang	Coarse loamy Udic Haplustepts	IIs	2s	1.46

Map ping Unit	Physiography	Soil Series	Soil Composition	Land Capability Sub-class	Land Irrigability Sub-class	Area (sq.km.)
Landscape on Dolerite dyke/Quartzite						
338	Ridges / Dykes	Jarerel	Loamy skeletal Typic Haplustepts	VIt	6t	23.04
Landscape on Epidiorite/Metavolcanic rocks-mainly intrusives						
339	Ridges/Low hills	Dolda	Fine Loamy Typic Ustorthents	VIt	6t	10.41
340	Pediments/Up lands	Pahantoli	Fine Typic Haplustepts	VIt	6t	6.7

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Landscape on Metabasic Rocks						
341	Ridges/Low hills	Dolda	Fine Loamy Typic Ustorthents	VIt	6t	.39
342	Uplands	Ronhe	Fine Lithic Ustorthents	VIt	6t	32.09
343	Lowlands, Gently sloping	Binda	Fine Loamy Udic Haplustepts	IIe	2c	288.80
Landscape on Crystalline Limestone, Calcareous rocks						
344	Ridges / Dykes	Hariharpur	Loamy skeletal Typic Dystrustepts	IIIst	3t	139.79
345	Gently to moderately sloping upland	Jonha	Fine Udic Rhodustalfs	IIIs	3s	166.11

Note: Minerology class is mixed in all the mapping units and temperature class is" hyperthermic".

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Descriptions of the Mapping Units and Soil Series:
Descriptions of mapping units and the soil series encountered within a mapping units are provided in this section. Extent of area of the each mapping unit is given in Table No.5. Location details of mapping units have been provided, toposheet wise, in the form of a polygon map and distribution of soil series in the form of soil code map Fig-9. These two maps are separately supplied to JSAC. Soil series indicated under each mapping unit are the major ones occupying maximum areas within the unit. Other soil series occupying less than 15% area are taken as intrusions. In most cases such intrusions occupy less than 5-10% area at any given place.

(Based on visual interpretation of IRS-P6 LISS-III)

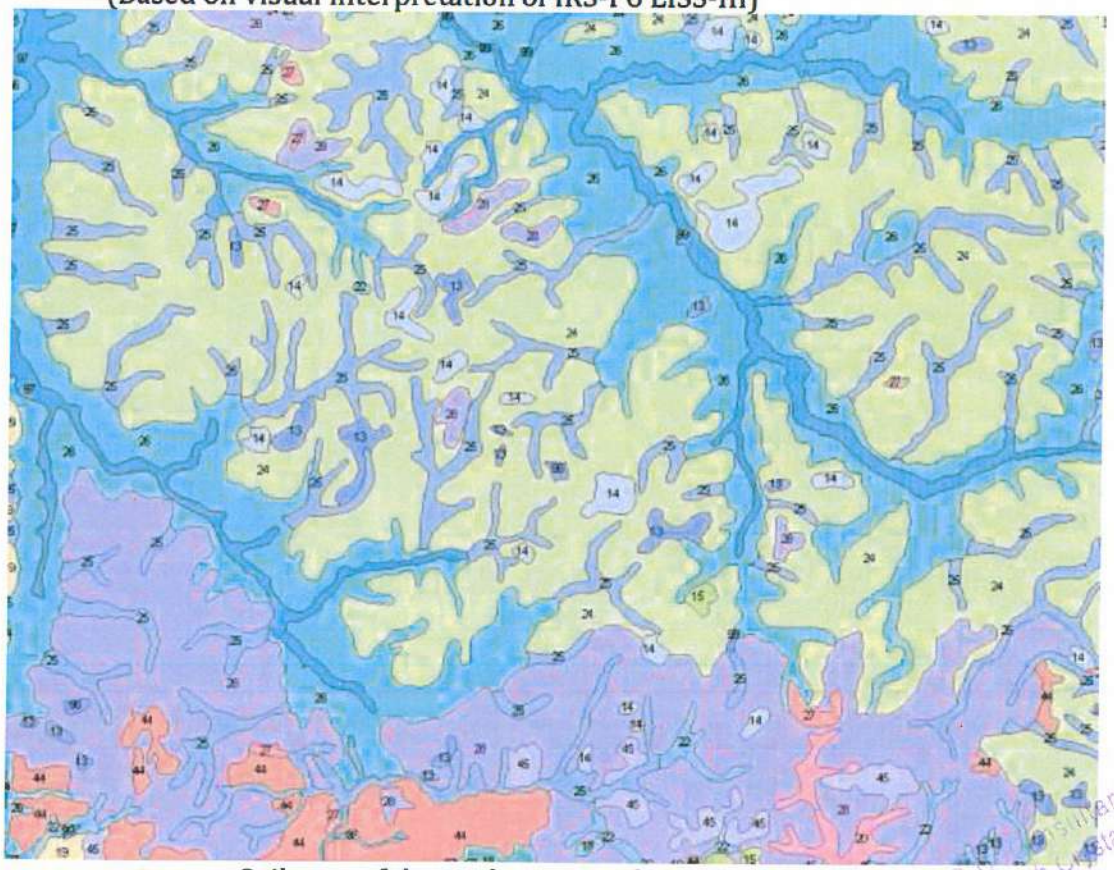

Figure 9 Soil map of the study area on the scale 1:50,000

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their cumulative area never crosses 20% of total area. Though the soil taxonomic classification is provided in the next section of this chapter, textural class and sub group are mentioned, in each case, in this section for general understanding. The series have been described in the landscape basis.

Alluvial Landscape
This unit occurs along the river South Koel flowing in north-south direction. It consists of nearly level to very gently sloping plain. However, in Khunti district both of the above lands are encountered. The soils are covered under paddy

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cultivation in Kharif season. The description of the mapping units and associated soils are given under.

Nearly level alluvial plain: MU-301

These are the nearly level plains with slopes varying from 0-1%. The area under this unit is 16.53- sqkm constituting 0.62% of geographical area of the district. Paddy is taken up as Kharif crop in this area. The soil series associated with this unit is Sangur and description of the same is given hereunder.

Sangur

Soils are deep, dark gray sandy clay loam in the surface and change to dark grayish brown sandy clay loam in the subsurface. The soil is nutral on the surface with pH 7 and it increases with the depth in the subsurface. They have nil to slight erosion, imperfectly drained and the water table is found at a depth of 170 cm. The mapping unit has very few limitations and qualifies for land capability class-IIIw and land irrigability class 3d. The soils are very deep with heavy textures.

Very gently sloping alluvial plain: MU-302

These are very gently sloping areas occurring along the river. They are having 1-3% slope but are levelled for cultivation of paddy in Kharif season. It is manifested on the image in dark gray colour with smooth texture. The soil series associated with this unit is Gangatoli. Soils are deep, grayish brown loam in the surface and change to brown sandy clay loam in the subsurface. The soil is acidic on the surface with pH 5.7, but the subsurface soil has normal soil reaction. They have nil to slight erosion, imperfectly drained and the water table is found at a depth of 140 cm. The mapping unit has very few limitations and qualifies for land capability sub class-IIs and land irrigability class 2d. The extent of area covered by this unit is 3.63sq.km constituting 0.13 % of the district. The soils are very deep with heavy textures.

Lateritic Landscape

This unit is found in the north western and southwestern parts of the district. This landscape consists of nearly level to gently sloping plateau tops, steeply sloping side slopes, ridges and mounds and footslopes. The plateau tops have laterite cappings at places, which support poor vegetation cover. The detailed description of the landforms along with the soils associated with them is given below:

Plateau top

The plateau top can be devided into two units namely nearly level and gently sloping and the details of the same along with the associated soil series are given below:

Nearly level plateau top: MU-303

The slope varies from 0-1% and exibit capping at some places; the soil series associated with this unit is Nawatoli series. The soils are deep, brown silty clay loam on the surface and yellowish brown to brownish yellow clay in the subsurface. The soils are acidic with pH ranging from 5.2 to 5.5. They have few limitations with respect to soil and topography categorized under Land capability

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class-IIs and Irrigability class 3td.The extent of area covered under this unit is 5.88sqkm. Constituting 0.22% geographical area of the district.

Valleys/ Depressed land: MU-307

These units consist of narrow elongated and irregular concave shaped drainage courses with slopes varying from 3-5% and 5-10% intermixed with scrublands and agriculture lands. They are identified by light cyon colour mixed with yellow brown and red mottled tones. At some places theses lands are also terraced. The extent of area covered by this unit is 0.71 sq.km accounting for .02% of the geographical area of the district. The soil series associated withis units is Sukrahatu and descriptions are given below:

Sukrahatu

Soils under this series are dark brown (7.5 YR3/3m) clay at surface and brown silty clay loam to clay in sub-surface horizons, which are deep. Solum extends up to 82 cm. pH of these soils is 5.2 at the surface and further increases at the subsurface horizon to 6.4 and deccreases in the lower horizon 5.9. Soils are free from neutral salts. Base saturation is low with values ranging from 49-73%.

Granite and Granite gneiss landscape

This unit occurs extensively in the study area except in the eastern side with granite as the main rock type and phyllite and mica schist occurring as minor intrusions. Chota –Nagpur Gneissic complex covers the area. Several landforms have been identified in this landscape viz; denudational hills, residual hills, dissected hills, pediment/inselberg complex, undulating plains and valleys. The soils occurring in these units are described below:

Denudational hills: MU-310

These are denudational hills; mostly occur in the highest elevation of the terrain. This unit occurs in the chotanagpur gneissic complex. These areas are severely eroded. Streams and streamlets emanate from this landscape. One soil series i.e. Teontoli occupies 60% of the area and remaining area is occupied by rocky i.e 40%. Descriptions of the soil series are provided here under. Total area occupied by this unit is 34.17 sq.km and constitutes 1.30% of the total area. These are classified under Loamy skeletal Typic Ustorthents.

Teontoli (TT)

Soils of Teontoli series are brown (7.5YR4/4m) in colour with graverlly sandy loam texture at the surface and gravelly sandy clay loam in the sub surface. These are moderately deep with solum depth of 36cm. Coarse fragments occur throughout the profile, which are more than 35%. These soils are encountered on very steep slopes (>35%). pH of these soils is in the range of 5.5 to 6.1. Organic carbon is low (0.42%) at

the surface decreasing to 0.35% in the lowest horizon. Base saturation is between 64-68% in the profile. Total area occupied by this unit is 244 sq.km and constitutes to 6.4% of the total area. These are classified under Loamy skeletal, Typic Ustorthents.

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Residual hills: MU-311

These are hilly areas of Granite and Granite Gneiss. These soils are severely eroded (e3) and rocky. About 80% of the area is barren rocky without vegetation except for bushes and grasses. Total area covered by this unit is 15.18 sq.km, accounting for 0.57% of the gross area. Residual hills have above 8% slope and support soil cover over 20% of the area where the soil series Tirha is identified. Description of Tirha series is provided hereunder.

Tirha

Soils of Tirha series are shallow, dark yellowish brown (10YR3.5/4m) gravelly sandy loams. Gravel percent is over 35. The solum is underlaid by lithic contact, which is hard to dig with spade. The slope varies from 25-35% and is covered with scrub vegetation. These soils are severely eroded. Gravels, cobbles and stones cover the surface. pH of these soils is around 6.5. Organic carbon is at 0.4%. Base saturation is low (68%). The total area covered by these soils comes to 29 sq.km, constituting 0.77% of the gross area. These are classified under Loamy skeletal family of Lithic Ustorthents.

Dissected hills: MU-312

These are hilly areas of Granite and Granite Gneiss. These soils are severely eroded (e3) and rocky. About 40% of the area is barren and rocky and is devoid of vegetation except for some scrubs. Total area covered by this unit is 75.53 sq.km, constituting 2.8% of the gross area. Dissected hills have 15-25% slopes and support soil cover where one soil series, Karantoli is recognised; occurring upto 60% of the landscape. Description of Karantoli series is given hereunder.

Karantoli (K)

Karantoli soils are moderately deep with effective depth in the range of 30-35 cm. Textures are gravelly sandy loams, with gravel more than 35%. The area is severely eroded. The slope vareis between 15-20%. Solum is underlaid by weathered Granitic murrum occurring mostly within 30cm. Murrum extends upto 100cm. These soils are under rainfed scrub vegetation. Most of the area is left barren. These soils have pH 5.4, which is slightly acidic in nature, and EC is less than 0.02 m.mhos/cm. Organic carbon content is low with value of 0.53%. Base saturation is low (65%). The total area covered by this series comes to 145 sq.km (3.8% of gross area). These are classified under Loamy skeletal family of Typic Ustorthents.

Footslopes, Pediments and Inselbergs Lanscape

It consists of different mapping units viz.upland areas, dissected pediment and foot slopes and toe slopes. The details of units have been given below:

Inselberg MU-313

It's mainly composed of of rocky knobs/stony waste, and reflects brown colour on the image. This unit is characterised by slope varying from 5-10% and severe erosion. Soils are skeletal in nature. Rock strata are encountered within 70cm and are exposed on surface at some places. Total area occupied by this mapping unit is 22.98 sq.km (0.87%).

Tetra (TE)

Tetra soils are shallow, yellowish brown (10YR4.5/4m) gravelly loamy sand with gravel percent exceeding 35. The structure is weak sub angular blocky, collapsing under slight pressure because of gravel. These soils are encountered on 5-10% slope gradients and are severely eroded. Barren rock is encountered at many places. The pH is 6.7 and organic carbon is 0.38%, which is at low level. These soils have base saturation of 66%. These areas are mostly under wastelands. They are presently used as grazing lands. Though weathered Granite murrum is encountered within 25cm, no rock is encountered within 50cm. The total area occupied by this series is computed to 16 sq.km (0.4% gross area).

These soils are best suited for grasslands. These soils are classified under Loamy skeletal family of Typic Ustorthents.

Toe slopes MU-314

This mapping unit represents toe slopes within the landscapes. Mostly 3-5% slopes are encountered and erosion is severe. These areas are under scrublands or under forest plants. Total area occupied by this mapping unit computes to 163.79sq.km (2.58%). Two soil series viz Chama and Karantoli are identified to be associated in this mapping unit. Karantoli soils occupy 40% of the MU, Chama soils occupy 40% and the balance 20% by rocky. Description of Karantoli is already given in earlier sections and the discription of Chama series is as follows.

Chama (C)

Chama soils are very deep; redish brown (5YR4/4m) sandy loam at the surface and dark reddish brown (5YR3/3m) sandy clay loam at sub-surface. The structure is subangular blocky. These soils are encountered on 3-5% slope gradients and are severely eroded. Barren rocky areas are encountered at many places. The pH ranges between 5-6, indicating that the soils are acidic in nature. Organic carbon is at 0.6%. These soils have base saturation of less 34% at the surface and 43% in the sub-surface. These areas are mostly under forest. The total area occupied by this series is computed to 11 sq.km (0.3% gross area). These soils are best suited for growing forest. These soils are classified under Fine loamy Typic Dystrustepts.

Pediment / inselberg complex MU-315

Both Pediment and inselberg occurs in close proximity to each other. The slopes of inselbergs vary between 15-25% and Pediments between 5-10%. These areas support good forest and scrub. Total area computed under this mapping unit is 357.20 sq.km (2.88%). Two soil series viz. Teontoli and Karantoli are seen associated in this mapping unit. They occupy 40% each. Descriptions of these two series were provided with earlier section.

MU-316: Uplands

These areas are occurring in Chotanagpur Gnessic complex in pediplain areas. Slope gradient varies from 5-10%. These are severely eroded landscapes supporting moderately deep skeletal soils. Mostly these areas are under scrub vegetation. At some places they are under dry land agriculture.

Total area occupied by this mapping unit is 108.74sq.km, computing to 0.59% gross area of the district. One soil series is identified in this area, i.e. Teontoli. Detailed discussion of this soil has been presented in the earlier section.

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MU-317: Dissected pediments/foot slopes

These lands occur in and around the hilly topography and are moderate to severely eroded. Mostly these areas are under scrub lands intermixed with agricultural lands. As could be visualised, in kharif season, patches of cultivated areas would exist in between pediments and hills. The total area occupied by this mapping unit is 0.33 sq.km, computing to 0.01% of gross area. Two soil series viz. Tangartoli and Hundratoli are identified in this unit occupying 60 & 40% of the total area, respectively. Descriptions of these two series are provided here under.

Tangartoli (TA)

Tangartoli soils are very deep, dark brown (7.5YR3/4m) sandy loams at surface and dark reddish brown (5YR3/3.5m) clay loam at sub-surface. The solum rests on hard murrum. These soils are found in moderately sloping areas on 5-7% slopes and are moderately eroded. Solum depth is between 100-160cm. These areas are mostly barren and crops like Jowar, Red gram, Castor etc. are grown wherever the lands are suitable for cultivation of crops.

pH of these soils is 6.1 on the surface and 5.9 in the sub suraface indicating they are slightly acidic side. OC is at 0.88% and is moderately high. Soils are low in base saturation (69%). The soils have light texture on the surface (sandy loam) and heavy texture in the lower layer (Clay loam, clay).

Hundratoli (HU)

Hundratoli soils are the associates of Tangartoli in mapping unit-317, occupying 40% of the area. These are reddish brown (5YR4/4m) sandy loams at surface and red (2.5YR4/6m) loam at sub-surface having solum depths of 50-60cm. Weathered granite is encountered down below. These areas possess 3-5% slopes and are subjected to moderate erosion.

pH is around 5 which is at acidic side and EC is less than 0.0.04 mhos/cm. OC is less than 0.3%. Base saturation was almost same in the A1 and B1 horizons. Sand percent ranges between 57-81 in the profile. In the areas with some soil cover, Jowar, red gram and groundnut are grown. The total area occupied by this series computes to 140sq.km (3.7%). These soils are classified Fine loamy family of Typic Dystrustepts.

Undulating Pediplain

This landform has different physiographic units such as upper pediplain, middle pediplain and the lower pediplain. The details of the above mapping units and the soils associated with this unit is given below:

Upper Pediplain MU-318

It is convex in shape, and can be identified by its, yellowish to greenish yellow colour on the image. These pediplains occur on the upper reaches of the undulating pediplains, mostly occurs as a water divider. They occur as irregular patches. Moderately active agriculture is observed in this area. Some pockets are gravelly but mostly free from coarse fragments. These areas have 3-5% local gradients but general gradients are 2-3%. The total area occupied by

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this unit computes to 238.20 sq.km forming 9.06% of gross area. Three soil series viz. Majhauli, Bathantoli and Kundo are identified to occupy this unit with 50, 25, 25% area coverages, respectively. Descriptions of these three soil series are provided hereunder.

Bathantoli (B)

Bathantoli soils are deep, strong brown (7.5YR4/6m) silty loam at surface and dark reddish brown (5YR3/3m) sandy clay loam at sub-surface with effective depths of 96cm. These soils occupy 25% of the mapping unit. They occur on 3-5% slope gradients and are subjected to moderate erosion. Some of these areas receive irrigation water from small tanks or from bore wells. Wherever irrigation is available paddy is taken but otherwise Jowar, pulses are mainly grown. Cutans are encountered in sub surface horizons.

pH of these soils is 5.6 on the surface and decreases to 5 in the lower horizon. These soils are acidic in nature. OC is 0.6% at surface and gradually decreases to 0.21% in the lower horizon. Base saturation is low with values ranging from 46 on the surface to 59 in the sub surface. Clay varies from 22 to 32% and increases with depth. These soils occupy 142-sq.km areas and constitute 3.77% gross area. These are classified under Fine loamy Ultic Haplustalfs.

Kundo (KN)

Kundo soils are moderately deep, yellowish red (5YR5/6m) sandy loam at surface and partially weathred rock at sub-surface with effective depth of 30cm. These soils occupy 25% of the mapping unit. They occur on 5-10% slope gradients and subjected to severe erosion.

pH of these soils is around 7.5 ESP is low. OC is 0.24% at surface. Base saturation is high (71%). Clay percent is 21.The upper horizon is fine sub surface is blocky. These soils occupy 140 sq.km accounting for 3.7% gross area. These are classified under Loamy skeletal Typic Ustorthents.

Middle Pediplain: MU-319

Gently sloping, mainly rainfed agricultural lands with yellowish green colour. These pediplains occur on middle reaches of the undulating pediplains, mostly above the tanks. They occur as irregular patches. Moderately good active agriculture is observed in this area. Some pockets are gravelly but mostly free from coarse fragments. These areas have 3-5% local gradients but general gradients are 2-3%. The total area occupied by this unit computes to 737.65 sq.km forming 28.06% of gross area. Two soil series viz. Balia and Majhauli are identified to occupy this unit at 50 & 40% area coverages, respectively. Descriptions of these three soil series are provided hereunder. Description of Majhauli is already provided in earlier section.

Balia (BA)

Balia soils are very deep, reddish brown (5YR4/4m) sandy loam at the surface and dark reddish brown (2.5YR3/4m) sandy clay at the sub-surface with effective depth of >170cm. These soils occupy 50% of the mapping unit. They occur on 3-5% slope gradients and subjected to moderate erosion. Some of these areas receive irrigation water from small tanks or from bore wells.

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Wherever irrigation is available paddy is taken but otherwise Jowar, pulses are mainly grown. The structures is weak fine sub angular blocky. Cutans are encountered in sub surface horizons.

pH of these soils is 5 in the surface and increases to 5.8 in the B2T.However the pH in B12 is low (5.1).The soils are acidic in nature and respond well for lime treatment. OC is 0.4% at surface and gradually decreases up to 0.27% in the lower layers. Base saturation is low (60-67%). Percent clay ranges between 21-45%, and increases with depth. These soils occupy 90 sq.km forming to 2.4% gross area. These are classified under Fine loamy family of Typic Rhodustalfs.

Lower Pediplain-Gently sloping: MU-320

Gently sloping plain with different tones due to the presence of different crops and other vegetation. These pediplains occur on lower reaches of the undulating pediplains, mostly occurs nearer to rivers and nalas. They occur as irregular patches. Intensive agriculture is observed in this area. These areas have 1-3% slope. The total area occupied by this unit is 21.66 sq.km forming 0.82% of gross area. Three soil series viz. Lodhma, Salangapos and Jamtoli are identified to cover this unit with 40, 40, 20% area coverages, respectively. Descriptions of these three soil series are provided hereunder.

Lodhma (LD)

These soils are very deep, grayish brown (2.5Y5/2m) clay loam at surface and light brownish gray to light olive brown (2.5Y6/2, 2.5Y5/3m) clay laoms in the lower layers. Coarse fragments (3-8%) are present throughout the profile. Slope varies from 1-3%. These soils are slightly eroded. Patchy thin cutans are encountered in last two horizons indicating the presence of argillic horizon pH of these soils is 5.2 at surface and increases to 6.1 in the lowest layer indicating that the soils are more acidic at surface than sub-surface. Organic carbon is 0.68% at surface and 0.3% down below. Base saturation is low and ranges between 48%-65% through out the profile. The texture is clay loam but the texture becomes heavier with depth. The total area covered by these soils is 142 sq.km forming 3.7% of gross area. These soils are classified under fine Ultic Haplustalfs.

Salangapos (S)

Salangapos soils are deep, dark yellowish brown (10YR3.5/4m) silty loam at surface and dark brown (10YR3/3m) sandy clay loam at sub-surface with effective depth of 82cm. These soils occupy 40% of the mapping unit. They have slope gradient of 2-3% and subjected to slight erosion. Some of these areas receive irrigation water from tanks or from streams/rivers. Paddy is the main crop taken up in this area. Patchy thin cutans are observed in sub surface horizons.

The soils are acidic in nature. pH of these soils is 5.5 in the surface and increases to 5.9 in the sub surface. OC is 0.45% at the surface and gradually decreasing up to 0.3% in the lower layer. Base saturation is found lowest at the surface (49%) and increased gradually along with the depth. The texture varies from silt loam to sandy clay with percent clay ranging between 24 to 38%, and increases with

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depth. These soils occupy 454-sq.km area and cover 12% of the gross area. These are classified under Fine loamy Ultic Haplustalfs.

Jamtoli (JA)

Jamtoli soils are very deep, light yellowish brown (2.5Y6/4m) clay loam at surface and olive brown (2.5Y4/4m) clay at sub-surface with effective depth of >140cm, below which the water table exists. These soils occupy 20% of the mapping unit. They occur on 2-3% slope gradients and subjected to moderate erosion. These are occurring in patches in Undulating pediplains. Patchy thin cutans are seen in sub surface horizons.

pH of these soils is 4.6 at the sub surface and 6.6 in the lower horizons, which indicates acidic nature at surface. OC is 0.65% at surface and 0.24% to 0.41% in the sub-surface horizones. Base saturation is very low at surface (36%) and 69 to 71% in sub-surfacce (69 to 71%) horizon. Clay % varies from 34% to 46% with maximum clay content in the middle layer. These soils occupy 71 sq.km computing to 1.9% gross area. These are classified under Fine family of Ultic Haplustalfs.

Lower Pediplain- Nearly level: MU-321

It is nearly level plain area occurring between upper pediplain and stream courses. These pediplains occur on lower reaches of the undulating pediplains, mostly occur nearer to rivers and nalas. They occur as irregular patches. Intensive agriculture is observed in this area. These areas have general slope gradient of 0-1%. The total area covered by this unit is to 29.64 sq.km forming 1.12% of gross area. Only one soil series i.e. Salangapos is identified. Description of this soil series is already provided in earlier sections.

Valleys

These valleys are found along the rivers Swarnrekha in the East and South Koel in the northwest. Both narrow valleys and broad valleys are encountered in this landform and description of it is given as under:

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Valleys-narrow: MU-322

These landscapes are narrow, elongated and represent the valleys emanating from hills and within plains. These valleys receive soil washed from surrounding landscapes. At places these are, severely eroded because of high slope gradient. Few patches are irrigated under small tanks, but other wise agriculture is only under rain fed conditions. Total area occupied by this mapping unit comes to 141 sq.km, forming 5.36% gross areas. Two soil series, Banrotoli and Patrotoli are recognised within this mapping unit. They cover in the proportion of 60 and 40% of the area respectively. Descriptions of these two series are provided here under.

Banrotoli (BT)

Soils of this series are very deep, brown (10YR4/3m) clay loam at surface and dark gray (10YR4/1m) loam in sub-surface horizons. Solum extends up to 110cm and after 110cm water table is found. On computing the shallow pit data, most

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of the observations clustered within 140cm depths and hence Banrotoli soils are grouped under deep category. The surface and sub surface layers are acidic with pH ranging from 5.1 to 5.8. However, the lower layers have slightly high pH ranging from 6.3 to 6.4. The distribution of organic carbon is also irregular with maximum found in the second layer. It ranges from 0.2 to 0.06. Base saturation is very irregular within the profile with lowest value in the surface. Banrotoli soils represent 135 sq.km of mapping unit.322, forming 3.6% gross area. These are classified under Fine loamy family of Typic Endoaquepts.

Patrotoli (PT)

These soils occupy 40% of the landscape under MU-322. Soils under this series are dark grayish brown (10YR3/3m) sandy clay loams at surface and brown sandy loams to sandy clay loams in sub-surface horizons, which are very deep. Solum extends up to 110cm. Coarse fragments range between 5-10% in sub-surface horizons. pH of these soils is uniform through out the profile with values ranging from 6 to 6.1. Soils are free from neutral salts. Base saturation is low with values ranging from 53-60% and it was found to decrease with depth gradually.

Total area occupied by these soils is 124 sq.km, computing to 3.3% gross area. These soils are classified under Fine loamy Oxyaquic Ustifluvents.

Valleys-Broad MU-323

Broad valley is elongated in shape, nearly plain, fine textured with cyan tone. These landscapes are broad, elongated and represent the valleys emanating from hills and plains. These valleys receive soil washed from surrounding landscapes. At places these are severely eroded because of higher slope gradient. Most of these areas are under irrigation from tanks, but other wise it is rainfed agriculture. Total area occupied by this mapping unit comes to 3.08 sq.km and constitutes 0.11% gross area. One soil series, Patrotoli is recognised within this mapping unit. Descriptions of this series are already provided in the earlier sections.

Very Gently-to-Gently Sloping Pediplains

The slope varies from 1-3%. In this landscape three mapping units are identified viz pediplains, narrow valleys and broad valleys. Description of these mapping units is provided here under.

Pediplains MU-324

These pediplains occur on lower reaches of the topography of Khunti district. They occur as irregular patches. Intensive agriculture is observed in this area. These areas have 1-3% slope. The total area occupied by this unit is 5.97 sq.km forming 0.22% of gross area. Three soil series viz. Nagri, Majhauli and Bathantoli are identified to occupy with 50, 30 and 20% of the area, respectively. Description of the Majhauli and Bathantoli are already provided in earlier sections. Descriptions of the Nagri soil series are given here under.

Nagri (N)

These soils are very deep, yellowish brown (10YR5/4m) clayey in texture at surface and dark brown to light brownish gray (10YR3/3,10YR6/2m) silty clay

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loam to loam in sub-surface horizons. Slopes of 1-3% converted to 0-1% slopes by levelling. These soils are slightly eroded.
pH of these soils is 5.9 at the surface indicating the surface soils are acidic. However, pH was found to increase with the depth with maximum of 8.4 at lowest horizon. EC varies from 0.023 to 0.032 mhos/cm. Organic carbon is 0.60% at surface and found to decrease with minimum of 0.12 % in the lower horizon. Base saturation was found to increase with depth with 71% in the surface and 79 % in lowest horizon. Significant variations were noticed in texture with in the profile. Heavy texture (clay) was found in the surface and textures have been found to be lighter (loam) in lower layers. . The total area occupied by these soils computes to 6 sq.km forming 0.1% of gross area. These soils are classified under Fine loamy family of Typic Haplustepts.

Narrow valleys MU-325
They are gently sloping and are characterized by agriculture and can be identified by curvilinear nature and cyan colour in the image.
These landscapes are narrow, elongated and represent the valleys emanating from local uplands. These valleys receive soil washed from surrounding pediplain. Most of the areas are irrigated under small tanks, but otherwise agriculture is only under rain fed conditions. Total area occupied by this mapping unit comes to 5.97 sq.km, computing to 0.22% gross area. One soil series, Dolaicha is recognised within this mapping unit. Descriptions of this soil series are provided here under.

Dolaicha (DA)
Soils of this series are very deep, olive yellow (2.5YR6/6m) silty clay loam at surface and light olive brown (2.5YR5/6m) clay in sub-surface horizons. Solum extends, mostly up to 125cm and after 125cm partially weatherd parent material is encountered. On computing the shallow pit data, most of the observations clustered at more than 150cm depth and hence Dolaicha soils are grouped under very deep (d5) category. In these areas ground water depth is shallow. If water is available paddy is grown. pH is around 5.2 in the surface and increases with the depth with a maximum 7 in the lowest horizon (B3). OC ranges between 0.56% at the surface decreasing to 0.48% in sub surface. Base saturation is moderate in the Ap and B2 horizon layer with values ranging from 59%-69% and it was found to decrease with the depth with a minimum of 46 % in the lowest layer. These are classified under Fine family of Ultic Haplustalfs.

Valleys-Broad MU-326
These landscapes are broad, elongated and represent the valleys emanating from local uplands. These are valleys receiving soil washed from surrounding pediplain. Most of the areas are irrigated under small tanks and rivers. Main crop is paddy. Total area occupied by this mapping unit comes to 8.22 sq.km, computing to 0.31% gross area. One soil series, Lohana is recognised within this mapping unit. Description of this soil series is provided here under.

Lohana (LA)
Soils of this series are very deep, brown (10YR4/3m) clay loam at surface and grayish brown (2.5Y5/2m) silty clay in sub-surface horizons. Solum extends,

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mostly up to 160cm. On computing the shallow pit data, most of the observations clustered at more than 150cm depths and hence Lohana soils are grouped within very deep (d5) depth class. In these areas ground water depth is shallow. If water is available paddy is grown. Patchy thin cutans are observed in sub-surface horizons. pH is 6 in A horizon but in B-horizon pH was found to vary between 6.0 to 7.3 and the values are found to increase with depth. However the maximum value (7.3) was found in B12 horizon. EC is very low (0.087 mhos/cm) at the surface. OC ranged between 1% to 0.72% with the maximum value in the top layer with. Base saturation is low at surface (51%)and increased with depth with a maximum of 83% in the last horizon. These are classified under Fine Ultic Haplustalfs.

Schist Landscape

This type of formation is seen in patches in different parts of the district except in the central part. In the landscape different landforms namely structural hills, uplands and lowlands are found to occur.

Structural Hills MU-327

These are structural hills, mostly forming at the highest altitute of the Schist terrain. These areas are severely eroded. Streams and streamlets emanate from this landscape. Total area occupied by this mapping unit comes to 271.31 sq.km, forming to 10.34% gross area. One soil series i.e. Kudda occupies 60% of the area and remaining area is covered by barren rocky i.e 40%. Description of the soil series is provided here under.

Kudda (KD)

Soils of Kudda series are dark grayish brown (10YR3.5/2m) graverlly clay loam at surface and very dark grayish brown (10YR3/2m) gravelly clay at sub surface horizon. These are moderately deep-to-deep with solum depth of 72cm. Coarse fragments occur throughout the profile, which are less than 15%. These soils are encountered on very steep slopes (>35%).

The soil is acidic and the pH is 5.5 at the surface and increase to 6 in the subsurface. Organic carbon is 0.84% at surface reducing to 0.80% in the lower horizon. Base saturation is low. These soils are classified as fine Udic Haplustepts.

Up lands MU-328

This mapping unit represents upland within the Schist area. This unit is undulating with 10-15% slope and has severe erosion problems. These areas are under scrublands or under forest plants. Total area occupied by this mapping unit computes to 99.48 sq.km (3.78% gross area). One soil series Bartuwa is identified to be associated with this mapping unit. Bartuwa soils occupy 70% of the MU, and the balance 30% rocky exposures. Description of Bartuwa series is as follows.

Bartuwa (BR)

Bartuwa soils are shallow, brown (10YR3.5/3m) gravelly loam at surface with partially whethered parent material in the sub-surface. These soils are encountered on 10-15% slope gradients and are severely eroded. Barren rocky

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area is also encountered at many places. These areas are mostly under forest. The total area covered by this series is found to be 70 sq.km (1.8%).
The pH is 5.8, which indicates that the soil is acidic in nature. Organic carbon is 0.6% and base saturation is 68%. These soils are classified under Loamy skeletal Typic Ustorthents.

Lowlands MU-329
These areas are occurring in Schist landscape. The slope gradient is 5-8%. These are slightly eroded landscapes supporting very deep soil cover. Mostly they are under scrub vegetation. At places they are under dry land agriculture. Total area occupied by this mapping unit is 4.03 sq.km, computing to 0.15% gross area of the district. One soil series is identified in this area, i.e. Dumbartoli.

Dumbartoli (DU)
Dumbartoli soils are very deep, yellow (10YR7/6m) sandy clay loam at surface; dark grayish brown to very dark grayish brown (10YR4/2, 10YR3/20m) loam at sub-surface. These soils are encountered on 5-8% slope gradients and are moderately eroded. Barren rocky areas are also encountered at few places as intrusions.
The pH is 6.2, which indicates slightly acidic in nature. Organic carbon content is 0.23%, which is at low level. These soils have base saturation of 69%. These areas are mostly under scrub forest and partly dry land agriculture.
These soils are best suited for dryland agriculture. They are classified under Fine loamy Udic Ustorthents.

Phyllite, Mica Schist Landscape
It consists of variety of landforms, namely structural hills, upper pediplain, lower pediplain narrow valleys and broad valleys, mostly occurring in the south eastern side of the district along the river Swarnarekha. The extent of area covered by this landscape is568.91sq.km. The description of the individual mapping units and the associated soils are given below:

Structural hills: MU-330
They are steep to very steeply sloping with slopes varying from 25-35%. They are covered with fairly dense scrub/vegetation. They are identified on the image by their characteristic brown to dull blue colour with red dotted tone. The extent of area covered by this unit is 67.31sq.km. The soil series associated with this unit is Joranga and the description of it is given below:

Joranga
Soils of Joranga series are brown (7.5YR3.5/4m) gravelly silty clay loam at the surface and clay loam in the subsurface. Gravel percent is over 45%. The slope varies from 20-25% and is covered with forest. These soils are severely eroded. Gravels, cobbles and stones cover the surface. pH of these soils is around 5.7. Organic carbon varies between 0.89 to 1.23%. Base saturation ranges from 66%to 70%.

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Upper pediplain MU-331

This unit is undulating with slopes varying from 10-15%. It is covered mostly by open scrub. It can be identified on the image with dark brown colour mixed with red mottled tone. The extent of area covered by this unit is 39.79sq.km (1.71%). The soil series associated with this unit is Hemromtoli and the description of the same is given below.

Hemromtoli

Soils of Hemromtoli series are dark grayish brown (10YR3/2m) sandy loam. The slope varies from 12-13% and is under paddy cultivation. These soils are moderately eroded. pH of these soils is around 5.4. Organic carbon is 1.14% at the surface and decreased with depth with a minimum of 0.78 in the last horizon. Base saturation ranges from 50%to 58%.

Lower pediplain MU-332

This landform is very gently sloping with slopes varying from 1-3%. This unit occurs in between pediplain and narrow valley. It is identified on image by medium cyon to greenish cyon tone with prominent drainage marks and the area is under rainfed cultivation. The extent of area covered by this unit is 49.88 (1.81%). The soil series associated with this unit is Rargaon and the description of the same is given below:

Rargaon

Soils of Rargaon series are moderately deep, brown (7.5YR4/4m) silty clay loam at surface and reddish brown (5YR4/4m) gravelly silty clay loam at sub surface. Coarse fragments occurs throughout the profile which are less than 10% at surface and around 35% in sub-surface. These soils are encountered on gently sloping areas with slope gradient of 1-3%.

The soils are slightly acidic in nature and pH varies between 6.3 and 6.4. Organic carbon is higher (1.21%) at the surface and decrease to 0.85% in the lowest horizon. Base saturation varies between 66-75% with maximum value found in the surface.

Broad valleys MU-334

They are very gently sloping with slopes varying from 1-3%. They can be identified on the image by mottle tone and prominant parcelling pattern. Broad valleys are mostly under paddy cultivation. The extent of area covered by this unit is 23.04 sq.km constituting 0.87%. The soil series associated with this unit is Tanbang and the same is described below:

Tanbang

Soils of this series are very deep, yellowish brown (10YR4.5/4m) sandy loam at the surface and yellowish brown (10YR5/4m) sandy loam in sub- surface horizons. Solum extends, mostly up to 160cm. If water is available paddy is grown. Patchy thin cutans are observed in sub-surface horizons. pH is around 5.8 at the surface. In B-horizon, pH was found to vary between 6.0 to 6.2 and the values are found to increase with depth. However, the maximum value (6.2) was found in B12 horizon. EC varied from .018 to .023 mhos/cm, OC ranged bet ween 0.62% to 0.38% with the maximum value in the top layer. Base saturation is

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low at surface (64%)and increased with depth with a maximum of 67% in the last horizon.

Dolerite (Dyke) / Quartzite Landscape
MU-338
Dykes are narrow elongated high relief areas mostly occurring at higher altitude (500m above msl). These areas are severely eroded. Total area occupied by this mapping unit comes to 10.41 sq.km, forming 0.39% of the total geographical area of the district. One soil series i.e. Jarerel occupies an area of 30% and the remaining area is occupied by barren rocky area. Description of the soil series is given here under.

Jarerel (J)
Soils of Jarerel series are red (2.5YR5/8m) colour graverlly clay loam at surface and red (2.5YR4/6m) gravelly loam at sub surface horizon. These are shallow to moderately deep with solum depth of 30-40cm. Coarse fragments occurs throughout the profile which are less than 15% at surface and around 35% in sub-surface. These soils are encountered on hills with slope gradient of 20-25%.
The soils are slightly acidic in nature and pH of these soils varies between 6.3 and 6.4. Organic carbon is very less (0.23%) at the surface and increase to 0.65% in the lowest horizon. Base saturation varies between 64 at the surface and 61% at sub-surface. These soils are classified as Loamy skeletal Typic Haplustepts.

Landscape on Epidiorite / Metavolcanic rocks-mainly intrusive
This geological formation is seen in all parts of the district in patches except in the central part. The landforms associated with this formation are structural hills, which are steeply sloping and upland with moderate slopes. The details of the landforms and associated soils with them are given below:

Structural Hills: MU-339
These are structural hills, mostly occuring in the highest elevation of the Epidiorite/Metavolconics geological formation. These areas are severely eroded. Streams and streamlets emanate from this landscape. Total area occupied by this mapping unit comes to 6.70 sq.km, forming 0.25% of the gross area. One soil series i.e. Dolda covers 30% of the area and the remaining area is occupied by rocky exposures. A description of the soil series is provided here under.

Dolda (D)
Soils of Dolda series are light reddish brown (5YR5.5/4m) with gravelly silty loam texture at the surface and has lithic contact at 15 cm. coarse fragments occur throughout the profile, which are more than 35%. These soils are encountered on 15-20% slopes.
The pH of these soils is around 5.5, which indicates slight acidity in nature. Organic carbon is 0.78% at the surface. Base saturation very less (48%). These soils are classified as Loamy skeletal Typic Ustorhents.

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Uplands / Pediments: MU-340

This mapping unit represents upland/pediments within the Epidiorite / Metavolconics area. Mostly 5-10% slopes are encountered and erosion is moderate. These areas are under scrub lands or under forests. At some places pulses are grown. Total area covered by this mapping unit is 0.39sq.km (0.01% gross area). Two soil series Pahantoli and Dolda are identified to be associated with this mapping unit. Pahantoli soils occupy 70% of the MU, and the balance 30% by Dolda series. Description of Dolda series is already provided in earlier section. Description of remaining soil series is given here under.

Pahantoli (PA)

Pahantoli soils are very deep, red (2.5YR5/8m) sandy clay at surface and red (2.5YR4/6m) clay in sub-surface, partially weathered parent material in the last horizon. These soils are encountered on 5-10% slope gradients and are moderately eroded. Barren rocky areas are encountered at few places.

The soils are moderately acidic in the surface (pH5.1) and slightly acidic (pH6.2-6.4) in the sub surface horizon. Organic carbon is 0.48% at the surface and decreases with depth. These soils have base saturation of 64% at surface and increased with depth and found highest value in the lower layer (71%). These areas under agriculture interfered with scrub vegetation. The total area occupied by this series is computed to 89 sq.km (2.3% gross area). These soils are classified under Fine Typic Haplustepts.

Landscapes on Metabasic rocks

This geological formation is seen in eastern and southern parts of the district in patches. The landforms associated in these landscapes are ridges, low hills with steep slopes, upland in between the ridges and the lowlands. The soils associated with these landforms are described below:

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Ridges: MU-341

These are high relief areas with steep slopes, bright red/magenta colour on the image curvilinear in shape and covered with fairly dense scrub.

These areas occur mostly in the high altitute areas (500m msl). These areas are severely eroded. Total area occupied by this mapping unit comes to 32.09sq.km, (1.2%). One soil series i.e. Dolda occupies 30% of the area and remaining area is occupied by rockout crops. Description of the soil series is already provided in earlier sections.

Uplands MU-342

These areas have moderate slopes, mostly covered with dense scrub/ vegetation identified by red mottled tone on the image.

This upland occurs in between ridges of the metabasic rocks. These units have slope gradients of 5-10% and erosion is severe. These areas are under scrublands or under forest plants. At some places pulses are grown. Total area occupied by this mapping unit is 308.90 sq.km (4.03%). One soil series, Ronhe is identified to be associated in this mapping unit. Description of Ronhe soil series is provided here under.

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Ronhe (R)

Ronhe soils are deep, yellowish red (5YR5/6m) sandy loam at surface and reddish brown (5YR4/4m) clay loam in sub-surface with partially weathered parent material below. These soils are encountered on 5-10% slope gradients and are severely eroded. Barren rocky areas are encountered at few places. The pH is less than 6.0 throughout the profile, which indicates acidity. Organic carbon content is low (0.2%). These soils have base saturation of around 63%.
These areas are mostly under agriculture intermixed with scrub vegetation. These soils are classified under Fine loamy family of Typic Haplustalfs.

Lowlands MU-343

They are gently sloping with slopes varying from 3- 5% and they can be identified on the image by dull blueish brown color. This unit has intermixture of scrub vegetation and agriculture. The extent of area covered by this unit is 1.68sq.km (0.06%). The soil series associated with this unit is Binda and the description of the same is given below:

Binda

Soils of this series are very deep, grayish brown (7.5YR4/4m) sandy loam at surface and brown (7.5YR 3.5/4m) sandy clay loam in sub-surface horizons. Solum extends, mostly up to 175cm. pH is around 5.8 in the surface but in B-horizon pH is found to vary between 6.1 to 6.5. The values are found to increase with depth. However the maximum value (6.5) was found in B21 horizon. EC is low (0.022 mhos/cm) at the surface. OC ranged between 0.45% to 0.27% with the maximum value in the top layer. Base saturation is higher at the surface (73%) and decreased with depth.

Landscape on Crystalline Limestone, Calcareous rocks

This formation is seen in the south central parts of the district in a limited area. The landform associated with this landscape is ridges that are gently to strongly sloping and uplands that are gently to moderately sloping. The details of the soils occurring in these units are given below:

Ridges MU-344

These are narrow elongated highly relief areas, mostly occurring in high altitude (500m msl). These areas are severely eroded. This unit is occurring as an intrusion in this district. Total area occupied by this mapping unit comes to 0.24 sq.km, (.009%). One soil series i.e. Hariharpur occupies 30% of the area and the remaining 70% area is covered by rock outcrops. A description of the soil series is provided here under.

Hariharpur (HA)

Soils of Hariharpur series are reddish brown (5YR4/4m), gravelly sandy loam at the surface and dark rddish brown (5YR3/3m), gravelly sandy clay loam in the sub surface horizon. These are moderately deep with solum depth of 50 cm. Coarse fragments occur throughout the profiles, which are less than 15% at surface and around 35% in sub-surface. These soils are encountered on 15-25% slopes.

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The pH of these soils is around 6.8. Organic carbon is 0.87% at the surface and 0.83% in the last horizon. Base saturation is 56% in the surface and increases with the depth (66%). These are classified as Loamy skeletal Typic Dystrustepts.

Gently to moderately sloping upland MU-345

This unit has slopes varying from 5-10%. This unit can be identified by dull bluish tone and coarse texture. It is covered by open scrub. The extent of area under this unit is 3.01sq.km constituting 0.11% of the total geographical area of the district. The soil series associated with this unit is Jonha and description of the series is given below.

Jonha

Soils of Jonha series are yellowish red (5YR5/6m) in colour with sandy clay texture at surface and clay with sub surface. These are deep soils with solum depth of 100 cm. These soils are encountered on gentl slopes. pH of these soils is in the range of 5.2 to 6.3. Organic carbon is lower (0.21)% at surface decreasing to 0.06% in the lowest horizon. Base saturation is higher at the lowest horizon (68%) and lower at the surface (55%).

7.5 Hydrogeology

The district is having varied hydrogeological characteristics due to which ground water potential differs from one region to another. It is underlain by Chotanagpur granite gneiss of pre-Cambrian age in three-fourth of the district.

Aquifer Systems

Two types of aquifers are found. Weathered aquifer and fractured aquifers. Thickness of weathered aquifers varies from 10-25 m in granite terrain and 30-60m in lateritic terrain. In weathered aquifer ground water occurs in unconfined condition while in fractured aquifer ground water occurs in semi confined to confined condition.(Fig-3)

Aquifer Geometry

The aquifer geometry for shallow and deeper aquifer has been established through hydro geological studies, exploration and the surface and sub-surface geophysical studies in the district.

Shallow Aquifer

The shallow aquifers are being tapped through dug wells, dug -cum borewells and hand pumps. The thickness of weathered mantle varies from 5 to 20 m.bgl. In lateritic terrain many dug wells dry up during summer months. Hand pumps generally tap first fracture zones and its depth is 30-40 m.bgl.

Deeper Aquifer

In granite gneiss terrain area first fracture occurs between 50-70 m and second fracture is found between 100-120 m depth. Discharge of borewells varies between 10 to 30 m3/hr in these areas. Drawdown varies between 13 to 20 m. Discharge may vary between 15 to 25 m3/hr. Drawdown may vary between 20-25 m.

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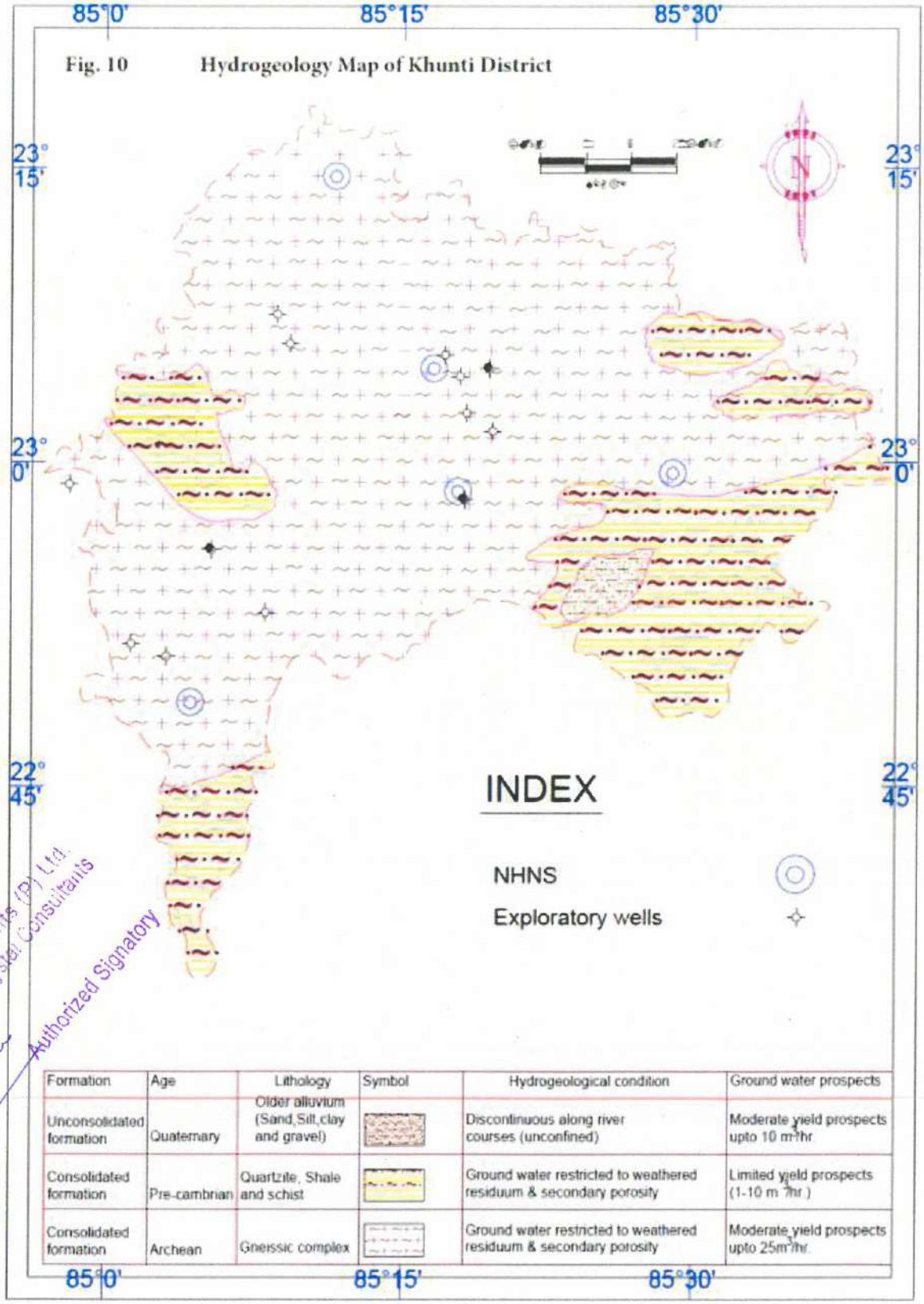

Fig. 10 Hydrogeology Map of Khunti District

Formation	Age	Lithology	Symbol	Hydrogeological condition	Ground water prospects
Unconsolidated formation	Quaternary	Older alluvium (Sand,Silt,clay and gravel)		Discontinuous along river courses (unconfined)	Moderate yield prospects upto 10 m³/hr
Consolidated formation	Pre-cambrian	Quartzite, Shale and schist		Ground water restricted to weathered residuum & secondary porosity	Limited yield prospects (1-10 m³/hr)
Consolidated formation	Archean	Gneissic complex		Ground water restricted to weathered residuum & secondary porosity	Moderate yield prospects upto 25m³/hr

Figure 10 Hydrogeology Map of Khunti District

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7.6 Depth to Water Level

Central Ground Water Board has established network of observation wells for monitoring of groundwater level to know the behavior of ground water regime in the district. There are five monitoring stations which are monitored every year in January, May, August & November.

During pre-monsoon season the minimum and maximum water level were observed as 4.09 mbgl at Murhu and 10.15 mbgl at Kalimati respectively. The water level during the post-monsoon season of the district ranges from 2.73 to 6.06 mbgl. The pre-monsoon and post-monsoon depth to water level has been presented in figure 11 & 12 below;

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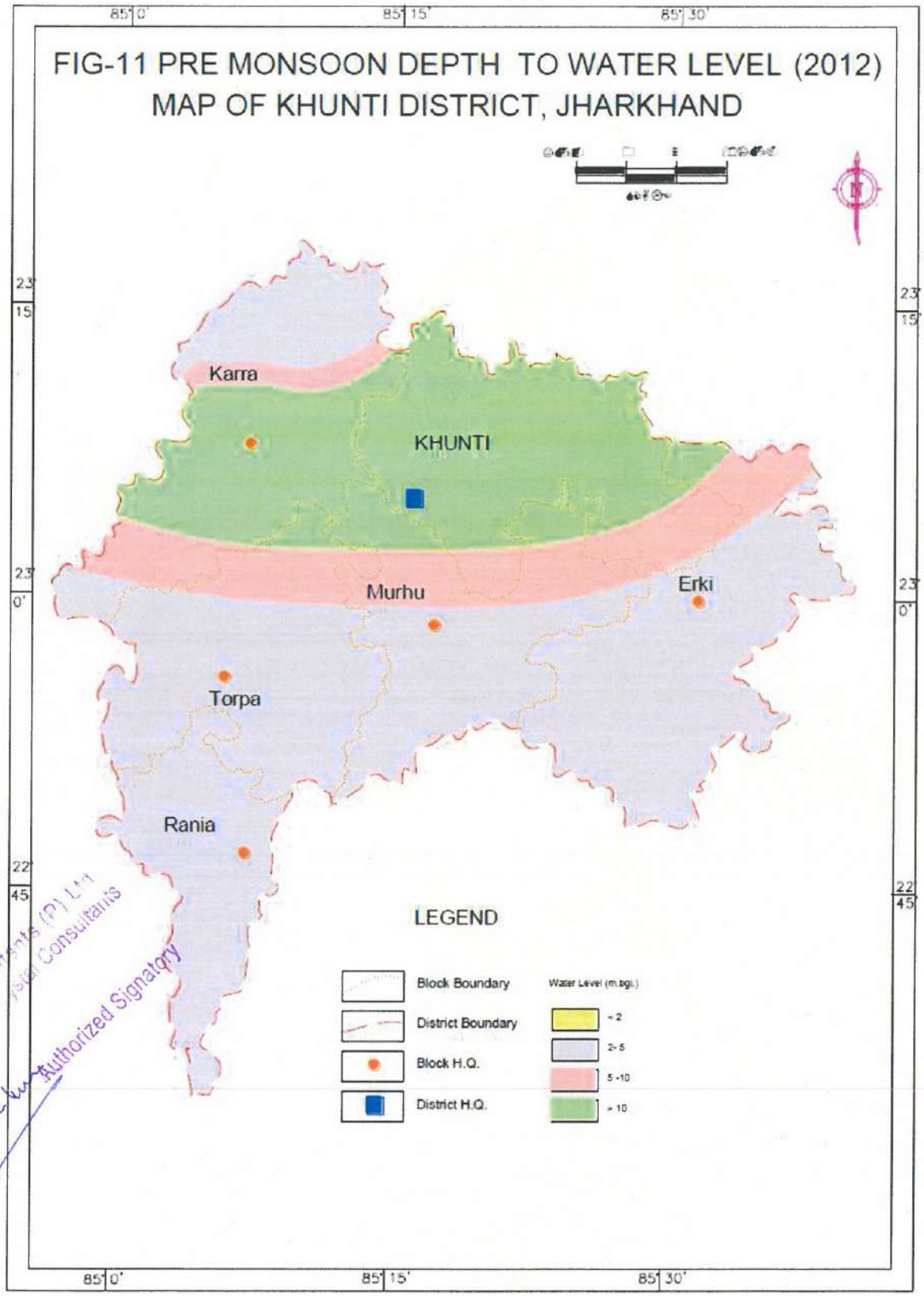

Figure 11 Pre Monsoon Depth of Water Level (2012) Map of Khunti District

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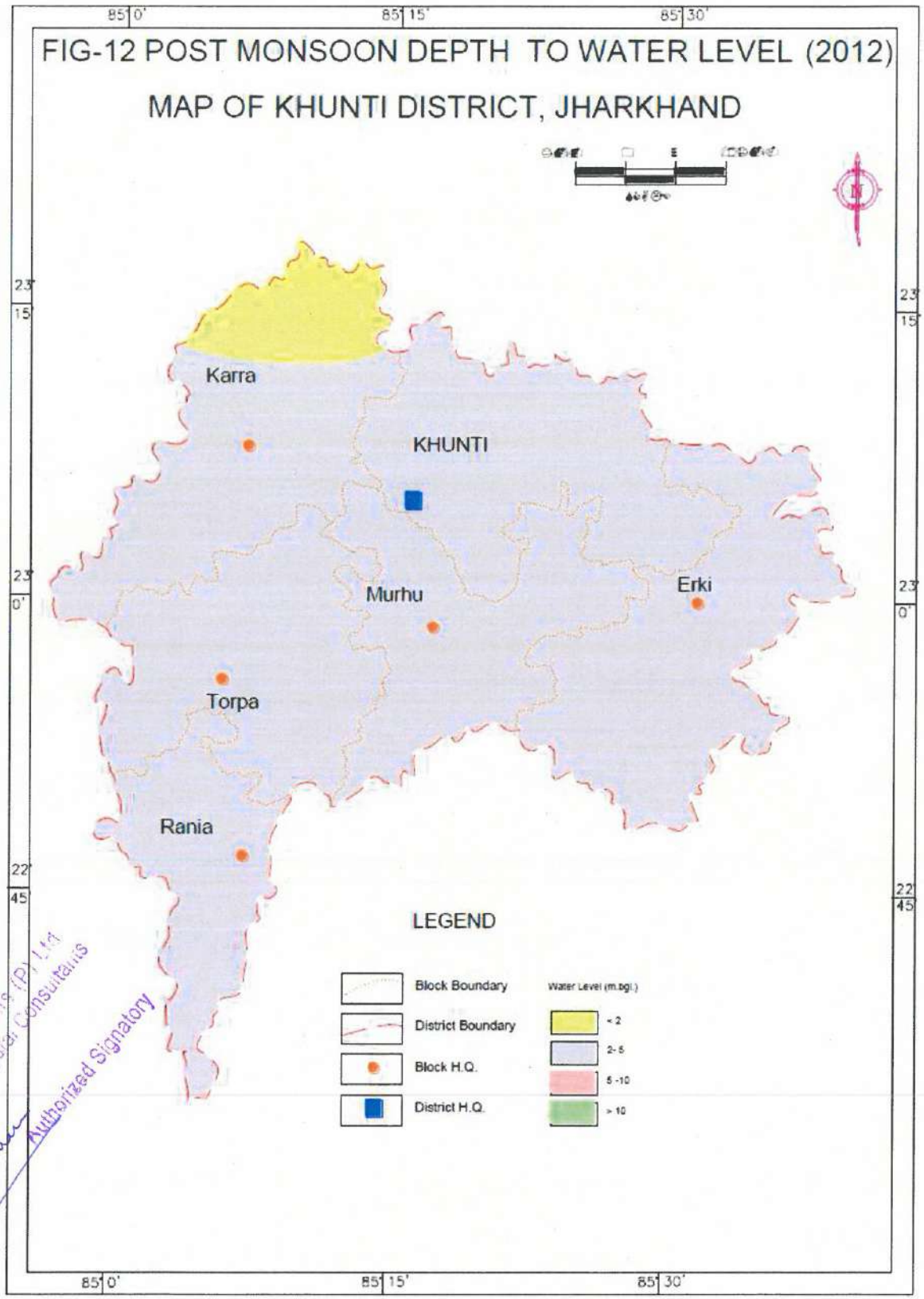

Figure 12 Post Monsoon Depth of Water Level (2012) Map of Khunti District

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7.7 Ground Water Resource

As per the latest resource estimation carried out following GEC 97 methodology, the overall stage of ground water development in Khunti district is 28.26% indicating sufficient scope of development. Net ground water availability is 14359.58 ham whereas total draft 4058.84 ham. The ground water resource of Khunti district given in Table 6.

7.8 Ground Water Quality

Ground water in the phreatic aquifers in Khunti district is alkaline in nature. The specific electrical conductance of ground water in phreatic zone during May 2011 was in the range of 193 - 1081 µS/cm at 25ºC. The suitability of ground water for drinking purpose has been evaluated on the basis of pH, Total hardness (T.H), Ca, Cl, F and NO3. The chemical concentration of these constituents, when compared with the drinking water specification recommended by IS:10500, 1991 as presented in Table-7 below, indicates that in two samples pH exceeded the permissible limit of 8.5 .

7.9 Status of Ground Water Development

In the rural areas the entire water supply is dependent on ground water. Ground water development is mainly carried out in the district through dug wells and Hand pumps. Dug wells are in general of 2 m diameter and between 8 to 15 m depth, depending on the thickness of the weathered zone, tapping the shallow ground water in the weathered zone and uppermost slice of the basement. Large number of dug wells used for drinking water is under private ownership for which there is no reliable data. Over the years Mark II/ Mark III hand pumps are being drilled in large numbers for ground water development. These hand pumps have the following two major advantages i) are less susceptible to contamination from surface sources and ii) they tap fractures between 20-60m depth which have been found to be less affected by seasonal water level fluctuation and thus have lesser chances of failure even during extreme summer. In rural areas of Khunti district the number of hand pumps drilled by PHED is 9207 of which 8007 are under working condition as on April 2012. There are 6463 dug wells, 40 shallow tube wells and tubewells as per minor irrigation census 2006-07. In the urban areas ground water plays a supplementary role in water supply, the major supply being made through dams, reservoirs or weirs across rivers or streams. No authentic data is available on the number of ground water structures catering the urban water supply.

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Table 6 Major chemical parameters of ground water samples of GWMS collected during May 2011

Block	Location	E.C. micro Siemens/cm at 25o C	pH	CO3	HCO3	Cl	Ca	Mg	TH as CaCO3	Na	K
				mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
KHUNTI	Khunti	1081	8.5	9	276.75	170.16	24	72.9	360	72	5.8
KARRA	Karra	411	7.88	0	55.36	63.81	42	9.7	95	16	9.3
KHUNTI	Kalimati	652	8.51	9	196.8	95.71	62	18.22	230	38	2.7
MURHU	Murhu	193	7.67	0	92.25	7.09	20	6.1	75	7.5	4.3
LODHMA	Lodhma	435	8.43	3	110.7	53.17	30	13.36	130	33	2.8

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Table 7 Dynamic Ground Water Resource of Khunti district as on 31st March 2009 as per GEC 97 (ham)

Assessment Unit/District	Net Annual Ground water Availability	Existing Gross Ground Water Draft for Irrigation	Existing Gross Ground water Draft for Domestic and Industrial Water Suply	Existing Gross Ground Water Draft For all Uses	Allocation for Domestic and Industrial Requirement suply upto next 25 years	Net Ground Water Availability for future irrigation development	Stage of Ground Water Development (%)
Arki	1867.65	141.98	113.56	255.55	139.20	1586.47	13.68
Karra	2830.21	1077.41	153.15	1230.55	214.48	1538.31	43.48
Khunti	3422.95	769.08	132.27	901.35	185.25	2468.62	26.33
Murhu	2172.27	421.78	122.55	544.32	171.63	1578.86	25.06
Rania	1730.57	323.29	57.04	380.34	69.92	1337.36	21.98
Torpa	2335.93	616.58	130.14	746.72	182.26	1537.08	31.97
TOTAL	14359.58	3350.12	708.71	4058.84	962.75	10046.70	28.26

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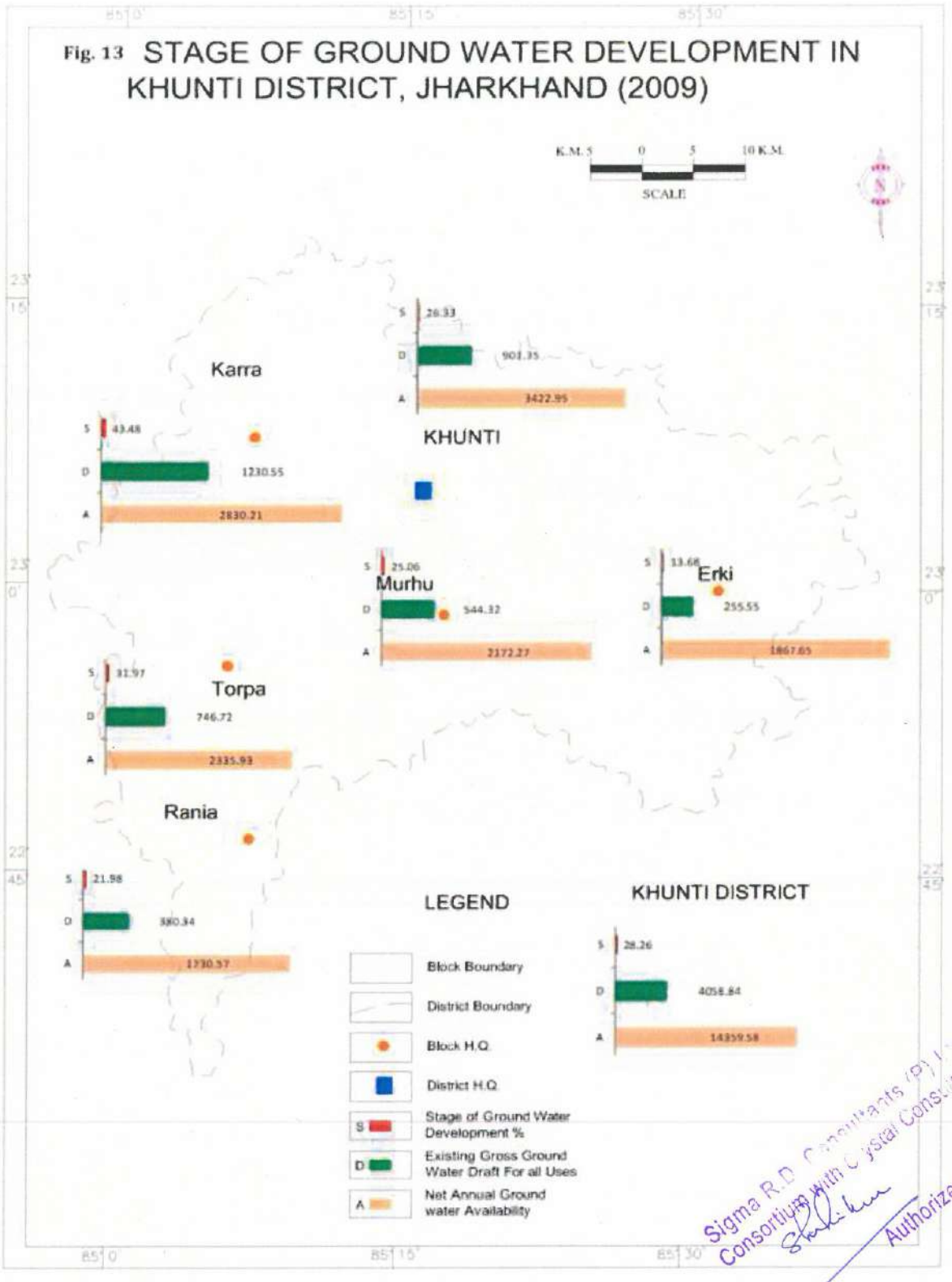

Figure 13 Stage of Ground Water Development in in Khunti District

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CHAPTER-VIII

CHAPTER – VIII LAND UTILIZATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURE, HORTICULTURE, MINING ETC.

Classification of Land Utilisation Statistics in the district of Khunti is given below in Table 8:

Table 8 Classification of Land Utilisation Statistics in the district of Khunti

(Thousand hectares)

Year	Reporting Area	Forest Area	Area under Non-agricultural use	Barren & unculturable land	Permanent pastures & other grazing land	Land under misc. tree groves not included in Net area sown	Culturable waste land	Fallow land other than Current fallow	Current fallow	Net area sown
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2008-09	260.014	44.395	17.707	19.656	1.256	0.370	12.921	46.034	57.730	59.945
2009-10	260.014	44.395	17.749	19.656	1.256	0.370	12.917	51.568	54.508	57.594
2010-11	260.014	44.395	17.749	19.656	1.256	0.370	12.917	52.944	58.150	52.576
2011-12	260.014	44.395	17.747	19.656	1.256	0.370	12.920	50.223	50.531	62.916
2012-13	260.014	44.395	18.115	19.656	1.256	0.370	12.917	51.932	53.569	57.804

Source:- DSO, Khunti

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CHAPTER-IX

CHAPTER – IX Physiography of the District

9.1 Introduction

The landscape of the district is formed of hills and undulating terrain of Ranchi Plateau. Ranchi plateau is the largest plateau in Jharkhand. The uplands of this plateau are known as Tanrs and the lowlands are locally known as Dons. These lowlands have a number of small hill blocks covered with forests.

9.2 Slope

More than 60% (i.e., 64.28%) of the Khunti district is covered by nearly level and very gently sloping ground. This area is located mostly in the north-western half of the district. Strongly sloping to very steep sloping ground is located in the south-eastern part of the district. The distribution of the slope categories, in this district, with their area and percentages are shown in the Table 8 and Figure 14.

Table 9 Distribution of Slope Categories in Khunti District

Serial No.	Slope Category	Area (in sq.km)	Percentage (%)
1	Nearly Level (0-1%)	417.28	15.81
2	Very Gently Sloping (1-3%)	1278.93	48.46
3	Gently Sloping (3-5%)	133.93	5.08
4	Moderately Sloping (5-10%)	155.92	5.91
5	Strongly Sloping (10-15%)	262.56	9.95
6	Moderately Steep to Steeply Sloping (15-35%)	272.99	10.34
7	Very Steeply Sloping (>35%)	117.30	4.44
	Total	2638.91	100.00

9.3 Altitude

Khunti district is located in the altitudinal zone of 200m to 900m. In it, major part of the district is in 500-700m zone and minor part of the district is in 200-500m and 700-900m zones. 200-500m zone is located in the extreme eastern and southern parts of the district and 700-900m zone is located in the north western and south eastern parts of this district. Khunti town is located in the altitudinal zone of 600m to 700m. Altitudinal zonal map of Khunti district is shown as Figure-15. Toposheet wise map covering Khunti town, with altitudes, is shown as Figure-16.

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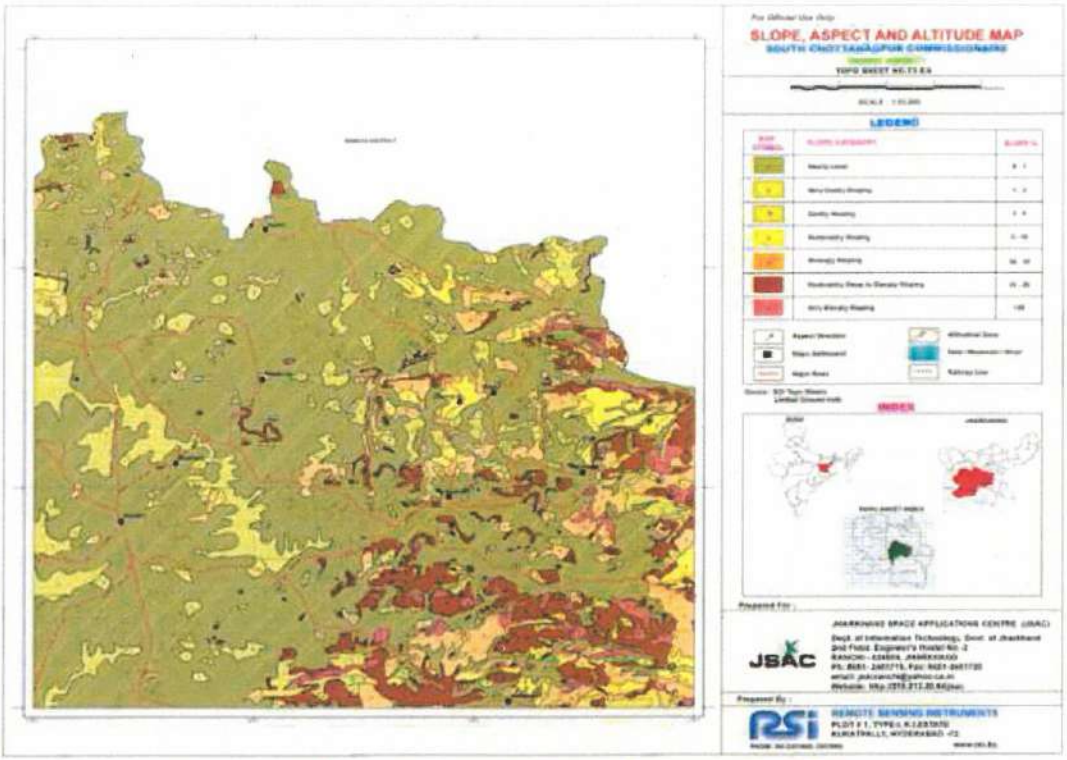

Figure 14 Slope Aspect and Altitude Map (Source-JSAC)

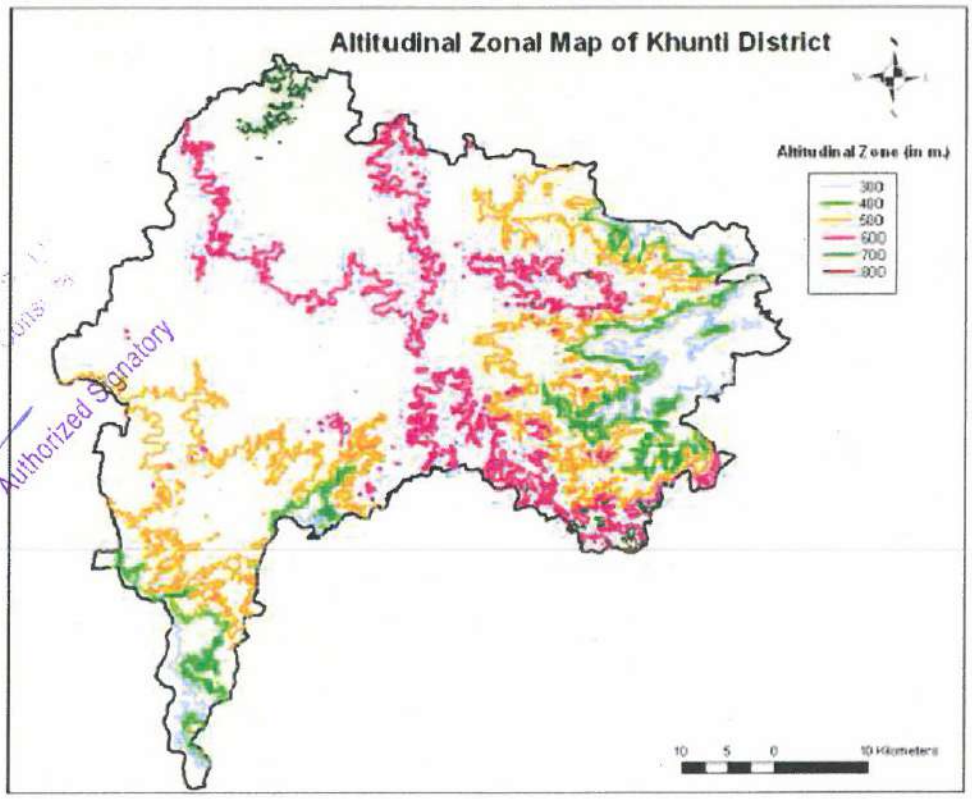

Figure 15 Altitudinal Zonal Map of District (Source-JSAC)

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CHAPTER-X

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CHAPTER – X RAINFALL: MONTH-WISE

Monthly Rainfall in the District of Khunti is given below in Table 10:

Table 10 Rainfall Data

District - Khunti

Unit - mm

Year/Month	Jan.	Feb.	March	Aprill	May	June	July	Agu.	Sept.	Oct.	Nov.	Dec.	Total
2001	1.2	7.2	32.0	5.0	28.1	648.1	326.5	223.0	127.0	73.5	0.0	0.0	1471.6
2002	17.3	11.4	17.5	5.9	10.4	413.1	151.6	444.7	525.0	167.8	0.0	0.0	1764.7
2003	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0
2004	2.7	1.0	3.0	14.9	29.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.4
2005	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	183.9	26.6	27.4	5.3	243.2
2006	0.0	0.0	69.6	0.0	105.0	129.0	487.3	384.6	342.2	60.0	0.0	0.0	1577.7
2007	0.0	0.0	0.0	15.0	8.8	107.2	428.0	297.2	404.2	41.6	0.0	0.0	1302.0
2008	2.4	2.5	6.6	12.2	40.8	456.9	481.8	301.1	275.4	35.0	0.0	0.0	1614.7
2009	3.1	0.0	4.0	0.0	83.8	70.2	371.4	290.8	269.6	70.8	15.2	0.6	1179.5
2010	0.0	1.8	0.0	7.5	13.3	57.4	192.2	191.6	169.3	30.6	22.5	28.0	714.2
2011	3.1	0.0	0.0	30.6	47.6	410.3	262.6	485.8	547.2	62.4	0.0	0.0	1849.6
2012	54.9	16.3	0.0	31.7	8.1	182.6	170.6	349.6	372.2	19.5	15.0	1.9	1222.4
2013	3.5	5.7	4.7	26.0	28.0	299.5	281.1	282.3	118.6	174.7	0.0	0.0	1224.1
2014	0.0	24.1	12.8	0.0	0.0	0.0	115.8	327.0	126.4	42.6	0.0	0.0	648.7
2015	0.0	0.0	67.0	82.0	28.2	159.6	522.6	234.2	66.2	41.4	0.0	0.0	1201.2
2016	17.4	5.6	22.2	0.0	38.6	78.0	463.4	392.6	182.4	37.0	0.0	0.0	1237.2
2017	0.0	0.0	0.0	0.0	19.0	253.8	580.0	368.0	244.8	73.4	3.6	0.0	1542.6
2018	0.0	6.2	0.0	0.0	0.0	69.2	0.0	0.0	0.0	0.0	3.6	0.0	79.0
Total	105.6	81.8	239.4	230.8	489.5	3334.9	4834.9	4572.5	3954.4	956.9	87.3	41.8	18929.8
Average	5.9	4.5	13.3	12.8	27.2	185.3	268.6	254.0	219.7	53.2	4.9	2.3	1051.7

Source:- DSO, Khunti

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CHAPTER-XI

CHAPTER – XI GEOLOGY & MINERAL WEALTH

11.1 Regional Geology

The geology of the area is 1nainly characterized by Chhotanagpur Granite Gneiss Complex of Archaean age which is having co1npl ex geo logical structures and different rock types of varying ages and forms the base1nent rock. The Chhotanagpur Granite Gneiss Complex includes high grade meta-sediments , gneisses, migmatites, khondalite, leptynite, granulites, and meta-igneous rocks, which have been intruded by mafic-ultramafic rocks, gabbro-anorthosite, granite, rapakivi granite, syenite, pegmatite, aplite and dolerite, tholeiitic basalts (Rajmahal Traps) at different geological periods. The regional trend in the area varies front N-S in the west to E-W in the east-central part to ENE-WSW in the extreme east and numerous short and discontinuous shear zones are present almost throughout the area and have affected almost all the rock types which are indicated by the development of Augens and Mylonite banding. The litho-unit consists mainly of granitic gneiss and patches of amphibolites can also be seen at places. The Chhotanagpur Granite Gneiss Complex is overlain by patches of Gondwana formations in the south-west and south portion of the district exposed in area. These formations are traversed by pegmatites and dolerite dykes. The central portion of the district is covered by quarternary sand and alluvium.

General Geological succession in and around Khunti:

Age	*Formation*	*Lithology*
Quaternary	.....	Sand and Alluvium
Cretaceous Jurassic Triassic Permian	Gondwana Formation	Dolerite dykes and pegmatites Alternating layers of sandstone, shale, coal and siltstone
Precambrian	UNCONFORMITY Chhotanagpur Granite Gneiss Complex	Granite Gneiss, Amphibolite and Older metamorphics

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Figure 16 Geological Map of Khunti District

11.2 Methodology for Preparation of District Survey Report:

Potential Resource Area/ Sand bars in every identified river in the district have been selected using ISRO satellite imageries.

Resolution in this process due consideration has been given to siting criteria

- Distance limitations prescribed in EMGSM, 2020 {(in respect of major bridges- EMGSM – 2020, In its Paragraph 4.3(H) has prescribed guidelines relating to restricting of sand mining from Major Bridges.
  Indian Road congress in the code IRC 5-2015 Para 102.2 has categorised Bridge depending on Length which is reproduced below:-
  (Minor Bridge is a bridge having a total length of up to 60m)
  (Major Bridge is a bridge having a total length of more than 60m)}
  List of Bridges existing close to identified PRAs are given in table 10.

- SSMG – 2016

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Table 11 Name of Bridge

Sl. No.	Bridge Name	Latitude	Longitude	Length
1	Kanakloiya Bridge	22.92316935	85.0544046	184 m
2	Chhata Bridge	23.05816497	85.236316	117m
3	Bichna Bridge	23.03650592	85.2278484	80m
4	Mahil-Ghaghra Bridge	22.99433319	85.2452795	140m
5	Mahil-Ghaghra Bridge	22.99361384	85.2469874	57m
6	Ganloya-Gurhami Gridge	22.97656479	85.2537413	94m
7	Margaon-Gurhami Bridge	22.96271309	85.2494461	103m
8	Sungi - Palsa Bridge	23.04882788	85.1312558	138 m
9	Kudri- Botlo bridge	23.02349279	85.1397035	88 m
10	Barkuli Bridge	22.9868018	85.110187	135 m
11	Kasmar Bridge	22.97272914	85.1076328	155 m
12	Churgi bridge	22.94359599	85.1130872	90 m
13	Patratoli Bridge	22.95561347	85.1406668	180m
14	Paira Bridge	22.94285147	85.1496055	70 m
15	Hanhat Bridge	23.46963267	84.9124937	100m
16	Jingi Bridge	23.47409917	84.843018	165m
17	Kanchi Dam	23.12396088	85.4851646	
18	Sarjamdih bridge	23.12176806	85.5159427	245m
19	Koinara- Jarakel Bridge	22.87190404	85.0716737	210m
20	Gutuhatu - Kelo bridge	22.84219516	85.1111923	215m
21	Karambu Bridge	23.11552593	85.5672025	451m

Step-1: Inventorization of river bed suitable for sand mining;

For this purpose following maps were procured for the district

1. S.O.I. Topo sheet (1:50,000)
2. KML maps
3. JSAC prepared map of the district
4. Cadastral Map

In addition following documents published by government agencies were also procured.

- Ground water information booklet from CGWB
- Report on slope, aspect and altitude of district published by J.S.A.C.
- Jharkhand river profile (SAUDRP)

Based on details study of above documents, maps, major rivers flowing through the district have been identified and listed in table 12 below:

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Table 12 Salient Features of Important Rivers and Streams:

S. No.	Name of the River or Stream	Total Length in the District (in Km)	Place of origin	Altitude at Origin
1.	Karo River	65	Katarpa	749
2.	Chhata River	41	Chatta	713
3.	Chengarjor River	13	Bandhtoli	573
4.	Koel River	25	Piska Nagri	715
5.	Kanchi River	35	Bandhea	756
6.	Sundari River	14	Mahuatoli	598
7.	Tajna River	51	Lodhma	680
8.	Banai River	40	Dumardaga	632

Table 13 Drainage system with description of main rivers

S. No.	Name of the River	Area drained (Sq. mile)	% Area drained in the District	Length (m)	Average width (m)	Mean Annual Run-off (inch)	Rate of Annual Deposition in the River (tons / sq. mile/year)	Annual Deposition (tonne) (Col. 3 x 8)
1	2	3	4	5	6	7	8	9
1.	Karo	194.56	20.20 %	65000	160	3.64	5650.25	1099312.64
2.	Chhata	26.98	2.80 %	41000	105	3.03	5960.17	160805.39
3.	Chengarjor	5.70	0.59 %	13000	80	3.94	9036.19	51506.28
4.	Koel	406.98	42.25 %	25000	70	3.03	4233.87	1723100.41
5.	Kanchi	176.70	18.34 %	35000	120	3.03	4764.62	841908.35
6.	Sundari	6.08	0.63 %	14000	54	3.03	6908.09	42001.19
7.	Tajna	34.48	3.58 %	51000	80	3.03	5804.13	200126.40
8.	Banai	32.30	3.35 %	40000	65	3.03	5845.68	188815.46

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For every identified river following information were found out;

- Point of origin of the river
- Elevation of the point of origin of river (AMSL)
- Length of the river flowing through the District
- Average width
- Mark existence of Bridges (Railway & Road) along the alignment of the river
- Existence of notified forest, national park, wildlife sanctuary, Eco-Sensitive zone
- Calculation of catchment area of the river in the district

Step-2: Selection of Potential Resource Areas (PRA)

(a) Identification & Marking of Potential Resource Area (PRA) where sand mining lease may be allotted.

PRAs along stretches of identified rivers in the district were selected as per guideline given in SSMMG – 2016 & EMGSM, 2020 & gazette notification S.O. 3611(e). Dated 25th July, 2018, Potential Resource Area for sand mining were identified and marked on KML map of the area.

(b) Reconnaissance survey

After demarcation of location of identified PRA, a reconnaissance field survey was done to ascertain mineability of identified PRA, route for evacuation, physical verification of existence of bridges, other social & environmental hotspots.

(c) After reconnaissance survey PRAs found suitable for mining of sand were finalized. All identified PRAs were marked on Survey of India Toposheet (1:50000)

(d) Finalised PRA were transferred to mauza map (1:3960). With this super imposed map details regarding name of Village, Plot No., Khata No., Thana No. and area of plot covered by particular PRA were tabulated in Table 15. KML maps for every finalised PRA has been prepared and given in Plate-5.

(e) The map showing different finalised PRAs super imposed on mauza map are shown in Plate-3.

(f) Mauza map for every PRAs were sent to respective circle officer, DFO (Territorial) and DFO (Wildlife) for recording their observation in a prescribed format. This included type of land within the PRA, distance of PRA from notified forest and ESZ. Observation recorded on prescribed format have been received from CO, DFO (T) and DFO (WL) they are enclosed at annexures. (Reports received from CO & DFO are enclosed at (Annexure-D, E, F)

(g) Assignment of Unique Identification No: (UIN)

Every identified PRA was assigned a Unique Identification Number (UIN).

This consisted of three letters followed by two numerals. First letter denoted the name of district. This is followed by two letters denoting name of the river. The last two numerals reflected serial no of the PRA. Counting starting from origin of the rivers towards direction of the flow.

All identified PRAs are shown in plate II.

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Step-3: Methodology of Field Survey of PRAs:

Field survey for preparation of a D.S.R is needed for following purposes

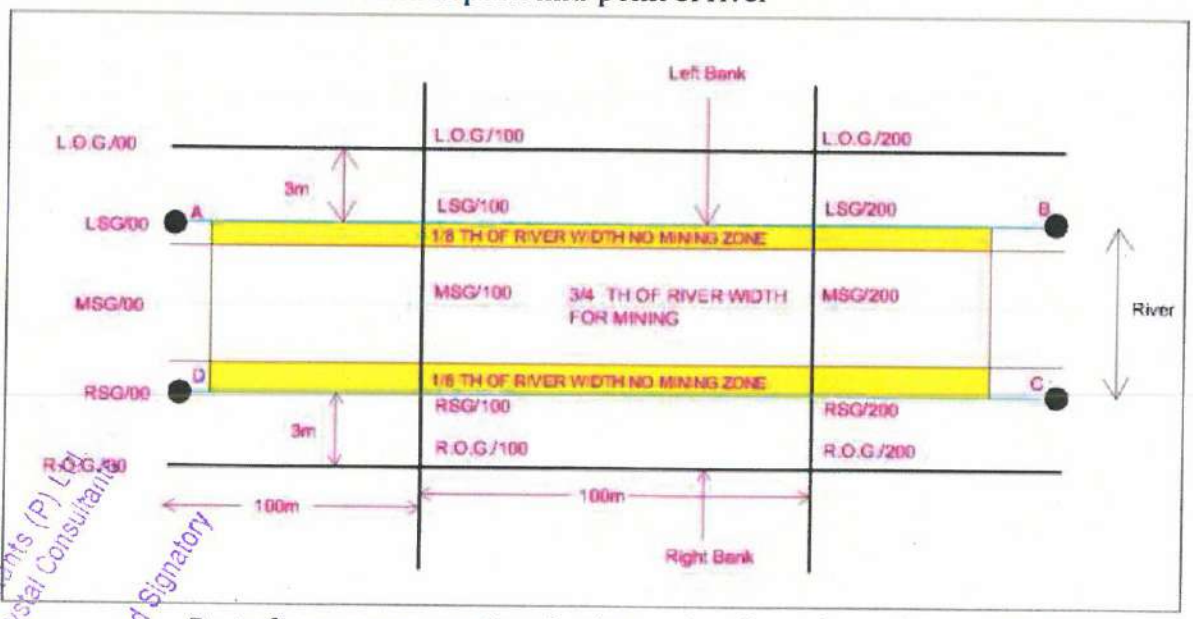
- Location details and bounding co-ordinate of PRA, village, tehsil & district
- Topographical survey of sand deposit within identified PRA in a grid pattern of 10 m X 10 m.
- Fixing of TBM with its RL (amsl)

Field survey of all finalised PRA was conducted using DGPS

- First of all TBM was fixed near the river on nearest existing permanent structures like school, bridges of PRA. A.M.S.L of TBM was determined by conducting fly leveling using auto levels. Reference R.L was taken at weir on Tajna river near Birhu village, Khunti.
- Four corners of an identified PRA are assigned as A, B, C and D for upstream side to downstream side. Co-ordinates and elevation (AMSL) measured for all four corners & recorded between cross section axis AB & CD every PRA is divided into section at 100m apart
- Every axis starts 3m away from river bank on left & right bank.

Cross sectional axis are identified by assigning them number denoting distance from the axis AB. LOG (denotes a point on ground 3m away on the left side & ROG (denotes a point on ground 3m away on the right side)

LOG – Outside level on left bank
ROG – Outside level (bank) on right side
LSG – R.L of sand deposit on left end side
MSG – R.L of sand deposit mid-point of river



Part of every cross sectional axis passing through sand deposit is divided in two parts.

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Pre-Monsoon field survey

Pre monsoon level of sand deposits in every identified river in the district of have been obtained from District Mining Office, Khunti and validated by satellite imagery.

Post Monsoon field survey

This was started in last week of October, 2022. Post monsoon data for 26 PRA have been completed.

Now, post monsoon field survey data were collected for all identified PRA of Khunti District.

Establishment of Temporary Bench Mark

For topographical survey of sand deposit in identified rivers, Temporary Bench Marks (TBMS) have been established at convenient locations close to identified Potential Resource Areas.

For determination of its reduced level, Flying Survey using Auto - level have been carried out. Reference level has been taken from a weir on Tajna river near Birhu village, Khunti having its amsl. as 600 m. Table - below gives details of TBMS in Khunti district:

Table 14 Table for TBM

SI. No.	TBM location	Latitude	Longitude	R.L (m AMSL)
1	Bichna Bridge	23.03650592	85.2278484	600
2	Mahil-Ghaghra Bridge	22.99433319	85.2452795	560.8
3	Sungi - Palsa Bridge	23.04882788	85.1312558	540.5
4	Kasmar Bridge	22.97272914	85.1076328	518.2
5	Churgi bridge	22.94359599	85.1130872	520
6	Sarjamdih bridge	23.12176806	85.5159427	301
7	Koinara- Jarakel Bridge	22.87190404	85.0716737	470
8	Gutuhatu - Kelo bridge	22.84219516	85.1111923	445.6

Step-3 Calculation of Extractable Reserve

Area of sand mining in every PRA will be confined central 3/4th of the river. Remaining 1/4th of width will be no mining zone.

A. River wise Total Geological Reserve – Total Geological Reserve of sand for every River has been calculated by using following equation.
   L x Average width x Average depth of sand deposit
B. Mineable Reserve – L x 3/4th of average width x depth of sand (subject to a maximum of 3m)
C. Extractable Reserve – 60% of mineable reserve.

Mineable reserve for every identified PRAs are given in Table-15

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Table 15 List of Potential Sand Area of Khunti (Category-2)

UIN No.	Mauza	Plot no.	Thana No.	Panchayat	Block	Area (Ha.)	Name of River	Length (m)	Width (m)	Depth (m)	Co-ordinate	Mineable mineral potential (in cubic metre) (Wx3/4xLxD)	Extractable mineral potential (in cubic metre) (60% of total mineral potential)
KCH06	Diyankel	1(p)	51	Diyankel	Torpa	2.55	Chhata	486	115	2.0	A- 22°57'18.43"N 85° 6'18.54"E B- 22°57'17.67"N 85° 6'21.84"E C- 22°57'3.94"N 85° 6'18.71"E D- 22°57'3.66"N 85° 6'15.09"E	83835.00	50301.00
	Kasmar	2216(p)	18	Barkuli		3.05							
KCH01	Kanti	2277(p)	36	Iarta	Karra	0.40	Chhata	309	51.8	2.0	A- 23° 4'0.73"N 85° 7'34.57"E B- 23° 4'0.99"N 85° 7'36.36"E C- 23°3'51.11"N 85° 7'37.45"E D- 23° 3'51.26"N 85° 7'36.33"E	24009.30	14405.58
		2452(p)				0.40							
	Sungi	565(p)	35	Sungi	Karra	0.80							
KCH02	Barkuli	1707(p)	19	Barkuli	Torpa	6.95	Chhata	771	90.14	2.0	A- 22°59'51.60"N 85° 6'56.82"E B- 22°59'48.85"N 85° 7'1.12"E C- 22°59'26.31"N 85° 6'52.61"E D- 22°59'26.31"N 85° 6'50.28"E	104246.91	62548.15

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KCH03	Barkuli	1707(p)	19	Barkuli	Torpa	4.36	Chhata	517	84.33	2.0	A- 22°58'55.74"N, 85° 6'30.08"E B- 22°58'55.57"N 85° 6'33.47"E C- 22°58'41.65"N, 85° 6'31.59"E D- 22°58'44.39"N 85° 6'27.70"E	65397.92	39238.75
KCH05	Manhatu	917	22	Diyankel	Torpa	2.50	Chhata	498	100.4	2.0	A- 22°57'44.49"N 85° 6'31.33"E B- 22°57'42.97"N 85° 6'31.99"E C- 22°57'31.71"N 85° 6'27.46"E D- 22°57'31.03"N 85° 6'23.72"E	74998.80	44999.28
	Kasmar	2173	18	Barkuli		2.50							
KCH04	Manhatu	1(p)	22	Diyankel	Torpa	2.60	Chhata	445	116.8	2.0	A- 22°58'6.63"N 85° 6'32.62"E B- 22°58'6.70"N 85° 6'36.23"E C- 22°57'51.63"N 85° 6'40.52"E D- 22°57'50.78"N 85° 6'37.71"E	77964.00	46778.40
	Kasmar	1415(p)	18	Barkuli		2.60							
KCG02	Diyankel	571(p)	51	Diyankel	Torpa	2.60	Chengarjor	316	82.2	1.7	A- 22°56'47.44"N 85° 6'24.99"E B- 22°56'45.78"N 85° 6'24.86"E C- 22°56'51.54"N 85° 6'15.26"E D- 22°56'52.66"N 85° 6'16.69"E	33118.38	19871.03

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KCG01	Ramjay	101(p)	48	Diyankel	Torpa	1.50	Chengarjor	230	65	1.7	A- 22°56'36.59"N 85° 7'41.07"E B- 22°56'35.08"N 85° 7'41.09"E C- 22°56'35.01"N 85° 7'34.36"E D- 22°56'36.05"N 85° 7'34.03"E	19061.25	11436.75
KKA03	Nichitpur	1(p)	66	Urikel	Torpa	18.10	Karo	1845	195	2.5	A- 22°54'43.63"N 85° 3'22.70"E B- 22°54'42.12"N 85° 3'32.64"E C- 22°53'43.48"N 85° 3'47.20"E D- 22°53'44.54"N 85° 3'41.19"E	674578.13	404746.88
	Ulihatu	1023(p)	65			10.00							
		1016(p)				8.00							
KKA04	Koinara	1680(p)	83	Banai	Rania	4.00	Karo	865	167.63	2.5	A- 22°52'25.99"N 85° 3'53.65"E B- 22°52'29.44"N 85° 3'56.66"E C- 22°52'22.26"N 85° 4'7.63"E D- 22°52'17.78"N 85° 4'5.47"E	271874.91	163124.94
		1681(p)				3.25							
	Jarakel	578	84			3.25							
		305(p)				4.00							
KKA05	Jarakel	305(p)	84	Banai	Rania	4.20	Karo	989	128.4	2.5	A- 22°52'11.58"N 85° 4'33.87"E B- 22°52'15.09"N 85° 4'36.72"E C- 22°51'49.39"N 85° 4'38.07"E D- 22°51'44.96"N 85° 4'34.12"E	238101.75	142861.05
		439				2.00							
	Koinara	1681(p)	83	Banai	Rania	1.50							
	Kocha	1	82	Topkara	Torpa	5.00							

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KKA06	Banai	1652(p)	107	Banai	Rania	7.20	Karo	860	167	2.5	A- 22°50'36.46"N 85° 5'49.23"E B- 22°50'38.83"N 85° 5'51.38"E C- 22°50'27.46"N 85° 6'14.82"E D- 22°50'23.59"N 85° 6'14.74"E	269287.50	161572.50
	Kocha	3580(p)	82	Topkara	Torpa	7.20							
KKA01	Budhiroma	221(p)	105	Dumargadi	Karra	1.74	Karo	415	41.92	2.5	A-23°10'14.25"N 85° 3'13.27"E B- 23°10'14.73"N 85° 3'14.12"E C- 23°10'4.03"N 85° 3'21.15"E D- 23°10'3.71"N 85° 3'19.88"E	32619.00	19571.40
KKA07	Japut	1360(p)	111	Jaipur	Rania	0.78	Karo	985	136.35	2.5	A- 22°50'21.63"N, 85° 7'46.34"E B- 22°50'21.82"N 85° 7'49.56"E C- 22°49'49.55"N 85° 7'48.79"E D- 22°49'51.50"N 85° 7'43.37"E	251821.41	151092.84
		826(p)				5.31							
	Derang	325(p)	75	Fatka	Torpa	0.93							
	Lohajimi	1(p)	112			6.45							
KKA02	Gobindpur	100(p)	49	Gobindpur	Karra	11.85	Karo	730	162	2.5	A- 23° 4'17.16"N 84°59'45.56"E B- 23° 4'17.92"N 84°59'48.96"E C- 23° 3'59.62"N 84°59'51.67"E D- 23° 3'58.47"N 84°59'49.26"E	221737.50	133042.50

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KBA03	Mahil	2188(p)	256	Hansa	Murhu	1.08	Banai	350	59	1.5	A- 23° 0'35.68"N 85°14'6.14"E B- 23° 0'36.27"N 85°14'7.63"E C- 23° 0'23.86"N 85°14'12.37"E D- 23° 0'22.87"N 85°14'10.85"E	23231.25	13938.75
	Ghaghra	1482(p)	266	ganloya		1.00							
KBA04	Mahil	2058(p)	256	Hansa	Murhu	1.68	Banai	430	76	1.5	A- 23° 0'12.51"N 85°14'21.17"E B- 23° 0'13.30"N 85°14'22.67"E C- 22°59'59.89"N 85°14'21.80"E D- 22°59'59.88"N 85°14'19.84"E	36765.00	22059.00
	Ghaghra	1482(p)	266	ganloya		1.60							
KBA02	Bichna	2512(p)	262	Bichna	Murhu	2.79	Banai	350	79	1.5	A- 23° 1'59.92"N 85°13'30.91"E B- 23° 2'0.09"N 85°13'32.60"E C- 23° 1'51.84"N 85°13'28.73"E D- 23° 1'52.52"N 85°13'27.96"E	31106.25	18663.75
KBA01	Pandu	1683(p)	248	Bichna	Murhu	2.80	Banai	389	73	1.5	A- 23° 3'2.68"N 85°13'53.38"E B- 23° 3'1.08"N 85°13'53.58"E C- 23° 2'55.84"N 85°13'42.67"E D- 23° 2'56.90"N 85°13'40.92"E	31946.63	19167.98

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KSU01	Churgi	790(p)	50	Diyankel	Torpa	3.25	Sundari	541	60	1.5	A- 22° 57'11.32"N 85° 7'53.85"E, B- 22° 57'9.99"N 85° 7'53.92"E C- 22° 56'57.92"N 85° 7'41.28"E D- 22° 56'59.50"N 85° 7'40.03"E	36517.50	21910.50
KKO01	Sode	1(p)	157	Sode	Rania	7.10	Koel	730	139	2.5	A- 22°41'15.91"N 85° 2'38.07"E B- 22°41'13.55"N 85° 2'40.83"E C- 22°40'52.95"N 85° 2'31.22"E D- 22°40'52.38"N 85° 2'28.07"E	190256.25	114153.75
KKO02	Sode	1426(p)	157	Sode	Rania	10.21	Koel	830	169	2.5	A- 22°40'17.89"N 85° 3'4.42"E B- 22°40'20.76"N, 85° 3'5.09"E C- 22°40'18.47"N 85° 3'22.10"E D- 22°40'15.91"N 85° 3'21.43"E	263006.25	157803.75
KKC04	Gurbera	1 39	288	Uparbalalong	Erki	4.72 6.34	Kanchi	1089	101	3.0	A- 23° 7'14.88"N 85°34'48.92"E, B- 23° 7'17.80"N 85°34'48.83"E C- 23° 7'1.50"N 85°35'22.55"E D- 23° 6'58.63"N 85°35'21.92"E	247475.25	148485.15

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KKC03	Sargia	1(p)	293	Sargeya	Erki	6.28	Kanchi	468	134	3.0	A- 23° 6'31.94"N 85°33'43.06"E B- 23° 6'32.87"N 85°33'41.16"E C- 23° 6'45.64"N 85°33'49.30"E D- 23° 6'43.11"N 85°33'52.80"E	141102.00	84661.20
KKC02	Maipa	805 790 2199 1(p)	295	Sargeya	Erki	3.64 8.82 6.51 1.34	Kanchi	1693	119	3.0	A- 23° 7'13.15"N 85°31'15.27"E B- 23° 7'17.00"N 85°31'15.92"E C- 23° 7'18.38"N 85°32'12.00"E D- 23° 7'15.56"N 85°32'11.46"E	453300.75	271980.45
KKC01	Barigara	1(p) 2827	296	Sargeya	Erki	4.68 18.66	Kanchi	1653	130	3.0	A- 23° 7'16.58"N 85°29'39.77"E, B- 23° 7'20.42"N, 85°29'40.55"E C-23°'15.84"N 85°30'36.94"E D- 23° 7'13.37"N 85°30'38.96"E	483502.50	290101.50

Lease area should be identified considering observation of DFO and CO enclosed at annexure D and E vis-à-vis siting criteria of SEIAA (annexure L) Pollution Control Board.

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JHARKHAND STATE SAND MINING POLICY - 2017

Department of Industries, Mines & Geology, Government of Jharkhand circulated gazette notification No. Kha.Ni (VIVIDH) – 67/2017 – 1905 dated 16.08.17 relating to Jharkhand state sand mining policy 2017.

In paragraph 2 of the notification relates to categorization of streams River. Which is reproduces below:

Based on District Survey Report the survey committee shall categorize the sand in 1st order and 2nd order stream/River as category-1 and 3rd order and above as category-2.

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List of Category – I

Sl No.	Sandghat	Plot No	Mauza	Panchayat	Block	River	Coordinate	Area (Ha)	Mineable mineral potential (in CUM) (60% of total mineral potential)
1	Sungi	565	Sungi	Karra	Karra	Chhata	A-23° 2'32.92"N 85° 7'58.81"E B-23° 2'32.90"N 85° 8'1.56"E C-23° 2'12.49"N 85° 8'5.69"E D-23° 2'11.33"N 85° 8'3.15"E	4.21	34101
2	Diyankel	1,557	Diyankel	Torpa	Torpa	Chhata	A-22°57'18.49"N 85° 6'18.36"E B-22°57'16.78"N 85° 6'21.23"E C-22°57'1.09"N 85° 6'16.25"E D-22°57'2.33"N 85° 6'14.68"E	4.72	38232
3	Churgi	790	Churgi	Torpa	Torpa	Sundari	A-22°56'57.74"N 85° 7'39.09"E B-22°57'9.94"N 85° 7'51.86"E C-22°57'9.19"N 85° 7'52.90"E D-22°56'56.68"N 85° 7'40.05"E	2.45	19845
4	Mahil	2188	Mahil	Murhu	Murhu	Banai	A-23° 0'35.61"N 85°14'6.26"E B-23° 0'36.30"N 85°14'8.03"E C-23° 0'24.61"N 85°14'13.09"E D-23° 0'22.60"N 85°14'10.88"E	2.81	22761
5	Ganloya	622	Ganloya	Murhu	Murhu	Banai	A-22°59'10.44"N 85°15'5.95"E B-22°59'11.64"N 85°15'7.41"E C-22°58'47.77"N 85°15'17.08"E D-22°58'47.40"N 85°15'15.71"E	3.49	28269

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Step-5: Determination of Rate of Annual Replenishment of Sand

The most important aspect in river engineering is prediction of bed load, transport rates (Annual Replenishment Rate) in streams. Three modes of transport namely rolling, sliding and siltation may occur simultaneously in bed load transport. The different modes of transportation are closely related and it is difficult, to separate them completely. There are a number of empirical equations to compute the Rate of Annual Replenishment of Sand for a River.

(a) Replenishment Study Based on Empirical formula:-

The Replenishment study is based on use of theoretical empirical formula comprising of analytical models to calculate the replenishment estimation. Sedimentation in river bed depends on catchment yield, peak flood discharge, bed load transport rates & sediment yield characteristics of the river use of these empirical formula need assessment of catchment yield, peak flood discharge & sieve analysis of river bed material.

Commonly used Empirical Equation are given below:

i. Ackers and White Equation:-

Ackers and White (1973) used dimensional analysis based on flow power concept and their proposed formula is as follows.

$$C_t = C_s G_s (d_{50}/h) (v/u_*)^{n'} [(F_{gr}/A1) - 1]^m$$

The dimensionless particle d_{gr} is calculated by :

$$d_{gr} = d_{50} (g (G_s-1)/v^2)^{1/3}$$

The particle mobility factor F_{gr} is calculated by:

$$F_{gr} = (U^{*n'}/(Gs - 1)g\, d_{50})^{1/2} * (V/(5.66\log (10/h\, d_{50}))^{1-n'}$$

Where,

A_1 = Critical particle mobility factor
C_s = Concentration coefficient in the sediments transport function
C_t = Total sediments concentration
d_{50} = Median grain size
d_{gr} = Dimensionless particle diameter
F_{gr} = Particle mobility parameter
g = Acceleration of gravity
D_g, S_g = Specific gravity
h = Water depth
m = Exponent in the sediment transport function
n′ = Manning roughness coefficient
U_* = Shear velocity
V = Mean flow velocity
v = Kinematic viscosity

ii. Meyer – Peter's equation :

Meyer – Peter's equation is based on experimental work carried out at Federal Institute of Technology Zurich. Mayer – Peter gave a dimensionless equation

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based, Mayer – Peter equations giving an empirical correlation of bed load transport rates in flumes and natural rivers.
The simplified Mayer – Peter's equation is given below:
g_b $0.417[\tau o\ (\eta'/\eta)^{1.5} - \tau c\ ]^{1.5}$
Where,
gb = Rate of bed load transport (by weight) in N per m width of channel per second.
η'= Manning's coefficient pertaining to grain size on an unrippled bed and stickler formula i,e. n' = (1/24) x d1/6 where d is the median size (d_{50}) of the bed sediment in m.
η = The actual observed value of the rugosity coefficient on rippled channels. Its value is generally taken as 0.020 for discharges of more than 11 cumecs, and 0.0225 for lower discharges.
τc = Critical shear stress required to move the grain in N/m_2 and given by equation τc = 0.68_7da , where da is mean or average size of the sediment in mm. This arithmetic average size is usually found to vary between d_{50} and d_{60}.
τo = Unit tractive force product by flowing water i.e. yw RS.. Truly speaking, its value should be taken as the unit tractive force product by flowing water on bed = 0.97ywRS. R is the hydraulic mean depth of the channel (depth of flow for wider channel) and S is the bed slope.

iii. Dandy - Bolton Equation :
Dandy – Bolton formula is used to calculate the sedimentation yield because:

- The formula uses catchment area and mean annual run-off as key determinants.
- It does not differentiate in basin wide smaller streams and their characteristics.
- Dandy and Bolton equation calculates all type of sediment yield i,e. sheet and rill erosion gully erosion, channel bed and bank erosion and mass movement etc.

Dandy – Bolton determined the combined the influence of run-off and drainage area on sediment yield to compute the sediment yield. They developed two equations i.e. for run-off less than 2 inch and for run-off more than 2 inch, which are given below:

For run-off less than 2 inch:
(Q < 2in) S = 1289 * (Q) $^{0\text{-}46*}$[1.43-0.26 Log (A)]

For run-off more than 2 inches:

(Q >2in): S = 1958 * (e $^{-0.055-*}$Q [1.43-0.26 Log (A)]

Where S = sediment yield (tones/sq miles/yr)

Q = Mean Annual run-off (inch)

A = Net drainage are in sq mile

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Dandy Bolton formula is often used to calculate the sedimentation yield. But use of these equations to predict sediment yield for a specific location would may not give accurate result because of the wide variability caused by local factors not considered in the equations development. However, they may provide a quick, rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Computed sediment yields normally would be low for highly erosive areas and high for well stabilized drainage basins with high plant density because the equations are derived from average values. The equations express the general relationships between sediment yield, run-off and drainage area, soils. Geology, topography, vegetation and land use. The effect of any of these variables may vary greatly from one geographic location to another, and the relative importance of controlling factors often varies within a given land resource area. Studies revealed that sediment yield per unit area generally decrease as drainage as drainage area increases. As drainage area increases, average land slopes usually decreases; and there is less probability of an intense rainstorm over the entire basin. Both phenomena tent to decrease sediment yield per unit area.

(iv) Catchment Yield Calculation:-

Total quantity of water that is expected in a given period from a stream at the outlet of catchment is known as yield of the catchment in that period. Annual yield from a catchment is the end product of various processes such as precipitation, infiltration & evapo transpiration operating on the catchment.

Catchment yield (m3) = Catchment area (m^2) x Run-off co-efficient (%) of rainfall (m).

Run-off generated from the water shed has been analysed using strange's table 15 method to get the reliable yield results. Run-off from a catchment is dependent on annual rainfall as well as catchment characteristics such as soil by type of ground covering land usage. Remote Sensing was used for demarcation of catchment area relevant to drainage system. Catchment of different rivers flowing in the district of Khunti are given in Table-12.

Run-off co-efficient of the catchment has been established based on strange's table (Table-15) 50% probability of rainfall.

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Table 16 Strange Table

Total Monsoon rainfall (inches)	Total Monsoon rainfall (mm)	Percentage of Runoff to rainfall			Total Monsoon rainfall (inches)	Total Monsoon rainfall (mm)	Percentage of Runoff to rainfall		
		Good catchment	Average catchment	Bad catchment			Good catchment	Average catchment	Bad catchment
1.0	25.4	0.1	0.1	0.1	31.0	787.4	27.4	20.5	13.7
2.0	50.8	0.2	0.2	0.1	32.0	812.8	28.5	21.3	14.2
3.0	76.2	0.4	0.3	0.2	33.0	838.2	29.6	22.2	14.8
4.0	101.6	0.7	0.5	0.3	34.0	863.6	30.8	23.1	15.4
5.0	127.0	1.0	0.7	0.5	35.0	889.0	31.9	23.9	15.9
6.0	152.4	1.5	1.1	0.7	36.0	914.4	33.0	24.7	16.5
7.0	177.8	2.1	1.5	1.0	37.0	939.8	34.1	25.5	17.0
8.0	203.2	2.8	2.1	1.4	38.0	965.2	35.3	26.4	17.6
9.0	228.6	3.5	2.6	1.7	39.0	990.6	36.4	27.3	18.2
10.0	254.0	4.3	3.2	2.1	40.0	1016.0	37.5	28.1	18.7
11.0	279.4	5.2	3.9	2.6	41.0	1041.4	38.6	28.9	19.3
12.0	304.8	6.2	4.6	3.1	42.0	1066.8	39.8	29.8	19.9
13.0	330.2	7.2	5.4	3.6	43.0	1092.2	40.9	30.6	20.4
14.0	355.6	8.3	6.2	4.1	44.0	1117.6	42.0	31.5	21.0
15.0	381.0	9.4	7.0	4.7	45.0	1143.0	43.1	32.3	21.5
16.0	406.4	10.5	7.8	5.2	46.0	1168.4	44.3	33.2	22.1
17.0	431.8	11.6	8.7	5.8	47.0	1193.8	45.4	34.0	22.7
18.0	457.2	12.8	9.6	6.4	48.0	1219.2	46.5	34.8	23.2
19.0	482.6	13.9	10.4	6.9	49.0	1244.6	47.6	35.7	23.8
20.0	508.0	15.0	11.3	7.5	50.0	1270.0	48.8	36.6	24.4
21.0	533.4	16.1	12.0	8.0	51.0	1295.4	49.9	37.4	24.9
22.0	558.8	17.3	12.9	8.6	52.0	1320.8	51.0	38.2	25.5
23.0	584.2	18.4	13.8	9.2	53.0	1346.2	52.1	39.0	26.0
24.0	609.6	19.5	14.6	9.7	54.0	1371.6	53.3	39.9	26.6
25.0	635.0	20.6	15.4	10.3	55.0	1397.0	54.4	40.8	27.2
26.0	660.4	21.8	16.3	10.9	56.0	1422.4	55.5	41.6	27.7
27.0	685.8	22.9	17.1	11.4	57.0	1447.8	56.6	42.4	28.3
28.0	711.2	24.0	18.0	12.0	58.0	1473.2	57.8	43.3	28.9
29.0	736.6	25.1	18.8	12.5	59.0	1498.6	58.9	44.4	29.4
30.0	762.0	26.3	19.7	13.1	60.0	1524.0	60.0	45.0	30.0

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Table 17 Catchment Yield and Peak Flood Discharge

Catchment Yield and Peak Flood Discharge
(Rainfall in descending order)
River - Karo

Sl. No. (n)	Rainfall in descending order in mm	Year	%dependability (n/N+1)*100
1	1849.60	2011	4.76
2	1764.70	2002	9.52
3	1614.70	2008	14.29
4	1577.70	2006	19.05
5	1471.60	2001	23.81
6	1302.00	2007	28.57
7	1298.10	2015	33.33
8	1224.10	2013	38.10
9	1222.40	2012	42.86
10	1192.60	2020	47.62
11	1179.50	2009	52.38
12	1168.50	2017	57.14
13	1055.30	2016	61.90
14	1013.50	2014	66.67
15	910.20	2019	71.43
16	714.20	2010	76.19
17	704.10	2018	80.95
18	243.20	2005	85.71
19	51.40	2004	90.48
20	6.00	2003	95.24

$$m = \frac{n \times p}{100}$$

Where

N = number of years for which rainfall observation available
m = Order No.
p = Rainfall dependability percentage

In present case N=20, p=50% dependability of rainfall, 50%

m= (20 x 50)/100 = 10

Corresponding to m = 10 the rainfall have been observed as 1192.60 mm

$$n = \frac{34.0 \times 1.193}{100} = 0.406 \text{ m}$$

Referring to strange table give in Table No.- 15 and taking catchment as average the run-off coefficient is 34%
With this catchment yield works out to (498.07 x 1000 x 1000 x 0.406) = 202.22 MCM
Calculation of Peak flood Discharge using dickens equation

$Q = CA^{3/4}$

Where Q = Peak flood discharge, C a constant depending on charecterics of the catchment, a = catchment area in sqkm
In the present case C = 11, a = 498.07

$= 11 \times 194.56^{3/4} = 11 \times (498.07)^{3/4}$

$= 1159.75$

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Table 18 Catchment Yield and Peak Flood Discharge

Catchment Yield and Peak Flood Discharge
(Rainfall in descending order)
River - Chhate

Sl. No. (n)	Rainfall in descending order in mm	Year	%dependability (n/N+1)*100
1	1849.60	2011	4.76
2	1764.70	2002	9.52
3	1614.70	2008	14.29
4	1577.70	2006	19.05
5	1471.60	2001	23.81
6	1302.00	2007	28.57
7	1298.10	2015	33.33
8	1224.10	2013	38.10
9	1222.40	2012	42.86
10	1192.60	2020	47.62
11	1179.50	2009	52.38
12	1168.50	2017	57.14
13	1055.30	2016	61.90
14	1013.50	2014	66.67
15	910.20	2019	71.43
16	714.20	2010	76.19
17	704.10	2018	80.95
18	243.20	2005	85.71
19	51.40	2004	90.48
20	6.00	2003	95.24

$$m = \frac{n \times p}{100}$$

Where

N = number of years for which rainfall observation available
m = Order No.
p = Rainfall dependability percentage

In present case N=20, p=50% dependability of rainfall, 50%

m= (20 x 50)/100 = 10

Corresponding to m = 10 the rainfall have been observed as 1192.60 mm

$$n = \frac{34.0 \times 1.193}{100} = 0.406 \text{ m}$$

Referring to strange table give in Table No.- 15 and taking catchment as average the run-off coefficient is 34%
With this catchment yield works out to (69.07 x 1000 x 1000 x 0.406) = 28.04 MCM
Calculation of Peak flood Discharge using dickens equation

$Q = CA^{3/4}$

Where Q = Peak flood discharge, C a constant depending on characteristics of the catchment, a = catchment area in sq.km
In the present case C = 11, a = 69.07

$= 11 \times 26.98^{3/4} = 11 \times (69.07)^{3/4}$

$= 263.54$

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Table 19 Catchment Yield and Peak Flood Discharge

Catchment Yield and Peak Flood Discharge
(Rainfall in descending order)
River - Chengarjor

Sl. No. (n)	Rainfall in descending order in mm	Year	%dependability (n/N+1)*100
1	1849.60	2011	4.76
2	1764.70	2002	9.52
3	1614.70	2008	14.29
4	1577.70	2006	19.05
5	1471.60	2001	23.81
6	1302.00	2007	28.57
7	1298.10	2015	33.33
8	1224.10	2013	38.10
9	1222.40	2012	42.86
10	1192.60	2020	47.62
11	1179.50	2009	52.38
12	1168.50	2017	57.14
13	1055.30	2016	61.90
14	1013.50	2014	66.67
15	910.20	2019	71.43
16	714.20	2010	76.19
17	704.10	2018	80.95
18	243.20	2005	85.71
19	51.40	2004	90.48
20	6.00	2003	95.24

$$m = \frac{n \times p}{100}$$

Where

N = number of years for which rainfall observation available
m = Order No.
p = Rainfall dependability percentage

In present case N=20, p=50% dependability of rainfall, 50%

m= (20 x 50)/100 = 10

Corresponding to m = 10 the rainfall have been observed as 1192.60 mm

$$n = \frac{34.0 \times 1.193}{100} = 0.406 \text{ m}$$

Referring to strange table give in Table No.- 15 and taking catchment as average the run-off coefficient is 34%
With this catchment yield works out to (14.59 x 1000 x 1000 x 0.406) = 5.92 MCM
Calculation of Peak flood Discharge using dickens equation

$Q = CA^{3/4}$

Where Q = Peak flood discharge, C a constant depending on characteristics of the catchment, a = catchment area in sq.km

In the present case C = 11, a = 14.59

$= 11 \times 5.7^{3/4} = 11 \times (14.59)^{3/4}$

$= 82.13$

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Table 20 Catchment Yield and Peak Flood Discharge

Catchment Yield and Peak Flood Discharge
(Rainfall in descending order)
River - Koel

Sl. No. (n)	Rainfall in descending order in mm	Year	%dependability (n/N+1)*100
1	1849.60	2011	4.76
2	1764.70	2002	9.52
3	1614.70	2008	14.29
4	1577.70	2006	19.05
5	1471.60	2001	23.81
6	1302.00	2007	28.57
7	1298.10	2015	33.33
8	1224.10	2013	38.10
9	1222.40	2012	42.86
10	1192.60	2020	47.62
11	1179.50	2009	52.38
12	1168.50	2017	57.14
13	1055.30	2016	61.90
14	1013.50	2014	66.67
15	910.20	2019	71.43
16	714.20	2010	76.19
17	704.10	2018	80.95
18	243.20	2005	85.71
19	51.40	2004	90.48
20	6.00	2003	95.24

$$m = \frac{n \times p}{100}$$

Where

N = number of years for which rainfall observation available
m = Order No.
p = Rainfall dependability percentage

In present case N=20, p=50% dependability of rainfall, 50%

m= (20 x 50)/100 = 10

Corresponding to m = 10 the rainfall have been observed as 1192.60 mm

$$n = \frac{34.0 \times 1.193}{100} = 0.406 \text{ m}$$

Referring to strange table give in Table No.- 15 and taking catchment as average the run-off coefficient is 34%
With this catchment yield works out to (1041.87 x 1000 x 1000 x 0.406) = 423.00 MCM
Calculation of Peak flood Discharge using dickens equation

$Q = CA^{3/4}$

Where Q = Peak flood discharge, C a constant depending on characteristics of the catchment, a = catchment area in sq.km

In the present case C = 11, a = 1041.87

$= 11 \times 406.98^{3/4} = 11 \times (1041.87)^{3/4}$

$= 2017.22$

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Table 21 Catchment Yield and Peak Flood Discharge

Catchment Yield and Peak Flood Discharge
(Rainfall in descending order)
River - Kanchi

Sl. No. (n)	Rainfall in descending order in mm	Year	%dependability (n/N+1)*100
1	1849.60	2011	4.76
2	1764.70	2002	9.52
3	1614.70	2008	14.29
4	1577.70	2006	19.05
5	1471.60	2001	23.81
6	1302.00	2007	28.57
7	1298.10	2015	33.33
8	1224.10	2013	38.10
9	1222.40	2012	42.86
10	1192.60	2020	47.62
11	1179.50	2009	52.38
12	1168.50	2017	57.14
13	1055.30	2016	61.90
14	1013.50	2014	66.67
15	910.20	2019	71.43
16	714.20	2010	76.19
17	704.10	2018	80.95
18	243.20	2005	85.71
19	51.40	2004	90.48
20	6.00	2003	95.24

$$m = \frac{n \times p}{100}$$

Where

N = number of years for which rainfall observation available
m = Order No.
p = Rainfall dependability percentage

In present case N=20, p=50% dependability of rainfall, 50%

m= (20 x 50)/100 = 10

Corresponding to m = 10 the rainfall have been observed as 1192.60 mm

$$n = \frac{34.0 \times 1.193}{100} = 0.406 \text{ m}$$

Referring to strange table give in Table No.- 15 and taking catchment as average the run-off coefficient is 34%
With this catchment yield works out to (452.35 x 1000 x 1000 x 0.406) = 183.65 MCM
Calculation of Peak flood Discharge using dickens equation

$Q = CA^{3/4}$

Where Q = Peak flood discharge, C a constant depending on characteristics of the catchment, a = catchment area in sq.km

In the present case C = 11, a = 452.35

$= 11 \times 176.7^{3/4} = 11 \times (452.35)^{3/4}$

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= 1078.95

Table 22 Catchment Yield and Peak Flood Discharge

Catchment Yield and Peak Flood Discharge
(Rainfall in descending order)
River - Sundari

Sl. No. (n)	Rainfall in descending order in mm	Year	%dependability (n/N+1)*100
1	1849.60	2011	4.76
2	1764.70	2002	9.52
3	1614.70	2008	14.29
4	1577.70	2006	19.05
5	1471.60	2001	23.81
6	1302.00	2007	28.57
7	1298.10	2015	33.33
8	1224.10	2013	38.10
9	1222.40	2012	42.86
10	1192.60	2020	47.62
11	1179.50	2009	52.38
12	1168.50	2017	57.14
13	1055.30	2016	61.90
14	1013.50	2014	66.67
15	910.20	2019	71.43
16	714.20	2010	76.19
17	704.10	2018	80.95
18	243.20	2005	85.71
19	51.40	2004	90.48
20	6.00	2003	95.24

$$m = \frac{n \times p}{100}$$

Where

N = number of years for which rainfall observation available
m = Order No.
p = Rainfall dependability percentage

In present case N=20, p=50% dependability of rainfall, 50%

m= (20 x 50)/100 = 10

Corresponding to m = 10 the rainfall have been observed as 1192.60 mm

$$n = \frac{34.0 \times 1.193}{100} = 0.406 \text{ m}$$

Referring to strange table give in Table No.- 15 and taking catchment as average the run-off coefficient is 34%
With this catchment yield works out to (15.56 x 1000 x 1000 x 0.406) = 6.32 MCM
Calculation of Peak flood Discharge using dickens equation

$Q = CA^{3/4}$

Where Q = Peak flood discharge, C a constant depending on characteristics of the catchment, a = catchment area in sq.km

In the present case C = 11, a = 15.56

$= 11 \times 6.08^{3/4} = 11 \times (15.56)^{3/4}$

$= 86.20$

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Table 23 Catchment Yield and Peak Flood Discharge

Catchment Yield and Peak Flood Discharge
(Rainfall in descending order)
River - Banai

Sl. No. (n)	Rainfall in descending order in mm	Year	%dependability (n/N+1)*100
1	1849.60	2011	4.76
2	1764.70	2002	9.52
3	1614.70	2008	14.29
4	1577.70	2006	19.05
5	1471.60	2001	23.81
6	1302.00	2007	28.57
7	1298.10	2015	33.33
8	1224.10	2013	38.10
9	1222.40	2012	42.86
10	1192.60	2020	47.62
11	1179.50	2009	52.38
12	1168.50	2017	57.14
13	1055.30	2016	61.90
14	1013.50	2014	66.67
15	910.20	2019	71.43
16	714.20	2010	76.19
17	704.10	2018	80.95
18	243.20	2005	85.71
19	51.40	2004	90.48
20	6.00	2003	95.24

$$m = \frac{n \times p}{100}$$

Where

N = number of years for which rainfall observation available
m = Order No.
p = Rainfall dependability percentage

In present case N=20, p=50% dependability of rainfall, 50%

m= (20 x 50)/100 = 10

Corresponding to m = 10 the rainfall have been observed as 1192.60 mm

$$n = \frac{34.0 \times 1.193}{100} = 0.406 \text{ m}$$

Referring to strange table give in Table No.- 15 and taking catchment as average the run-off coefficient is 34%
With this catchment yield works out to (82.69 x 1000 x 1000 x 0.406) = 33.57 MCM
Calculation of Peak flood Discharge using dickens equation

$Q = CA^{3/4}$

Where Q = Peak flood discharge, C a constant depending on characteristics of the catchment, a = catchment area in sq.km
In the present case C = 11, a = 82.69

$= 11 \times 32.3^{3/4} = 11 \times (82.69)^{3/4}$

$= 301.63$

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Table 24 River wise rate of replenishment using Sandy – Bolton equation

Karo River (Khunti)

$= 1958 \left(2.56^{-0.055} \times 3.64 \left[1.43 - 0.26 \times \text{Log } 194.56 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.64 \left[1.43 - 0.26 \times 2.28905356 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.64 \left[1.43 - 0.595154 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.64 \left[0.83485 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.0388 \right)$

$= 1958 \left(0.94961 \times 3.0388 \right)$

$= 5650.25$

Chhata River (Khunti)

$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.26 \times \text{Log } 26.98 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.26 \times 1.43104195 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.372071 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.05793 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.2055 \right)$

$= 1958 \left(0.94961 \times 3.2055 \right)$

$= 5960.17$

Chengarjor River (Khunti)

$= 1958 \left(2.56^{-0.055} \times 3.94 \left[1.43 - 0.26 \times \text{Log } 5.7 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.94 \left[1.43 - 0.26 \times 0.75587486 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.94 \left[1.43 - 0.196527 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 3.94 \left[1.23347 \right] \right)$

$= 1958 \left(2.56^{-0.055} \times 4.8599 \right)$

$= 1958 \left(0.94961 \times 4.8599 \right)$

$= 9036.19$

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Koel River (Khunti)

$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.26 \times \text{Log } 406.98 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.26 \times 2.60957307 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.678489 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[0.75151 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 2.2771 \right)$$
$$= 1958 \left(0.94961 \times 2.2771 \right)$$
$$= 4233.87$$

Kanchi River (Khunti)

$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.26 \times \text{Log } 176.70 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.26 \times 2.24723655 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.584282 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[0.84572 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 2.5625 \right)$$
$$= 1958 \left(0.94961 \times 2.5625 \right)$$
$$= 4764.62$$

Sundari River (Khunti)

$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.26 \times \text{Log } 6.08 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.26 \times 0.78390358 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.43 - 0.203815 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 3.03 \left[1.22619 \right] \right)$$
$$= 1958 \left(2.56^{-0.055} \times 3.7153 \right)$$
$$= 1958 \left(0.94961 \times 3.7153 \right)$$
$$= 6908.09$$

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Banai River (Khunti)

=	1958	(	2.56	0.055	x	3.03	[	1.43	-	0.26	x Log	32.30	])
=	1958	(	2.56	0.055	x	3.03	[	1.43	-	0.26	x	1.50920252	
=	1958	(	2.56	0.055	x	3.03	[	1.43	-	0.392393			
=	1958	(	2.56	0.055	x	3.03	[	1.03761					
=	1958	(	2.56	0.055	x	3.1440							
=	1958	(	0.94961		x	3.1440							
=	5845.68												

Determination of Rate of Annual Replenishment Based on Field Survey

Rate of annual replenishment of sand has been determined by considering pre-monsoon data received from District Mining Office & post –monsoon data generated by field survey in December, 2022.

It may also be noted that sand was mined in following one ghats as discussed earlier in Chapter-III, Table-1.

Methodology:

As explained earlier level of sand deposit in river channel were measured at pre-determined locations points pre monsoon & post monsoon. Replenishment volume was estimate by determination of change in area as explained in following figures.

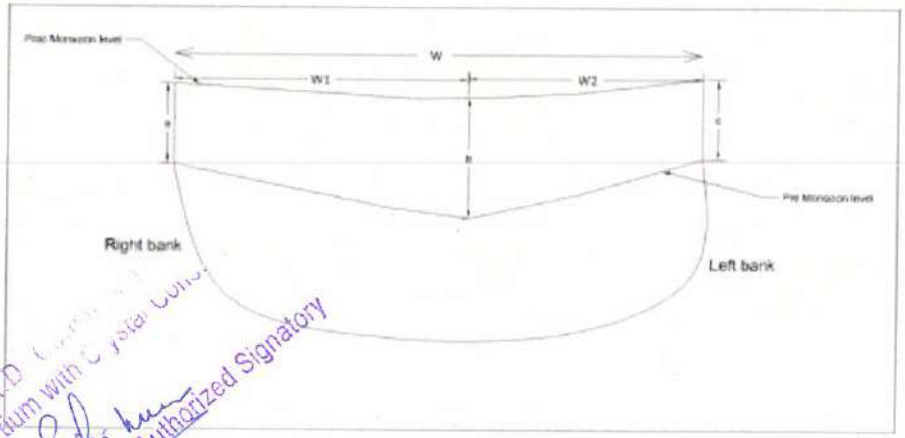
A = (a+b/2) X W1

difference of level area of C.S = (a+b)/2 + (b+c)/2

A2 = (b+c/2) X W2

Area of replenishment = A1 + A2

Volume of replenishment between two cross sections spaced at 100 m = (A1+ A2) x 100



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Sand Replenishment Estimation Sheet

District- KHUNTI River- KARO Mauza- NICHITPUR, ULIHATU UNI-KKA03

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	181	480	480	0.00							
	ROG/00		480	480	0.00							
	LSD/00		478.4	479	0.60	0.60						
	RSD/00		478.3	479	0.70		0.70		0.65			
	MSD/00		478.4	479	0.60			0.60		0.65	117.65	
2	LOG/100	185	481	481	0.00							
	ROG/100		480	480	0.00							
	LSD/100		478.3	479	0.70	0.70						
	RSD/100		478.4	479	0.60		0.60		0.65			
	MSD/100		748.4	749	0.60			0.60		0.60	115.625	5898.9
3	LOG/200	188	481	481	0.00							
	ROG/200		480	480	0.00							
	LSD/200		478.4	479	0.60	0.60						
	RSD/200		478.3	479	0.70		0.70		0.65			
	MSD/200		478.5	479	0.50			0.50		0.60	117.5	5990.625
4	LOG/300	184	481	481	0.00							
	ROG/300		480	480	0.00							

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	LSD/300		478.5	479	0.50	0.50						
	RSD/300		478.4	479	0.60		0.60		0.55			
	MSD/300		478.5	479	0.50			0.50		0.55	101.2	5177.5
5	LOG/400	181	481	481	0.00							
	ROG/400		480	480	0.00							
	LSD/400		478.4	479	0.60	0.60						
	RSD/400		478.5	479	0.50		0.50		0.55			
	MSD/400		478.3	479	0.70			0.70		0.60	104.075	5304.95
6	LOG/500	178	481	481	0.00							
	ROG/500		480	480	0.00							
	LSD/500		478.2	479	0.80	0.80						
	RSD/500		478.3	479	0.70		0.70		0.75			
	MSD/500		478.5	479	0.50			0.50		0.60	120.15	6111.575
7	LOG/600	175	481	481	0.00							
	ROG/600		480	480	0.00							
	LSD/600		478.4	479	0.60	0.60						
	RSD/600		478.4	479	0.60		0.60		0.60			
	MSD/600		478.4	479	0.60			0.60		0.60	105	5370.15
8	LOG/700	177	480	480	0.00							
	ROG/700		479	479	0.00							
	LSD/700		477.30	478	0.70	0.70						
	RSD/700		477.50	478	0.50		0.50		0.60			
	MSD/700		477.40	478	0.60			0.60		0.55	101.775	5193.75

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9	LOG/800	182	480	480	0.00							
	ROG/800		479	479	0.00							
	LSD/800		477.4	478	0.60	0.60						
	RSD/800		477.2	478	0.80		0.80		0.70			
	MSD/800		477.5	478	0.50			0.50		0.65	122.85	6244.275
10	LOG/900	185	480	480	0.00							
	ROG/900		479	479	0.00							
	LSD/900		477.5	478	0.50	0.50						
	RSD/900		477.3	478	0.70		0.70		0.60			
	MSD/900		477.4	478	0.60			0.60		0.65	115.625	5904.1
11	LOG/1000	180	479	479	0.00							
	ROG/1000		480	480	0.00							
	LSD/1000		477.5	478	0.50	0.50						
	RSD/1000		477.3	478	0.70		0.70		0.60			
	MSD/1000		477.4	478	0.60			0.60		0.65	112.5	5740.625
12	LOG/1100	181	479	479	0.00							
	ROG/1100		480	480	0.00							
	LSD/1100		477.5	478	0.50	0.50						
	RSD/1100		477.3	478	0.70		0.70		0.60			
	MSD/1100		477.4	478	0.60			0.60		0.65	113.125	5768.75
13	LOG/1200	182	479	479	0.00							
	ROG/1200		480	480	0.00							
	LSD/1200		477.5	478	0.50	0.50						
	RSD/1200		477.3	478	0.70		0.70		0.60			

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	MSD/1200		477.4	478	0.60			0.60		0.65	113.75	5800.625
14	LOG/1300	182	478	478	0.00							
	ROG/1300		478	478	0.00							
	LSD/1300		476.5	477	0.50	0.50						
	RSD/1300		476.3	477	0.70		0.70		0.60			
	MSD/1300		476.4	477	0.60			0.60		0.65	113.75	5801.25
15	LOG/1400	181	478	478	0.00							
	ROG/1400		478	478	0.00							
	LSD/1400		476.5	477	0.50	0.50						
	RSD/1400		476.3	477	0.70		0.70		0.60			
	MSD/1400		476.4	477	0.60			0.60		0.65	113.125	5770
16	LOG/1500	180	478	478	0.00							
	ROG/1500		478	478	0.00							
	LSD/1500		476.5	477	0.50	0.50						
	RSD/1500		476.3	477	0.70		0.70		0.60			
	MSD/1500		476.4	477	0.60			0.60		0.65	112.5	5738.125
17	LOG/1600	183	478	478	0.00							
	ROG/1600		478	478	0.00							
	LSD/1600		476.5	477	0.50	0.50						
	RSD/1600		476.3	477	0.70		0.70		0.60			
	MSD/1600		476.4	477	0.60			0.60		0.65	114.375	5831.25
18	LOG/1700	185	478	478	0.00							
	ROG/1700		478	478	0.00							

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	LSD/1700		476.5	477	0.50	0.50						
	RSD/1700		476.3	477	0.70		0.70		0.60			
	MSD/1700		476.4	477	0.60			0.60		0.65	115.625	5895.625
19	LOG/1800	184	478	478	0.00							
	ROG/1800		478	478	0.00							
	LSD/1800		476.5	477	0.50	0.50						
	RSD/1800		476.3	477	0.70		0.70		0.60			
	MSD/1800		476.4	477	0.60			0.60		0.65	115	5865.625
20	LOG/1900	189	478	478	0.00							
	ROG/1900		478	478	0.00							
	LSD/1900		476.5	477	0.50	0.50						
	RSD/1900		476.3	477	0.70		0.70		0.60			
	MSD/1900		476.5	477	0.50			0.50		0.60	113.4	5785
21	LOG/2015	194	478	478	0.00							
	ROG/2015		478	478	0.00							
	LSD/2015		476.5	477	0.50	0.50						
	RSD/2015		476.3	477	0.70		0.70		0.60			
	MSD/2015		476.5	477	0.50			0.50		0.60	116.4	5933.4
										TOTAL		115126.1

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- BANAI | Mauza- MAHIL AND GHAGHRA | UNI-KBA03

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	71	566	566	0.00							
	ROG/00		566	566	0.00							
	LSD/00		564.4	565	0.60	0.60						
	RSD/00		564.3	565	0.70		0.70		0.65			
	MSD/00		564.4	565	0.60			0.60		0.65	46.15	
2	LOG/100	73	566	566	0.00							
	ROG/100		567	567	0.00							
	LSD/100		564.3	565	0.70	0.70						
	RSD/100		564.4	565	0.60		0.60		0.65			
	MSD/100		564.4	565	0.60			0.60		0.60	45.625	2327.4
3	LOG/200	69	567	567	0.00							
	ROG/200		567	567	0.00							
	LSD/200		564.4	565	0.60	0.60						
	RSD/200		564.3	565	0.70		0.70		0.65			
	MSD/200		564.5	565	0.50			0.50		0.60	43.125	2201.875
4	LOG/300	67	567	567	0.00							
	ROG/300		564	564	0.00							
	LSD/300		563.5	564	0.50	0.50						
	RSD/300		563.4	564	0.60		0.60		0.55			
	MSD/300		563.5	564	0.50			0.50		0.55	36.85	1885.625

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5	LOG/350	72	567	567	0.00							
	ROG/350		564	564	0.00							
	LSD/350		563.4	564	0.60	0.60						
	RSD/350		563.5	564	0.50		0.50		0.55			
	MSD/350		563.3	564	0.70			0.70		0.60	41.4	2106.85
										TOTAL		8521.75

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- CHENGARJOR | Mauza- DIYANKEL | UNI-KCG02

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	52	500	500	0.00							
	ROG/00		500	500	0.00							
	LSD/00		499.4	500	0.60	0.60						
	RSD/00		499.3	500	0.70		0.70		0.65			
	MSD/00		499.4	500	0.60			0.60		0.65	33.8	
2	LOG/100	54	501	501	0.00							
	ROG/100		501	501	0.00							
	LSD/100		498.3	499	0.70	0.70						
	RSD/100		498.4	499	0.60		0.60		0.65			
	MSD/100		498.4	499	0.60			0.60		0.60	33.75	1721.3
3	LOG/200	57	500	500	0.00							
	ROG/200		500	500	0.00							
	LSD/200		499.4	500	0.60	0.60						
	RSD/200		499.3	500	0.70		0.70		0.65			
	MSD/200		499.5	500	0.50			0.50		0.60	35.625	1815
4	LOG/300	49	501	501	0.00							
	ROG/300		500	500	0.00							

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	LSD/300		497.5	498	0.50	0.50						
	RSD/300		497.4	498	0.60		0.60		0.55			
	MSD/300		497.5	498	0.50			0.50		0.55	26.95	1383.125
5	LOG/400	48	501	501	0.00							
	ROG/400		500	500	0.00							
	LSD/400		497.5	498	0.50	0.50						
	RSD/400		497.4	498	0.60		0.60		0.55			
	MSD/400		497.5	498	0.50			0.50		0.55	26.4	1346.95
6	LOG/495	50	501	501	0.00							
	ROG/495		500	500	0.00							
	LSD/495		497.5	498	0.50	0.50						
	RSD/495		497.4	498	0.60		0.60		0.55			
	MSD/495		497.5	498	0.50			0.50		0.55	27.5	1401.4
										TOTAL		7667.775

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- BANAI | Mauza- PANDU | UNI-KBA01

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Difference in (m)	Volume between Consecutive Axis						
			Pre Monsoon	Post Monsoon		a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	74	583	583	0.00							
	ROG/00		584	584	0.00							
	LSD/00		580.4	581	0.60	0.60						
	RSD/00		580.3	581	0.70		0.70		0.65			
	MSD/00		580.4	581	0.60			0.60		0.65	48.1	
2	LOG/100	72	582	582	0.00							
	ROG/100		584	584	0.00							
	LSD/100		580.3	581	0.70	0.70						
	RSD/100		580.4	581	0.60		0.60		0.65			
	MSD/100		580.4	581	0.60			0.60		0.60	45	2298.1
3	LOG/200	70	582	582	0.00							
	ROG/200		583	583	0.00							
	LSD/200		580.4	581	0.60	0.60						
	RSD/200		580.3	581	0.70		0.70		0.65			
	MSD/200		580.5	581	0.50			0.50		0.60	43.75	2232.5
4	LOG/300	72	582	582	0.00							
	ROG/300		584	584	0.00							

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	LSD/300		579.5	580	0.50	0.50						
	RSD/300		579.4	580	0.60		0.60		0.55			
	MSD/300		579.5	580	0.50			0.50		0.55	39.6	2023.75
5	LOG/389	71	581	581	0.00							
	ROG/389		583	583	0.00							
	LSD/389		579.4	580	0.60	0.60						
	RSD/389		579.5	580	0.50		0.50		0.55			
	MSD/389		579.3	580	0.70			0.70		0.60	40.825	2080.85
										TOTAL		8635.2

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- BANAI | Mauza- GHAGHRA | UNI-KBA04

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Difference in (m)	Volume between Consecutive Axis						
			Pre Monsoon	Post Monsoon		a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	76	565	565	0.00							
	ROG/00		563	563	0.00							
	LSD/00		561.4	562	0.60	0.60						
	RSD/00		561.3	562	0.70		0.70		0.65			
	MSD/00		561.4	562	0.60			0.60		0.65	49.4	
2	LOG/100	75	562	562	0.00							
	ROG/100		563	563	0.00							
	LSD/100		561.3	562	0.70	0.70						
	RSD/100		561.4	562	0.60		0.60		0.65			
	MSD/100		561.4	562	0.60			0.60		0.60	46.875	2393.15
3	LOG/200	73	563	563	0.00							
	ROG/200		563	563	0.00							
	LSD/200		562.4	563	0.60	0.60						
	RSD/200		562.3	563	0.70		0.70		0.65			
	MSD/200		562.5	563	0.50			0.50		0.60	45.625	2328.125
4	LOG/300	70	562	562	0.00							
	ROG/300		564	564	0.00							

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	LSD/300		561.5	562	0.50	0.50						
	RSD/300		561.4	562	0.60		0.60		0.55			
	MSD/300		561.5	562	0.50			0.50		0.55	38.5	1970.625
	LOG/430		563	563	0.00							
	ROG/430		564	564	0.00							
5	LSD/430	78	560.4	561	0.60	0.60						
	RSD/430		560.5	561	0.50		0.50		0.55			
	MSD/430		560.3	561	0.70			0.70		0.60	44.85	2281
										TOTAL		8972.9

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- CHHATA | Mauza- KANTI | UNI-KCH01

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	57	544	544	0.00							
	ROG/00		543	543	0.00							
	LSD/00		541.4	542	0.60	0.60						
	RSD/00		541.3	542	0.70		0.70		0.65			
	MSD/00		541.4	542	0.60			0.60		0.65	37.05	
2	LOG/100	52	544	544	0.00							
	ROG/100		543	543	0.00							
	LSD/100		541.3	542	0.70	0.70						
	RSD/100		541.4	542	0.60		0.60		0.65			
	MSD/100		541.4	542	0.60			0.60		0.60	32.5	1662.05
3	LOG/225	55	542	542	0.00							
	ROG/225		543	543	0.00							
	LSD/225		540.4	541	0.60	0.60						
	RSD/225		540.3	541	0.70		0.70		0.65			
	MSD/225		540.5	541	0.50			0.50		0.60	34.375	1751.25
										TOTAL		3413.3

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- CHHATA | Mauza- BARKULI | UNI-KCH02

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	90	512	512	0.00							
	ROG/00		512	512	0.00							
	LSD/00		510.4	511	0.60	0.60						
	RSD/00		510.3	511	0.70		0.70		0.65			
	MSD/00		510.4	511	0.60			0.60		0.65	58.5	
2	LOG/100	95	512	512	0.00							
	ROG/100		512	512	0.00							
	LSD/100		510.3	511	0.70	0.70						
	RSD/100		510.4	511	0.60		0.60		0.65			
	MSD/100		510.4	511	0.60			0.60		0.60	59.375	3027.25
3	LOG/200	97	512	512	0.00							
	ROG/200		514	514	0.00							
	LSD/200		510.4	511	0.60	0.60						
	RSD/200		510.3	511	0.70		0.70		0.65			
	MSD/200		510.5	511	0.50			0.50		0.60	60.625	3090.625
4	LOG/300	93	511	511	0.00							
	ROG/300		512	512	0.00							
	LSD/300		510.5	511	0.50	0.50						

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	RSD/300		510.4	511	0.60		0.60		0.55				
	MSD/300		510.5	511	0.50			0.50		0.55	51.15	2618.125	
5	LOG/400	89	514	514	0.00								
	ROG/400		512	512	0.00								
	LSD/400		510.4	511	0.60	0.60							
	RSD/400		510.5	511	0.50		0.50		0.55				
	MSD/400		510.3	511	0.70			0.70		0.60	51.175	2609.9	
6	LOG/500	85	511	511	0.00								
	ROG/500		511	511	0.00								
	LSD/500		510.2	511	0.80	0.80							
	RSD/500		510.3	511	0.70		0.70		0.75				
	MSD/500		510.5	511	0.50			0.50		0.60	57.375	2919.925	
7	LOG/600	92	510	510	0.00								
	ROG/600		510	510	0.00								
	LSD/600		509.4	510	0.60	0.60							
	RSD/600		509.4	510	0.60		0.60		0.60				
	MSD/600		509.4	510	0.60			0.60		0.60	55.2	2817.375	
8	LOG/700	97	511	511	0.00								
	ROG/700		511	511	0.00								
	LSD/700		508.30	509	0.70	0.70							
	RSD/700		508.50	509	0.50		0.50		0.60				
	MSD/700		508.40	509	0.60			0.60		0.55	55.775	2843.95	
9	LOG/771	90	510	510	0.00								
	ROG/771		510	510	0.00								

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	LSD/771		509.4	510	0.60	0.60						
	RSD/771		509.2	510	0.80		0.80		0.70			
	MSD/771		509.5	510	0.50			0.50		0.65	60.75	3093.275
										TOTAL		23020.43

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- CHHATA | Mauza- BARKULI | UNI-KCH03

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	85	508	508	0.00							
	ROG/00		508	508	0.00							
	LSD/00		505.4	506	0.60	0.60						
	RSD/00		505.3	506	0.70		0.70		0.65			
	MSD/00		505.4	506	0.60			0.60		0.65	55.25	
2	LOG/100	82	508	508	0.00							
	ROG/100		508	508	0.00							
	LSD/100		506.3	507	0.70	0.70						
	RSD/100		506.4	507	0.60		0.60		0.65			
	MSD/100		506.4	507	0.60			0.60		0.60	51.25	2617.75
3	LOG/200	79	508	508	0.00							
	ROG/200		507	507	0.00							
	LSD/200		505.4	506	0.60	0.60						
	RSD/200		505.3	506	0.70		0.70		0.65			
	MSD/200		505.5	506	0.50			0.50		0.60	49.375	2520
4	LOG/300	84	508	508	0.00							
	ROG/300		508	508	0.00							
	LSD/300		505.5	506	0.50	0.50						

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	RSD/300		505.4	506	0.60		0.60		0.55			
	MSD/300		505.5	506	0.50			0.50		0.55	46.2	2359.375
5	LOG/400	87	508	508	0.00							
	ROG/400		508	508	0.00							
	LSD/400		505.4	506	0.60	0.60						
	RSD/400		505.5	506	0.50		0.50		0.55			
	MSD/400		505.3	506	0.70			0.70		0.60	50.025	2547.45
6	LOG/517	85	507	507	0.00							
	ROG/517		507	507	0.00							
	LSD/517		505.2	506	0.80	0.80						
	RSD/517		505.3	506	0.70		0.70		0.75			
	MSD/517		505.5	506	0.50			0.50		0.60	57.375	2918.775
										TOTAL		12963.35

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Sand Replenishment Estimation Sheet

District- KHUNTI River- CHHATA Mauza- KASMAR UNI-KCH06

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	92	505	505	0.00							
	ROG/00		506	506	0.00							
	LSD/00		502.4	503	0.60	0.60						
	RSD/00		502.3	503	0.70		0.70		0.65			
	MSD/00		502.4	503	0.60			0.60		0.65	59.8	
2	LOG/100	90	505	505	0.00							
	ROG/100		505	505	0.00							
	LSD/100		503.3	504	0.70	0.70						
	RSD/100		503.4	504	0.60		0.60		0.65			
	MSD/100		503.4	504	0.60			0.60		0.60	56.25	2872.3
3	LOG/200	88	506	506	0.00							
	ROG/200		504	504	0.00							
	LSD/200		502.4	503	0.60	0.60						
	RSD/200		502.3	503	0.70		0.70		0.65			
	MSD/200		502.5	503	0.50			0.50		0.60	55	2806.25
4	LOG/300	95	503	503	0.00							
	ROG/300		504	504	0.00							
	LSD/300		502.5	503	0.50	0.50						

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	RSD/300		502.4	503	0.60		0.60		0.55			
	MSD/300		502.5	503	0.50			0.50		0.55	52.25	2667.5
5	LOG/400	92	504	504	0.00							
	ROG/400		503	503	0.00							
	LSD/400		501.4	502	0.60	0.60						
	RSD/400		501.5	502	0.50		0.50		0.55			
	MSD/400		501.3	502	0.70			0.70		0.60	52.9	2697.25
6	LOG/500	90	503	503	0.00							
	ROG/500		503	503	0.00							
	LSD/500		501.4	502	0.60	0.60						
	RSD/500		501.5	502	0.50		0.50		0.55			
	MSD/500		501.3	502	0.70			0.70		0.60	51.75	2640.4
7	LOG/600	89	504	504	0.00							
	ROG/600		503	503	0.00							
	LSD/600		501.4	502	0.60	0.60						
	RSD/600		501.5	502	0.50		0.50		0.55			
	MSD/600		501.3	502	0.70			0.70		0.60	51.175	2610.5
										TOTAL		16294.2

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- KANCHI | Mauza- SARGEYA | UNI-KKC03

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	150	275	275	0.00							
	ROG/00		274	274	0.00							
	LSD/00		274.4	275	0.60	0.60						
	RSD/00		274.3	275	0.70		0.70		0.65			
	MSD/00		274.4	275	0.60			0.60		0.65	97.5	
2	LOG/100	155	275	275	0.00							
	ROG/100		275	275	0.00							
	LSD/100		274.3	275	0.70	0.70						
	RSD/100		274.4	275	0.60		0.60		0.65			
	MSD/100		274.4	275	0.60			0.60		0.60	96.875	4941.25
3	LOG/200	148	275	275	0.00							
	ROG/200		275	275	0.00							
	LSD/200		274.4	275	0.60	0.60						
	RSD/200		274.3	275	0.70		0.70		0.65			
	MSD/200		274.5	275	0.50			0.50		0.60	92.5	4721.875
4	LOG/300	151	274	274	0.00							
	ROG/300		276	276	0.00							
	LSD/300		274.5	275	0.50	0.50						

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	RSD/300		274.4	275	0.60		0.60		0.55			
	MSD/300		274.5	275	0.50			0.50		0.55	83.05	4245
5	LOG/418	150	274	274	0.00							
	ROG/418		276	276	0.00							
	LSD/418		273.4	274	0.60	0.60						
	RSD/418		273.5	274	0.50		0.50		0.55			
	MSD/418		273.3	274	0.70			0.70		0.60	86.25	4395.55
										TOTAL		18303.675

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- CHENGARJOR | Mauza- RAMJAY | UNI-KCG01

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	65	507	507	0.00							
	ROG/00		508	508	0.00							
	LSD/00		505.4	506	0.60	0.60						
	RSD/00		505.3	506	0.70		0.70		0.65			
	MSD/00		505.4	506	0.60			0.60		0.65	42.25	
2	LOG/100	62	507	507	0.00							
	ROG/100		507	507	0.00							
	LSD/100		504.3	505	0.70	0.70						
	RSD/100		504.4	505	0.60		0.60		0.65			
	MSD/100		504.4	505	0.60			0.60		0.60	38.75	1979.75
3	LOG/215	69	506	506	0.00							
	ROG/215		507	507	0.00							
	LSD/215		504.4	505	0.60	0.60						
	RSD/215		504.3	505	0.70		0.70		0.65			
	MSD/215		504.5	505	0.50			0.50		0.60	43.125	2195
										TOTAL		4174.75

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- CHHATA | Mauza- DIYANKEL | UNI-KCH05

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	101	500	500	0.00							
	ROG/00		501	501	0.00							
	LSD/00		499.4	500	0.60	0.60						
	RSD/00		499.3	500	0.70		0.70		0.65			
	MSD/00		499.4	500	0.60			0.60		0.65	65.65	
2	LOG/100	105	500	500	0.00							
	ROG/100		500	500	0.00							
	LSD/100		500.3	501	0.70	0.70						
	RSD/100		500.4	501	0.60		0.60		0.65			
	MSD/100		500.4	501	0.60			0.60		0.60	65.625	3346.9
3	LOG/200	99	500	500	0.00							
	ROG/200		500	500	0.00							
	LSD/200		498.4	499	0.60	0.60						
	RSD/200		498.3	499	0.70		0.70		0.65			
	MSD/200		498.5	499	0.50			0.50		0.60	61.875	3159.375
4	LOG/300	98	500	500	0.00							
	ROG/300		501	501	0.00							
	LSD/300		498.5	499	0.50	0.50						

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	RSD/300		498.4	499	0.60		0.60		0.55			
	MSD/300		498.5	499	0.50			0.50		0.55	53.9	2756.875
5	LOG/400	102	500	500	0.00							
	ROG/400		501	501	0.00							
	LSD/400		498.4	499	0.60	0.60						
	RSD/400		498.5	499	0.50		0.50		0.55			
	MSD/400		498.3	499	0.70			0.70		0.60	58.65	2986.4
6	LOG/498	104	500	500	0.00							
	ROG/498		501	501	0.00							
	LSD/498		498.4	499	0.60	0.60						
	RSD/498		498.5	499	0.50		0.50		0.55			
	MSD/498		498.3	499	0.70			0.70		0.60	59.8	3048.65
										TOTAL		15298.2

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- KOEL | Mauza- SODE | UNI-KKO02

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	122	285	285	0.00							
	ROG/00		284	284	0.00							
	LSD/00		279.4	280	0.60	0.60						
	RSD/00		279.3	280	0.70		0.70		0.65			
	MSD/00		279.4	280	0.60			0.60		0.65	79.3	
2	LOG/100	120	285	285	0.00							
	ROG/100		284	284	0.00							
	LSD/100		279.3	280	0.70	0.70						
	RSD/100		279.4	280	0.60		0.60		0.65			
	MSD/100		279.4	280	0.60			0.60		0.60	75	3829.3
3	LOG/200	117	283	283	0.00							
	ROG/200		284	284	0.00							
	LSD/200		279.4	280	0.60	0.60						
	RSD/200		279.3	280	0.70		0.70		0.65			
	MSD/200		279.5	280	0.50			0.50		0.60	73.125	3731.25
4	LOG/300	119	283	283	0.00							
	ROG/300		283	283	0.00							
	LSD/300		278.5	279	0.50	0.50						

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	RSD/300		278.4	279	0.60		0.60		0.55			
	MSD/300		278.5	279	0.50			0.50		0.55	65.45	3345.625
5	LOG/400	125	281	281	0.00							
	ROG/400		283	283	0.00							
	LSD/400		279.4	280	0.60	0.60						
	RSD/400		279.5	280	0.50		0.50		0.55			
	MSD/400		279.3	280	0.70			0.70		0.60	71.875	3659.2
6	LOG/500	127	279	279	0.00							
	ROG/500		283	283	0.00							
	LSD/500		276.2	277	0.80	0.80						
	RSD/500		276.3	277	0.70		0.70		0.75			
	MSD/500		276.5	277	0.50			0.50		0.60	85.725	4358.125
7	LOG/600	122	280	280	0.00							
	ROG/600		283	283	0.00							
	LSD/600		277.4	278	0.60	0.60						
	RSD/600		277.4	278	0.60		0.60		0.60			
	MSD/600		277.4	278	0.60			0.60		0.60	73.2	3745.725
8	LOG/700	120	283	283	0.00							
	ROG/700		283	283	0.00							
	LSD/700		277.30	278	0.70	0.70						
	RSD/700		277.50	278	0.50		0.50		0.60			
	MSD/700		277.40	278	0.60			0.60		0.55	69	3523.2
9	LOG/830	120	282	282	0.00							
	ROG/830		283	283	0.00							

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	LSD/830		277.4	278	0.60	0.60						
	RSD/830		277.2	278	0.80		0.80		0.70			
	MSD/830		277.5	278	0.50			0.50		0.65	81	4119
										TOTAL		30311.43

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- KARO | Mauza- NICHITPUR | UNI-KKA04

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	179	466	466	0.00							
	ROG/00		465	465	0.00							
	LSD/00		462.4	463	0.60	0.60						
	RSD/00		462.3	463	0.70		0.70		0.65			
	MSD/00		462.4	463	0.60			0.60		0.65	116.35	
2	LOG/100	176	466	466	0.00							
	ROG/100		465	465	0.00							
	LSD/100		462.3	463	0.70	0.70						
	RSD/100		462.4	463	0.60		0.60		0.65			
	MSD/100		462.4	463	0.60			0.60		0.60	110	5616.35
3	LOG/200	170	466	466	0.00							
	ROG/200		465	465	0.00							
	LSD/200		462.4	463	0.60	0.60						
	RSD/200		462.3	463	0.70		0.70		0.65			
	MSD/200		462.5	463	0.50			0.50		0.60	106.25	5422.5
4	LOG/300	172	465	465	0.00							
	ROG/300		465	465	0.00							
	LSD/300		462.5	463	0.50	0.50						

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	RSD/300		462.4	463	0.60		0.60		0.55			
	MSD/300		462.5	463	0.50			0.50		0.55	94.6	4836.25
5	LOG/400	174	465	465	0.00							
	ROG/400		463	463	0.00							
	LSD/400		461.4	462	0.60	0.60						
	RSD/400		461.5	462	0.50		0.50		0.55			
	MSD/400		461.3	462	0.70			0.70		0.60	100.05	5097.1
6	LOG/500	179	464	464	0.00							
	ROG/500		462	462	0.00							
	LSD/500		461.2	462	0.80	0.80						
	RSD/500		461.3	462	0.70		0.70		0.75			
	MSD/500		461.5	462	0.50			0.50		0.60	120.825	6141.3
7	LOG/600	182	464	464	0.00							
	ROG/600		462	462	0.00							
	LSD/600		461.4	462	0.60	0.60						
	RSD/600		461.4	462	0.60		0.60		0.60			
	MSD/600		461.4	462	0.60			0.60		0.60	109.2	5580.825
8	LOG/700	186	464	464	0.00							
	ROG/700		462	462	0.00							
	LSD/700		461.4	462	0.60	0.60						
	RSD/700		461.4	462	0.60		0.60		0.60			
	MSD/700		461.4	462	0.60			0.60		0.60	111.6	5689.2
9	LOG/800	175	464	464	0.00							
	ROG/800		462	462	0.00							

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	LSD/800		461.2	462	0.80	0.80						
	RSD/800		461.3	462	0.70		0.70		0.75			
	MSD/800		461.5	462	0.50			0.50		0.60	118.125	6017.85
10	LOG/865	172	465	465	0.00							
	ROG/865		465	465	0.00							
	LSD/865		462.5	463	0.50	0.50						
	RSD/865		462.4	463	0.60		0.60		0.55			
	MSD/865		462.5	463	0.50			0.50		0.55	94.6	4848.125
										TOTAL		49249.5

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- KOEL | Mauza- SODE | UNI-KKO01

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Difference in (m)	Volume between Consecutive Axis						
			Pre Monsoon	Post Monsoon		a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	108	281	281	0.00							
	ROG/00		282	282	0.00							
	LSD/00		276.4	277	0.60	0.60						
	RSD/00		276.3	277	0.70		0.70		0.65			
	MSD/00		276.4	277	0.60			0.60		0.65	70.2	
2	LOG/100	110	281	281	0.00							
	ROG/100		282	282	0.00							
	LSD/100		276.3	277	0.70	0.70						
	RSD/100		276.4	277	0.60		0.60		0.65			
	MSD/100		276.4	277	0.60			0.60		0.60	68.75	3507.7
3	LOG/200	112	282	282	0.00							
	ROG/200		281	281	0.00							
	LSD/200		276.4	277	0.60	0.60						
	RSD/200		276.3	277	0.70		0.70		0.65			
	MSD/200		276.5	277	0.50			0.50		0.60	70	3568.75
4	LOG/300	113	282	282	0.00							
	ROG/300		281	281	0.00							
	LSD/300		277.5	278	0.50	0.50						

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	RSD/300		277.4	278	0.60		0.60		0.55			
	MSD/300		277.5	278	0.50			0.50		0.55	62.15	3177.5
5	LOG/400	111	282	282	0.00							
	ROG/400		279	279	0.00							
	LSD/400		276.4	277	0.60	0.60						
	RSD/400		276.5	277	0.50		0.50		0.55			
	MSD/400		276.3	277	0.70			0.70		0.60	63.825	3253.4
6	LOG/500	107	281	281	0.00							
	ROG/500		278	278	0.00							
	LSD/500		276.2	277	0.80	0.80						
	RSD/500		276.3	277	0.70		0.70		0.75			
	MSD/500		276.5	277	0.50			0.50		0.60	72.225	3675.075
7	LOG/600	106	280	280	0.00							
	ROG/600		280	280	0.00							
	LSD/600		276.4	277	0.60	0.60						
	RSD/600		276.4	277	0.60		0.60		0.60			
	MSD/600		276.4	277	0.60			0.60		0.60	63.6	3252.225
8	LOG/700	107	282	282	0.00							
	ROG/700		279	279	0.00							
	LSD/700		276.4	277	0.60	0.60						
	RSD/700		276.5	277	0.50		0.50		0.55			
	MSD/700		276.3	277	0.70			0.70		0.60	61.525	3139.85
9	LOG/834	109	280	280	0.00							
	ROG/834		280	280	0.00							

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	LSD/834		276.4	277	0.60	0.60						
	RSD/834		276.4	277	0.60		0.60		0.60			
	MSD/834		276.4	277	0.60			0.60		0.60	65.4	3331.525
										TOTAL		26906.03

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- KARO | Mauza- JAPUT, Derang, Lohajimi | UNI-KKA07

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	136	429	429	0.00							
	ROG/00		430	430	0.00							
	LSD/00		427.4	428	0.60	0.60						
	RSD/00		427.3	428	0.70		0.70		0.65			
	MSD/00		427.4	428	0.60			0.60		0.65	88.4	
2	LOG/100	134	429	429	0.00							
	ROG/100		430	430	0.00							
	LSD/100		427.3	428	0.70	0.70						
	RSD/100		427.4	428	0.60		0.60		0.65			
	MSD/100		427.4	428	0.60			0.60		0.60	83.75	4275.9
3	LOG/200	130	429	429	0.00							
	ROG/200		430	430	0.00							
	LSD/200		427.4	428	0.60	0.60						
	RSD/200		427.3	428	0.70		0.70		0.65			
	MSD/200		427.5	428	0.50			0.50		0.60	81.25	4146.25
4	LOG/300	135	428	428	0.00							
	ROG/300		428	428	0.00							
	LSD/300		426.5	427	0.50	0.50						

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	RSD/300		426.4	427	0.60		0.60		0.55			
	MSD/300		426.5	427	0.50			0.50		0.55	74.25	3793.75
5	LOG/400	138	428	428	0.00							
	ROG/400		428	428	0.00							
	LSD/400		426.4	427	0.60	0.60						
	RSD/400		426.5	427	0.50		0.50		0.55			
	MSD/400		426.3	427	0.70			0.70		0.60	79.35	4041.75
6	LOG/500	140	428	428	0.00							
	ROG/500		428	428	0.00							
	LSD/500		426.2	427	0.80	0.80						
	RSD/500		426.3	427	0.70		0.70		0.75			
	MSD/500		426.5	427	0.50			0.50		0.60	94.5	4804.35
7	LOG/600	135	428	428	0.00							
	ROG/600		428	428	0.00							
	LSD/600		426.4	427	0.60	0.60						
	RSD/600		426.4	427	0.60		0.60		0.60			
	MSD/600		426.4	427	0.60			0.60		0.60	81	4144.5
8	LOG/700	131	428	428	0.00							
	ROG/700		428	428	0.00							
	LSD/700		425.30	426	0.70	0.70						
	RSD/700		425.50	426	0.50		0.50		0.60			
	MSD/700		425.40	426	0.60			0.60		0.55	75.325	3847.25
9	LOG/800	129	428	428	0.00							
	ROG/800		428	428	0.00							

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Jharkhand, Ranchi

	LSD/800		426.4	427	0.60	0.60							
	RSD/800		426.2	427	0.80		0.80		0.70				
	MSD/800		426.5	427	0.50			0.50		0.65	87.075	4429.075	
10	LOG/900	135	428	428	0.00								
	ROG/900		428	428	0.00								
	LSD/900		426.5	427	0.50	0.50							
	RSD/900		426.3	427	0.70		0.70		0.60				
	MSD/900		426.4	427	0.60			0.60		0.65	84.375	4305.825	
11	LOG/985	138	428	428	0.00								
	ROG/985		428	428	0.00								
	LSD/985		427.5	428	0.50	0.50							
	RSD/985		427.3	428	0.70		0.70		0.60				
	MSD/985		427.4	428	0.60			0.60		0.65	86.25	4396.875	
										TOTAL		42185.53	

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- KARO | Mauza- JARAKEL, Kocha , koinara | UNI-KKA05

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	175	463	463	0.00							
	ROG/00		464	464	0.00							
	LSD/00		461.4	462	0.60	0.60						
	RSD/00		461.3	462	0.70		0.70		0.65			
	MSD/00		461.4	462	0.60			0.60		0.65	113.75	
2	LOG/100	173	463	463	0.00							
	ROG/100		464	464	0.00							
	LSD/100		461.3	462	0.70	0.70						
	RSD/100		461.4	462	0.60		0.60		0.65			
	MSD/100		461.4	462	0.60			0.60		0.60	108.125	5520
3	LOG/200	170	463	463	0.00							
	ROG/200		464	464	0.00							
	LSD/200		461.4	462	0.60	0.60						
	RSD/200		461.3	462	0.70		0.70		0.65			
	MSD/200		461.5	462	0.50			0.50		0.60	106.25	5420.625
4	LOG/300	168	462	462	0.00							
	ROG/300		462	462	0.00							
	LSD/300		460.5	461	0.50	0.50						

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	RSD/300		460.4	461	0.60		0.60		0.55			
	MSD/300		460.5	461	0.50			0.50		0.55	92.4	4726.25
5	LOG/400	174	462	462	0.00							
	ROG/400		462	462	0.00							
	LSD/400		460.4	461	0.60	0.60						
	RSD/400		460.5	461	0.50		0.50		0.55			
	MSD/400		460.3	461	0.70			0.70		0.60	100.05	5094.9
6	LOG/500	177	462	462	0.00							
	ROG/500		462	462	0.00							
	LSD/500		460.2	461	0.80	0.80						
	RSD/500		460.3	461	0.70		0.70		0.75			
	MSD/500		460.5	461	0.50			0.50		0.60	119.475	6073.8
7	LOG/600	179	461	461	0.00							
	ROG/600		461	461	0.00							
	LSD/600		459.4	460	0.60	0.60						
	RSD/600		459.4	460	0.60		0.60		0.60			
	MSD/600		459.4	460	0.60			0.60		0.60	107.4	5489.475
8	LOG/700	182	461	461	0.00							
	ROG/700		461	461	0.00							
	LSD/700		459.30	460	0.70	0.70						
	RSD/700		459.50	460	0.50		0.50		0.60			
	MSD/700		459.40	460	0.60			0.60		0.55	104.65	5339.9
9	LOG/800	176	461	461	0.00							
	ROG/800		461	461	0.00							

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	LSD/800		459.4	460	0.60	0.60							
	RSD/800		459.2	460	0.80		0.80		0.70				
	MSD/800		459.5	460	0.50			0.50		0.65	118.8	6044.65	
10	LOG/900	174	461	461	0.00								
	ROG/900		461	461	0.00								
	LSD/900		459.5	460	0.50	0.50							
	RSD/900		459.3	460	0.70		0.70		0.60				
	MSD/900		459.4	460	0.60			0.60		0.65	108.75	5556.3	
11	LOG/989	175	461	461	0.00								
	ROG/989		461	461	0.00								
	LSD/989		459.5	460	0.50	0.50							
	RSD/989		459.3	460	0.70		0.70		0.60				
	MSD/989		459.4	460	0.60			0.60		0.65	109.375	5577.5	
										TOTAL		54843.4	

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- KARO | Mauza- BANAI, Kocha | UNI-KKA06

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	158	438	438	0.00							
	ROG/00		437	437	0.00							
	LSD/00		435.4	436	0.60	0.60						
	RSD/00		435.3	436	0.70		0.70		0.65			
	MSD/00		435.4	436	0.60			0.60		0.65	102.7	
2	LOG/100	155	437	437	0.00							
	ROG/100		437	437	0.00							
	LSD/100		435.3	436	0.70	0.70						
	RSD/100		435.4	436	0.60		0.60		0.65			
	MSD/100		435.4	436	0.60			0.60		0.60	96.875	4946.45
3	LOG/200	154	437	437	0.00							
	ROG/200		437	437	0.00							
	LSD/200		435.4	436	0.60	0.60						
	RSD/200		435.3	436	0.70		0.70		0.65			
	MSD/200		435.5	436	0.50			0.50		0.60	96.25	4909.375
4	LOG/300	149	437	437	0.00							
	ROG/300		436	436	0.00							
	LSD/300		435.5	436	0.50	0.50						

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	RSD/300		435.4	436	0.60		0.60		0.55				
	MSD/300		435.5	436	0.50			0.50		0.55	81.95	4193.75	
5	LOG/400	155	437	437	0.00								
	ROG/400		436	436	0.00								
	LSD/400		435.4	436	0.60	0.60							
	RSD/400		435.5	436	0.50		0.50		0.55				
	MSD/400		435.3	436	0.70			0.70		0.60	89.125	4538.2	
6	LOG/500	158	436	436	0.00								
	ROG/500		436	436	0.00								
	LSD/500		434.2	435	0.80	0.80							
	RSD/500		434.3	435	0.70		0.70		0.75				
	MSD/500		434.5	435	0.50			0.50		0.60	106.65	5421.625	
7	LOG/600	160	436	436	0.00								
	ROG/600		436	436	0.00								
	LSD/600		434.4	435	0.60	0.60							
	RSD/600		434.4	435	0.60		0.60		0.60				
	MSD/600		434.4	435	0.60			0.60		0.60	96	4906.65	
8	LOG/700	162	436	436	0.00								
	ROG/700		436	436	0.00								
	LSD/700		434.30	435	0.70	0.70							
	RSD/700		434.50	435	0.50		0.50		0.60				
	MSD/700		434.40	435	0.60			0.60		0.55	93.15	4753.5	
9	LOG/800	157	436	436	0.00								
	ROG/800		436	436	0.00								

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	LSD/800		434.4	435	0.60	0.60						
	RSD/800		434.2	435	0.80		0.80		0.70			
	MSD/800		434.5	435	0.50			0.50		0.65	105.975	5391.9
9	LOG/920	159	436	436	0.00							
	ROG/920		436	436	0.00							
	LSD/920		434.4	435	0.60	0.60						
	RSD/920		434.2	435	0.80		0.80		0.70			
	MSD/920		433.5	434	0.50			0.50		0.65	107.325	5366.25
										TOTAL		44427.7

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- KARO | Mauza- BUDHIROMA | UNI-KKA01

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Difference in (m)	Volume between Consecutive Axis						
			Pre Monsoon	Post Monsoon		a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	42	566	566	0.00							
	ROG/00		570	570	0.00							
	LSD/00		566.4	567	0.60	0.60						
	RSD/00		566.3	567	0.70		0.70		0.65			
	MSD/00		566.4	567	0.60			0.60		0.65	27.3	
2	LOG/100	40	566	566	0.00							
	ROG/100		570	570	0.00							
	LSD/100		566.3	567	0.70	0.70						
	RSD/100		566.4	567	0.60		0.60		0.65			
	MSD/100		566.4	567	0.60			0.60		0.60	25	1277.3
3	LOG/200	35	569	569	0.00							
	ROG/200		570	570	0.00							
	LSD/200		567.4	568	0.60	0.60						
	RSD/200		567.3	568	0.70		0.70		0.65			
	MSD/200		567.5	568	0.50			0.50		0.60	21.875	1118.75
4	LOG/300	43	569	569	0.00							
	ROG/300		570	570	0.00							
	LSD/300		568.5	569	0.50	0.50						

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	RSD/300		568.4	569	0.60		0.60		0.55			
	MSD/300		568.5	569	0.50			0.50		0.55	23.65	1204.375
5	LOG/415	41	569	569	0.00							
	ROG/415		570	570	0.00							
	LSD/415		566.4	567	0.60	0.60						
	RSD/415		566.5	567	0.50		0.50		0.55			
	MSD/415		566.3	567	0.70			0.70		0.60	23.575	1202.4
										TOTAL		4802.825

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- SUNDARI | Mauza- Churgi | UNI-KSU01

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monshon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	62	508	508	0.00							
	ROG/00		508	508	0.00							
	LSD/00		506.4	507	0.60	0.60						
	RSD/00		506.3	507	0.70		0.70		0.65			
	MSD/00		506.4	507	0.60			0.60		0.65	40.3	
2	LOG/100	60	508	508	0.00							
	ROG/100		508	508	0.00							
	LSD/100		506.3	507	0.70	0.70						
	RSD/100		506.4	507	0.60		0.60		0.65			
	MSD/100		506.4	507	0.60			0.60		0.60	37.5	1915.3
3	LOG/200	49	508	508	0.00							
	ROG/200		508	508	0.00							
	LSD/200		506.4	507	0.60	0.60						
	RSD/200		506.3	507	0.70		0.70		0.65			
	MSD/200		506.5	507	0.50			0.50		0.60	30.625	1568.75
4	LOG/300	64	506	506	0.00							
	ROG/300		507	507	0.00							
	LSD/300		506.5	507	0.50	0.50						

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	RSD/300		506.4	507	0.60		0.60		0.55			
	MSD/300		506.5	507	0.50			0.50		0.55	35.2	1790.625
5	LOG/400	66	507	507	0.00							
	ROG/400		506	506	0.00							
	LSD/400		505.4	506	0.60	0.60						
	RSD/400		505.5	506	0.50		0.50		0.55			
	MSD/400		505.3	506	0.70			0.70		0.60	37.95	1932.7
6	LOG/541	55	507	507	0.00							
	ROG/541		507	507	0.00							
	LSD/541		505.2	506	0.80	0.80						
	RSD/541		505.3	506	0.70		0.70		0.75			
	MSD/541		505.5	506	0.50			0.50		0.60	37.125	1894.2
										TOTAL		9101.575

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- KANCHI | Mauza- MAIPA | UNI-KKC02

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	130	285	285	0.00							
	ROG/00		285	285	0.00							
	LSD/00		282.4	283	0.60	0.60						
	RSD/00		282.3	283	0.70		0.70		0.65			
	MSD/00		282.4	283	0.60			0.60		0.65	84.5	
2	LOG/100	132	285	285	0.00							
	ROG/100		285	285	0.00							
	LSD/100		283.3	284	0.70	0.70						
	RSD/100		283.4	284	0.60		0.60		0.65			
	MSD/100		283.4	284	0.60			0.60		0.60	82.5	4209.5
3	LOG/200	135	283	283	0.00							
	ROG/200		283	283	0.00							
	LSD/200		282.4	283	0.60	0.60						
	RSD/200		282.3	283	0.70		0.70		0.65			
	MSD/200		282.5	283	0.50			0.50		0.60	84.375	4301.25
4	LOG/300	140	285	285	0.00							
	ROG/300		285	285	0.00							
	LSD/300		282.5	283	0.50	0.50						

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	RSD/300		282.4	283	0.60		0.60		0.55			
	MSD/300		282.5	283	0.50			0.50		0.55	77	3934.375
5	LOG/400	140	285	285	0.00							
	ROG/400		284	284	0.00							
	LSD/400		283.4	284	0.60	0.60						
	RSD/400		283.5	284	0.50		0.50		0.55			
	MSD/400		283.3	284	0.70			0.70		0.60	80.5	4102
6	LOG/500	133	284	284	0.00							
	ROG/500		284	284	0.00							
	LSD/500		283.2	284	0.80	0.80						
	RSD/500		283.3	284	0.70		0.70		0.75			
	MSD/500		283.5	284	0.50			0.50		0.60	89.775	4569.25
7	LOG/600	130	285	285	0.00							
	ROG/600		285	285	0.00							
	LSD/600		283.4	284	0.60	0.60						
	RSD/600		283.4	284	0.60		0.60		0.60			
	MSD/600		283.4	284	0.60			0.60		0.60	78	3989.775
8	LOG/700	136	285	285	0.00							
	ROG/700		284	284	0.00							
	LSD/700		283.30	284	0.70	0.70						
	RSD/700		283.50	284	0.50		0.50		0.60			
	MSD/700		283.40	284	0.60			0.60		0.55	78.2	3988
9	LOG/800	142	285	285	0.00							
	ROG/800		284	284	0.00							

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	LSD/800		282.4	283	0.60	0.60							
	RSD/800		282.2	283	0.80		0.80		0.70				
	MSD/800		282.5	283	0.50			0.50		0.65	95.85	4870.7	
10	LOG/900	141	285	285	0.00								
	ROG/900		284	284	0.00								
	LSD/900		282.5	283	0.50	0.50							
	RSD/900		282.3	283	0.70		0.70		0.60				
	MSD/900		282.4	283	0.60			0.60		0.65	88.125	4502.1	
11	LOG/1000	134	285	285	0.00								
	ROG/1000		285	285	0.00								
	LSD/1000		282.5	283	0.50	0.50							
	RSD/1000		282.3	283	0.70		0.70		0.60				
	MSD/1000		282.4	283	0.60			0.60		0.65	83.75	4275.625	
12	LOG/1100	130	285	285	0.00								
	ROG/1100		286	286	0.00								
	LSD/1100		282.5	283	0.50	0.50							
	RSD/1100		282.3	283	0.70		0.70		0.60				
	MSD/1100		282.4	283	0.60			0.60		0.65	81.25	4146.25	
13	LOG/1200	125	285	285	0.00								
	ROG/1200		286	286	0.00								
	LSD/1200		282.5	283	0.50	0.50							
	RSD/1200		282.3	283	0.70		0.70		0.60				
	MSD/1200		282.4	283	0.60			0.60		0.65	78.125	3987.5	
14	LOG/1300	124	284	284	0.00								

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	ROG/1300		286	286	0.00								
	LSD/1300		281.5	282	0.50	0.50							
	RSD/1300		281.3	282	0.70		0.70		0.60				
	MSD/1300		281.4	282	0.60			0.60		0.65	77.5	3953.125	
15	LOG/1400	120	283	283	0.00								
	ROG/1400		285	285	0.00								
	LSD/1400		281.5	282	0.50	0.50							
	RSD/1400		281.3	282	0.70		0.70		0.60				
	MSD/1400		281.4	282	0.60			0.60		0.65	75	3827.5	
16	LOG/1500	128	282	282	0.00								
	ROG/1500		283	283	0.00								
	LSD/1500		280.5	281	0.50	0.50							
	RSD/1500		280.3	281	0.70		0.70		0.60				
	MSD/1500		280.4	281	0.60			0.60		0.65	80	4075	
17	LOG/1560	135	282	282	0.00								
	ROG/1560		283	283	0.00								
	LSD/1560		280.5	281	0.50	0.50							
	RSD/1560		280.3	281	0.70		0.70		0.60				
	MSD/1560		280.4	281	0.60			0.60		0.65	84.375	4298.75	
										TOTAL		67030.7	

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Sigma R.D. Consultancy Pvt. Ltd. Consortium with Crystal Consultants

Authorized Signatory

Sand Replenishment Estimation Sheet

District- KHUNTI | River- KANCHI | Mauza- BARIGARA | UNI-KKC01

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	134	291	291	0.00							
	ROG/00		292	292	0.00							
	LSD/00		290.4	291	0.60	0.60						
	RSD/00		290.3	291	0.70		0.70		0.65			
	MSD/00		290.4	291	0.60			0.60		0.65	87.1	
2	LOG/100	138	291	291	0.00							
	ROG/100		292	292	0.00							
	LSD/100		290.3	291	0.70	0.70						
	RSD/100		290.4	291	0.60		0.60		0.65			
	MSD/100		290.4	291	0.60			0.60		0.60	86.25	4399.6
3	LOG/200	132	291	291	0.00							
	ROG/200		292	292	0.00							
	LSD/200		290.4	291	0.60	0.60						
	RSD/200		290.3	291	0.70		0.70		0.65			
	MSD/200		290.5	291	0.50			0.50		0.60	82.5	4211.25
4	LOG/300	130	290	290	0.00							
	ROG/300		291	291	0.00							
	LSD/300		289.5	290	0.50	0.50						

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	RSD/300		289.4	290	0.60		0.60		0.55				
	MSD/300		289.5	290	0.50			0.50		0.55	71.5	3657.5	
5	LOG/400	128	289	289	0.00								
	ROG/400		290	290	0.00								
	LSD/400		288.4	289	0.60	0.60							
	RSD/400		288.5	289	0.50		0.50		0.55				
	MSD/400		288.3	289	0.70			0.70		0.60	73.6	3751.5	
6	LOG/500	126	289	289	0.00								
	ROG/500		290	290	0.00								
	LSD/500		288.2	289	0.80	0.80							
	RSD/500		288.3	289	0.70		0.70		0.75				
	MSD/500		288.5	289	0.50			0.50		0.60	85.05	4326.1	
7	LOG/600	127	288	288	0.00								
	ROG/600		289	289	0.00								
	LSD/600		287.4	288	0.60	0.60							
	RSD/600		287.4	288	0.60		0.60		0.60				
	MSD/600		287.4	288	0.60			0.60		0.60	76.2	3895.05	
8	LOG/700	129	288	288	0.00								
	ROG/700		289	289	0.00								
	LSD/700		287.30	288	0.70	0.70							
	RSD/700		287.50	288	0.50		0.50		0.60				
	MSD/700		287.40	288	0.60			0.60		0.55	74.175	3784.95	
9	LOG/800	136	288	288	0.00								
	ROG/800		289	289	0.00								

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	LSD/800		286.4	287	0.60	0.60						
	RSD/800		286.2	287	0.80		0.80		0.70			
	MSD/800		286.5	287	0.50			0.50		0.65	91.8	4664.175
10	LOG/900	132	288	288	0.00							
	ROG/900		287	287	0.00							
	LSD/900		286.5	287	0.50	0.50						
	RSD/900		286.3	287	0.70		0.70		0.60			
	MSD/900		286.4	287	0.60			0.60		0.65	82.5	4216.8
11	LOG/1000	126	287	287	0.00							
	ROG/1000		287	287	0.00							
	LSD/1000		285.5	286	0.50	0.50						
	RSD/1000		285.3	286	0.70		0.70		0.60			
	MSD/1000		285.4	286	0.60			0.60		0.65	78.75	4020
12	LOG/1100	130	287	287	0.00							
	ROG/1100		287	287	0.00							
	LSD/1100		285.5	286	0.50	0.50						
	RSD/1100		285.3	286	0.70		0.70		0.60			
	MSD/1100		285.4	286	0.60			0.60		0.65	81.25	4141.25
13	LOG/1200	140	287	287	0.00							
	ROG/1200		287	287	0.00							
	LSD/1200		285.5	286	0.50	0.50						
	RSD/1200		285.3	286	0.70		0.70		0.60			
	MSD/1200		285.4	286	0.60			0.60		0.65	87.5	4456.25
14	LOG/1300	138	289	289	0.00							

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	ROG/1300		287	287	0.00								
	LSD/1300		285.5	286	0.50	0.50							
	RSD/1300		285.3	286	0.70		0.70		0.60				
	MSD/1300		285.4	286	0.60			0.60		0.65	86.25	4400	
15	LOG/1400	135	289	289	0.00								
	ROG/1400		288	288	0.00								
	LSD/1400		285.5	286	0.50	0.50							
	RSD/1400		285.3	286	0.70		0.70		0.60				
	MSD/1400		285.4	286	0.60			0.60		0.65	84.375	4305	
16	LOG/1500	128	288	288	0.00								
	ROG/1500		288	288	0.00								
	LSD/1500		285.5	286	0.50	0.50							
	RSD/1500		285.3	286	0.70		0.70		0.60				
	MSD/1500		285.4	286	0.60			0.60		0.65	80	4084.375	
17	LOG/1600	126	288	288	0.00								
	ROG/1600		288	288	0.00								
	LSD/1600		285.5	286	0.50	0.50							
	RSD/1600		285.3	286	0.70		0.70		0.60				
	MSD/1600		285.4	286	0.60			0.60		0.65	78.75	4017.5	
18	LOG/1731	130	288	288	0.00								
	ROG/1731		288	288	0.00								
	LSD/1731		285.5	286	0.50	0.50							
	RSD/1731		285.3	286	0.70		0.70		0.60				
	MSD/1731		285.4	286	0.60			0.60		0.65	81.25	4141.25	
										TOTAL		70472.55	

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Sand Replenishment Estimation Sheet

District- KHUNTI | River- KARO | Mauza- Govindpur | UNI-KKA02

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	93	532	532	0.00							
	ROG/00		531	531	0.00							
	LSD/00		529.4	530	0.60	0.60						
	RSD/00		529.3	530	0.70		0.70		0.65			
	MSD/00		529.4	530	0.60			0.60		0.65	60.45	
2	LOG/100	90	532	532	0.00							
	ROG/100		532	532	0.00							
	LSD/100		531.3	532	0.70	0.70						
	RSD/100		531.4	532	0.60		0.60		0.65			
	MSD/100		531.4	532	0.60			0.60		0.60	56.25	2872.95
3	LOG/200	88	532	532	0.00							
	ROG/200		532	532	0.00							
	LSD/200		531.4	532	0.60	0.60						
	RSD/200		531.3	532	0.70		0.70		0.65			
	MSD/200		531.5	532	0.50			0.50		0.60	55	2806.25
4	LOG/300	86	532	532	0.00							
	ROG/300		531	531	0.00							
	LSD/300		528.5	529	0.50	0.50						

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	RSD/300		528.4	529	0.60		0.60		0.55				
	MSD/300		528.5	529	0.50			0.50		0.55	47.3	2420	
5	LOG/400	89	532	532	0.00								
	ROG/400		531	531	0.00								
	LSD/400		528.4	529	0.60	0.60							
	RSD/400		528.5	529	0.50		0.50		0.55				
	MSD/400		528.3	529	0.70			0.70		0.60	51.175	2606.05	
6	LOG/500	87	531	531	0.00								
	ROG/500		531	531	0.00								
	LSD/500		529.2	530	0.80	0.80							
	RSD/500		529.3	530	0.70		0.70		0.75				
	MSD/500		529.5	530	0.50			0.50		0.60	58.725	2987.425	
7	LOG/600	85	530	530	0.00								
	ROG/600		530	530	0.00								
	LSD/600		528.4	529	0.60	0.60							
	RSD/600		528.4	529	0.60		0.60		0.60				
	MSD/600		528.4	529	0.60			0.60		0.60	51	2608.725	
8	LOG/700	85	530	530	0.00								
	ROG/700		530	530	0.00								
	LSD/700		528.4	529	0.60	0.60							
	RSD/700		528.4	529	0.60		0.60		0.60				
	MSD/700		527.4	528	0.60			0.60		0.60	51	2550	
9	LOG/830	85	530	530	0.00								
	ROG/830		530	530	0.00								

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	LSD/830		528.4	529	0.60	0.60						
	RSD/830		528.4	529	0.60		0.60		0.60			
	MSD/830		526.4	527	0.60			0.60		0.60	51	2550
										TOTAL		21401.4

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Sand Replenishment Estimation Sheet

District- KHUNTI River- KANCHI Mauza- GURUBERA UNI-KKC04

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	107	270	270	0.00							
	ROG/00		272	272	0.00							
	LSD/00		268.4	269	0.60	0.60						
	RSD/00		268.3	269	0.70		0.70		0.65			
	MSD/00		268.4	269	0.60			0.60		0.65	69.55	
2	LOG/100	103	270	270	0.00							
	ROG/100		270	270	0.00							
	LSD/100		268.3	269	0.70	0.70						
	RSD/100		268.4	269	0.60		0.60		0.65			
	MSD/100		268.4	269	0.60			0.60		0.60	64.375	3288.3
3	LOG/200	99	270	270	0.00							
	ROG/200		270	270	0.00							
	LSD/200		267.4	268	0.60	0.60						
	RSD/200		267.3	268	0.70		0.70		0.65			
	MSD/200		267.5	268	0.50			0.50		0.60	61.875	3158.125
4	LOG/300	105	269	269	0.00							
	ROG/300		269	269	0.00							
	LSD/300		267.5	268	0.50	0.50						

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	RSD/300		267.4	268	0.60		0.60		0.55				
	MSD/300		267.5	268	0.50			0.50		0.55	57.75	2949.375	
5	LOG/400	111	269	269	0.00								
	ROG/400		269	269	0.00								
	LSD/400		267.4	268	0.60	0.60							
	RSD/400		267.5	268	0.50		0.50		0.55				
	MSD/400		267.3	268	0.70			0.70		0.60	63.825	3249	
6	LOG/500	115	268	268	0.00								
	ROG/500		268	268	0.00								
	LSD/500		267.2	268	0.80	0.80							
	RSD/500		267.3	268	0.70		0.70		0.75				
	MSD/500		267.5	268	0.50			0.50		0.60	77.625	3945.075	
7	LOG/600	103	268	268	0.00								
	ROG/600		268	268	0.00								
	LSD/600		266.4	267	0.60	0.60							
	RSD/600		266.4	267	0.60		0.60		0.60				
	MSD/600		266.4	267	0.60			0.60		0.60	61.8	3167.625	
8	LOG/700	102	268	268	0.00								
	ROG/700		268	268	0.00								
	LSD/700		266.30	267	0.70	0.70							
	RSD/700		266.50	267	0.50		0.50		0.60				
	MSD/700		266.40	267	0.60			0.60		0.55	58.65	2994.3	
9	LOG/800	101	268	268	0.00								
	ROG/800		567	567	0.00								

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	LSD/800		266.4	267	0.60	0.60						
	RSD/800		266.2	267	0.80		0.80		0.70			
	MSD/800		266.5	267	0.50			0.50		0.65	68.175	3467.4
10	LOG/900	99	267	267	0.00							
	ROG/900		267	267	0.00							
	LSD/900		265.5	266	0.50	0.50						
	RSD/900		265.3	266	0.70		0.70		0.60			
	MSD/900		265.4	266	0.60			0.60		0.65	61.875	3161.925
11	LOG/1035	107	267	267	0.00							
	ROG/1035		267	267	0.00							
	LSD/1035		265.5	266	0.50	0.50						
	RSD/1035		265.3	266	0.70		0.70		0.60			
	MSD/1035		265.4	266	0.60			0.60		0.65	66.875	3405.625
										TOTAL		32786.75

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Sand Replenishment Estimation Sheet

District- KHUNTI River- BANAI Mauza- BICHNA UNI-KBA02

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	81	583	583	0.00							
	ROG/00		584	584	0.00							
	LSD/00		580.4	581	0.60	0.60						
	RSD/00		580.3	581	0.70		0.70		0.65			
	MSD/00		580.4	581	0.60			0.60		0.65	52.65	
2	LOG/100	77	582	582	0.00							
	ROG/100		584	584	0.00							
	LSD/100		580.3	581	0.70	0.70						
	RSD/100		580.4	581	0.60		0.60		0.65			
	MSD/100		580.4	581	0.60			0.60		0.60	48.125	2458.9
3	LOG/200	82	582	582	0.00							
	ROG/200		583	583	0.00							
	LSD/200		580.4	581	0.60	0.60						
	RSD/200		580.3	581	0.70		0.70		0.65			
	MSD/200		580.5	581	0.50			0.50		0.60	51.25	2610.625
4	LOG/320	78	582	582	0.00							
	ROG/320		584	584	0.00							
	LSD/320		579.5	580	0.50	0.50						

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	RSD/320		579.4	580	0.60		0.60		0.55			
	MSD/320		579.5	580	0.50			0.50		0.55	42.9	2196.25
										TOTAL		7265.775

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Sand Replenishment Estimation Sheet

District- KHUNTI **River- CHHATA** **Mauza- MANHATU. KASMAR** **UNI-KCH04**

Sl. No.	Nodal Point	Width of the Rever (in m)	Elevation amsl		Volume between Consecutive Axis							
			Pre Monsoon	Post Monsoon	Difference in (m)	a in (m)	b in (m)	c in (m)	a+b/2 in (m)	b+c/2 in (m)	Area of cross section in (m^2)	volume in (m^3)
1	LOG/00	73	505	505	0.00							
	ROG/00		506	506	0.00							
	LSD/00		502.4	503	0.60	0.60						
	RSD/00		502.3	503	0.70		0.70		0.65			
	MSD/00		502.4	503	0.60			0.60		0.65	47.45	
2	LOG/100	75	505	505	0.00							
	ROG/100		505	505	0.00							
	LSD/100		503.3	504	0.70	0.70						
	RSD/100		503.4	504	0.60		0.60		0.65			
	MSD/100		503.4	504	0.60			0.60		0.60	46.875	2391.2
3	LOG/200	71	506	506	0.00							
	ROG/200		504	504	0.00							
	LSD/200		502.4	503	0.60	0.60						
	RSD/200		502.3	503	0.70		0.70		0.65			
	MSD/200		502.5	503	0.50			0.50		0.60	44.375	2265.625
4	LOG/300	69	503	503	0.00							
	ROG/300		504	504	0.00							
	LSD/300		502.5	503	0.50	0.50						

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	RSD/300		502.4	503	0.60		0.60		0.55			
	MSD/300		502.5	503	0.50			0.50		0.55	37.95	1941.875
5	LOG/400	73	504	504	0.00							
	ROG/400		503	503	0.00							
	LSD/400		501.4	502	0.60	0.60						
	RSD/400		501.5	502	0.50		0.50		0.55			
	MSD/400		501.3	502	0.70			0.70		0.60	41.975	2136.7
6	LOG/500	76	504	504	0.00							
	ROG/500		503	503	0.00							
	LSD/500		501.2	502	0.80	0.80						
	RSD/500		501.3	502	0.70		0.70		0.75			
	MSD/500		500.5	501	0.50			0.50		0.60	51.3	2606.975
7	LOG/604	72	504	504	0.00							
	ROG/604		503	503	0.00							
	LSD/604		501.4	502	0.60	0.60						
	RSD/604		501.5	502	0.50		0.50		0.55			
	MSD/604		501.3	502	0.70			0.70		0.60	41.4	2121.3
										TOTAL		13463.68

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CHAPTER-XII

CHAPTER – XII COMPLIANCE OF REGULATION

12.1 Introduction

District Survey Report of Sand Mining or River Bed Mining in the district is prepared under-

- ✓ MoEF & CC, GoI notification S.O. 1533(E) dated 14/09/2006
- ✓ MoEF & CC, GoI notification S.O. 141 (E) dated 15/01/2016
- ✓ Sustainable Sand Mining Guidelines, 2016
- ✓ Sand Policy of Govt. of Jharkhand, 2017
- ✓ MoEF & CC, GoI notification S.O. 3611 (E) dated 25/07/2018
- ✓ Enforcement and Monitoring Guidelines for Sand Mining 2020
- ✓ Jharkhand Minor Mineral Concession Rule, 2021

12.2 Compliance to provisions in Gazette notification no. S.O 3611 dated 25.07.2018 & sustainable sand mining guideline (SSMG) 2016.

Notification 3611 dated 25.07.2018 has laid doom structure of DSR for sand mining.

SSMG- 2016 lays down certain guidelines for preparation of DSR for sand mining.

Table below gives status of compliance to above guidelines:

Table 25 Compliance MoEF & CC, GoI notification S.O. 3611 (E) dated 25/07/2018 & SSMG – 2016 Guidelines Applicable to Preparation of D.S.R for Sand Mining

Sl. No.	Prescribed Guideline	Complied
1.	The report can have following structure	
A	Introduction	Complied Refer to Chapter – I
B	Overview of Mining Activity in the District	Complied Refer to Chapter – II
C	The List of Mining Leases in the District with location, area and period of validity	Complied Refer to Chapter – III
D	Details of Royalty or Revenue received in last three years	Complied Refer to Chapter – IV
E	Detail of Production of Sand or Bajari or minor mineral in last three years	Complied Refer to Chapter – V
F	Process of Deposition of Sediments in the rivers of the District	Complied Refer to Chapter – VI
G	General Profile of the District	Complied

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<table>
<tr><td></td><td></td><td>Refer to Chapter – VII</td></tr>
<tr><td>H</td><td>Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining etc</td><td>Complied
Refer to Chapter – VIII</td></tr>
<tr><td>I</td><td>Physiography of the District</td><td>Complied
Refer to Chapter – IX</td></tr>
<tr><td>J</td><td>Rainfall: month-wise</td><td>Complied
Refer to Chapter – X</td></tr>
<tr><td>K</td><td>Geology and Mineral Wealth</td><td>Complied
Refer to Chapter – XI</td></tr>
<tr><td>2.</td><td>Drainage System with description of main rivers.
<table><tr><td>Sl. No.</td><td>NAME OF RIVER</td><td>AREA DRAINED (Sq. Km)</td><td>% AREA DRAINED</td></tr><tr><td></td><td></td><td></td><td></td></tr></table></td><td>Complied Refer to Table 12</td></tr>
<tr><td>3.</td><td>Salient Features of Important Rivers and Streams:
<table><tr><td>Sl. No.</td><td>Name of the River /Stream</td><td>Total Length in theDistrict (in Km)</td><td>Place of origin</td><td>Altitude at Origin</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table></td><td>Complied
Refer to Table 13</td></tr>
<tr><td>4.</td><td>Methodology Adopted for Calculating of Mineral Potential
The mineral potential is calculated based on field investigation and geology of the catchment area of the river/ streams. As per the policy of the State- location, depth of mineable mineral is defined.The area for removal of mineral in a river or stream can be decided depending on geo-morphology and other factors, it can be 50% to 60% of the area of a particular river/stream.
The specific gravity of each mineral constituent is different. While calculating the mineral potential, the average specific gravity is taken as 2.25. The percent of mineral constituent like boulder, bajari, sand also varies for different river and streams.</td><td>Complied
Refer to Chapter – XI</td></tr>
<tr><td>5.</td><td>The quantum of deposition varies from stream to stream depending upon factors like catchment lithology, discharge, river profile and geomorphology of the river course. There are certain geomorphological features developed in the river beds such as channel bar, point bar etc. where annual deposition is more even two to three meters.</td><td>Quantum of replenishment of sand has been determined by surveyed data</td></tr>
<tr><td></td><td></td><td></td></tr>
</table>

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6.	The specific gravity of each mineral constituents is different. While calculating the mineral potential the average specific gravity is taken as 2.25. The percentage of mineral constituent like boulder, river bajari, sand also varies for different river and streams.	Specific gravity of sand samples collected from every PRA have been tested and enclosed with this report.

6. Present Status of Mining

This gives the detail of mining leases already in operation in this stretch, area and production in last three years from these leases are calculated.

Mineral Potential is calculated in following way:

Mineral Potential

Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)

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12.3 Compliance to Environment Monitoring Guideline for Sand mining 2020.

EMGS-2020 has also laid down guidelines for preparation of DSR for sand mines & also for estimating annual rate of replenishment of sand.

In preparation of this DSR these guidelines have been followed.

Status of Compliance to provisions in EMGS – 2020 is given below in table.

Status of Compliance to provisions in Enforcement & Monitoring Guidelines for Sand Mining (EMGSM) 2020

Sl. No.	Condition laid down by SSMG	Compliance
a.	District Survey Report for sand mining shall be prepared before the auction/e- auction/grant of the mining lease/Letter of Intent (LoI) by Mining department or department dealing the mining activity in respective states.	District Survey Report for sand mining has been prepared. After its approval appropriate action will be taken by mining department for auction and grant of mining lease.
b.	The first step is to develop the inventory of the River Bed Material and Other sand sources in the district. In order to make the inventory of River Bed Material, a detailed survey of the district needs to be carried out, to identify the source of River Bed Material and alternative source of sand (M-Sand). The source will include rivers, de-siltation of reservoir/dams, Patta lands/Khatedari Land, M-sand etc.	After detailed field survey inventory of rivers in the district has been prepared where sand can be mined. There is no source of M sand in the district. This is covered in chapter – XI
c.	District Survey Report is to be prepared in such a way that it not only identifies the mineral-bearing area but also define the mining and no mining zones considering various environmental and social factors.	District Survey Report identifies both mining and non-mining zone. This is covered in chapter - XI
d.	Identification of the source of Sand & M- Sand. The sources may be from Rivers, Lakes, Ponds, Dams, De-silting locations, Patta land/ Khatedari lands. The details in case of Rivers such as [name, length of river, type (Perennial or Non-Perennial), Villages, Tehsil, District], in case of Lakes, Ponds, Dams, De-silting locations [Name, owned/maintained by (State Govt./PSU), area, Villages, Tehsil, District] in case of Patta land/Khatedari lands [Owner Name, Si. No, Area, Agricultural/Non- Agricultural, Villages, Tehsil, District], in case of M-Sand Plant [Owner Name, Sy No, Area, Quantity/Annum, Villages, Tehsil, District], needs to be recorded as per format given in Annexure-I.	In this District Survey Report, source of sand in the district has been identified as river sand only. Required details on river, land has been furnished in chapter – XI. There is no M-sand plant in the district. Annexure -I has been filled and enclosed.
e.	Defining the sources of Sand/M-Sand in the district is the next step for identification of the potential area of deposition/aggradation wherein mining lease could be granted. Detailed survey needs to be carried out for quantification of minerals. The purpose of mining	Source of sand in the district has been found to be sand to be mined from the river bed. OGL for every potential resource

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	in the river bed is for channelization of rivers so as to avoid the possibility of flooding and to maintain the flow of the rivers. For this, the entire river stretch needs to be surveyed and Original Ground Level (OGL) to be recorded and area of aggradation/deposition needs to be ascertained by comparing the level difference between the outside riverbed OGL and water level. Once the area of aggradation/deposition are identified, then the quantity of River Bed Material available needs to be calculated. The next step is channelization of the river bed and for this central ¾th part of the river, width needs to be identified on a map. Out of the ¾th part area, where there is a deposition/aggradation of the material needs to be identified. The remaining ¼th area needs to be kept as no mining zone for the protection of banks. The specific gravity of the material also needs to be ascertained by analyzing the sample from a NABL accredited lab. Thus, the quantity of material available in metric ton needs to be calculated for mining and no mining zone.	area have been recorded along with R.L of sand deposit. Portion of the river channel from where sand will be mined have been identified only 3/4th of river to be mined. Sand samples have been tested by NABL certified labs.
f.	The permanent boundary pillars need to be erected after identification of an area of aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters.	Permanent boundary pillar will be erected after lease is granted.
g.	Identifying the mining and no mining zone shall follow with defining the area of sensitivity by ascertaining the distance of the mining area from the protected area, forest, bridges, important structures, habitation etc. and based on the sensitivity the area non-sensitive area non-sensitive area needs to be defined in sensitive and non-sensitive area.	No mining zone has been identified based on criteria given EMGS-2020. Siting criteria as per SPCB and SEIAA will be followed at stage of seeking E.C or CTE.
h.	Demand and supply of the Riverbed Material through market survey needs to be carried out. In addition to this future demand for the next 5 years also needs to be considered.	Demand and supply of sand has been done as per recommendation given in document titled "Sand MiningFramework" published by Ministry of Mines GoI.
i.	It is suggested that as far as possible the sensitive areas should be avoided for mining, unless local safety condition arises. Such deviation shall be temporary & shall not be a permanent feature.	This will be followed at the time when E.C or CTE is sought for individual mining lease.
j.	The final area selected for the mining should be then divided into mining lease as per the requirement of State Government. It is suggested the mining lease area should be so selected as to cover the entire	In this Report Potential Area of sand in rivers have been identified. Final area for mining will be done

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	deposition area. Dividing a large area of deposition/aggradation into smaller mining leases should be avoided as it leads to loss of mineral and indirectly promote illegal mining.	when mining lease is allotted by mining dept.
k.	Cluster situation shall be examined. A cluster is formed when one mining lease of homogenous mineral is within 500 meters of the other mining lease. In order to reduce the cluster formation mining lease size should be defined in such a way that distance between any two clusters preferably should not be less than 2.5 Km. Mining lease should be defined in such a way that the total area of the mining leases in a cluster should not be more than 10 Ha.	There are two cluster condition in the DSR. They are recorded in Annexure – A / VII.
l.	The number of a contiguous cluster needs to be ascertained. Contiguous cluster is formed when one cluster is at a distance of 2.5 Km from the other cluster.	There is one contiguous cluster.
m.	The mining outside the riverbed on Patta land/Khatedari land be granted when there is possibility of replenishment of material. In case, there is no replenishment then mining lease shall only be granted when there is no riverbed mining possibility within 5 KM of the Patta land/Khatedari land. For government projects, mining could be allowed on Patta land/Khatedari land but the mining should only be done by the Government agency and material should not be used for sale in the open market. Cluster situation as mentioned in para k above is also applicable for the mining in Patta land/Khatedari land.	There is no proposal for mining beyond river bed.
n.	The State Government should define the transportation route from the mining lease considering the maximum production from the mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely etc. is available with the State Government. It is suggested that the transportation route should be selected in such a way that the movement of trucks/tippers/tractors from the villages having habitation should be avoided. The transportation route so selected should be verified by the State Government for its carrying capacity.	Transportation route for every PRA has been identified and marked on toposheet. They are enclosed at plate 4, duly certified by DMO.
o.	Potential site for mining having its impact on the forest, protected area, habitation, bridges etc, shall be avoided. For this, a sub- divisional committee may be formed which after the site visit shall decide its suitability for mining. The list of mining lease after the recommendation of the Committee needs to be defined in the following format given in as Annexure-	This DSR was examined by Sub-Divisional Committee. Observations of Sub-Divisional Committee wasrecorded in annexure H. Mining lease

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	II. The Sub-Divisional Committee after the site visit shall make a recommendation on the site for its suitability of mining and also records the reason for selecting the mining lease in the Patta land. The details regarding cluster and contiguous cluster needs to be provided as in Annexure-III. The details of the transportation need to be provided as in Annexure IV.	area will be decided after DSR is approved.
p.	Public consultation-The Comments of the various stakeholders may be sought on the list of mining lease to be auctioned. The State Government shall give an advertisement in the local and national newspaper for seeking comments of the general public on the list of mining lease included in the DSR. The DSR should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public. The comments so received shall be placed before the sub- divisional committee for active consideration. The final list of sand mining areas [leases to be granted on riverbed & Patta land/Khatedari land, de-siltation location (ponds/lakes/dams), M-Sand Plants (alternate source of sand)] after the public hearing needs to be defined in the final DSR in the format as per Annexure-V. The details regarding clusterand contiguous cluster needs to be provided in Annexure-VI. The details of the transportation need to be provided in Annexure-VII.	The DSR was uploaded on district NIC portal for one month for getting suggestion from stakeholders. On receipt of suggestion was reviewed by sub-divisional committee. Proposed Transportation Routes are given in Annexure A/VII.

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Physical survey of the field by the conventional method as per Enforcement & Monitoring Guidelines for Sand Mining (EMGSM) 2020

Sl. No.	Particular	Compliance / Non-Compliance
1.	The conventional survey technical using DGPS and other survey tools are used to define the topography, contours and offsets of the lease area. The survey should clearly depict the important attributes of the stretch of the river and its nearby important civil and other feature of importance. Such information will provide the eligible spatial area for mining. The contour and the elevation benchmarks will provide the baseline data for assessing the pre and post-study period scenario.	*DGPS survey has been done to define topography, contours and offset of PRA's. TBM has been fixed as benchmark for base line survey & reference in future.* *TBM has been fixed as explained in section-11.2 (Step-2)*
2.	Physical benchmarks are to be fixed at appropriate intervals (preferable 1 in 30 m) and the Reduced Level (RL) shall be validated from a nearby standard RL. These RL should be engraved on a steel plate (Bench Plate) and shall be fixed and placed at locations which are free from any damages and are available in pre. and post-study period. The bench plates shall be available for use during the mining period as reference for all mining activity. Reference pillar may also be used in place of bench plates with visible and readable demarcation on the ground as common reference points to control the topographic survey and mining activity.	*TBM_s with its reduced level (amsl) have been fixed on bridges/ school /buildings. Physical bench marks at interval of 1 in 30m would be fixed once mining lease is allotted.*
3.	Baseline data on elevation status for a grid of 10 m x 10 m is preferred to have accuracy in the assessment. It is expected that two consecutive cross-sections in longitudinal and lateral direction should not be more than 10- meter distance apart, however, the regulatory authority may fix these intervals depending on the geographical and site-specific conditions, only and after providing the scientific reason for such deviation.	*Topographical survey of sand deposits to determine R.L. of top of sand deposit have been conducted in 10m X 10m grid using DGPS. However, elevation data required for determination of annual rate of replenishment study has been given in this report.*
4.	The levels (MSL & RL) of the corner point of each grid should be identifiable and safety barriers (Non-Mining) demarcated as restricted in consensus with Mineral Concession Rules of respective State, and the provision mentioned in this Sustainable Sand Mining Management Guidelines.	*Complied* *Details given in chapter - XI*

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5.	The changes observed in the elevation in pre and post scenario at each node should be depicted in graphical forms with an appropriate scale to estimate the area of deposition and erosion. These graphical presentations should depict the active channel regime and the flow bed elevation with other important features required to be considered for estimation of the mining area. The area of deposition and erosion shall be calculated for each cross-section after giving due regard to the stability and safety of active channel banks, and other features of importance. The elevation level shall be in reference to the nearest bench-plates established for the purpose.	*Pre and post monsoon data on elevation of sand deposits are shown in graphical form. Annexure-J. Based on these areas of deposition has been identified.*
6.	A clear identification is required to be highlighted between grids under mineable and grids under the non-mineable area. These baseline data (pre and post) be subjected to stimulation with the help of data mine software to derive at the replenishment area and corresponding volume and estimated weight.	*Replenishment volume based on pre and post monsoon elevation has been calculated and given in chapter 11*
7.	The database should be structured in a tabulated form clearly depicting the nomenclature of the section lines, latitude and longitude of the starting point, chain-age and respective levels of all the points taken on that section line.	*Complied. Chapter - 11*
8.	Net area shall be derived after the summation of the area of deposition minus area of erosion for each cross-section. The volume will be estimated by multiplying the distance between two cross-sections with the average of net area of these two consecutive cross-sections.	*This has been covered at chapter 11. (Sand Replenishment Estimation sheet)*
9.	One sample per 900 square meters (30 m x 30 m) shall be preferred sample density for assessment of bulk density for estimation of deposition rate. Care should be taken that the sample for assessment of bulk density is taken from the deposition zone and not from erosion. However, depending on the site condition, river morphology and geographical condition, sample density may be adjusted. Reason for such deviation shall be appropriately highlighted in the report with supporting scientific data.	*Sand analysis data for each PRA are given in annexure -C.*

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12.4 Compliance to observation of state Environment Assessment Committee SEAC, while appraising Draft DSR for sand mining have recorded their observations in Minutes of Meeting Status of compliance to above observations are given in table below:

STATUS OF COMPLIANCE TO THE POINTS COVERED IN MINUTES OF MEETING OF SEAC ON APPRAISAL OF DRAFT DSR FOR LOHARDAGA & KHUNTI HELD ON 5TH DECEMBER 2022 THE SEAC, IN THEIR SUGGESTION COVERED CERTAIN POINTS TO BE INCLUDED IN FINAL DSR		
Sl.	Point Observed by SEAC	Compliance
1.	The final DSR after approval by Sub-Divisional Committee, Deputy Commissioner and incorporation of the public comments is to be submitted for appraisal by SEAC.	Final DSR was submitted to SEAC after approval of sub- divisional committee & incorporation of public comments.
2.	The final DSR should be signed by all members of the Sub-Divisional Committee and the Consultant involved in the preparation of the same. All pages of the DSR should be signed by the authorized officer of the Sub Divisional Committee.	Complied
3.	The draft DSR submitted is based only on part survey. In the submitted DSR the complete area of the river/rivers have not been surveyed, only some selected ghats/lease have been surveyed. The complete potential area should be demarcated before proposing the sand leases / ghats as per EMGSM guideline 2020.	This report incorporates all Potential Resource Area (Twenty Six) identified in the district. They have been demarcated on satellite imagery, SOI Toposheet & relevant Mauza Maps.
4.	The field survey of pre-monsoon period is to be included in final DSR.	Pre-monsoon data for preparation of the DSR have been obtained from District Mining Office, Khunti (Annexure-B)
5.	The DSR should be placed in the public domain for at least 01 (one) month from the date of publication of the advertisement for obtaining comments of the public. The comments received shall be placed. The comments received shall be placed before the concerned Sub-Divisional Committee for consideration. The final DSR should be submitted to SEIAA, after incorporation of all replies of the comments received from the public.	An advertisement published on local newspaper dated 13 March, 2023. The Draft DSR was uploaded on District Portal from 17th March, 2023 to 17th April, 2023 for public consultation. The final DSR have been submitted to SEIAA after vetted by Sub- Divisional Committee.
6.	Demand and Supply of the river bed material through market survey needs to be carried out. In addition to this, future demand for the next five year also needs to be considered to justify the number and area of the sandghat to be included in the final DSR.	Demand & Supply of river bed material have been provided through data furnished by DMO (Supply) & for demand assessment by method given in documents "Sand Mining Framework" published by Ministry of Mines Govt of India. (Chapter-1)

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7.	The sandghat / leases have not to be proposed on the confluence / meanders / concavities / active channels of the river.	In selection of Potential Resource Area for sand this condition has been considered.
8.	The Khata & Khasra (Class / Nature of land including "Jungle Jhari") of the lease area should be certified by the concerned Circle Officer (CO) and to be incorporated in the final DSR.	These details have been obtained & recorded (Annexure – D)
9.	The distance of sand leases / ghats from the Forest / Wildlife Protected Area / Birds Sanctuary / Wildlife Sanctuary / National Park / Eco Sensitive Zone should be verified and certified by the concerned DFO's of the respective Territorial and Wildlife division.	Distance of Identified Potential Resource Area for sand from notified forest, Wildlife protected area/ Bird sanctuary / National Park have been obtained from DFO (T) & DFO (WL) (Ref. Annexure E & F)
10.	The undertaking regarding presence of aquatic animal in the river in proximity of the proposed sand ghats should be verified and certified by concerned Govt. Departments like Zoological Survey of India.	Letter has been written to Director ZSI, Kolkata with a request to furnish a list of aquatic animals in river in the district. Till the time reply is not received from ZSI. *District Fisheries Department has furnished list of aquatic flora and fauna in the district.*
11.	The proposed leases / ghats should meet all the siting criteria of State Pollution Control Board / SEIAA.	During selection of ghat / lease, all the siting criteria of JSPCB / JSEIAA will be considered.
12.	Clear and high resolution color satellite images of the proposed potential sand mining area should be submitted with final DSR including the date of photographs / geocoded location. Details of all such s satellite imageries should be included in the final DSR.	High resolution color satellite imagery have been used in preparation of this report. Photographs taken in course of survey are geocoded. They are enclosed in Annexure I
13.	The table of estimation of sand resources after pre-monsoon and post monsoon survey should be included in the final DSR.	Gross geological reserve, Mineable reserve and extractable reserve during post – monsoon period have been estimated given in Chapter – XI.
14.	All primary & secondary data should be supported with relevant references and documentary evidences in the final DSR.	This has been complied in preparation of the report.
15.	Bulk density and specific gravity of the sand should be certified by NABL accredited laboratory.	Sand sample collected from PRA have been tested for SP. Gravity & size analysis by NABL accredited lab they are enclosed at Annexure – C.
16.	Concave side of the river should be avoided for identification of sand leases / ghats.	In selection of PRA concave side of river has been avoided

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17.	KML files of existing leases / ghats and proposed lease / ghats should be provided.	There is one existing ghat in the district. KML map of all PRA have been prepared & enclosed at Plate -5
18.	Clusters and contiguous cluster formation should be followed as per EMGSM guidelines, 2020.	Two cluster has been proposed in DSR
19.	Average length and width of the river should be included and mining should be restricted to $3/4^{th}$ of the river width and mining should be restricted within 60% of the mineable reserve.	Average length & width of river has been furnished in Table 15. Identification of no Mining zone & calculation of mineable reserve only centered ¾ of river width has been considered extractable reserve has been taken as 60% of mineable reserve.
20.	Transportation routes should be defined for the proposed mining sites and duly certified from the competent Authorities.	Transport route for every PRA have been worked on Toposheet. They are enclosed at Plate - 4.
21.	All the annexures given in the EMGSM guideline, 2020 should be filled and included in the final DSR.	All annexure of EMGSM 2020 have been filled & enclosed at Annexure A.
22.	Point no. 9.3 of the EMGSM guidelines, 2020 regarding monitoring of mining near inter-district or interstate boundary should be addressed in the final DSR, if applicable.	In this district there are two PRA located on inter district/ interstate boundary.
23.	In addition to above, any other applicable criteria as required under SSMG, 2016 & EMGSM guidelines, 2020 should be included in the final DSR.	Applicable criteria as per SSMG 2016, EMGSM -2020 have been complied (Refer Chapter XII)
24.	The presentation of the final DSR at the time of appraisal by SEAC should cover all the points of SSMG, 2016& EMGSM guidelines, 2020.	This DSR covers all the points of SSMG, 2016 & EMGSM, 2020.

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REFERENCE

- *Publications of Directorate of Economics and Statistics, Jharkhand*
- *Census Handbook, 2011*
- *Data from District of Mining Officer (DMO)*
- *Ground Water Information Booklet Khunti District, Jharkhand State, 2013 published by Central Ground Water Authority (CGWA)*
- *Soil Resources of Khunti District, Jharkhand published by Jharkhand Space Applications Center (JSAC)*
- *Previous Approved District Survey Report (DSR)*

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ANNEXURE - A
Annexure as per 2020

Annexure-I

Details of Sand/M-Sand Sources

a) Rivers:

River Name/M-Sand Plant	Total Stretch of River (in KM)	Type of River (Perennial or Non-Perennial)
Chhata	41	Seasonal
Chhengarjor	13	Seasonal
Karo	65	Perennial
Banai	40	Seasonal
Sundari	14	Seasonal
Koel	25	Perennial
Kanchi	35	Perennial

b) De-Siltation Location: (Lakes/Ponds/Dams etc.)

Name of Reservoir/Dams	Maintain/Controlled by State Govt./PSU etc.	Location	District	Tehsil	Village	Size(Ha)
NIL	NIL	NIL	NIL	NIL	NIL	NIL

c) Patta Lands/Khatedari Land:

Owner	Sy. No	Area (Ha)	District	Tehsil	Village	Agricultural Land (Yes/No)
NIL	NIL	NIL	NIL	NIL	NIL	NIL

d) M-Sand Plants:

Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity Tonnes/Annum
NIL	NIL	NIL	NIL	NIL	NIL	NIL

Note: For inclusion of M-Sand Plant/Patta Land in DSR the plant/landowners need to submit the request to the Mining Department with complete details. Inclusion in DSR does not give them the right to operate the M-Sand Plant/Sand Mining lease.

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Annexure-II

List of Potential Mining Leases (existing & proposed) Rivers

(Identified Potential Resource Area)

River Details	Lease Details	Area (in Ha)	Distance (in KM) from PA/BR/WC/	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Total excavation in Tonnes /Annum considering digging depth max as 3 meters	Mineral to be mined (Sand/ Bajri/ RBM etc.)	Existing / Proposed
Chhata	NIL	5.6	NIL	2.000	NO	218809.35	Sand	Proposed
Chhata	NIL	1.6	NIL	0.340	NO	62664.27	Sand	Proposed
Chhata	NIL	7.0	NIL	0.258	NO	272084.44	Sand	Proposed
Chhata	NIL	4.4	NIL	0.270	NO	170688.56	Sand	Proposed
Chhata	NIL	5.0	NIL	0.462	NO	195746.87	Sand	Proposed
Chhata	NIL	5.2	NIL	1.300	NO	203486.04	Sand	Proposed
Chengarjor	NIL	2.6	NIL	2.200	NO	86438.97	Sand	Proposed
Chengarjor	NIL	1.5	NIL	1.200	NO	49749.86	Sand	Proposed
Karo	NIL	36.1	NIL	0.695	NO	1760648.91	Sand	Proposed
Karo	NIL	14.5	NIL	0.367	NO	709593.51	Sand	Proposed
Karo	NIL	12.7	NIL	1.200	NO	621445.57	Sand	Proposed
Karo	NIL	14.4	NIL	2.400	NO	702840.38	Sand	Proposed
Karo	NIL	1.7	NIL	0.260	NO	85135.59	Sand	Proposed
Karo	NIL	13.5	NIL	1.200	NO	657253.87	Sand	Proposed
Karo	NIL	11.9	NIL	0.462	NO	578734.88	Sand	Proposed
Banai	NIL	2.1	NIL	1.800	NO	60633.56	Sand	Proposed
Banai	NIL	3.3	NIL	2.200	NO	95956.65	Sand	Proposed
Banai	NIL	2.8	NIL	2.500	NO	81187.31	Sand	Proposed
Banai	NIL	2.8	NIL	0.926	NO	83380.69	Sand	Proposed
Sundari	NIL	3.3	NIL	1.800	NO	95310.68	Sand	Proposed
Koel	NIL	7.1	NIL	2.100	NO	496568.81	Sand	Proposed
Koel	NIL	10.2	NIL	0.957	NO	686446.31	Sand	Proposed
Kanchi	NIL	11.1	NIL	1.500	NO	645910.40	Sand	Proposed
Kanchi	NIL	6.3	NIL	2.500	NO	368276.22	Sand	Proposed
Kanchi	NIL	20.3	NIL	0.539	NO	1183114.96	Sand	Proposed
Kanchi	NIL	23.3	NIL	0.270	NO	1261941.53	Sand	Proposed
						10172106.64		

Note: Mining lease will be granted only after LOI is issued and EC are granted

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Patta Lands/Khatedari Land: (existing & proposed)

Owner	Sy. No	Area	District	Tehsil	Village	Total Reserve (MT)	Total Mineral to be mined (MT)	Existing /Proposed
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

De-Siltation Location: (Lakes/Ponds/Dams etc.) (Existing & proposed)

Name of Reservoi r /Dams	Maintain /Controlle d by State Govt./PSU etc.	Locatio n	Distric t	Tehsi l	Villag e	Size (Ha)	Quantit y MT / Year	Existing /Proposed
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

M-Sand Plants :(existing & proposed)

Plant Nam e	Owne r	Distric t	Tehsi l	Villag e	Geo-locatio n	Quantity Tonnes/Annu m	Existing/Propose d
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

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Annexure-III

Cluster & Contiguous Cluster details Clusters:

River Name	Cluster No.	Lease No	Location (Riverbed / Patta Land)	Village	Area (in Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Chhata	2	NIL	Riverbed	Kasmar, Manhatu, Diyankel	NIL	NIL	NIL

Contiguous Clusters:

River Name	Contiguous Cluster No.	Cluster No	Number of leases in the cluster	Location (Riverbed / Patta Land)	Distance between clusters	Village	Area of Cluster (Ha)	Total Mineral Excavation (Ton)
Chhata	1	2	NIL	Riverbed	400m	Kasmar, Manhatu, Diyankel	NIL	NIL

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Annexure-IV

Transportation Routes for individual leases and leases in Cluster

Lease No	Transportation Route No	Number of tippers /day of lease	Number of tippers /day of all the lease on route	Length of Route in KM	Type of Road (Black Topped/ unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be Constructed by Govt/ Lease Owner	Route Map & Location
KCH06	KCH06	NIL	NIL	0.397	unpaved	unpaved	Lease Owner	Attached
KCH01	KCH01	NIL	NIL	0.245	unpaved	unpaved	Lease Owner	Attached
KCH02	KCH02	NIL	NIL	0.567	unpaved	unpaved	Lease Owner	Attached
KCH03	KCH03	NIL	NIL	0.536	unpaved	unpaved	Lease Owner	Attached
KCH05	KCH05	NIL	NIL	0.503	unpaved	unpaved	Lease Owner	Attached
KCH04	KCH04	NIL	NIL	1.000	unpaved	unpaved	Lease Owner	Attached
KCG02	KCG02	NIL	NIL	0.236	unpaved	unpaved	Lease Owner	Attached
KCG01	KCG01	NIL	NIL	0.283	unpaved	unpaved	Lease Owner	Attached
KKA03	KKA03	NIL	NIL	0.346	unpaved	unpaved	Lease Owner	Attached
KKA04	KKA04	NIL	NIL	0.511	unpaved	unpaved	Lease Owner	Attached
KKA05	KKA05	NIL	NIL	0.164	unpaved	unpaved	Lease Owner	Attached
KKA06	KKA06	NIL	NIL	0.258	unpaved	unpaved	Lease Owner	Attached
KKA01	KKA01	NIL	NIL	0.349	unpaved	unpaved	Lease Owner	Attached
KKA07	KKA07	NIL	NIL	0.417	unpaved	unpaved	Lease Owner	Attached
KKA02	KKA02	NIL	NIL	0.093	unpaved	unpaved	Lease Owner	Attached
KBA03	KBA03	NIL	NIL	0.398	unpaved	unpaved	Lease Owner	Attached
KBA04	KBA04	NIL	NIL	0.455	unpaved	unpaved	Lease Owner	Attached
KBA02	KBA02	NIL	NIL	0.510	unpaved	unpaved	Lease Owner	Attached
KBA01	KBA01	NIL	NIL	0.176	unpaved	unpaved	Lease Owner	Attached
KSU01	KSU01	NIL	NIL	0.430	unpaved	unpaved	Lease Owner	Attached
KKO01	KKO01	NIL	NIL	0.471	unpaved	unpaved	Lease Owner	Attached
KKO02	KKO02	NIL	NIL	0.351	unpaved	unpaved	Lease Owner	Attached
KKC04	KKC04	NIL	NIL	0.207	unpaved	unpaved	Lease Owner	Attached
KKC03	KKC03	NIL	NIL	0.474	unpaved	unpaved	Lease Owner	Attached
KKC02	KKC02	NIL	NIL	0.138	unpaved	unpaved	Lease Owner	Attached
KKC01	KKC01	NIL	NIL	0.246	unpaved	unpaved	Lease Owner	Attached

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Cluster No	Transportation Route No	Number of tippers /day of cluster	Number of tippers /day of all the clusters on route	Length of Route in KM	Type of Road (Black Topped/ unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be Constructed by Govt/Lease Owner	Route Map & Location
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

Sigma R.D. Consultants (P) Ltd.
Consortium With Crystal Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

Annexure-V

Final List of Potential Mining Leases (existing & proposed) Rivers

River Details	Lease Details	Area (in Ha)	Distance (in KM) from PA/BR/WC/	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Total excavation in (MT/Yr) (Mine depth max as 3 m)	Mineral to be mined (Sand/Bajri/RBM etc.)	Existing /Proposed
Chhata	NIL	5.60	NIL	Refer to Annexure-E	NO	175392.00	Sand	Proposed
Chhata	NIL	1.60	NIL		NO	50112.00	Sand	Proposed
Chhata	NIL	6.95	NIL		NO	217674.00	Sand	Proposed
Chhata	NIL	4.36	NIL		NO	136555.20	Sand	Proposed
Chhata	NIL	5.00	NIL		NO	156600.00	Sand	Proposed
Chhata	NIL	5.20	NIL		NO	162864.00	Sand	Proposed
Chengarjor	NIL	2.60	NIL		NO	69217.20	Sand	Proposed
Chengarjor	NIL	1.50	NIL		NO	39933.00	Sand	Proposed
Karo	NIL	36.10	NIL		NO	1413315.00	Sand	Proposed
Karo	NIL	14.50	NIL		NO	567675.00	Sand	Proposed
Karo	NIL	12.70	NIL		NO	497205.00	Sand	Proposed
Karo	NIL	14.40	NIL		NO	563760.00	Sand	Proposed
Karo	NIL	1.74	NIL		NO	68121.00	Sand	Proposed
Karo	NIL	13.47	NIL		NO	527350.50	Sand	Proposed
Karo	NIL	11.85	NIL		NO	463927.50	Sand	Proposed
Banai	NIL	2.08	NIL		NO	48859.20	Sand	Proposed
Banai	NIL	3.28	NIL		NO	77047.20	Sand	Proposed
Banai	NIL	2.79	NIL		NO	65537.10	Sand	Proposed
Banai	NIL	2.80	NIL		NO	65772.00	Sand	Proposed
Sundari	NIL	3.25	NIL		NO	76342.50	Sand	Proposed
Koel	NIL	14.10	NIL		NO	552015.00	Sand	Proposed
Koel	NIL	10.21	NIL		NO	399721.50	Sand	Proposed
Kanchi	NIL	11.06	NIL		NO	519598.80	Sand	Proposed
Kanchi	NIL	6.28	NIL		NO	295034.40	Sand	Proposed
Kanchi	NIL	20.31	NIL		NO	954163.80	Sand	Proposed
Kanchi	NIL	23.34	NIL		NO	1096513.20	Sand	Proposed

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Patta Lands/Khatedari Land: (existing & proposed)

Owner	Sy. No	Area	District	Tehsil	Village	Total Reserve (MT)	Total Mineral to be mined (MT)	Existing /Proposed
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

De-Siltation Location: (Lakes/Ponds/Dams etc.) (Existing & proposed)

Name of Reservoir/ Dams	Maintain/ Controlled by State Govt./PSU etc.	Location	Distt.	Tehsil	Village	Size(Ha)	Quantity MT/Year	Existing/ Proposed
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

M-Sand Plants :(existing & proposed)

Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity MT/Annum	Existing/Proposed
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

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Annexure-VI

Final List of Cluster & Contiguous Cluster Clusters:

River Name	Cluster No.	Lease No	Location (Riverbed /Patta Land)	Village	Area (in Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Chatta	2	NIL	Riverbed	Kasmar, Manhatu, Diyankel	NIL	NIL	NIL

Contiguous Clusters:

River Name	Contiguous Cluster No.	Cluster No	Number of leases in the cluster	Location (Riverbed /Patta Land)	Distance between clusters	Village	Area of Cluster (in Ha)	Total Mineral Excavation (Ton)
Chatta	1	2	NIL	Riverbed	NIL	Kasmar, Manhatu, Diyankel	NIL	NIL

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Annexure-VII

Final Transportation Routes for individual leases and leases in Cluster

Lease No	Transportation Route No	Number of tippers /day of lease	Number of tippers /day of all the lease on route	Length of Route in KM	Type of Road (Black Topped/ unpaved)	Recommendation for road(Black Topped/ unpaved)	The road will be Constructed by Govt/ Lease Owner	Route Map & Location
KCH06	KCH06	NIL	NIL	0.397	unpaved	unpaved	Lease Owner	Attached
KCH01	KCH01	NIL	NIL	0.245	unpaved	unpaved	Lease Owner	Attached
KCH02	KCH02	NIL	NIL	0.567	unpaved	unpaved	Lease Owner	Attached
KCH03	KCH03	NIL	NIL	0.536	unpaved	unpaved	Lease Owner	Attached
KCH05	KCH05	NIL	NIL	0.503	unpaved	unpaved	Lease Owner	Attached
KCH04	KCH04	NIL	NIL	1.000	unpaved	unpaved	Lease Owner	Attached
KCG02	KCG02	NIL	NIL	0.236	unpaved	unpaved	Lease Owner	Attached
KCG01	KCG01	NIL	NIL	0.283	unpaved	unpaved	Lease Owner	Attached
KKA03	KKA03	NIL	NIL	0.346	unpaved	unpaved	Lease Owner	Attached
KKA04	KKA04	NIL	NIL	0.511	unpaved	unpaved	Lease Owner	Attached
KKA05	KKA05	NIL	NIL	0.164	unpaved	unpaved	Lease Owner	Attached
KKA06	KKA06	NIL	NIL	0.258	unpaved	unpaved	Lease Owner	Attached
KKA01	KKA01	NIL	NIL	0.349	unpaved	unpaved	Lease Owner	Attached
KKA07	KKA07	NIL	NIL	0.417	unpaved	unpaved	Lease Owner	Attached
KKA02	KKA02	NIL	NIL	0.093	unpaved	unpaved	Lease Owner	Attached
KBA03	KBA03	NIL	NIL	0.398	unpaved	unpaved	Lease Owner	Attached
KBA04	KBA04	NIL	NIL	0.455	unpaved	unpaved	Lease Owner	Attached
KBA02	KBA02	NIL	NIL	0.510	unpaved	unpaved	Lease Owner	Attached
KBA01	KBA01	NIL	NIL	0.176	unpaved	unpaved	Lease Owner	Attached
KSU01	KSU01	NIL	NIL	0.430	unpaved	unpaved	Lease Owner	Attached
KKO01	KKO01	NIL	NIL	0.471	unpaved	unpaved	Lease Owner	Attached
KKO02	KKO02	NIL	NIL	0.351	unpaved	unpaved	Lease Owner	Attached
KKC04	KKC04	NIL	NIL	0.207	unpaved	unpaved	Lease Owner	Attached
KKC03	KKC03	NIL	NIL	0.474	unpaved	unpaved	Lease Owner	Attached
KKC02	KKC02	NIL	NIL	0.138	unpaved	unpaved	Lease Owner	Attached
KKC01	KKC01	NIL	NIL	0.246	unpaved	unpaved	Lease Owner	Attached

Cluster No	Transportation Route No	Number of tippers /day of cluster	Number of tippers /day of all the clusters on route	Length of Route in KM	Type of Road (Black Topped/ unpaved)	Recommendation for road(Black Topped/ unpaved)	The road will be Constructed by Govt/Lease Owner	Route Map & Location
NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

Sigma R.D. Consultants Pvt. Ltd. (Consortium with Crystal Consultants)
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ANNEXURE - B

Pre monsoon data (certified by DMO)

PRE-MONSOON DATA (KHUNTI)

Sand Ghat	Corner Point	Latitude	Longitude	RL
NICHITPUR, ULIHATU	A	22.91062	85.0565595	478.4
	B	22.9117	85.0590655	478.3
	C	22.89541	85.0631102	476.5
	D	22.8957	85.0614417	476.3

Sand Ghat	Corner Point	Latitude	Longitude	RL
MAHIL AND GHAGHRA	A	23.00991	85.2350392	564.4
	B	23.01007	85.2354533	564.3
	C	23.00713	85.2363899	563.4
	D	23.00692	85.235934	563.5

Sand Ghat	Corner Point	Latitude	Longitude	RL
DIYANKEL	A	22.94652	85.1069483	499.4
	B	22.94604	85.106904	499.3
	C	22.94765	85.1042294	497.5
	D	22.94799	85.1046723	497.4

Sand Ghat	Corner Point	Latitude	Longitude	RL
PANDU	A	23.05074	85.2314943	580.4
	B	23.0503	85.2315496	580.3
	C	23.04884	85.2285206	579.4
	D	23.04914	85.228015	579.5

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Sand Ghat	Corner Point	Latitude	Longitude	RL
GHAGHRA	A	23.00346	85.2392044	561.4
	B	23.0037	85.2396302	561.3
	C	22.99997	85.2394371	560.4
	D	22.99997	85.2388446	560.5

Sand Ghat	Corner Point	Latitude	Longitude	RL
KANTI	A	23.06686	85.1262298	541.4
	B	23.06694	85.1267302	541.3
	C	23.0642	85.1270707	541.5
	D	23.06422	85.1267676	541.4

Sand Ghat	Corner Point	Latitude	Longitude	RL
BARKULI	A	22.99767	85.1157846	510.4
	B	22.9969	85.1169782	510.3
	C	22.99064	85.1169782	509.4
	D	22.99064	85.113967	509.2

Sand Ghat	Corner Point	Latitude	Longitude	RL
BARKULI 2	A	22.98323	85.1084573	505.4
	B	22.98332	85.1093486	505.3
	C	22.97824	85.1087747	505.2
	D	22.979	85.1076949	505.3

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Sand Ghat	Corner Point	Latitude	Longitude	RL
KASMAR	A	22.95514	85.1051007	502.4
	B	22.9549	85.1060829	502.3
	C	22.9511	85.1051968	501.4
	D	22.95102	85.1041923	501.5

Sand Ghat	Corner Point	Latitude	Longitude	RL
SARGEYA	A	23.10887	85.5619602	274.4
	B	23.10913	85.5614342	274.3
	C	23.11268	85.5636937	273.2
	D	23.11198	85.5646656	273.3

Sand Ghat	Corner Point	Latitude	Longitude	RL
RAMJAY	A	22.9435	85.1280754	505.4
	B	22.94307	85.1280801	505.3
	C	22.94335	85.1261182	504.4
	D	22.94306	85.1262116	504.3

Sand Ghat	Corner Point	Latitude	Longitude	RL
DIYANKEL	A	22.96233	85.1086489	499.4
	B	22.96193	85.1088867	499.3
	C	22.95881	85.1076264	498.4
	D	22.95861	85.1065907	498.5

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Sand Ghat	Corner Point	Latitude	Longitude	RL
SODE	A	22.95764	85.1054132	279.4
	B	22.9637	85.1061478	279.3
	C	22.98461	85.1052468	277.4
	D	22.96341	85.1042243	277.2

Sand Ghat	Corner Point	Latitude	Longitude	RL
KOINARA	A	22.87504	85.0639688	462.4
	B	22.87603	85.0649279	462.3
	C	22.87285	85.0687872	461.4
	D	22.87161	85.0681851	461.4

Sand Ghat	Corner Point	Latitude	Longitude	RL
SODE	A	22.98221	85.2146143	276.4
	B	22.95549	85.101457	276.3
	C	22.9511	85.1052468	276.4
	D	22.96322	85.1041453	275.4

Sand Ghat	Corner Point	Latitude	Longitude	RL
JAPUT, DERANG, LOHAJIMI	A	22.83934	85.1295385	427.4
	B	22.83939	85.1304324	427.3
	C	22.83043	85.1302205	427.5
	D	22.83097	85.1287145	427.3

Sand Ghat	Corner Point	Latitude	Longitude	RL
JARAKEL, KOCHA , KOINARA	A	22.87043	85.075198	461.4
	B	22.87144	85.0759703	461.3
	C	22.86372	85.0772412	459.5
	D	22.86256	85.0759107	459.3

Sand Ghat	Corner Point	Latitude	Longitude	RL
BANAI, KOCHA	A	22.84346	85.0970085	435.4
	B	22.84413	85.0976219	435.3
	C	22.84097	85.1041305	434.4
	D	22.83988	85.1040942	434.2

Sand Ghat	Corner Point	Latitude	Longitude	RL
BUDHIROMA	A	23.17061	85.0536532	566.4
	B	23.17076	85.0539236	566.3
	C	23.16776	85.0558518	566.4
	D	23.16769	85.055534	566.5

Sand Ghat	Corner Point	Latitude	Longitude	RL
CHURGI	A	22.95314	85.1316248	506.4
	B	22.95277	85.1316441	506.3
	C	22.94906	85.1278162	505.4
	D	22.94935	85.1275549	505.4

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Sand Ghat	Corner Point	Latitude	Longitude	RL
MAIPA	A	23.12033	85.5207508	282.4
	B	23.12153	85.5207855	282.3
	C	23.12177	85.5366657	276.5
	D	23.12099	85.5365178	276.3

Sand Ghat	Corner Point	Latitude	Longitude	RL
BARIGARA	A	23.12127	85.4943802	290.4
	B	23.12234	85.4945962	290.3
	C	23.12107	85.5102622	285.5
	D	23.12038	85.510821	285.3

Sand Ghat	Corner Point	Latitude	Longitude	RL
GOVINDPUR	A	23.07135	84.9961433	529.4
	B	23.0717	84.9969103	529.3
	C	23.06656	84.9976856	528.4
	D	23.06628	84.9968227	528.4

Sand Ghat	Corner Point	Latitude	Longitude	RL
GURUBERA	A	23.12069	85.5802353	268.4
	B	23.12161	85.5802311	268.3
	C	23.11716	85.5896672	264.5
	D	23.11607	85.5888436	264.3

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Sand Ghat	Corner Point	Latitude	Longitude	RL
BICHNA	A	23.03362	85.2252306	580.4
	B	23.03378	85.226208	580.3
	C	23.03099	85.2246222	579.5
	D	23.03112	85.2243004	579.4

Sand Ghat	Corner Point	Latitude	Longitude	RL
MANHATU. KASMAR	A	22.96849	85.1090211	502.4
	B	22.96854	85.1099894	502.3
	C	22.96434	85.1112567	501.2
	D	22.96411	85.1104747	501.3

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ANNEXURE - C
Sand analysis report

EcoCare

Specialised Hoouse on Environmental Monitoring, Analysis, Assessment & Management
ISO 9001:2015 Certified, OHSAS 45001:2018 Certified

Phone : (0341) 2252011
Fax : (0341) 2252011
Email : ecocareasansol@rediffmail.com
Manoj Talkies Basement, Kumarpur
Asansol - 713304
Paschim Bardhaman (W.B.)

ULR No. TC510923000000581P

Date of Print: 23.12.2022

Sand Texture Analysis Report

Client Name: Crystal Consultants Pvt. Ltd.
Client Address: Kshitij Kashyap Vihar,
Opposite Ashok Nagar Road No. 3,
Ranchi, Jharkhand, PIN – 834002
Sample Type: Riverbed Sand
Period of Sampling: 20.11.2022 to 25.11.2022
Sampling Density: Two per Hectare

Sample Collected By: Party
Source: Multiple Rivers in Khunti District
Period of Analysis: 12.12.2022 to 22.12.2022
Sample Condition: Sealed & Preserved

ID	Area (Ha)	Length (m)	No. of Samples	Sand Sample Collected for texture analysis						Bulk Density (Ton/m³)
				4.75mm to 2.00 mm		2.00mm to 425 micron		425 to 75 micron		
				Nos.	%	Nos.	%	Nos.	%	
KCH01	1.60	309	3	0	0	2	62.5	1	37.5	1.65
KCH02	6.95	771	14	3	21.58	8	57.55	3	20.86	1.64
KCH03	3.48	517	7	1	14.37	5	71.84	1	13.79	1.68
KCH04	5.15	604	10	1	9.71	6	58.25	3	32.04	1.65
KCH05	5.03	498	10	2	19.88	6	59.64	2	20.48	1.63
KCH06	5.42	600	11	1	9.23	7	64.58	3	26.2	1.67
KCG01	1.30	215	3	0	0	2	76.92	1	23.08	1.65
KCG02	2.45	495	5	1	20.41	3	61.22	1	18.37	1.66
KKA01	1.74	415	3	0	0	2	57.47	1	42.53	1.65
KKA02	10.45	830	21	4	19.14	11	52.63	6	28.23	1.67
KKA03	36.45	2015	73	15	20.58	39	53.5	19	25.93	1.64
KKA04	19.25	865	39	6	15.58	22	57.14	11	27.27	1.62
KKA05	17.30	989	35	5	14.45	20	57.8	10	27.75	1.66
KKA06	14.60	920	29	4	13.7	17	58.22	8	28.08	1.63
KKA07	13.47	985	27	5	18.56	16	59.39	6	22.05	1.64
KBA01	2.80	389	6	1	17.86	3	53.57	2	28.57	1.67
KBA02	2.79	350	6	1	17.92	4	71.68	1	10.39	1.66
KBA03	2.50	350	5	0	0	3	60	2	40	1.67
KBA04	3.28	430	7	1	15.24	4	60.98	2	23.78	1.63
KKO01	6.72	620	13	2	14.88	8	59.52	3	25.6	1.65
KKO02	9.25	830	19	2	10.81	10	54.05	7	35.14	1.64
KKC01	23.34	1731	47	8	17.14	29	62.13	10	20.74	1.63
KKC02	20.31	1560	41	8	19.69	22	54.16	11	26.14	1.67
KKC03	6.28	418	13	2	15.92	8	63.69	3	20.38	1.65
KKC04	11.06	1035	22	4	18.08	14	63.29	4	18.63	1.66
KSU01	3.35	541	7	1	14.93	4	59.7	2	25.37	1.64

1. Test values are reported based on the samples received.
2. Samples will be destroyed after 7 days from the date of issues of the Test Report, subject to nature of preservation; sample will be preserved as per the standard method.
3. The Test report shall not be reproduced without the written approval of the laboratory.

Approved

Authorised Signatory

Dr. Mousumi Pal
Ph.D.(Env.), Scientist
Authorised Signatory

ANNEXURE - D
NOC from CO

कार्यालय अंचल अधिकारी, अड़की खूँटी।

पत्रांकः– 05
दिनांकः– 9/1/23

प्रेषक,

अंचल अधिकारी,
अड़की।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषयः– DSR (District Survey Report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंगः– आपका पत्रांकः– 798 / एम० दिनांकः– 28.12.2022

महाशय,

उपर्युक्त विषय एवं प्रसंग में चार बालू घाटों का जाँच राजस्व उप निरीक्षक एवं अंचल निरीक्षक अड़की से कराया गया, जिसकी छायाप्रति इस पत्र के साथ संलग्न कर आवश्यक कार्रवाई हेतु भेजी जा रही है।

अनुलग्नकः–यथोक्त।

विश्वासभाजन

9/1/23

अंचल अधिकारी,
अड़की।
9/1/23

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi
Approved

सेवा में,
अंचल अधिकारी
खूंटी।

विषय :- DSR (District Survey Report) Sand में बालु घाटों का जाँच प्रतिवेदन के विषय में।

प्रसंग :- जिला खनन कार्यालय, खूंटी के पत्रांक 798/एम० दिनांक 28/12/2022 के आलोक में।

महाशय,

उपर्युक्त विषय के सम्बन्ध में कहना है कि खूंटी जिला के DSR (District Survey Report) Sand में वर्णित अंचल खूंटी के 4 (चार) बालूघाटों का स्थल जाँच अंचल अमीन एवं मेरे द्वारा किया गया। निर्धारित बिन्दु के अनुसार 4 (चार) बालू घाटों (मौजावार) का जाँच प्रतिवेदन निम्न प्रकार है। :-

मौजा - मुड़बेड़ा थाना नं. 288 खाता. 73 प्लॉट - 1 - रकबा 11.66 P० किस्म जॉ० स्थल नदी
73 प्लॉट 39 16.02 P० नदी

क्र०सं	निर्धारित बिन्दु	हाँ/नहीं
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा दाज०डी में अंचल खूंटी के रूप में दर्ज है?	नहीं
2.	क्या 500 मी० की दूरी के अन्दर कोई मानव बसावट (Habitation) स्थित है?	नहीं
3	क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4	क्या 500 मी० की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि०मी० की परिधी में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी० की दूरी के अन्दर कोई स्मारक / पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

6/1/23

6/1/23

Approved
State Level Environment Impact Assessment Authority * Jharkhand Ranchi

P.T.O

मौजा सरोचा थाना नं. 293 खाता - 313 प्लॉट - 1(P) रकबा - 69.70 ए. किस्म - नदी
जे० खास

क्र. सं.	निर्धारित बिन्दु	हाँ/नहीं
1	क्या प्रस्तावित भूमि की कोई सर्वे खतियान अथवा रीज. II में जंगल झाड़ी के रूप में दर्ज है?	नहीं
2	क्या 500 मी० की दूरी के अन्दर कोई मानव बसाहट (Habitation) स्थित है?	नहीं
3	क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4	क्या 500 मी० की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी० की दूरी के अन्दर कोई शैक्षणिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि.मी० की परिधी में कोई अंतरराज्यीय (Inter State) बॉर्डर है?	नहीं
8	क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय Monuments/Archaeological) महत्व के स्थल है?	नहीं

मौजा - मैया थाना-295 खाता 89 प्लॉट 805 रकबा 7.80 ए. किस्म नदी
89 790 28.00 ए. नदी
149 2199 16.10 ए. नदी
149 1(P) 32.50 नदी

जे० खास

क्र. सं.	निर्धारित बिन्दु	हाँ/नहीं
1.	क्या प्रस्तावित भूमि की कोई सर्वे खतियान अथवा रीज. II में जंगल झाड़ी के रूप में दर्ज है?	नहीं
2.	क्या 500 मी० की दूरी के अन्दर कोई मानव बसाहट (Habitation) स्थित है?	नहीं
3	क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4.	क्या 500 मी० की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5.	क्या 500 मी० की दूरी के अन्दर कोई शैक्षणिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है?	नहीं
7.	क्या 10 कि.मी. की परिधी में कोई अंतरराज्यीय (Inter State) बॉर्डर है?	नहीं
8	क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

SDO 6/11/22

6/11/22

Approved State Level Environment Impact Assessment Authority * Jharkhand, Ranchi

P.T.O

मौजा खरीगड़ा थाना 296 खाता प्लॉट रकबा किस्म जॉ० खान

221 1(P) 31.10P. नदी

221 1827 50.30P. नदी

क्र.सं	निर्धारित बिन्दु	हाँ / नहीं
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रैयती में जंगल झाड़ी के रूप में दर्ज है?	नहीं
2.	क्या 500 मी० की दूरी के अन्दर कोई आवास बसावट (Habitation) स्थित है?	नहीं
3.	क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam / Reservoir) स्थित है?	नहीं
4	क्या 500 मी० की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5.	क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि०मी० की परिधी में कोई अंतर्राज्यीय (Inter-State) सीमा है?	नहीं
8	क्या 500 मी० की दूरी में अन्दर कोई स्मारक / पुरातत्वीय (Monuments / Archaeological) महत्व के स्थल है?	नहीं

अतः जाँच प्रतिवेदन प्रेषित की आवश्यक कार्रवाई हेतु समर्पित।

6/1/23
कांचल मरांडी
कानूनगो

6/1/23

C.I.

Approved
State Level Environment ... Jharkhand, Ranchi

कार्यालय अंचल अधिकारी, कर्रा (खूँटी)

प्रेषक,

अंचल अधिकारी,
कर्रा।

पत्रांक– 28(11)
दिनांक– 10/01/23

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषयः– DSR (District Survey Report) Sand में वर्णित बालू घाटों का जांच प्रतिवेदन भेजने के संबंध में।

प्रसंगः– आपका पत्रांक 797/एम0 दिनांक 28.12.2022

महाशय,

उपर्युक्त विषयक एवं प्रसंगाधीन पत्र के संबंध में सूचित करना है कि कर्रा अंचल अंतर्गत मौजा गोविन्दपुर, थाना सं0 49 के अन्तर्गत बिन्दुवार जांच प्रतिवेदन निम्न प्रकार है:–

क्र0	निर्धारित बिन्दु	हाँ/नहीं
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर ii में जंगल झाड़ी के रूप में दर्ज है ?	सर्वे खतियान के अनुसार गैर मजरूआ खास किस्म नदी दर्ज है।
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव बसाहट (Habitation) स्थित है ?	नहीं
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है ?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है ?	हाँ
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधि में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः प्रतिवेदन सूचनार्थ प्रेषित।

विश्वासभाजन

10/01

अंचल अधिकारी
कर्रा।

कार्यालय अंचल अधिकारी, कर्रा (खूँटी)

प्रेषक,

अंचल अधिकारी,
कर्रा।

पत्रांक– 27 (11)
दिनांक– 10/01/23

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषयः– DSR (District Survey Report) Sand में वर्णित बालू घाटों का जांच प्रतिवेदन भेजने के संबंध में।

प्रसंगः– आपका पत्रांक 797/एम0 दिनांक 28.12.2022

महाशय,

उपर्युक्त विषयक एवं प्रसंगाधीन पत्र के संबंध में सूचित करना है कि कर्रा अंचल अंतर्गत मौजा कांटी, थाना सं0 36 के अन्तर्गत बिन्दुवार जांच प्रतिवेदन निम्न प्रकार है:–

क्र0	निर्धारित बिन्दु	हाँ/नहीं
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर ii में जंगल झाड़ी के रूप में दर्ज है ?	खतियान के अनुसार गैर मजरूआ खास किस्म नदी दर्ज है।
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव बसाहट (Habitation) स्थित है ?	नहीं
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है ?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है ?	हाँ
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधि में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः प्रतिवेदन सूचनार्थ प्रेषित।

विश्वासभाजन

10/01

अंचल अधिकारी
कर्रा।

State Level Environment Impact Assessment Authority * Jharkhand Ranchi * Approved

कार्यालय अंचल अधिकारी, कर्रा (खूँटी)

प्रेषक,

अंचल अधिकारी,
कर्रा।

पत्रांक– 26 (11)
दिनांक– 10/01/23

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषयः– DSR (District Survey Report) Sand में वर्णित बालू घाटों का जांच प्रतिवेदन भेजने के संबंध में।

प्रसंगः– आपका पत्रांक 797/एम0 दिनांक 28.12.2022

महाशय,

उपर्युक्त विषयक एवं प्रसंगाधीन पत्र के संबंध में सूचित करना है कि कर्रा अंचल अंतर्गत मौजा सुनगी, थाना सं0 35, के अन्तर्गत बिन्दुवार जांच प्रतिवेदन निम्न प्रकार है:–

क्र0	निर्धारित बिन्दु	हाँ/नहीं
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर ii में जंगल झाड़ी के रूप में दर्ज है ?	नहीं
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव बसाहट (Habitation) स्थित है ?	नहीं
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है ?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है ?	हाँ
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधि में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः प्रतिवेदन सूचनार्थ प्रेषित।

विश्वासभाजन

10/01

अंचल अधिकारी
कर्रा।

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi
Approved

कार्यालय अंचल अधिकारी, कर्रा (खूँटी)

प्रेषक,

अंचल अधिकारी,
कर्रा।

पत्रांक– 88।
दिनांक– 30/12/22

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषयः– DSR (District Survey Report) Sand में वर्णित बालू घाटों का जांच प्रतिवेदन भेजने के संबंध में।

प्रसंगः– आपका पत्रांक 797/एम0 दिनांक 28.12.2022

महाशय,

उपर्युक्त विषयक एवं प्रसंगाधीन पत्र के संबंध में सूचित करना है कि कर्रा अंचल अंतर्गत मौजा बुढ़ीरोमा, थना सं0 105, के अन्तर्गत बिन्दुवार जांच प्रतिवेदन निम्न प्रकार है:–

क्र0	निर्धारित बिन्दु	हाँ/नहीं
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर ii में जंगल झाड़ी के रूप में दर्ज है ?	सर्वे खतियान के अनुसार गैरमजरूआ खास नदी दर्ज है।
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव बसाहट (Habitation) स्थित है ?	नहीं
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है ?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है ?	हाँ
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधि में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः प्रतिवेदन सूचनार्थ प्रेषित।

विश्वासभाजन

30.12.22
अंचल अधिकारी
कर्रा।

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

कार्यालय अंचल अधिकारी, मुरहू, खूँटी

पत्रांक 1013(ii)/राo
दिनांक 30-12-2022

प्रेषक,

अंचल अधिकारी,
मुरहू।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषयः— DSR (District Survey) Sand के वर्णित बालूघाटों का जॉच प्रतिवेदन उपलब्ध करने के संबंध में।

प्रसंगः— भवदीय पत्रांक 799 दिनांक 3.12.22।

महाशय,

उपरोक्त विषयक प्रसगाधीन पत्र के आलोक में कहना है कि खूँटी DSR (District Survey) Sand के वर्णित मुरहू अंचल के 4 (चार) बालूघाटों का आपके द्वारा दिए गए निर्धारित बिन्दु पर हल्कावार संबंधित राजस्व उप निरीक्षक एवं अंचल निरीक्षक के द्वारा जाँच कर इस प्रतिवेदन के साथ संलग्न कर भेजी जा रही है। (जाँच प्रतिवेदन मूल रूप में संलग्न)

क्रमांक		1.	2.	3.	4.	5.	6.	7.	8.
हल्का / मौजा		क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर ।। में जंगल झाड़ी के रूप मे दर्ज है ,	क्या 500 मी. की दूरी के अन्दर कोई मान बसाहट (Habitation) स्थित है?	क्या 500 मी. की दूरी के अन्दर कोई जलीय निकाय (Dam/ Reservior) स्थित है?	क्या 500 मी. की दूरी के अन्दर कोई नदी (River) स्थित है ?	क्या 500 मी. की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है ?	क्या 500 मी. की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है ?	क्या 10 कि.मी. की परिधि में कोई अंतरराज्यीय (Inter state) सीमा है?	क्या 500 मी. की दूरी के अन्दर कोई स्मारक/ पुरातत्वीय (Monu ments /Archaeological) महत्व के स्थल है ?
हल्का VI	Mahil	नहीं	हाँ	हाँ	हाँ	नहीं	नहीं	नहीं	नही
	Mahil	नही	हाँ	हाँ	हाँ	नहीं	नही	नही	नहीं
हल्का VII	Bichna	नहीं	हाँ	हाँ	हाँ	हाँ	नहीं	नहीं	नहीं
	Pandu	नहीं	हाँ	हाँ	हाँ	नहीं	नहीं	नहीं	नहीं
हल्का VII	Ghaghra	नही	हाँ	हाँ	हाँ	नहीं	नहीं	नहीं	नहीं
	Ghaghra	नहीं	हाँ	हाँ	हाँ	नहीं	नहीं	नहीं	नहीं

विश्वासभाजन

30/12/22

अंचल अधिकारी,
मुरहू

Approved
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

सेवा में,

अंचल अधिकारी

मुरहू

विषय - DSR (District Survey Report) Sand में वर्णित बालुघाटों का जाँच प्रतिवेदन उपलब्ध कराने के सम्बन्ध में।

प्रसंग - जिला खनन पदाधिकारी रांची के पत्रांक 799 दिनांक 28-12-22

महाशय,

उपरोक्त विषय के सम्बन्ध में कहना है कि ग्राम बादगा आना नं 266 ~~~~ में स्थित बालुघाटों के सम्बन्ध में ~~~~ निम्नवत जाँच प्रतिवेदन निम्नवत है

क्रमांक	निर्धारित बिन्दु	ग्राम बादगा प्ला 1482 P		ग्राम पासरा प्ला 1482 P	
			हाँ/नहीं		हाँ/नहीं
1	क्या आवेदित भूमि की कोटि सुबे खतियान वाला रतियान D में जंगल झाड़ी के रूप में दर्ज है?	1482 P	नहीं	1482 P	नहीं
2	क्या 500 मीटर की दूरी के अन्दर कोई मानव बसावट स्थित है?	"	हाँ	"	हाँ
3	क्या 500 मीटर की दूरी के अन्दर कोई जलीय निकाय स्थित है?	"	हाँ	"	हाँ
4	क्या 500 मीटर की दूरी के अन्दर कोई नदी स्थित है	"	हाँ	"	हाँ
5	क्या 500 मीटर की दूरी के अन्दर कोई ऐतिहासिक संरचना स्थित है	"	नहीं	"	नहीं
6	क्या ~~मीटर~~ 500 मीटर की दूरी के अन्दर कोई पुरातात्विक स्थल स्थित है	"	नहीं	"	नहीं
7	क्या 10 किलोमीटर की परिधि में कोई अन्तर्राज्यीय सीमा है?	"	नहीं	"	नहीं
8	क्या 500 मीटर की दूरी के अन्दर कोई स्मारक / पुरातात्विय महत्व के स्थल हैं?	"	नहीं	"	नहीं

अतः अनुरोध कार्यालय देख जाँच प्रतिवेदन समर्पित।

29/12/22

29/12/2022

Approved
State Level Environment Impact Assessment Authority
Jharkhand, Ranchi

सेवा में,

अंचलाधिकारी,

मुरहु ।

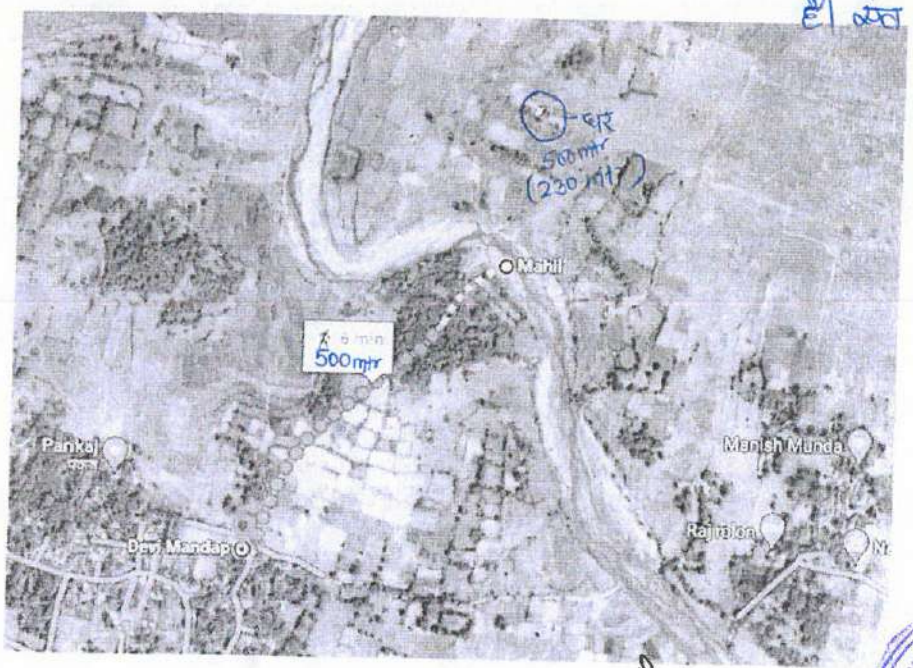
विषय :- DSR (District Survey Report) Sand में वर्णित माहिल ग्राम, मुरहु अंचल, बालुघाट का जाँच प्रतिवेदन सिन्दुवार ।

महाशया,

उपरोक्त विषय के संदर्भ में उपलब्ध कराए गए Potential Sand Area का detail Co-ordinate एवं मौजा माहिल के खाता 172 गैरमजरुआ खास, प्लॉट 2058 रकबा 16.64 डिसमिल बनई नदी एवं प्लॉट न. 111/2188 रकबा 11.70 डिसमिल नदी सर्वे RS खतियान में दर्ज है ।

1. नहीं
2. हाँ (मानव बसाहट है)
3. हाँ
4. हाँ
5. नहीं
6. नहीं
7. नहीं
8. नहीं

क्रमांक 1 से 8 तक का उत्तर उपरोक्त वर्णित है। एवं उपलब्ध कराए गए Co-ordinate के अनुसार स्थल चित्र प्रदर्शित है ।



R.S.I
Halka VI
28/12/2022

28/12/2022

Approved
State Level Environment Impact Assessment Authority
Jharkhand, Ranchi

सेवा में,

अंचल अधिकारी

कुरडू।

विषय:- DSR (District Survey report) Sand में वर्णित वानुथलों का जांच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग:- जिला खनन कार्यालय खूंटी पत्रांक 7991/ख.- दिनांक 28.12.2022

महाशय,

उपर्युक्त विषय एवं प्रसंग के संबंध में कहना है कि मौजा विजय का सं० 262 खाता सं० 2512 प्लॉट सं० 1470 रकबा 2.76 एकड़ में अवैध बालू उत्खनन के संबंध में निम्नवत प्रश्नवार प्रतिवेदन है:—

1. क्या आवेदित भूमि की कोई दूरी स्थित सक्रिय नदी/धारा/चैनल से जांच में पाई गई है? - नहीं।
2. क्या DSR की दूरी के अन्दर कोई मानव बसावट विद्यमान है? - हाँ।
3. क्या DSR की दूरी के अन्दर कोई ऐतिहासिक धरोहर स्थित है? - हाँ।
4. क्या DSR की दूरी के अन्दर कोई गांव है - हाँ।
5. क्या DSR की दूरी के अन्दर कोई शैक्षिक संस्थान स्थित है? - हाँ। डॉन बास्को विद्यालय
6. क्या DSR की दूरी के अन्दर कोई चिकित्सालय स्थित है? - नहीं।
7. क्या 10 KM. की परिधि में कोई ~~चिकित्सालय~~ ऐतिहासिक धरोहर स्थित है - नहीं।
8. क्या DSR की दूरी के अन्दर कोई रामसर/ऐतिहासिक महत्व के स्थल है - नहीं।

29/12/2022

कार्यपालक पदाधिकारी

अं.प.अ.-VII

29/12/2022

Approved

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

सेवा में,

अपर समाहर्ता

कुचई।

विषय:- DLR (District Survey report) Sand से संबंधित कागजात के ऑफलाईन/लिखित उपलब्ध कराने के संबंध में।

प्रसंग:- जिला खनन कार्यालय पत्रांक 739/खन० दिनांक 28/12/22

महाशय,

उपर्युक्त विषय एवं प्रसंगांतर्गत निवेदन है कि मौजा पाटकुं थाना नं० 248 खाता नं० 110 खेसरा नं० 1683 रकबा 2.80 एकड़ आदि से संबंधित कौन कौन से कागजात उपलब्ध नहीं कराये जाने हेतु निम्नवत स्पष्टीकरण प्रस्तुत है:-

1. नहीं।
2. हाँ।
3. हाँ।
4. हाँ।
5. नहीं।
6. नहीं।
7. नहीं।
8. नहीं।

29/12/2022

Memo-VII

29/12/2022

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

कार्यालय अंचल अधिकारी, रनियाँ।

पत्रांक:- 374(ii)
दिनांक:- 17-07-2023

प्रेषक,

अंचल अधिकारी,
रनियाँ।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषय :- DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :- भवदीय पत्रांक–800 / एम0,दिनांक–28.12.2022

महाशय,

उपर्युक्त विषय एंव प्रसंग के संबंध में कहना है कि DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन राजस्व कागजात से एवं स्थल जाँच की गयी जो निम्न प्रकार है मौजा–जापुद थाना न0–111, खाता न0–57 प्लॉट सं0–1360P, एवं प्लॉट सं0–826P रकबा–0.78 एवं 5.31 एकड़ क्षेत्र पर बालुघाट हेतु जाँच प्रतिवेदन बिन्दुवार इस प्रकार है:–

क्र0	निर्धारित बिन्दू	हाँ / नही
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है?	नहीं
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव बसाहट (Habitation) स्थित है।	हाँ
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नही
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्यालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधी में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक / पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः पत्र प्राप्ति स्वीकार की जाय।

विश्वासभाजन

अंचल अधिकारी
रनियाँ।

Approved
State Level Environment Impact Assessment Authority * Jharkhand Ranchi

Scanned with CamScanner

कार्यालय अंचल अधिकारी, रनियाँ।

पत्रांकः–...3 6(1)...
दिनांकः–...17-01-2023...

प्रेषक,

अंचल अधिकारी,
रनियाँ।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषय :– DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :– भवदीय पत्रांक–800 / एम0,दिनांक–28.12.2022

महाशय,

उपर्युक्त विषय एंव प्रसंग के संबंध में कहना है कि DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन राजस्व कागजात से एवं स्थल जाँच की गयी जो निम्न प्रकार है मौजा–सोदे थाना न0–157, खाता सं0–179 प्लॉट सं0–1426P रकवा–10.21 एकड़ क्षेत्र पर बालुघाट हेतु जाँच प्रतिवेदन बिन्दुवार इस प्रकार है:–

क्र0	निर्धारित बिन्दू	हाँ / नही
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है?	नही
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव वसाहट (Habitation) स्थित है।	हाँ
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्यालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधी में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक / पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः पत्र प्राप्ति स्वीकार की जाय।

विश्वासभाजन

अंचल अधिकारी
रनियाँ।

Approved
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

Scanned with CamScanner

कार्यालय अंचल अधिकारी, रनियाँ।

पत्रांकः-35(11)
दिनांकः-17-01-2023

प्रेषक,

अंचल अधिकारी,
रनियाँ।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषय :- DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :- भवदीय पत्रांक–800 / एम0,दिनांक–28.12.2022

महाशय,

उपर्युक्त विषय एंव प्रसंग के संबंध में कहना है कि DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन राजस्व कागजात से एवं स्थल जाँच की गयी जो निम्न प्रकार है मौजा–सोदे थाना न0–157, खाता सं0–179 प्लॉट सं0–1P रकवा–7.10 एकड़ क्षेत्र पर बालुघाट हेतु जाँच प्रतिवेदन बिन्दुवार इस प्रकार है:–

क्र0	निर्धारित बिन्दू	हाँ / नही
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है?	नही
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव बसाहट (Habitation) स्थित है।	हाँ
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्यालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधी में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक / पुरातत्वीय (Monuments/Archaeological) गहत्व के स्थल है?	नहीं

अतः पत्र प्राप्ति स्वीकार की जाय।

विश्वासभाजन

अंचल अधिकारी
रनियाँ।

State Level Environment Impact Assessment Authority Jharkhand, Ranchi
Approved

Scanned with CamScanner

कार्यालय अंचल अधिकारी, रनियाँ।

पत्रांकः-.....34(11).....
दिनांकः-.....17-07-2023

प्रेषक,

अंचल अधिकारी,
रनियाँ।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषय :- DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :- भवदीय पत्रांक-800/एम0,दिनांक-28.12.2022

महाशय,

उपर्युक्त विषय एंव प्रसंग के संबंध में कहना है कि DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन राजस्व कागजात से एवं स्थल जाँच की गयी जो निम्न प्रकार है मौजा-बनई थाना न0-107, खाता न0-63 प्लॉट सं0-1652P, रकवा-7.20 एकड़ क्षेत्र पर बालुघाट हेतु जाँच प्रतिवेदन बिन्दुवार इस प्रकार है:-

क्र0	निर्धारित बिन्दू	हाँ/नही
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है?	नही
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव वसाहट (Habitation) स्थित है।	नही
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्यालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधी में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः पत्र प्राप्ति स्वीकार की जाय।

विश्वासभाजन

अंचल अधिकारी
रनियाँ।

16.07.23

State Level Environment Approved Jharkhand, Ranchi

Scanned with CamScanner

कार्यालय अंचल अधिकारी, रनियाँ।

पत्रांकः–.....334(1).....
दिनांकः–.....17-07-2023.....

प्रेषक,

अंचल अधिकारी,
रनियाँ।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषय :– DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :– भवदीय पत्रांक–800 / एम0,दिनांक–28.12.2022

महाशय,

उपर्युक्त विषय एंव प्रसंग के संबंध में कहना है कि DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन राजस्व कागजात से एवं स्थल जाँच की गयी जो निम्न प्रकार है मौजा–कोयनारा थाना न0–83, खाता–56 प्लॉट सं0–1681P ,कुल रकबा–1.50 एकड़ क्षेत्र पर बालुघाट हेतु जाँच प्रतिवेदन बिन्दुवार इस प्रकार है:–

क्र0	निर्धारित बिन्दू	हाँ / नही
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है?	नहीं
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव बसाहट (Habitation) स्थित है।	हां
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्यालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधी में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक / पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः पत्र प्राप्ति स्वीकार की जाय।

विश्वासभाजन

17.7.2023

अंचल अधिकारी
रनियाँ।

16.07.23

Approved
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi

Scanned with CamScanner

कार्यालय अंचल अधिकारी, रनियाँ।

पत्रांकः– 3241
दिनांकः– 17-07-23

प्रेषक,

अंचल अधिकारी,
रनियाँ।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषय :– DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :– भवदीय पत्रांक–800 / एम0,दिनांक–28.12.2022

महाशय,

उपर्युक्त विषय एंव प्रसंग के संबंध में कहना है कि DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन राजस्व कागजात से एवं स्थल जाँच की गयी जो निम्न प्रकार है मौजा–जराकेल थाना न0–84, खाता सं0–32 प्लॉट सं0–305P रकवा–4.20 एवं प्लॉट– 439, रकवा–2.00 एकड़ क्षेत्र पर बालुघाट हेतु जाँच प्रतिवेदन बिन्दुवार इस प्रकार हैः–

क्र0	निर्धारित बिन्दू	हाँ / नही
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है?	नहीं
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव वसाहट (Habitation) स्थित है।	हां
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्यालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधी में कोई अंतरराज्यीय (Interstate) सीमा है?	नही
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक / पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः पत्र प्राप्ति स्वीकार की जाय।

विश्वासभाजन

अंचल अधिकारी
रनियाँ।
16.07.23

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi

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कार्यालय अंचल अधिकारी, रनियाँ।

पत्रांकः-...31(ii)...
दिनांकः-...17.07.23...

प्रेषक,

अंचल अधिकारी,
रनियाँ।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषय :- DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :- भवदीय पत्रांक–800 / एम0,दिनांक–28.12.2022

महाशय,

उपर्युक्त विषय एंव प्रसंग के संबंध में कहना है कि DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन राजस्व कागजात से एवं स्थल जाँच की गयी जो निम्न प्रकार है मौजा–जराकेल थाना न0–84, खाता सं0–32 प्लॉट सं0–578 रकवा–3.25 एवं प्लॉट– 305P, रकवा–4.00 एकड़ क्षेत्र पर बालुघाट हेतु जाँच प्रतिवेदन बिन्दुवार इस प्रकार हैः–

क्र0	निर्धारित बिन्दू	हाँ / नही
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है?	नहीं
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव वसाहट (Habitation) स्थित है।	हां
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्यालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधी में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक / पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः पत्र प्राप्ति स्वीकार की जाय।

विश्वासभाजन

अंचल अधिकारी
रनियाँ।
16.8.23

State Level Environment ... Approved ... Jharkhand, Ranchi

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कार्यालय अंचल अधिकारी, रनियाँ।

पत्रांकः- 30(ii)
दिनांकः- 17.07.2023

प्रेषक,

अंचल अधिकारी,
रनियाँ।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषय :- DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :- भवदीय पत्रांक–800/एम0,दिनांक–28.12.2022

महाशय,

उपर्युक्त विषय एंव प्रसंग के संबंध में कहना है कि DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन राजस्व कागजात से एवं स्थल जाँच की गयी जो निम्न प्रकार है मौजा–कोयनारा थाना न0–83, खाता–56 प्लॉट सं0–1681P ,कुल रकबा–3.25 एकड़ क्षेत्र पर बालुघाट हेतु जाँच प्रतिवेदन बिन्दुवार इस प्रकार है:–

क्र0	निर्धारित बिन्दू	हाँ/नही
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है?	नहीं
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव वसाहट (Habitation) स्थित है।	हां
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्यालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि0मी0 की परिधी में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः पत्र प्राप्ति स्वीकार की जाय।

विश्वासभाजन

17-7-2023

अंचल अधिकारी
रनियाँ।

16.07.23

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

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कार्यालय अंचल अधिकारी, रनियाँ।

पत्रांक:– 258(ii)
दिनांक:– 17.07.2023

प्रेषक,

अंचल अधिकारी,
रनियाँ।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

विषय :– DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :– भवदीय पत्रांक–800 / एम0,दिनांक–28.12.2022

महाशय,

उपर्युक्त विषय एंव प्रसंग के संबंध में कहना है कि DSR(District Survey report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन राजस्व कागजात से एवं स्थल जाँच की गयी जो निम्न प्रकार है मौजा–कोयनारा थाना न0–83, खाता सं0–56 प्लॉट सं0–1680P ,कुल रकबा–4.00 एकड़ क्षेत्र पर बालुघाट हेतु जाँच प्रतिवेदन बिन्दुवार इस प्रकार है:–

क्र0	निर्धारित बिन्दू	हाँ/नही
1	क्या आवेदित भूमि की कोटि सर्वे खतियान यथा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है?	नहीं
2	क्या 500 मी0 की दूरी के अन्दर कोई मानव बसाहट (Habitation) स्थित है।	हां
3	क्या 500 मी0 की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है?	नहीं
4	क्या 500 मी0 की दूरी के अन्दर कोई नदी (River) स्थित है?	नहीं
5	क्या 500 मी0 की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है?	नहीं
6	क्या 500 मी0 की दूरी के अन्दर कोई चिकित्यालय (Hospital) स्थित है?	नहीं
7	क्या 10 कि०मी0 की परिधी में कोई अंतरराज्यीय (Interstate) सीमा है?	नहीं
8	क्या 500 मी0 की दूरी के अन्दर कोई स्मारक / पुरातत्वीय (Monuments/Archaeological) महत्व के स्थल है?	नहीं

अतः पत्र प्राप्ति स्वीकार की जाय।

विश्वासभाजन

अंचल अधिकारी
रनियाँ।
16.8.23

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

Scanned with CamScanner

कार्यालय अंचल अधिकारी, तोरपा (खूँटी)।

पत्रांक.....854

प्रेषक,

अंचल अधिकारी,
तोरपा।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी।

तोरपा / दिनांक..30.12.22

विषय :– DSR (District Survey Report) Sand में वर्णित बालूघाटों का जाँच प्रतिवेदन के संबंध में।

प्रसंग :– भवदीय का पत्रांक –801,एम0 दिनांक–28.12.2022

महाशय,

उपर्युक्त विषयक प्रसंगाधीन पत्र के संबंध में कहना है कि तोरपा अंचल अंतर्गत DSR (District Survey Report) Sand में वर्णित 12 (बारह) बालूघाटों का बिंदुवार जाँच प्रतिवेदन, राजस्व उपनिरीक्षक, अंचल अमीन एवं अंचल निरीक्षक से प्राप्त कर इस पत्र के साथ मूल रूप में संलग्न कर भेजी जाती है।

अनुलग्नक :– यथोक्त।

विश्वासभाजन

30.12.22

अंचल अधिकारी,
तोरपा।

State Level Environment Approved Jharkhand, Ranchi

सेवा में,

अंचलाधिकारी

तोपचांची

विषय:- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन।

महाशय,

उपर्युक्त विषय के संबंध में कहना है कि कार्यालय ज्ञा० III के आलोक निम्नवत् प्रतिवेदन निम्न प्रकार है।

1. क्या आवेदित भूमि का खेसरा सर्वे खतियान पर्चा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है। नहीं।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव बसावट स्थित है। नहीं।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय Dam/Reservior स्थित है। नहीं।
4. क्या 500 मी० की दूरी के अन्दर कोई नदी स्थित है। हाँ।
5. क्या 500 मी० दूरी के अन्दर कोई ऐतिहासिक संरक्षण स्थित है। नहीं।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय स्थित है। नहीं।
7. क्या 10 कि०मी० की परिधि में कोई अन्तर्राज्यीय सीमा है। नहीं।
8. क्या 500 मी० की दूरी के अन्दर कोई ऐतिहासिक / पुरातत्वीय महत्व के स्थल है। नहीं।

जिला	केल	खाता	प्लॉट	रकबा
51	150		01	2.55 एकड़

G.R. No

A-22°57'18.49"N 6'18.36"E
B-22°57'16.78"N 85°6'21.23"E
C-22°57'1.09"N 85°6'16.25"E
D-22°57'2.33"N 85°6'14.68"E

आवेदक उपस्थित।

20/12/2022

20/12/2022

State Level Environment Assessment Approved Jharkhand, Ranchi

सेवा में,

अंचलाधिकारी

तोपचांची

विषय :- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन।

महोदय,

उपर्युक्त विषय के संबंध में कहना है कि हल्का सं० III के अन्तर्गत निम्नवत् प्रतिवेदन निम्न प्रकार है।

1. क्या आवेदित खनिज का कोई खनिज पट्टा/लीज II में पंजाल माफी के रूप में दर्ज है। नहीं।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव बस्ती/घर स्थित है। नहीं।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय Dam/Reservior स्थित है। नहीं।
4. क्या 500 मी० की दूरी के अन्दर कोई नदी स्थित है। हाँ
5. क्या 500 मी० दूरी के अन्दर कोई ऐतिहासिक संरक्षण स्थित है। नहीं।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय स्थित है। नहीं।
7. क्या 10 कि०मी० की परिधि में कोई अन्तर्राज्यीय सीमा है। नहीं।
8. क्या 500 मी० की दूरी के अन्दर कोई ऐतिहासिक/पुरातत्वीय महत्व के स्थल है। नहीं।

मौजा	खाता	प्लॉट	रकबा	G.R No
रामजय 48	28	101	1.50 ए०	A- 22°56'36.60" N 85°7'41.10" E
				B- 22°56'35.25" N 85°7'40.99" E
				C- 22°56'34.92" N 85°7'33.66" E
				D- 22°56'36.05" N 85°7'33.99" E

अतः प्रतिवेदन समर्पित।

30/12/2022

30/12/2022

Approved

सेवा में,

जिलाधिकारी

जाजपुर

विषय:- DRS sand में वर्णित बालु घाटों का ऑपरेशन प्रतिवेदन।

महोदय,

उपयुक्त विषय के संबंध में कहना है कि कण्डिका सं० III के अनुपालन निमित्त प्रमाण है।

1. क्या आवेदित भूमि का कोई सर्वे खतियान अथवा अभिलेख II में जंगल झाड़ी के रूप में दर्ज है? नहीं।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव बसावट स्थित है? नहीं।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय Dam/Reservior स्थित है? नहीं।
4. क्या 500 मी० की दूरी के अन्दर कोई नदी स्थित है? हाँ।
5. क्या 500 मी० दूरी के अन्दर कोई ऐतिहासिक संरक्षण स्थित है? नहीं।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय स्थित है? नहीं।
7. क्या 10 कि०मी० की परिधि में कोई अन्तर्राज्यीय सीमा है? नहीं।
8. क्या 500 मी० की दूरी के अन्दर कोई ऐतिहासिक/पुरातत्वीय महत्व के अवशेष है? नहीं।

G.R. No

मौजा	खाता	प्लॉट	रकबा	A-22°56'57.74"N 85°7'39.09"E
चुलाई	39	790	3.25 ए०	B-22°57'9.94"N 85°7'51.86"E
50			गौरतलब	C-22°57'9.19"N 85°7'52.90"E
				D-22°56'56.68"N 85°7'40.05"E

अतः प्रतिवेदन समर्पित।

30/12/2022

30/12/2022

Approved

सेवा में,

अंचलाधिकारी

तोपचांची

विषय:- DRS Sand में वर्णित बालू घाटों का ऑनलाइन प्रतिवेदन।

महोदय,

उपयुक्त विषय के संबंध में कहना है कि कार्यालय पं० III के अन्तर्गत निम्नवत् प्रतिवेदन निम्न प्रकार है।

1. क्या आवेदित भूमि का खतियान पर्चा रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव बसावट स्थित है? नहीं।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय Dam/Reservior स्थित है? नहीं।
4. क्या 500 मी० की दूरी के अन्दर कोई नदी स्थित है? हाँ।
5. क्या 500 मी० दूरी के अन्दर कोई रेलवे लाइन संचालन स्थित है? नहीं।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय स्थित है? नहीं।
7. क्या 10 कि०मी० की परिधि में कोई अन्तर्राज्यीय सीमा है? नहीं।
8. क्या 500 मी० की दूरी के अन्दर कोई ऐतिहासिक / पुरातत्वीय महत्व के स्थल है? नहीं।

G.R.No

खेसरा	खाता	खाता	रकबा	
51	50	571	2.60	A- 22°56'52.20"N 85°6'17.57"E
				B- 22°56'47.29"N 85°6'23.95"E
				C- 22°56'46.23"N 85°6'23.83"E
				D- 22°56'51.16"N 85°6'15.65"E

अतः प्रतिवेदन समर्पित।

20/12/2022

20/12/2022

Approved

State Level Environment Impact Assessment Authority * Jharkhand Ranchi

सेवा में,

अंचल अधिकारी
तोरपा (खूँटी)

प्रेषक :- जिला खनन कार्यालय, खूँटी क्रमांक :- 831/खनन दिनांक 22/12/2022
के आलोक में।

विषय :- DSR (District Survey report) हेतु में वर्णित बालुघाटों का जाँच प्रतिवेदन उपलब्ध कराने के सम्बंध में।

महाशय,

उपर्युक्त प्रसंगाधीन विषय के सम्बंध में कहना है कि तोरपा अंचल स्थित इनका II से सम्बंधित बालुघाट पर निम्नलिखित बिन्दुओं पर जाँच प्रतिवेदन की मांग की गई थी।

क्रम सं०	निर्धारित बिन्दु	मौजा चिन्हित का खतियान	मौजा डेलिगेट 2023	मौजा डेलिगेट सं०-1016
1.	क्या आवेदित क्षेत्र को कोटि सर्वेक्षण खतियान खण्ड खतियान II में जंगल झाड़ी के रूप में दर्ज है?	नहीं	नहीं	नहीं
2.	क्या 500 मी० की दूरी के अंदर कोई जलीय निकाय (Habitation) स्थित है? मानव बसावट	नहीं	नहीं	नहीं
3.	क्या 500 मी० की दूरी के अंदर कोई जलीय निकाय (Dam/Reservoir) स्थित है?	नहीं	नहीं	नहीं
4.	क्या 500 मी० की दूरी के अंदर (कोई नदी River) स्थित है?	हाँ	हाँ	हाँ
5.	क्या 500 मी० की दूरी के अंदर कोई ऑक्सिजन संस्थान स्थित है	नहीं	नहीं	नहीं
6.	क्या 500 मी० की दूरी के अंदर कोई चिकित्सालय स्थित है?	नहीं	नहीं	नहीं
7.	क्या 10 कि०मी० की परिधि में कोई अंतराज्यीय सीमा है?	नहीं	नहीं	नहीं
8.	क्या 500 मी० की दूरी के अंदर कोई स्मारक/पुरातत्वीय महत्व के स्थल हैं?	नहीं	नहीं	नहीं

अतः आगेत कार्यवाई हेतु प्रतिवेदन समर्पित।

मौजा खाता प्लाट रकबा Coordinate

Sanjay Kumar
R.I. (I+II)

तिमिमुटु 1 A - 22°54'38.68"N 85°3'24.2"

उलीहातु 1023 B - 22°54'40.15"N 85°3'30.2"

" 1016 C - 22°53'39.48"N 85°3'45.6"

D - 22°53'42.45"N 85°3'36.5"

Approved
State Level Environment Impact Assessment Authority
Jharkhand

सेवा में,

अपील प्राधिकारी

रांची।

विषयः- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि हल्का IV के अंतर्गत बिन्दुवार प्रतिवेदन निम्न प्रकार है:

1. क्या आवेदित भूमि की ओर सर्वे खतियान क्या रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव आवास (Habitation) स्थित है? है
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी की दूरी के अन्दर कोई नदी (River) स्थित है? है
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archeological) महत्व के स्थल है? नहीं है।
8. क्या 10 कि०मी० परिधी में कोई अंतर्राज्यीय (Interstate) सीमा है? नहीं है।

मौजा	थाना सं०	खाता सं०	प्लॉट सं०	रकबा	Co-ordinate
आरकुली	19	96	1707	4.360	A- 22° 59'0.83"N 85° 6'29.80"E
					B- 22° 58' 51.82"N 85° 6' 33.03"E
					C- 22° 58' 36.55"N 85° 6' 31.06"E
					D- 22° 58' 36.87"N 85° 6' 26.[illegible]"E

जिला खनन पदाधिकारी

30/12/22

Approved
State Level Environment Impact Assessment Authority
Jharkhand, Ranchi

सेवा में,

अंचल पदाधिकारी

तोरपा।

विषय:- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि हल्का No के अंतर्गत निम्नवत् प्रतिवेदन निम्न प्रकार है:

1. क्या आवेदित भूमि की ओर सर्वे खतियान क्या रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव आवास (Habitation) स्थित है? है।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी० की दूरी के अन्दर कोई नदी (River) स्थित है? है।
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातात्त्विक (Monuments/Archeological) महत्व के स्थल है? नहीं है।
8. क्या 10 कि०मी० परिधि में कोई अंतर्राज्यीय (Interstate) सीमा है? नहीं है।

मौजा थाना सं० खाता सं० खाँट सं० रकबा

बारकुली 19 96 1707 6.9500

Co-ordinates

A- 22°59'51.60"N 85°6'6.82"E

B- 22°59'48.79"N 85°7'1.17"E

C- 22°59'26.35"N 85°6'57.20"E

D- 22°59'27.10"N 85°6'51.23"E

Approved

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

20/12/22

सेवा में,

अंचल पुलिस अधिकारी

तोरपा।

विषयः- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में कहना है कि कॉलम IV के अंतर्गत बिन्दुवार प्रतिवेदन निम्न प्रकार है:-

1. क्या आवेदित भूमि की ओर सर्वे खतियान या रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है
2. क्या 500 मी० की दूरी के अन्दर कोई मानव आवास (Habitation) स्थित है? है।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी की दूरी के अन्दर कोई नदी (River) स्थित है? है।
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archeological) महत्व के स्थल है? नहीं है।
8. क्या 10 कि०मी० परिधि में कोई अंतर्राज्यीय (Inter-state) सीमा है? नहीं है।

मौजा	थाना सं०	खाता सं०	प्लॉट सं०	रकबा	CO-ordinate
डुमार	18	114	2216	3.05 एकड़	A- 22°57'18.49"N 85°6'18.36"E
					B- 22°57'16.78"N 85°6'21.23"E
					C- 22°57'1.09"N 85°6'16.[illegible]"E
					D- 22°57'2.33"N 85°6'14.68"E

30/12/22

Approved

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

सेवा में,

अंचल सुरक्षा पदाधिकारी

लोहरदगा।

विषय:- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि कॉलम IV के अंतर्गत बिन्दुवार प्रतिवेदन निम्न प्रकार है:

1. क्या आवेदित भूमि की ओर सर्वे खतियान एवं रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है
2. क्या 500 मी० की दूरी के अन्दर कोई मानव आवास (Habitation) स्थित है? है
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी० की दूरी के अन्दर कोई नदी (River) स्थित है? है।
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातात्विक (Monuments/Archeological) महत्व के स्थल है? नहीं है।
8. क्या 10 कि०मी० परिधि में कोई अंतर्राज्यीय (Interstate) सीमा है? नहीं है।

मौजा	थाना सं०	खाता सं०	प्लॉट सं०	रकबा	Co-ordinate
कुसमार	18	114	1415	2.60	A - 22° 58'5.24"N 85° 6'31.52"E
				मो० 20 खाद	B - 22° 58'4.07"N 85° 6'34.80"E
					C - 22° 57'51.61"N 85° 6'40.09"E
					D - 22° 57'50.78"N 85° 6'37.74"E

30/12/2022

Approved

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

सेवा में,

अंचल पुलिस अधिकारी

तोरपा।

विषय:- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि हल्का IV के अंतर्गत निम्नवत् प्रतिवेदन निम्न प्रकार है:

1. क्या आवेदित भूमि की ओर सर्वे खतियान क्या रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव आवास (Habitation) स्थित है? है।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी की दूरी के अन्दर कोई नदी (River) स्थित है? है।
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archeological) महत्व के स्थल है? नहीं है।
8. क्या 10 कि०मी० परिधी में कोई अंतर्राज्यीय (Inter-state) सीमा है? नहीं है।

मौजा	आना सं०	खत सं०	प्लॉट सं०	रकबा	Co-ordinate
उरमार	18	114	2,173	2.50 एकड़	A – 22° 57' 46.33"N 85° 6' 16.58"E B – 22° 57' 38.77"N 85° 6' [illegible] E C – 22° 57' 21.05"N 85° 6' [illegible] E D – 22° 57' 21.23"N 85° 6' 20.11 E

Approved
State Level Environment Impact Assessment Authority
Jharkhand, Ranchi

20/12/2022

सेवा में,

अंचल अधिकारी

नोरपा।

विषयः- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि कालम IV के अंतर्गत बिन्दुवार प्रतिवेदन निम्न प्रकार है:-

1. क्या आवेदित भूमि की ओर सर्वे खतियान या रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है
2. क्या 500 मी० की दूरी के अन्दर कोई मानव आवास (Habitation) स्थित है? है।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी० की दूरी के अन्दर कोई नदी (River) स्थित है? है।
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archeological) महत्व के स्थल है? नहीं है।
8. क्या 10 कि०मी० परिधि में कोई अंतर्राज्यीय (Inter-State) सीमा है? नहीं है।

मौजा	थाना सं०	खाता सं०	प्लॉट सं०	रकबा	Co-ordinate
गनहातु	22	69	1	2.60	A- 22°58'5.24"N 85°6'31.52"E
					B- 22°58'4.09"N 85°6'34.80"E
					C- 22°57'51.61"N 85°6'40.49"E
					D- 22°57'50.78"N 85°6'37.74"E

Approved
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi

Shalini

Amrita
मंत्रालय

Mahato
A.S.I

Kumar
CI
30/12/2022.

सेवा में,

अँचल अधिकारी

तोरपा।

विषय:- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि हलका IV के अंतर्गत बिन्दुवार प्रतिवेदन निम्न प्रकार है:

1. क्या आलोचित भूमि की ओर सर्वे खतियान या रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव आवास (Habitation) स्थित है? है।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी की दूरी के अन्दर कोई नदी (River) स्थित है? है।
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archeological) महत्व के स्थल है? नहीं है।
8. क्या 10 कि०मी० परिधी में कोई अंतर्राज्यीय (Interstate) सीमा है? नहीं है।

मौजा	थाना सं०	खाता सं०	प्लॉट सं०	रकबा	Co-ordinate
मनहातु	22	69	917	2.50 Ec	A - 22°57'40.33"N 85°6'06.58"E
					B - 22°57'38.79"N 85°6'29.61"E
				मौ० प्र० खरदा	C - 22°57'21.05"N 85°6'23.[illegible]"E
					D - 22°57'22.23"N 85°6'20.11"E

30/12/22

Approved
State Level Environment Impact Assessment Authority
Jharkhand, Ranchi

सेवा में,

अंचल अधिकारी

तोरपा।

विषय:- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि हल्का VII के अंतर्गत बिन्दुवार प्रतिवेदन निम्न प्रकार है:-

1. क्या आवेदित भूमि की ओर सर्वे खतियान क्या रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव आवास (Habitation) स्थित है? नहीं है
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय विकास (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी० की दूरी के अन्दर कोई नदी (River) स्थित है? है।
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archeological) महत्व के स्थल है? नहीं है।
8. क्या 10 कि०मी० परिधी में कोई अंतर्राज्यीय (Interstate) सीमा है? नहीं है।

मौजा	थाना सं०	खाता सं०	प्लॉट सं०	रकबा	Co-ordinate
उचांग	75	71	325	0.93 एकड़	A- 22°49'46.69"N 85°7'32.21"E
					B- 22°50'25.40"N 85°7'44.84"E
					C- 22°50'27.11"N 85°7'49.21"E
					D- 22°49'42.11"N 85°7'34.43"E

Approved
State Level Environment Impact Assessment Authority
Jharkhand, Ranchi

30/12/22

सेवा में,

अपील प्राधिकारी

रांची।

विषयः- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि हस्त VII के अंतर्गत निम्नवत् प्रतिवेदन निम्न प्रकार है:

1. क्या आवेदित भूमि की ओर सर्वे खतियान क्या रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव बसावट (Habitation) स्थित है? नहीं है।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी की दूरी के अन्दर कोई नदी (River) स्थित है? है।
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archeological) महत्व के स्थल है? नहीं है।
8. क्या 10 कि०मी० परिधी में कोई अंतर्राज्यीय (Inter-state) सीमा है? नहीं है।

मौजा	थाना सं०	खाता सं०	प्लॉट सं०	रकबा	Co-ordinate
लोहाजिमी	112	91	1	6.45 एकड़	A- 23°49'46.69"N 85°7'32.27"E
					B- 23°50'25.40"N 85°7'[illegible]84",
					C- 23°50'27.[illegible]N 85°7'49.[illegible]",
					D- 23°49'4[illegible]N 85°7'[illegible]

मौ0 10 खतियान

Approved

State Level Environment Impact Authority * Jharkhand, Ranchi *

Shamsuzza
अ. मंत्री

08/12/22

सेवा में,

अंचल अधिकारी

तोरपा।

विषय:- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि हल्का VII के अंतर्गत निम्नवत् प्रतिवेदन निम्न प्रकार है:

1. क्या आवेदित भूमि की ओर सर्वे खतियान या रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है।
2. क्या 500 मी० की दूरी के अन्दर कोई मानव आवास (Habitation) स्थित है? नहीं है।
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी० की दूरी के अन्दर कोई नदी (River) स्थित है? है।
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है।
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archeological) महत्व के स्थल है? नहीं है।
8. क्या 10 कि०मी० परिधि में कोई अंतर्राज्यीय (Inter-state) सीमा है? नहीं है।

मौजा	थाना सं०	खाता सं०	प्लॉट सं०	रकबा	Co-ordinate
पेचा	82	3580	7208		A- 22°50'36.73"N 85°5'48.65"E
					B- 22°50'38.99"N 85°5'51.66"E
					C- 22°50'21.56"N 85°6'16.50"E
					D- 22°50'23.[illegible] N 85°6'[illegible]E

Approved

22/12/22

सेवा में,

अंचल अधिकारी

चतरा।

विषय:- DRS Sand में वर्णित बालू घाटों का जाँच प्रतिवेदन समर्पित करने के संबंध में।

महाशय,

उपर्युक्त विषय के संबंध में सूचित करना है कि हल्का VIII के अंतर्गत विन्दुवार प्रतिवेदन निम्न प्रकार है:

1. क्या आवेदित भूमि की ओर सर्वे खतियान या रजिस्टर II में जंगल झाड़ी के रूप में दर्ज है? नहीं है
2. क्या 500 मी० की दूरी के अन्दर कोई मानव आवास (Habitation) स्थित है? नहीं है
3. क्या 500 मी० की दूरी के अन्दर कोई जलीय निकाय (Dam/Reservior) स्थित है? नहीं है।
4. क्या 500 मी० की दूरी के अन्दर कोई नदी (River) स्थित है? हाँ है
5. क्या 500 मी० की दूरी के अन्दर कोई शैक्षिक संस्थान (Educational Institute) स्थित है? नहीं है
6. क्या 500 मी० की दूरी के अन्दर कोई चिकित्सालय (Hospital) स्थित है? नहीं है।
7. क्या 500 मी० की दूरी के अन्दर कोई स्मारक/पुरातत्वीय (Monuments/Archeological) महत्व के स्थल है? नहीं है
8. क्या 10 कि०मी० परिधी में कोई अंतर्राज्यीय (Interstate) सीमा है? नहीं है

मौजा	थाना सं०	खता सं०	प्लॉट सं०	रकबा	co-ordinate
चतरा	82	220	1	5.00 Ec	A- 24° 52' 13.68" N 84° 4' 30.66" E
				जो मो० खाद	B- 24° 52' 17.38" N 85° 4' 33.55" E
					C- 24° 51' 46.94" N 85° 4' 37.64" E
					D- 24° 51' 45.28" N 85° 4' 32.61" E

Approved
State Level ... Jharkhand, Ranchi

Amritsar

27/12/22

ANNEXURE - E
NOC from DFO(T)

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Diyankel
Thana No.:	51	Thana Name:	Diyankel
Khata No.:	150	Khesra Name:	IP

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti
Letter No. 105
Date of issue 19/01/23
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Divisional Forest Officer

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government	**Contact no.:**	7260999992
Email ID	dmo-khunti@jharkhandmail.gov.in		

Location of Proposed Land

District	Khunti	**Battery Point**	Kasmar
Thana No.:	18	Thana Name:	Kasmar
Khata No.:	114	Khesra Name:	2216P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 106

Date of issue 19/01/23

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand Ranchi * Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	36	**Battery Point**	Kanti
Khata No.:	111	Thana Name:	Kanti
		Khesra Name:	2277P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m?	No	No
2	Whether Project location come under No Mining Zone?	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location*	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti
Letter No. 82
Date of issue 17/01/2023
Signature
Name KULDEEP MEENA
Divisional Forest Officer
Khunti Forest Division, Khunti

Approved
State Level Environment ... Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Kanti
Thana No.	86	Thana Name:	Kanti
Khata No.:	117	Khesra Name:	2452P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m?	Yes	Yes
2	Whether Project location come under No Mining Zone?	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location?	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 80

Date of issue 17/01/2023

Signature

Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Approved
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Sungi
Thana No.	35	Thana Name	Sungi
Khata No.:	83	Khesra Name:	565P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m?	Yes	Yes
2	Whether Project location come under No Mining Zone?	No	No
3	Does there any National park located within 10 km from project location?	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location?	No	No
5	Does there any ESZ available within 10 km distance from project location?	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)?	No	No

Division DFO Khunti
Letter No. 81
Date of issue 17/01/2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Divisional Forest Officer

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	19	**Battery Point**	Barkuli
Khata No.:	96	Thana Name:	Barkuli
		Khesra Name:	1707P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 96

Date of issue 19/01/2023

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Khunti Forest Division, Khunti

Divisional Forest Officer

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Manahatu
Thana No.:	22	Thana Name:	Manahatu
Khata No.:	69	Khesra Name:	917

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti
Letter No. 109
Date of issue 19/01/23
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Approved
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Kasmar
Thana No.:	18	Thana Name:	Kasmar
Khata No.:	114	Khesra Name:	2173,1415P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 107
Date of issue 19/01/23
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Approved
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Manahatu
Thana No.:	22	Thana Name:	Manahatu
Khata No.:	69	Khesra Name:	IP

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 108

Date of issue 19/01/23

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division,Khunti

State Level Environment ... Approved ... Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Diyankel
Thana No.:	51	Thana Name:	Diyankel
Khata No.:	50	Khesra Name:	571P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 104

Date of issue 19/01/23

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division,Khunti

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Nichitpur
Thana No.:	66	Thana Name:	Nichitpur
Khata No.:	77	Khesra Name:	1P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 121
Date of issue 19.01.2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Approved * Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	65	**Battery Point**	Ulihatu
Khata No.:	44	Thana Name:	Ulihatu
		Khesra Name:	1023P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 120
Date of issue 19.04.2023
Signature
Name KULDEEP MEENA
Divisional Forest Officer
Khunti Forest Division, Khunti

Divisional Forest Officer

State Level Environment Impact Assessment Authority ★ Jharkhand, Ranchi ★
Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Ulihatu
Thana No.:	65	Thana Name:	Ulihatu
Khata No.:	44	Khesra Name:	1016P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 111
Date of issue 19/01/23
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Approved
State Level Environment Impact Assessment Authority * Jharkhand

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Jarakel
Thana No.:	84	Thana Name:	Jarakel
Khata No.:	32	Khesra Name:	305P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 116
Date of issue 19/01/23
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Jarakel
Thana No.:	84	Thana Name:	Jarakel
Khata No.:	32	Khesra Name:	439

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	No
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 94
Date of issue 19/01/23
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environ... Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Kocha
Thana No.:	82	Thana Name:	Kocha
Khata No.:	220	Khesra Name:	1

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	No
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti

Letter No. 102

Date of issue 19/01/23

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority ★ Jharkhand, Ranchi ★

Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Banai
Thana No	107	Thana Name:	Banai
Khata No	63	Khesra Name:	1652P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 112

Date of issue 19/01/23

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	105	**Battery Point**	Budhiroma
Khata No.:	52	Thana Name:	Budhiroma
		Khesra Name:	221P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 125
Date of issue 19.01.2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Mahil
Thana No.:	256	Thana Name:	Mahil
Khata No.:	111	Khesra Name:	2188P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti
Letter No. 114
Date of issue 19/01/2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Approved
State Level Environment Impact Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Ghaghra
Thana No.:	266	Thana Name:	Ghaghra
Khata No.:	87	Khesra Name:	1482P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	No
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 122
Date of issue 19-04-2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Divisional Forest Officer

State Level Environ... Approp... Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Mahil
Thana No.:	256	Thana Name:	Mahil
Khata No.:	172	Khesra Name:	2058P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	No
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 113

Date of issue 19/01/2023

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Churgi
Thana No.:	50	Thana Name:	Churgi
Khata No.:	39	Khesra Name:	790P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 101

Date of issue 19/01/23

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division, Khunti

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Bichna
Thana No.:	262	Thana Name:	Bichna
Khata No.:	70	Khesra Name:	2512P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	No
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 123
Date of issue 19.04.2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Divisional Forest Officer

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Pandu
Thana No.:	248	Thana Name:	Pandu
Khata No.:	110	Khesra Name:	1683P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 115

Date of issue 19.01.2023

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Sode
Thana No.:	157	Thana Name:	Sode
Khata No.:	4	Khesra Name:	IP

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 119

Date of issue 19/01/23

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti	**Contact no.:**	7260999992
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in		

Location of Proposed Land

District	Khunti	**Battery Point**	Sode
Thana No.:	157	Thana Name:	Sode
Khata No.:	179	Khesra Name:	1426P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 118

Date of issue 19/01/23

Signature

Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Approved
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Japut
Thana No.:	111	Thana Name:	Japut
Khata No.:	57	Khesra Name:	826P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	No
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 95
Date of issue 19/01/2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Divisional Forest Officer

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Derang
Thana No.:	75	Thana Name:	Derang
Khata No.:	71	Khesra Name:	325P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	No
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 103
Date of issue 19/01/23
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Approved
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Lohajimi
Thana No.:	112	Thana Name:	Lohajimi
Khata No.:	91	Khesra Name:	1P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	No
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti
Letter No. 99
Date of issue 19/01/2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Gurbera
Thana No.:	288	Thana Name:	Gurbera
Khata No.:	73	Khesra Name:	1

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti

Letter No. 75

Date of issue 17/01/2023

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Khunti Forest Division, Khunti

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Gurbera
Thana No.:	288	Thana Name:	Gurbera
Khata No.:	73	Khesra Name:	39

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division: DFO Khunti
Letter No: 76
Date of issue: 13/01/2023
Signature:
Name: KULDEEP MEENA
Divisional Forest Officer
Khunti Forest Division, Khunti

Divisional Forest Officer

State Level Environ... Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Sargia
Thana No.:	293	Thana Name	Sargia
Khata No.:	313	Khesra Name.	1P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti
Letter No. 74
Date of Issue 17/01/2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Maipa
Thana No.:	295	Thana Name:	Maipa
Khata No.:	89	Khesra Name:	805,790

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division: DFO Khunti
Letter No: ES
Date of issue: 17/01/2023
Signature:
Name: KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khuntijc@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Maipa
Thana No.:	295	Thana Name:	Maipa
Khata No.:	149	Khesra Name:	2199

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti
Letter No. 77
Date of issue 17/01/2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Approved
State Level Environment Impact Assessment Authority (SEIAA) Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Maipa
Thana No.:	295	Thana Name:	Maipa
Khata No.:	149	Khesra Name:	1P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti

Letter No. 110

Date of issue 19/01/2023

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Barigara
Thana No.:	296	Thana Name:	Barigara
Khata No.:	221	Khesra Name:	1P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	No
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti
Letter No. 79
Date of issue 17/01/2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environ... Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	296	**Battery Point**	Barigara
Khata No.:	221	Thana Name:	Barigara
		Khesra Name:	2827

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 124
Date of issue 19-04-2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment ... Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Ramjay
Thana No.:	48	Thana Name:	Ramjay
Khata No.:	28	Khesra Name:	101P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Khunti

Letter No. 98

Date of issue 19/01/2023

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Gobindpur
Thana No.:	49	Thana Name:	Gobindpur
Khata No.:	198	Khesra Name:	100P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 126
Date of issue 19.04.2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	111	**Battery Point**	Japut
Khata No.:	57	Thana Name:	Japut
		Khesra Name:	1360P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	No	No
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**
Letter No. 177
Date of issue 30/01/2023
Signature
Name KULDEEP MEENA

Divisional Forest Officer
Khunti Forest Division, Khunti

Divisional Forest Officer

State Level Environ... Approv... Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	84	**Battery Point**	Jarakel
Khata No.:	32	Thana Name:	Jarakel
		Khesra Name:	578

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 179

Date of issue 30/01/2023

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division,Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Goverament		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti	Battery Point	Kocha
Thana No.:	82	Thana Name:	Kocha
Khata No.:	220	Khesra Name:	3580P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 273

Date of issue 13/02/23

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Approved Jharkhand, Ranchi

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Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	83	**Battery Point**	Koinara
Khata No.:	56	Thana Name:	Koinara
		Khesra Name:	1680P,1681P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	Yes	Yes
2	Whether Project location come under No Mining Zone? *	No	No
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Khunti**

Letter No. 178

Date of issue 30/01/2023

Signature

Name KULDEEP MEENA

Divisional Forest Officer

Divisional Forest Officer
Khunti Forest Division, Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

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ANNEXURE - F
NOC from DFO(WL)

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Banai
Thana No.:	107	Thana Name:	Banai
Khata No.:	63	Khesra Name:	1652P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 202
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/202
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Barigara
Thana No.:	296	Thana Name:	Barigara
Khata No.:	221	Khesra Name:	2827

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 183
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environ... Authority * Jharkhand, Ranchi *

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Barkuli
Thana No.:	19	Thana Name:	Barkuli
Khata No.:	96	Khesra Name:	1707P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 170
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority ★ Jharkhand, Ranchi ★
Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	262	**Battery Point**	Bichua
Khata No.:	70	Thana Name:	Bichua
		Khesra Name:	2512p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 180
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999092

Location of Proposed Land

District	Khunti		
Thana No.:	105	**Battery Point**	Budhiroma
Khata No.:	52	Thana Name:	Budhiroma
		Khesra Name:	221P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 198
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023

Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023

Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment * Approved * Jharkhand, Ranchi *

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	75	**Battery Point**	Derang
Khata No.:	71	Thana Name:	Derang
		Khesra Name:	325p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., ~~Khunti~~
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 193
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Approved * Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Natified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Diyankel
Thana No.:	51	Thana Name:	Diyankel
Khata No.:	150	Khesra Name:	1P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 182
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment ★ Jharkhand, Ranchi ★ APPROVED

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999993

Location of Proposed Land

District	Khunti		
Thana No.:	51	**Battery Point**	Diyankel
Khata No.:	50	Thana Name:	Diyankel
		Khesra Name:	571P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 179
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment ... Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	266	**Battery Point**	Ghaghra
Khata No.:	87	Thana Name:	Ghaghra
		Khesra Name:	1482(p)

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 192
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023

Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023

Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Approved * Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	266	**Battery Point**	
Khata No.:	87	Thana Name:	Ghaghra
		Khesra Name:	Ghaghra
			1482P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 191
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Gobindpur
Thana No.:	49	Thana Name:	Gobindpur
Khata No.:	198	Khesra Name:	100p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 199
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	Contact no.:	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	288	Battery Point	Gurbera
Khata No.:	73	Thana Name:	Gurbera
		Khesra Name:	1

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 178
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	288	**Battery Point**	Gurbera
Khata No.:	73	Thana Name:	Gurbera
		Khesra Name:	39

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 194
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260099992

Location of Proposed Land

District	Khunti	**Battery Point**	Japut
Thana No.:	111	Thana Name:	Japut
Khata No.:	57	Khesra Name:	826p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 172
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Approved * Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Japut
Thana No.:	111	Thana Name:	Japut
Khata No.:	57	Khesra Name:	1360p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250-m? *	~~No~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~No~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 173
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Approved
Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999092

Location of Proposed Land

District	Khunti	**Battery Point**	Kanti
Thana No.:	36	Thana Name:	Kanti
Khata No.:	111	Khesra Name:	2277P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~No~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 201
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khuntiz@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Kanti
Thana No.:	36	Thana Name:	Kanti
Khata No.:	117	Khesra Name:	2452P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 185
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environ... Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Officer Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999892

Location of Proposed Land

District	Khunti	**Battery Point**	Kasmar
Thana No.	18	Thana Name	Kasmar
Khata No.	114	Khesra Name	141SP

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 195
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Kasmar
Thana No.:	18	Thana Name:	Kasmar
Khata No.:	114	Khesra Name:	2173

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 197
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

Divisional Forest Officer
Wildlife Division, Ranchi
04/03/2023

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

Divisional Forest Officer
Wildlife Division, Ranchi
04/03/2023

State Level Environment Impact Assessment Authority * Approved * Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Kasmar
Thana No.:	18	Thana Name:	Kasmar
Khata No.:	114	Khesra Name:	2216P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Yes Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Yes Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 200
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	82	**Battery Point**	Kocha
Khata No.:	220	Thana Name:	Kocha
		Khesra Name:	1

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 187
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority Approved Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Kocha
Thana No.:	82	Thana Name:	Kocha
Khata No.:	220	Khesra Name:	3580P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 184
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Koinara
Thana No.:	83	Thana Name:	Koinara
Khata No.:	56	Khesra Name:	1680P,1681P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 171
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Lohajimi
Thana No.:	112	Thana Name:	Lohajimi
Khata No.:	91	Khesra Name:	1p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 190
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti		
Thana No.:	256	**Battery Point**	Mahil
Khata No.:	172	Thana Name:	Mahil
		Khesra Name:	2058p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 189
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Mahil
Thana No.:	256	Thana Name:	Mahil
Khata No.:	111	Khesra Name:	2188P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 186
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Maipa
Thana No.:	295	Thana Name:	Maipa
Khata No.:	89,149	Khesra Name:	805,790,2199,1P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 196
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environ... Approv... Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Manhatu
Thana No.:	22	Thana Name:	Manhatu
Khata No.:	69	Khesra Name:	1P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 176
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	NichitPur
Thana No.:	66	Thana Name:	NichitPur
Khata No.:	77	Khesra Name:	1P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 168
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment ... Approved ... Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Pandu
Thana No.:	248	Thana Name:	Pandu
Khata No.:	110	Khesra Name:	1683

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 169
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Ramjay
Thana No.:	48	Thana Name:	Ramjay
Khata No.:	28	Khesra Name:	101p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 177
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Sargia
Thana No.:	293	Thana Name:	Sargia
Khata No.:	313	Khesra Name:	1p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**
Letter No. 181
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
APP

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Sode
Thana No.:	157	Thana Name:	Sode
Khata No.:	4	Khesra Name:	1p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 175
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government		
Email ID	dmo-khunti@jharkhandmail.gov.in	**Contact no.:**	7260999992

Location of Proposed Land

District	Khunti	**Battery Point**	Sode
Thana No.:	157	Thana Name:	Sode
Khata No.:	179	Khesra Name:	1426p

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division DFO Wildlife Ranchi
Letter No. 174
Date of issue 04-03-2023
Signature
Name

Divisional Forest Officer

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

04/03/2023
Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
Approved

Department of Forest, Environment and Climate Change

Report of Distance from Notified Forest, National Park, Sanctuary & Eco-Sensitive Zone

Name Of Applicant	District Mining Office Khunti		
Institution Type	Government	**Contact no.:**	7260999992
Email ID	dmo-khunti@jharkhandmail.gov.in		

Location of Proposed Land

District	Khunti	**Battery Point**	Ulihatu
Thana No:	65	Thana Name:	Ulihatu
Khata No.:	44	Khesra Name:	1023P,1016P

#	Checkpoint	Range Forest Officer	Divisional Forest Officer
1	Whether Distance of Project location from Reserved Forest/Protected Forest is 250 m? *	~~Yes~~	Related to Khunti Forest Div., Khunti
2	Whether Project location come under No Mining Zone? *	~~Yes~~	Related to Khunti Forest Div., Khunti
3	Does there any National park located within 10 km from project location? *	No	No
4	Does there any Wildlife sanctuary located within 10 km distance from project location? *	No	No
5	Does there any ESZ available within 10 km distance from project location? *	No	No
6	Whether Proposed project comes under prohibited category of ESZ (Yes or No)? *	No	No

Division **DFO Wildlife Ranchi**

Letter No._____

Date of issue_____

Signature_____

Name_____

Divisional Forest Officer

Divisional Forest Officer
Wildlife Division, Ranchi

Note:- As per Notification - S.O. 2897(E) dated 09th August 2019 of the Ministry of Environment, Forest and Climate Change, Government of India, New Delhi, the Eco Sensitive Zone (ESZ) is 350 meters to 05 kilometers around the boundary of Palkot Wildlife Sanctuary, Gumla. Since the battery point is found outside the Eco Sensitive Zone of Palkot Wildlife Sanctuary, hence the proposed activity is not prohibited as per the ESZ Notification.

Industry Battery Point - Ulihatu

Shale mine is not found.

04/03/2023

Divisional Forest Officer
Wildlife Division, Ranchi

Divisional Forest Officer
Wildlife Division, Ranchi

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *

ANNEXURE - G

Report from District Fisheries Office (Khunti)

कार्यालयः जिला मत्स्य पदाधिकारी खूँटी ।

पत्रांक 93 मत्स्य/खूँटी/दिनांक 20/02/23

प्रेशक,

जिला मत्स्य पदाधिकारी
खूँटी ।

सेवा में,

जिला खनन पदाधिकारी,
खूँटी ।

विषयः– जलीय जीवों के सबंध में सूचना एकत्र करने के सबंध में।

प्रसंग :– जिला खनन कार्यालय खूँटी का पत्रांक 80/दिनांक 13.02.2023

महाशय,

उपरोक्त विशयक प्रासंगिक पत्र के संबंध में खूँटी जिलांर्गत चिह्नित बालू घाटों में (कारो, बनई, सुंदारी ,कोयल, कांची, चेगनाझोर नदी) में उपलब्ध संभावित जलीय जीवों की सूची एतद् सह संलग्न कर प्रेषित की जा रही है।

सादर सूचनार्थ प्रेषित ।

अनु0 – यथोक्त।

विश्वासभाजन,
20/02/23
जिला मत्स्य पदाधिकारी
खूँटी।

Commonly Found aquatic animals in Koel ,Karo ,Chhata ,Chengrajor ,Sundari and Banai rivers of Khunti Dist.

Sl.no.	Scientific Names	Common Names
1	Carcinus maenas	Crab
2	Catla catla	Catla/major carp
3	Chana marulus	Channa
4	Chana punctatus	Garai
5	Chanda nama	Chanda pothi
6	Chela chela	Chelwa
7	Cirhinus mrigala	Mrigal /major carp
8	Cirhinus reba	Pothia/minor carp
9	Clarius batracus	Mangur
10	Gadusia chapra	Chapila
11	Glossogobius sp.	Bulla
12	Heteropneustes fossilis	Singhi
13	Labeo bata	Bata
14	Labeo rohita	Rohu /major carp
15	Macrobrachium malcomsonni	Freshwater prawn
16	Mastacembelus mastus	Getu
17	Mystus vittatus	Tengra
18	Notopterus chitala	Chital
19	Oreochromis mosambicus	Common Tilapia
20	Pila globosa	Freshwater snail
21	Puntius ticto	Pothia/minor carp
22	Rana temporaria	Common toad
23	Unio manus	Unio
24	Wallago attu	Freshwater shark/boari

District Fisheries Officer

Khunti

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
Approved

ANNEXURE - H

Minutes of sub-Divisional committee meeting

दिनांक 16.04.2023 को अनुमंडल पदाधिकारी, खूँटी की अध्यक्षता में DSR के Sub Divisional Committee, खूँटी की बैठक की कार्यवाही।

- उपस्थिति पंजी के अनुसार।
- सर्वप्रथम Sub Divisional Committee, खूँटी के उपस्थित सदस्यों का स्वागत करते हुए सभा की कार्यवाही प्रारम्भ की गई।
- जिला खनन पदाधिकारी / Consultant M/s Sigma R D Consultants Pvt Ltd in Consortium with Crystal Consultants से DSR के प्रगति के संबंध में जानकारी प्रस्तुत करने का निदेश दिया गया।
- बालू खनिज के लिए तैयार किये जा रहे जिला सर्वेक्षण रिपोर्ट के प्रगति के संबंध में M/s Sigma R D Consultants Pvt Ltd in Consortium with Crystal Consultants के प्रतिनिधि द्वारा बताया गया कि जिलान्तर्गत 26 चिनिहत बालू घाटों के लिए संभावित संसाधन क्षेत्र (Potential Resource Area) के लिए DSR का प्रारूप तैयार किया गया था। जिसे दिनांक– 17.03.2023 को जिला के वेबसाईट में आमजनों के सुझाव/मन्तव्य के लिए अपलोड किया गया था। जिसकी सूचना दिनांक– 14.03.2023 के स्थानीय दैनिक समाचार पत्र में प्रकाशित की गई थी।
- Enforcement and Monitoring Guidelines for Sand Mining, 2020 के अनुसार दिनांक– 16.04.2023 को अवधी पुरी हो चुकी है। इस दौरान किसी प्रकार की कोई सुझाव/मन्तव्य/आपत्ति प्राप्त नहीं हुए हैं। साथ ही SEIAA राँची की 99 वीं बैठक में दिये गये सुझाव के अनुपालन के संबंध में M/s Sigma R D Consultants Pvt Ltd in Consortium with Crystal Consultants के प्रतिनिधि द्वारा बताया गया कि उक्त बैठक में दिये गये सुझाव का सभी बिन्दुओं का अनुपालन कर लिया गया है।
- समीक्षा के क्रम में तैयारं किये गए DSR के प्रारूप के संबंध में गठित Sub Divisional Committee के सदस्यों से अपना मन्तव्य रखने को कहा गया। सभी सदस्यों द्वारा अग्रेतर कार्रवाई हेतु अनुसंशा की गई।

अंत में सधन्यवाद सभा की कार्यवाही समाप्त की गई।

ज्ञापांकः– , दिनांकः–

प्रतिलिपिः– सभी सदस्य, Sub Divisional Committee, खूँटी को सूचनार्थ प्रेषित।

प्रतिलिपिः– उपायुक्त, खूँटी को सादर सूचनार्थ प्रेषित।

जिला खनन पदाधिकारी
खूँटी।

सहायक निदेशक, भूतत्व,
जिला भूतत्विक कार्यालय,
खूँटी।

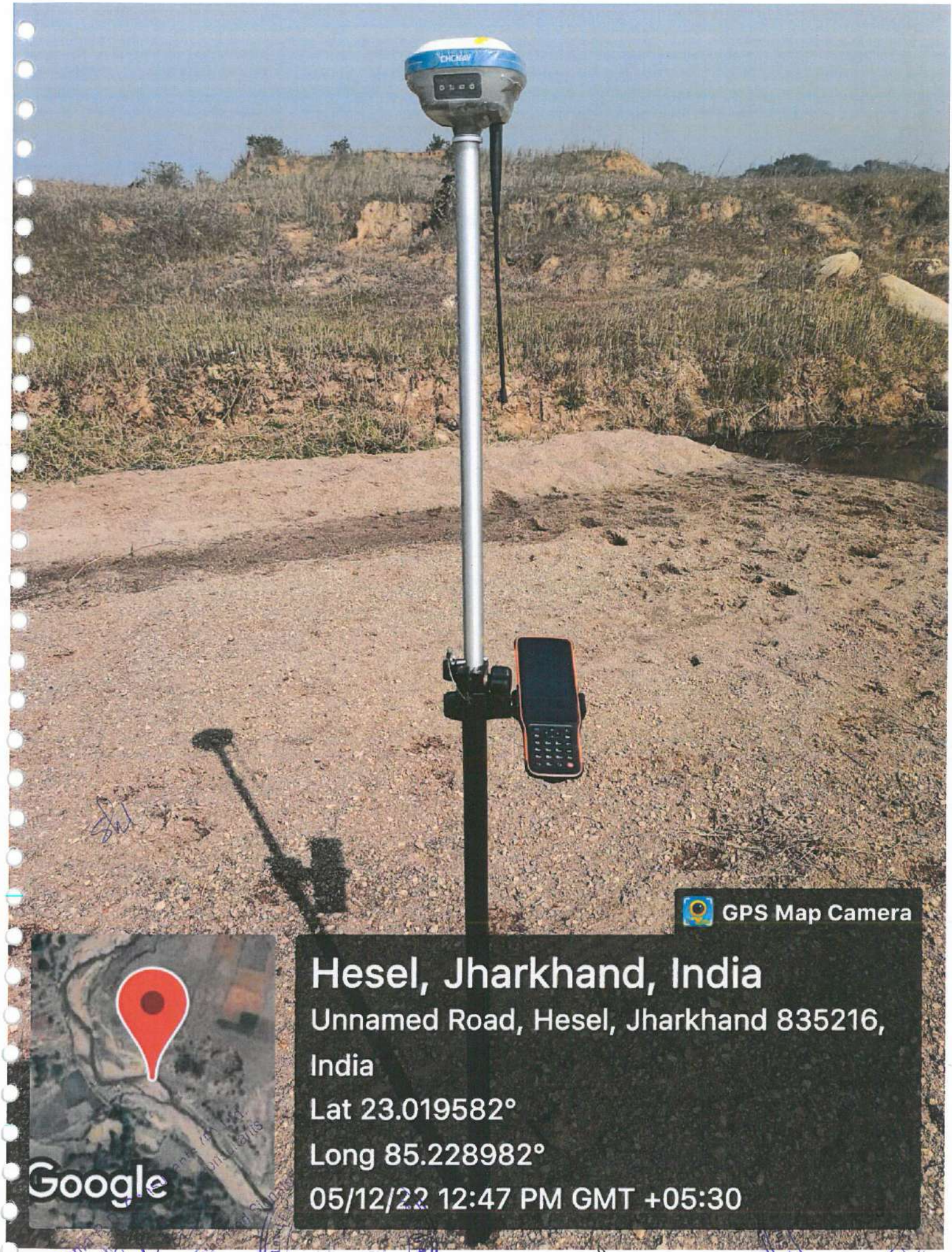
कार्यपालक अभियंता,
लघु सिंचाई प्रमण्डल
खूँटी।

क्षेत्रीय पदाधिकारी,
JSPCB, खूँटी।

वन प्रमण्डल पदाधिकारी,
खूँटी।

अनुमंडल पदाधिकारी,
खूँटी।

ANNEXURE - I
Geotag Photograph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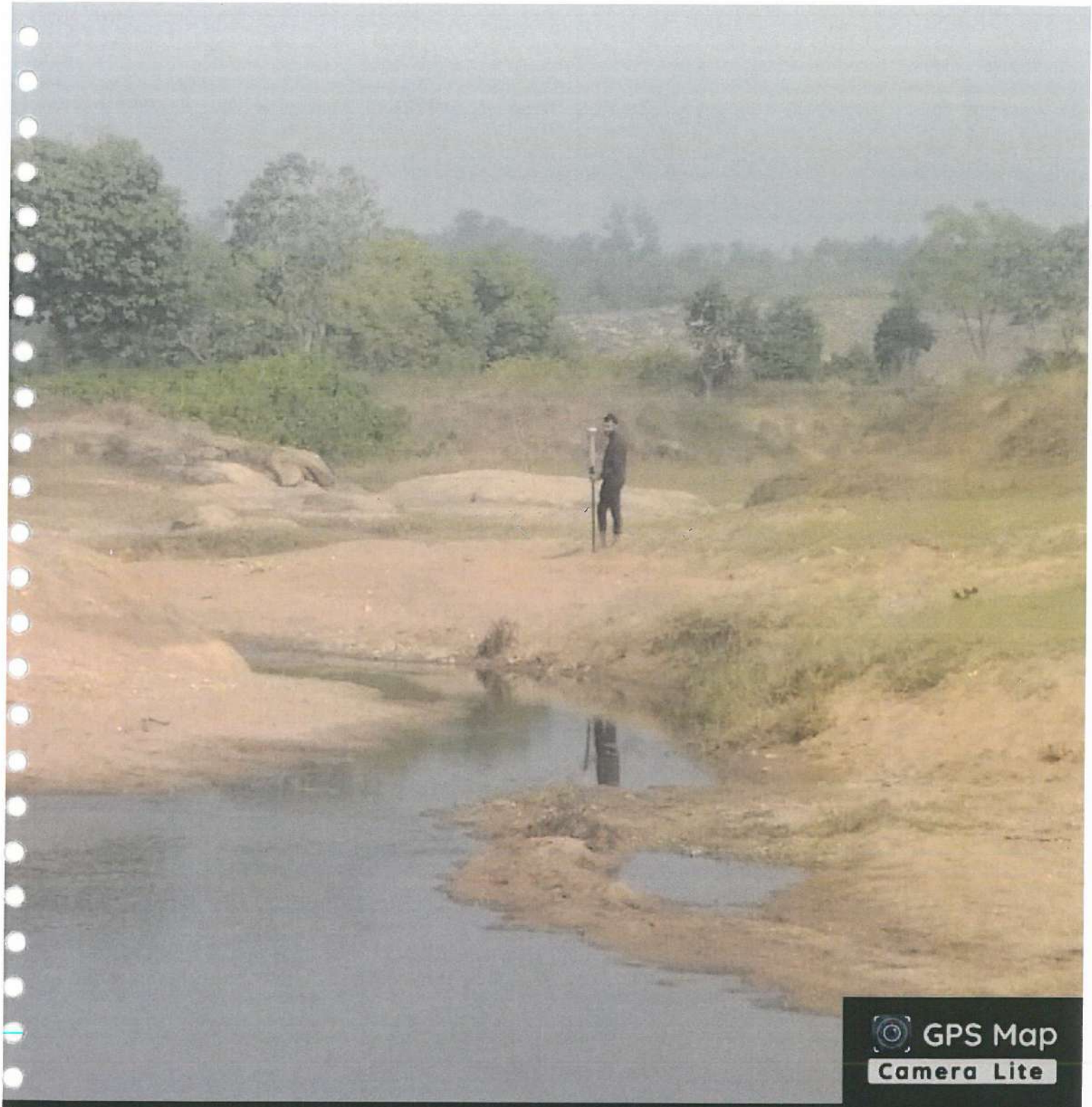
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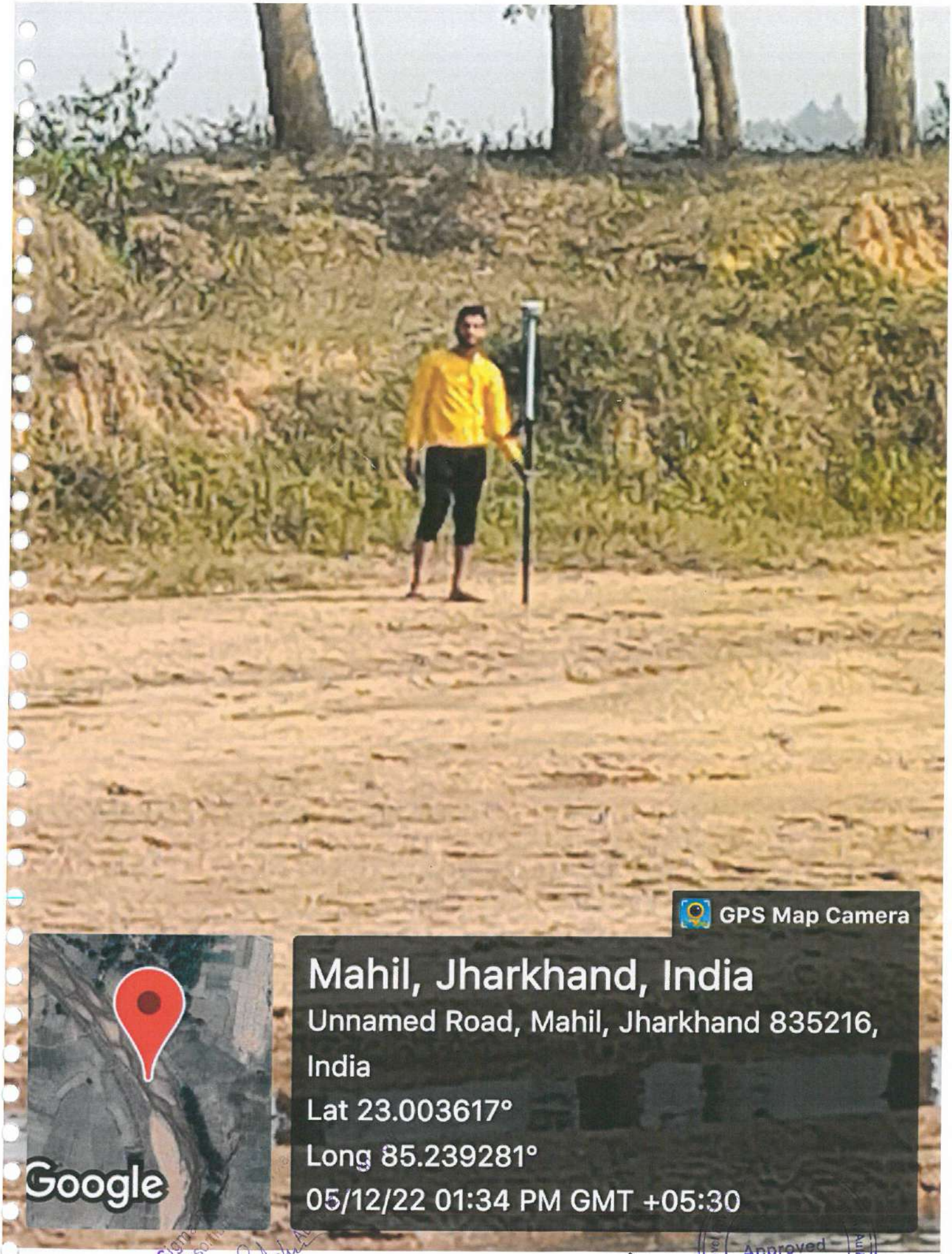
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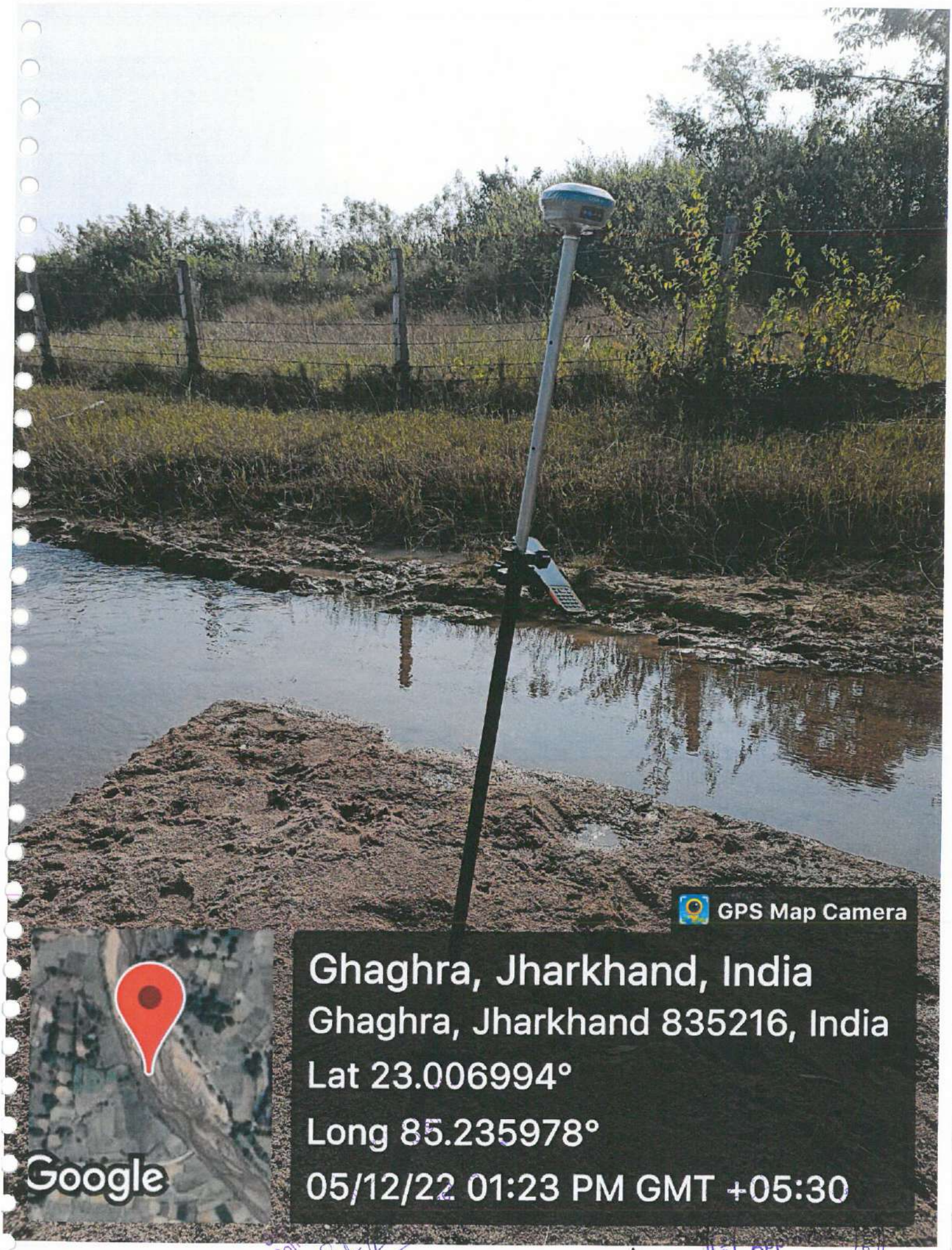
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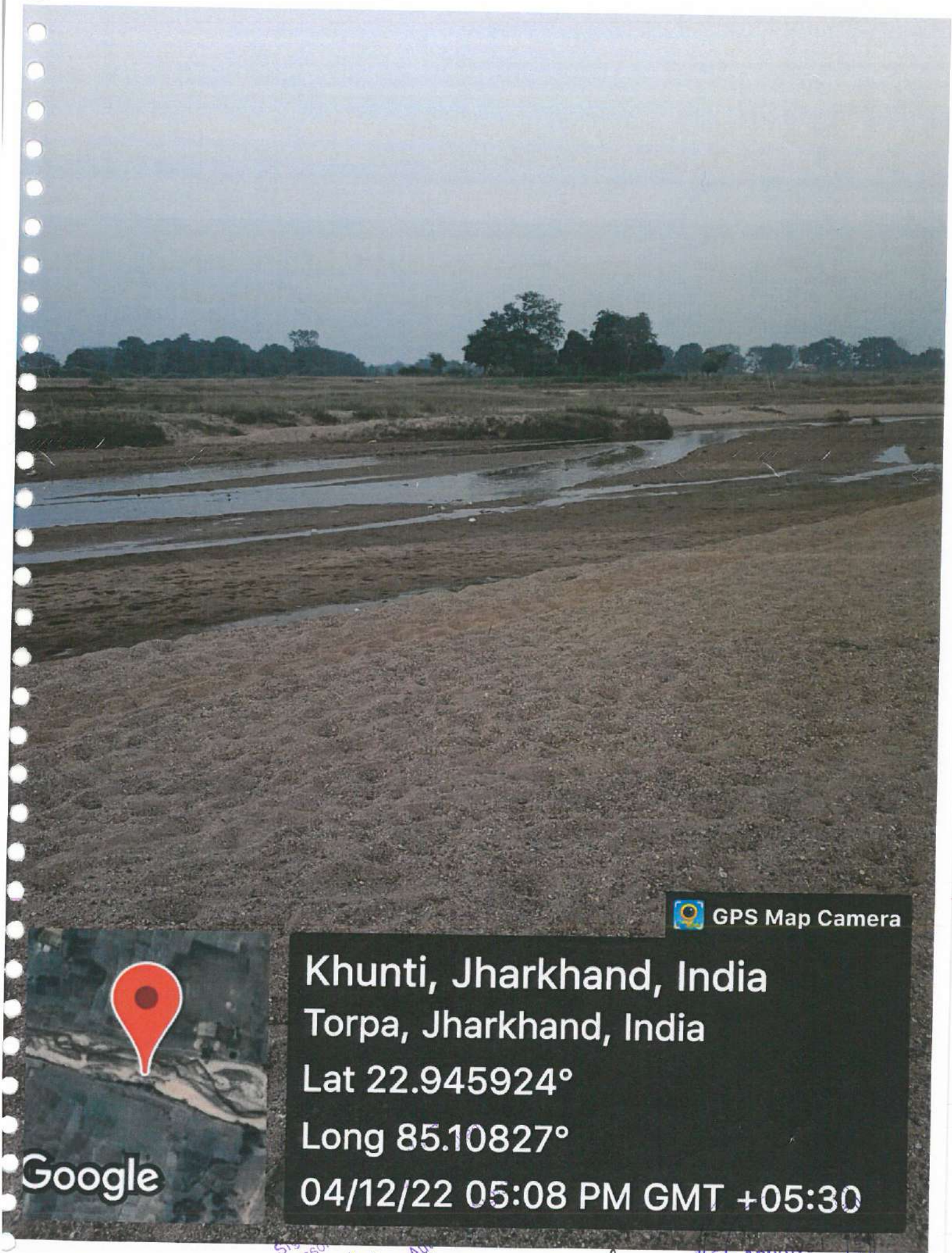
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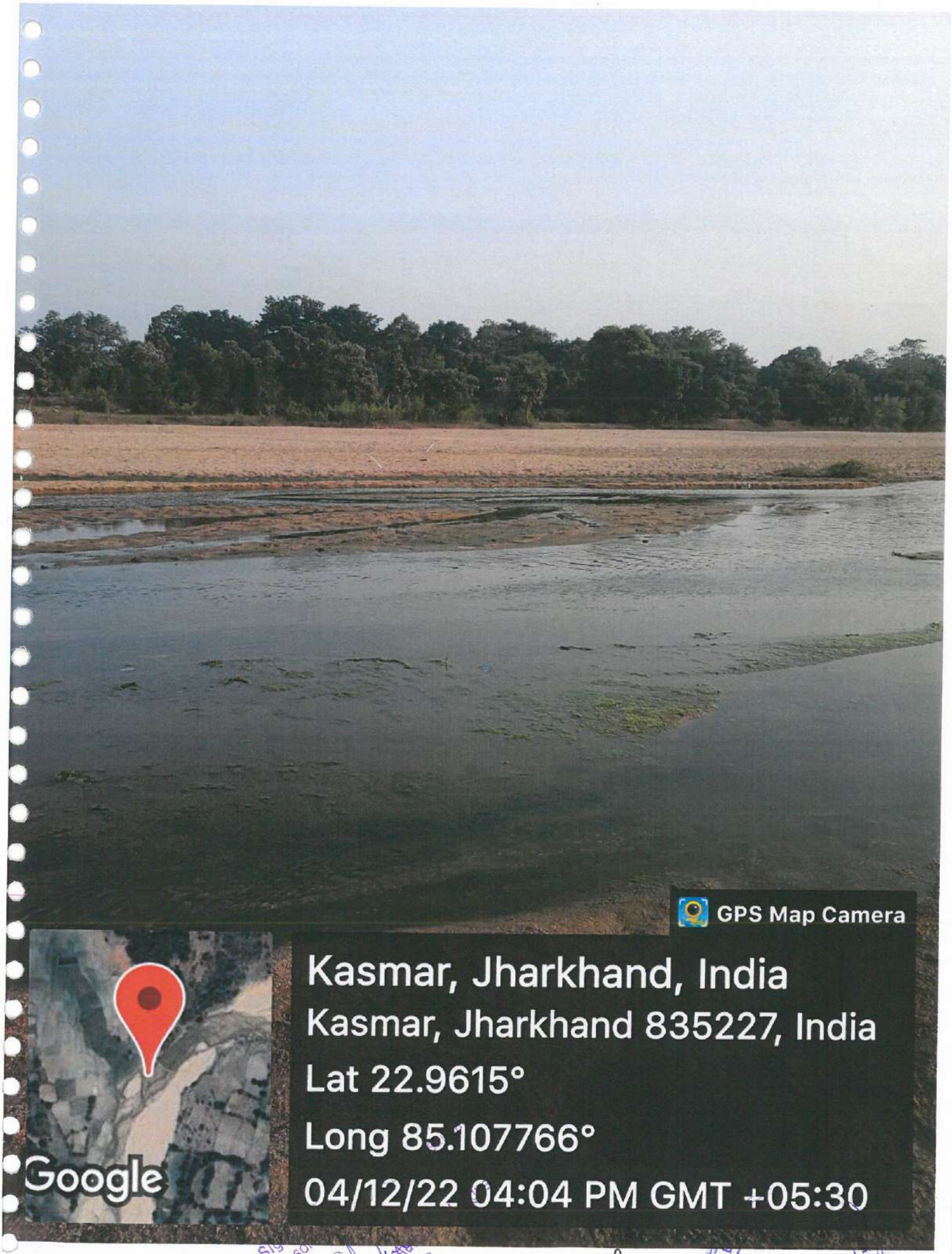
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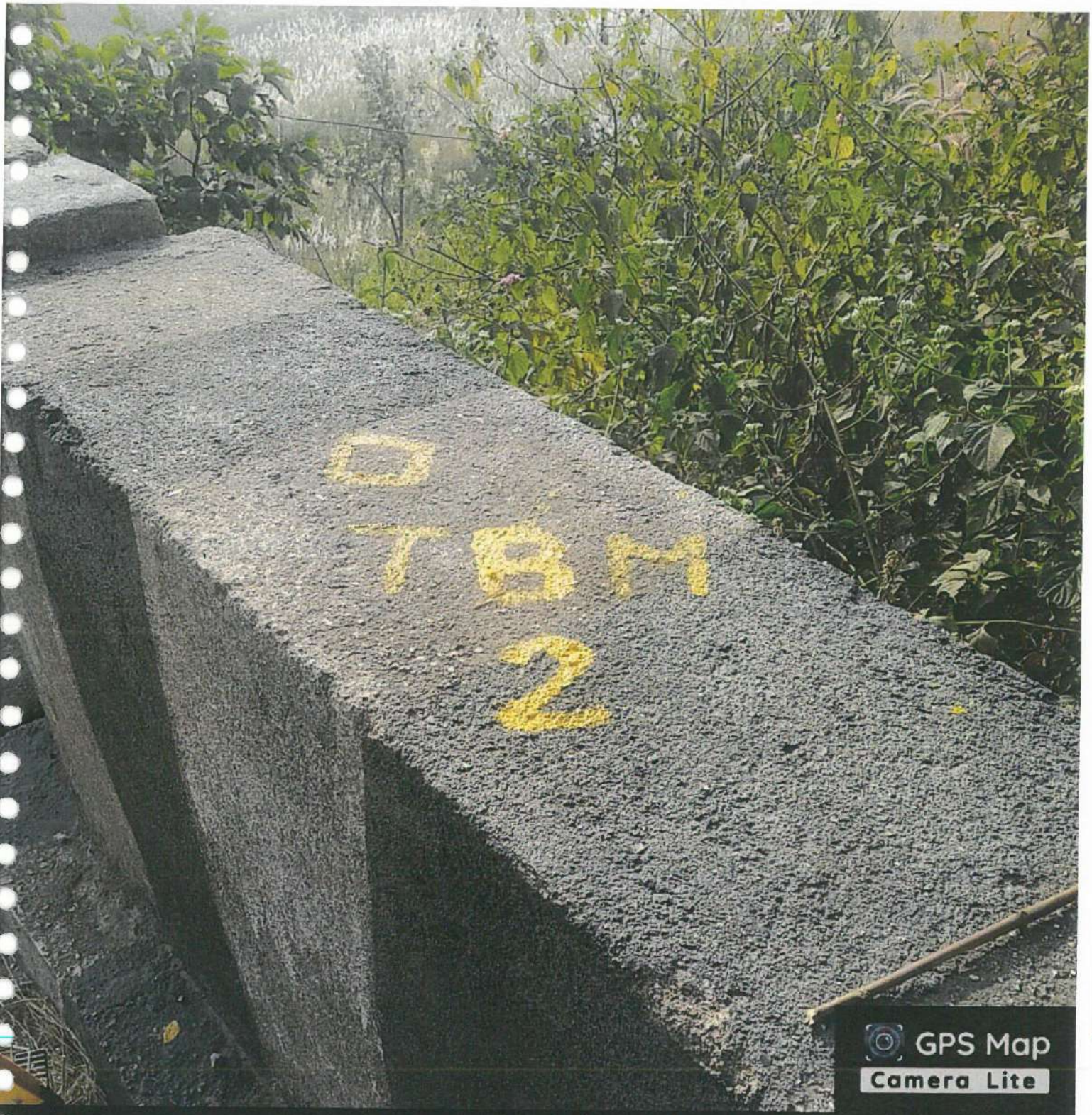
Approved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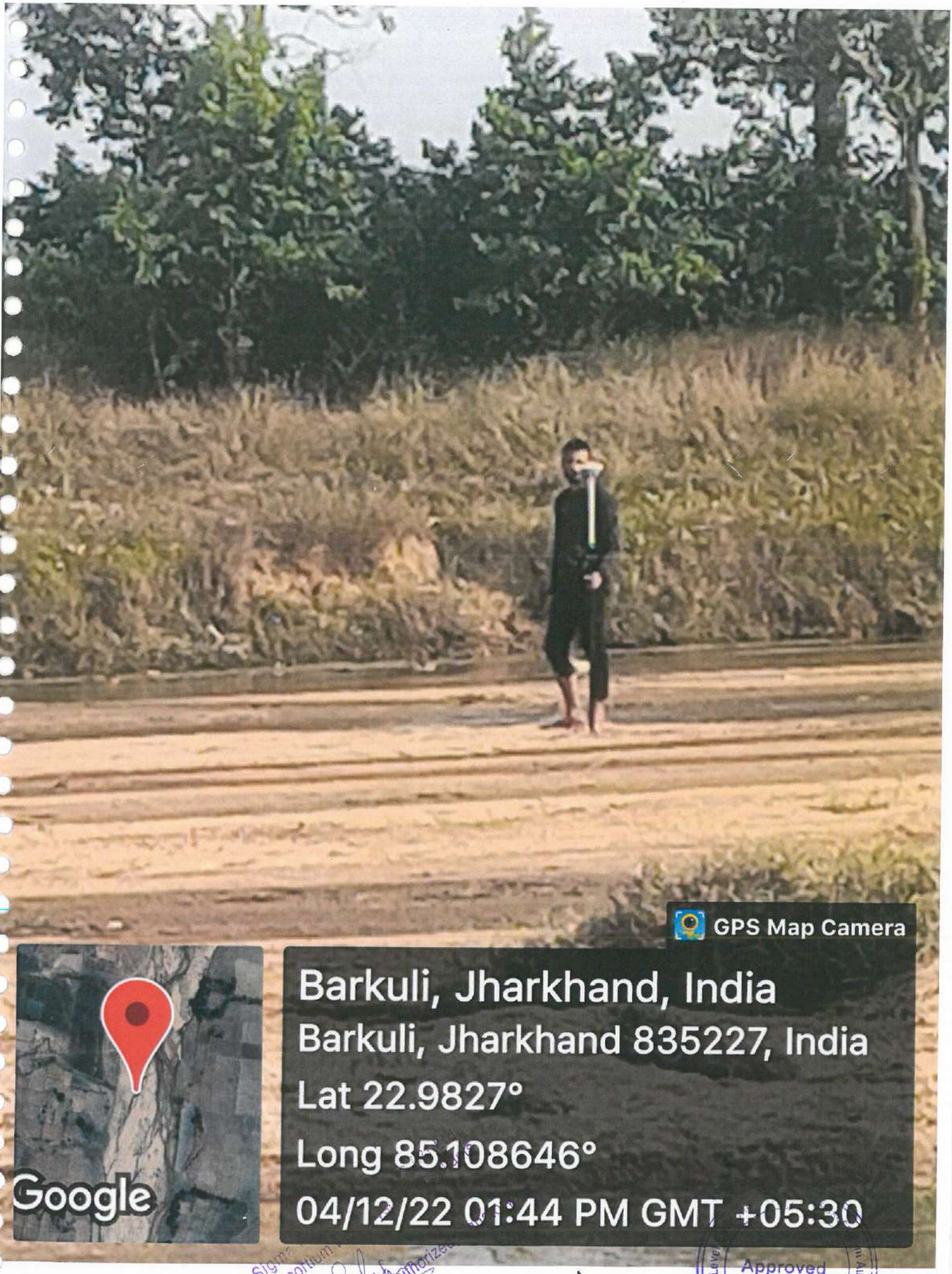
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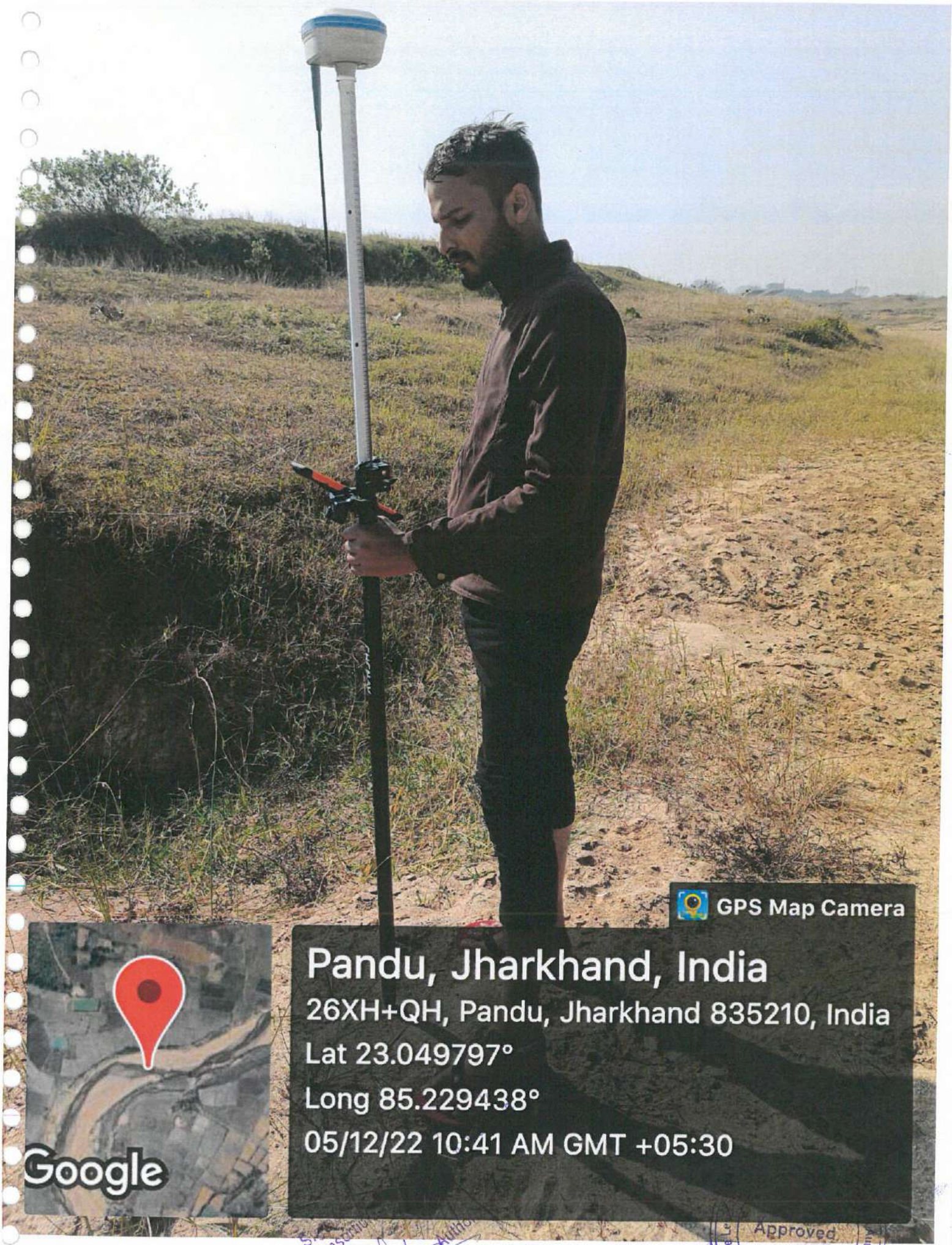
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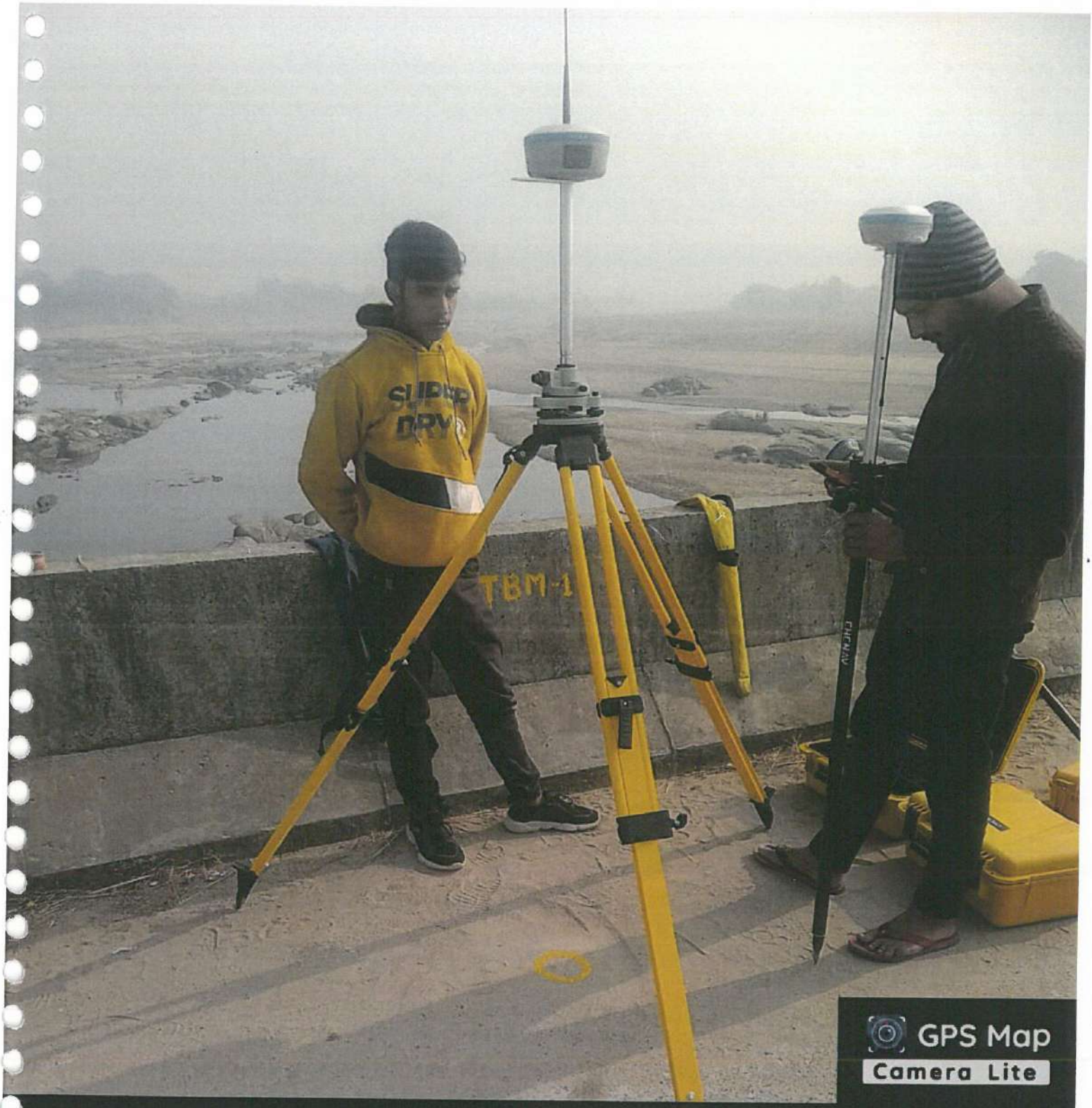
Approved



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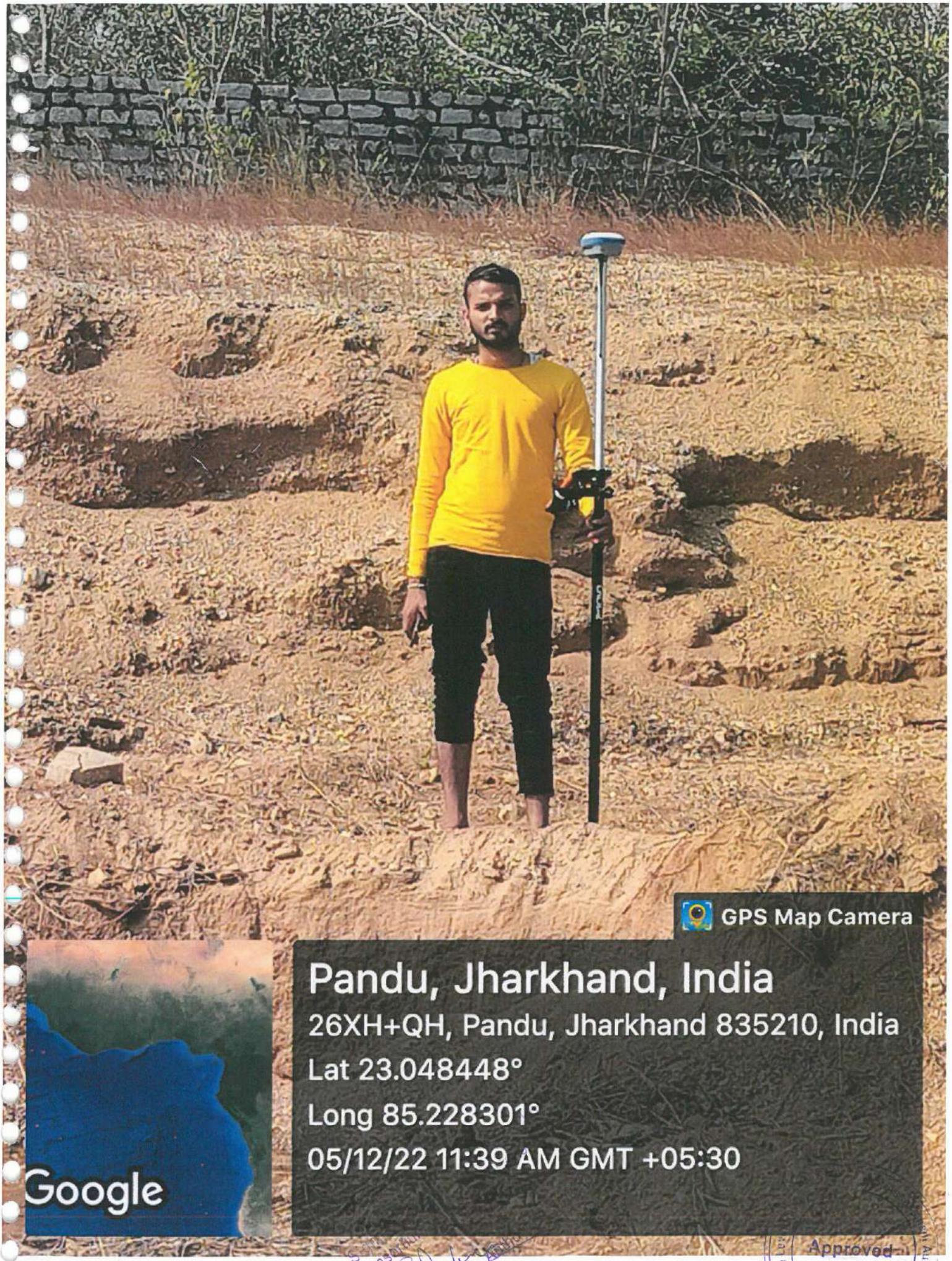
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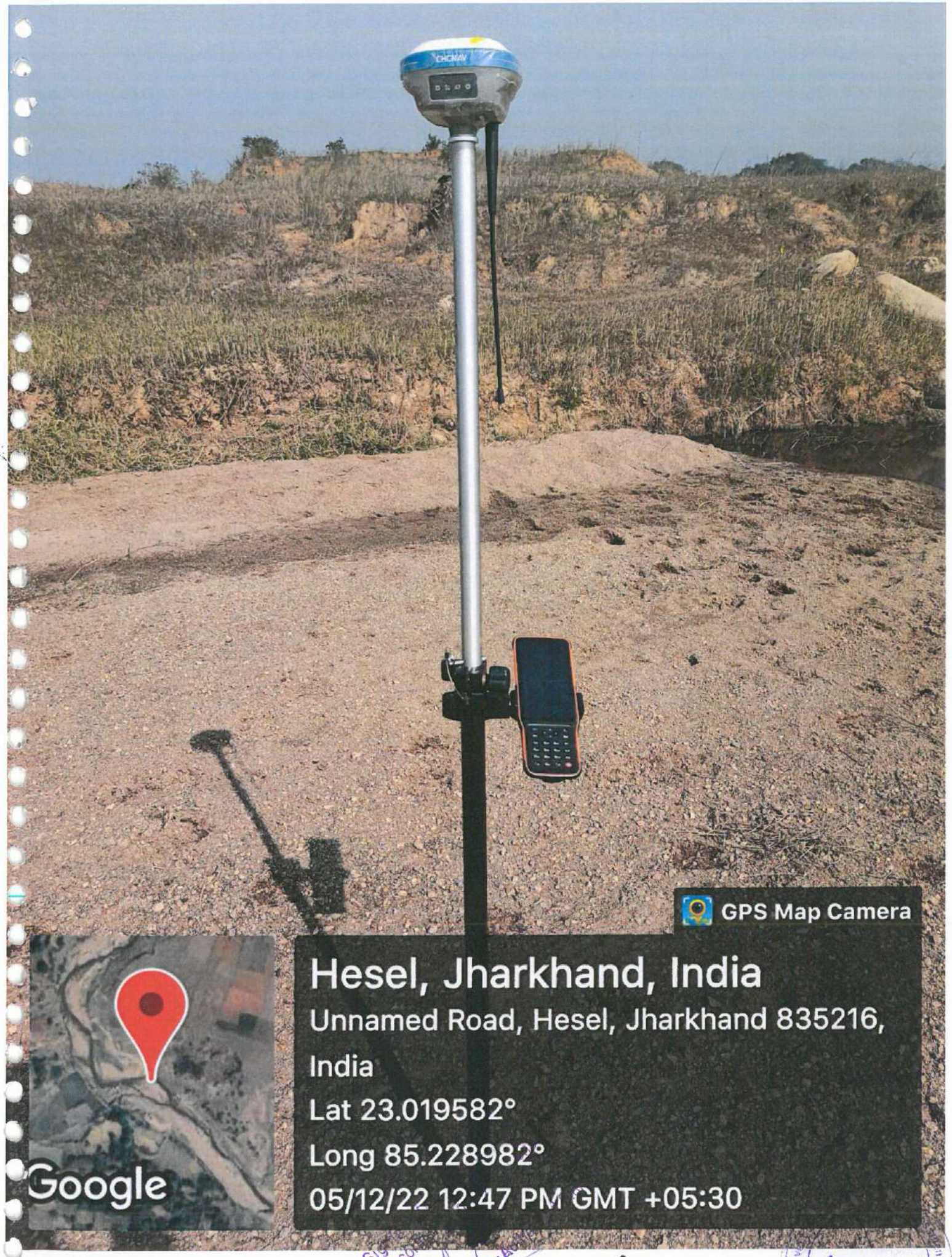
Approved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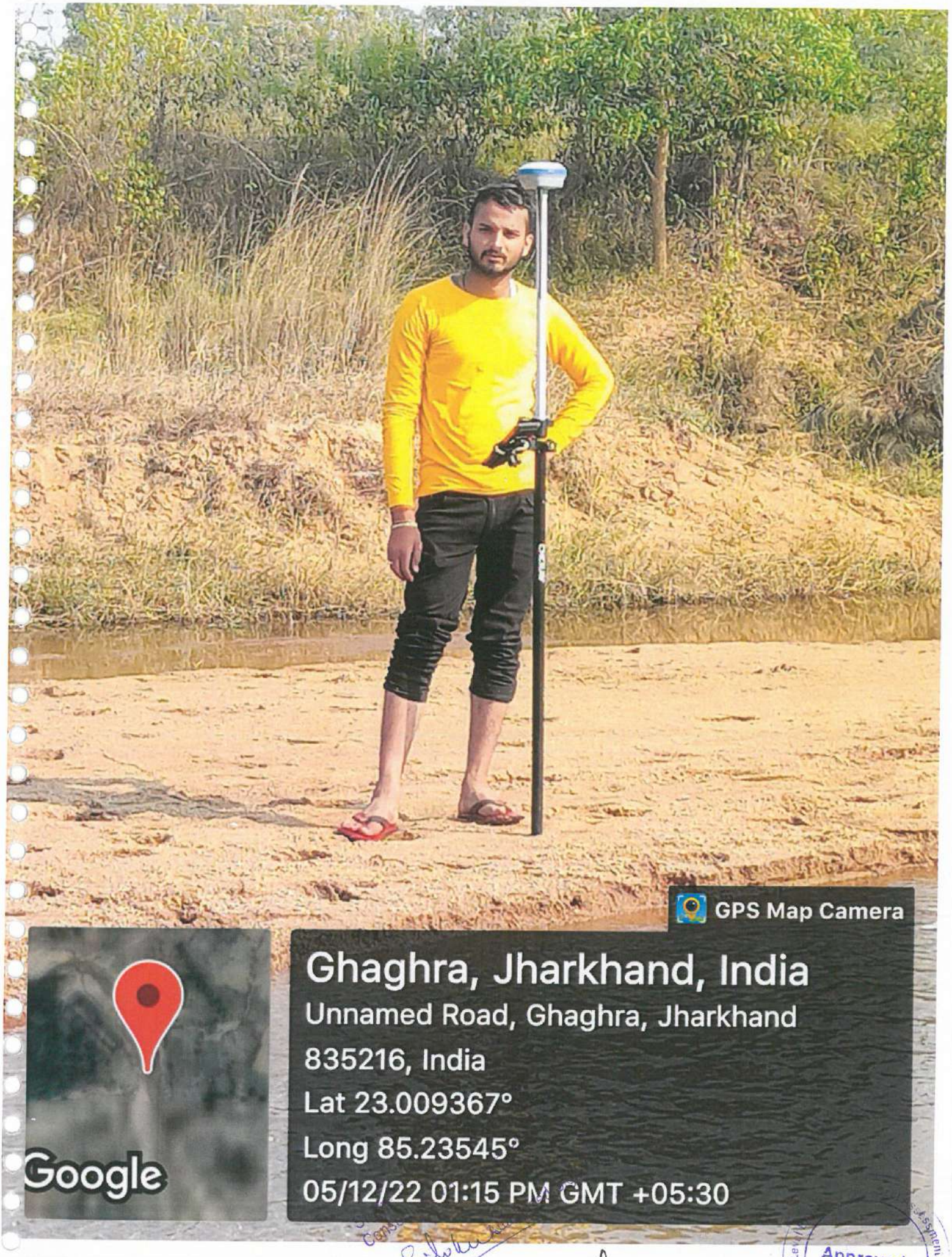
Approved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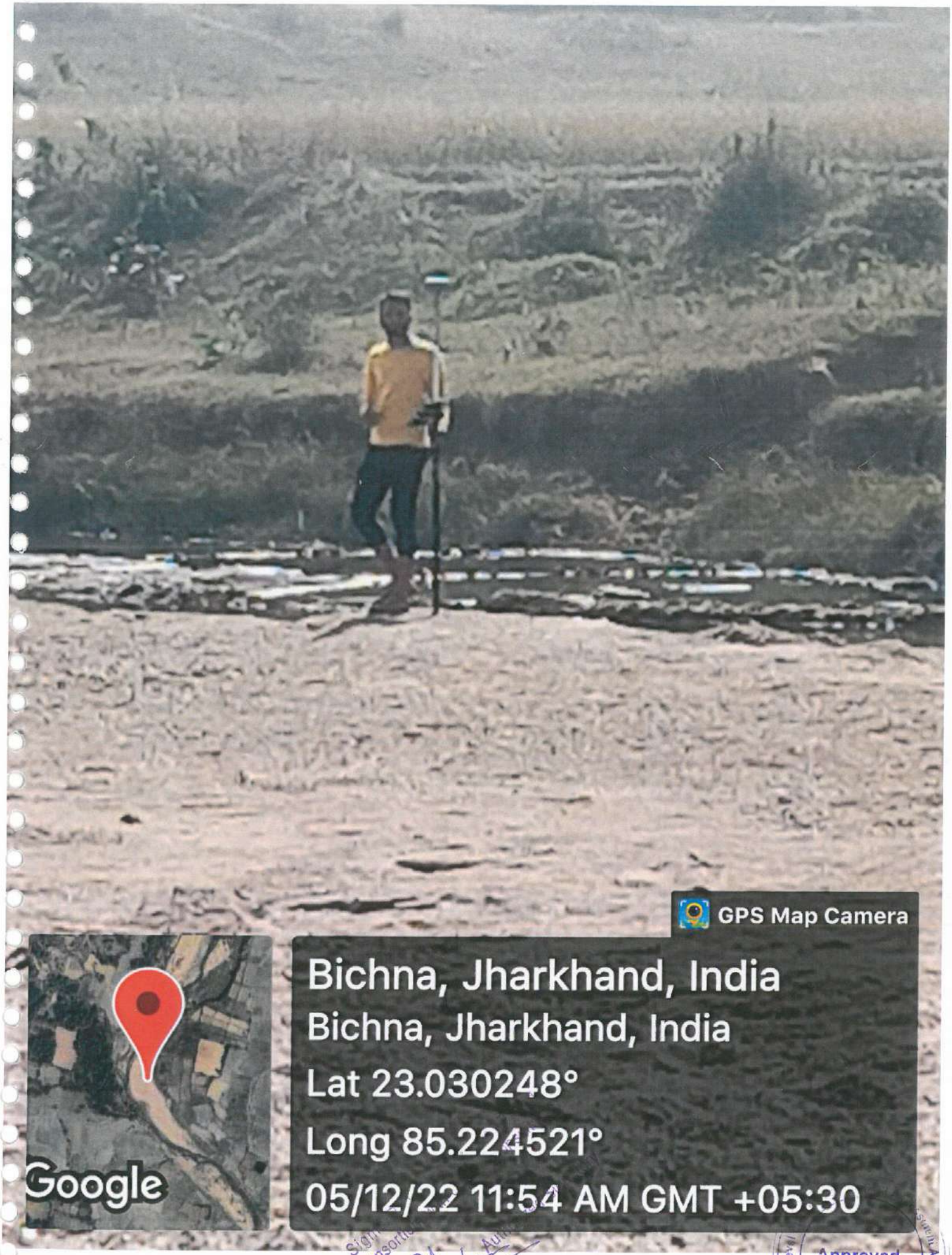
Approved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Bichna, Jharkhand, India
Lat 23.030248°
Long 85.224521°
05/12/22 11:54 AM GMT +05:30
Google

Approved

GPS Map Camera
Jarakel, Jharkhand, India
Jarakel, Jharkhand 835216, India
Lat 22.870548°
Long 85.075618°
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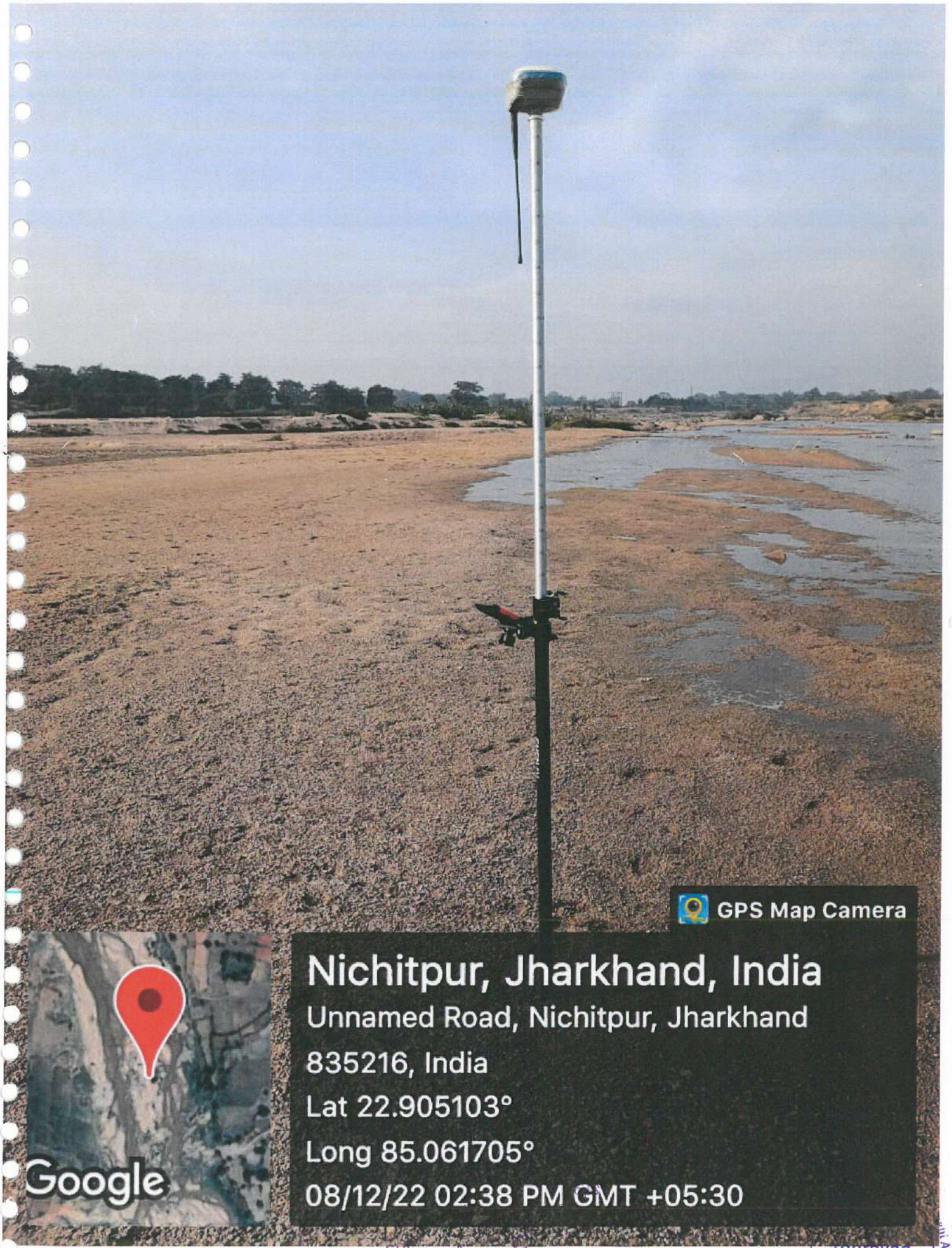
Google

Approved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835216, India
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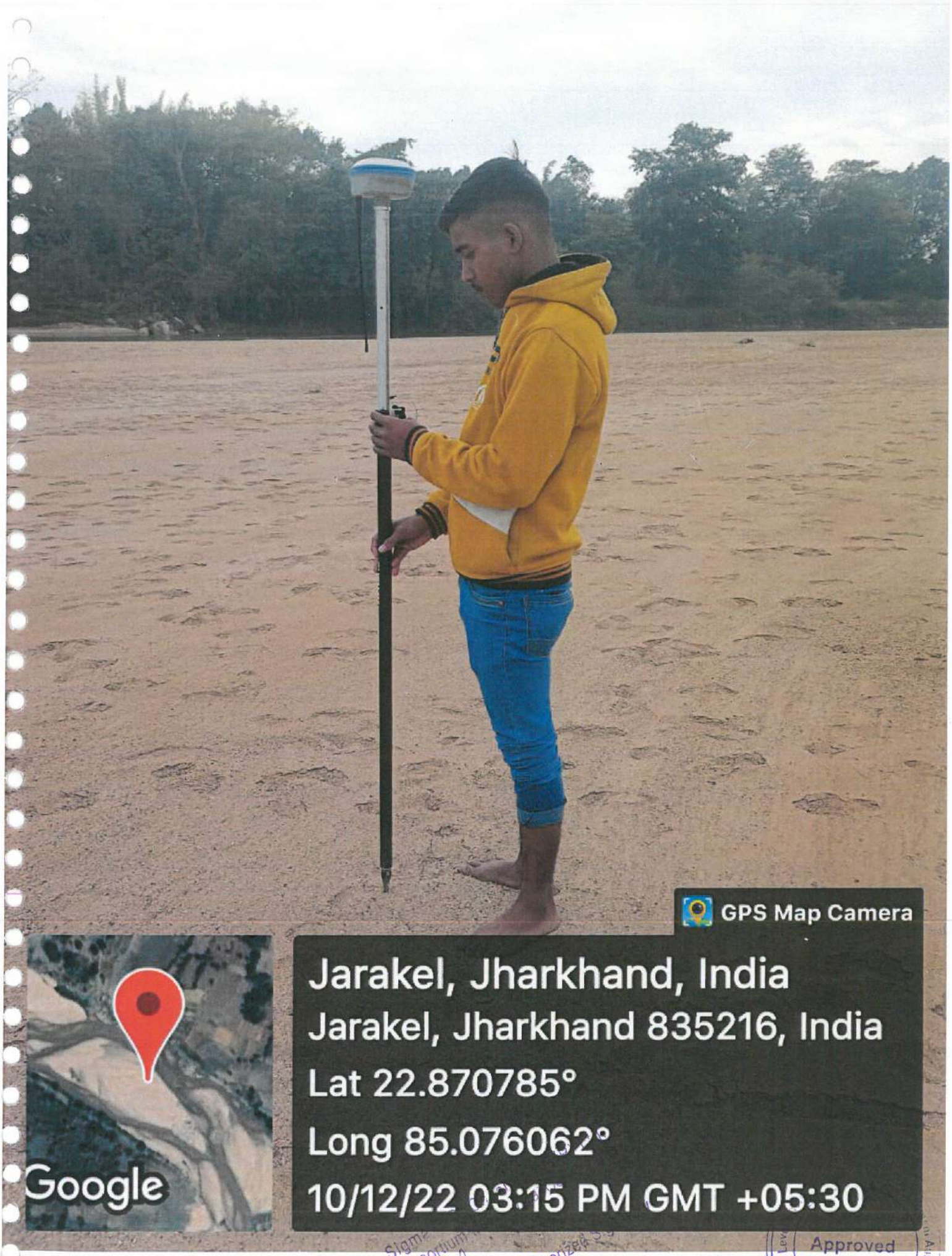
Google

Approved



Sigma Consortium
Authorized Signatory
Approved
State Level
Jharkhand, Ranchi

GPS Map Camera
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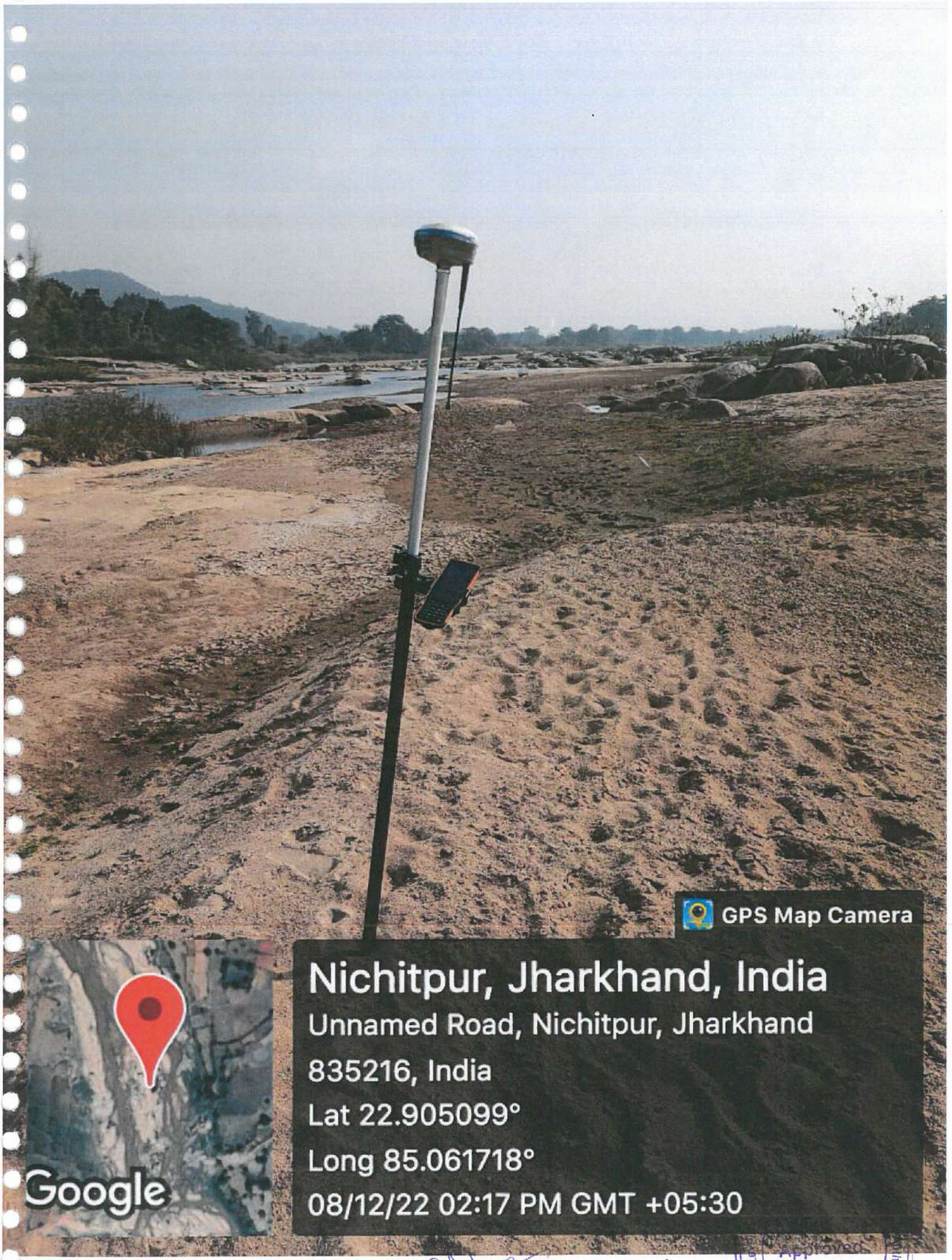
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GPS Map Camera
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26XH+QH, Pandu, Jharkhand 835210, India
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Long 85.228309°
12/04/23 04:06 PM GMT +05:30
Google

GPS Map Camera
Pandu, Jharkhand, India
26XH+QH, Pandu, Jharkhand 835210, India
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Long 85.228305°
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Google

GPS Map Camera
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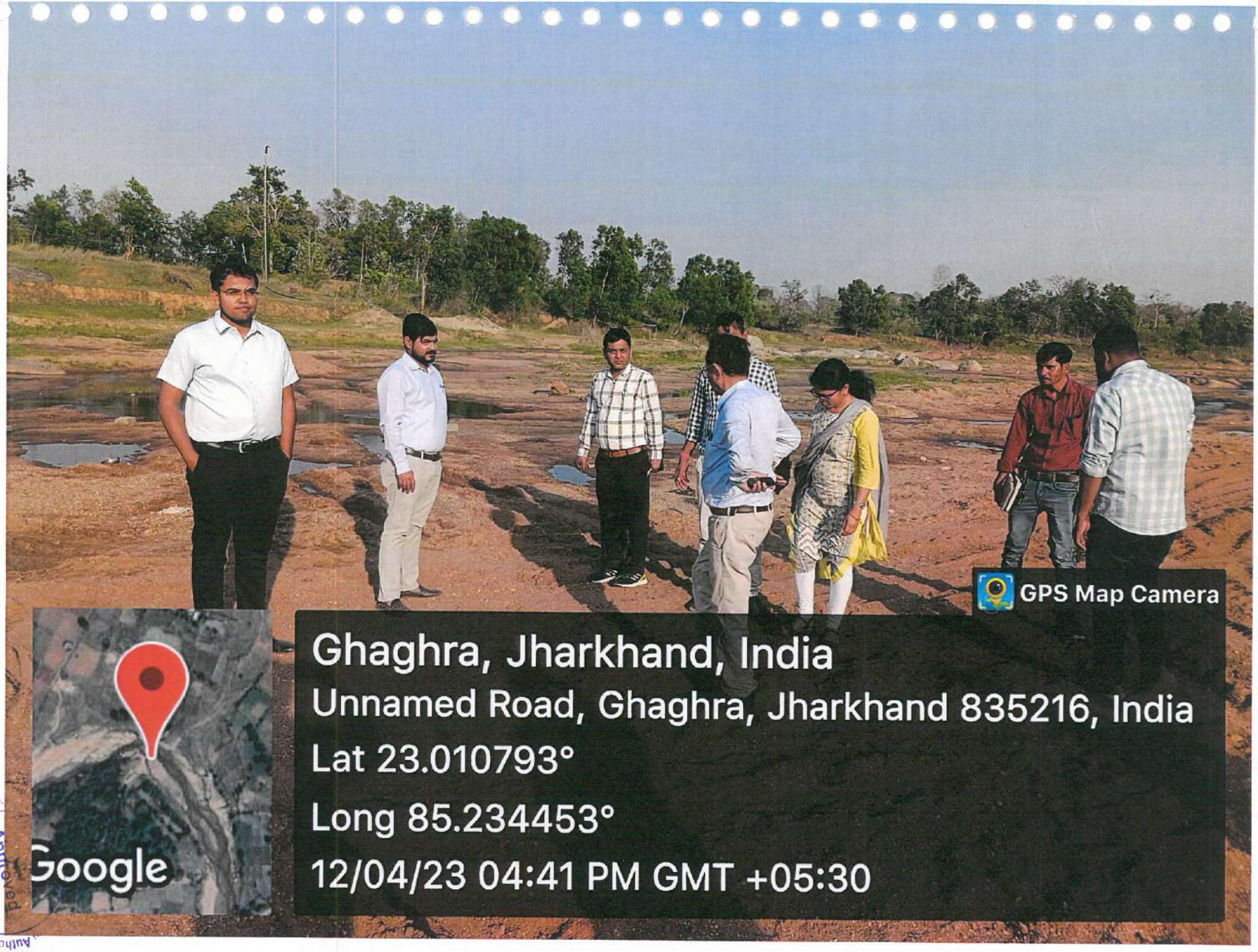
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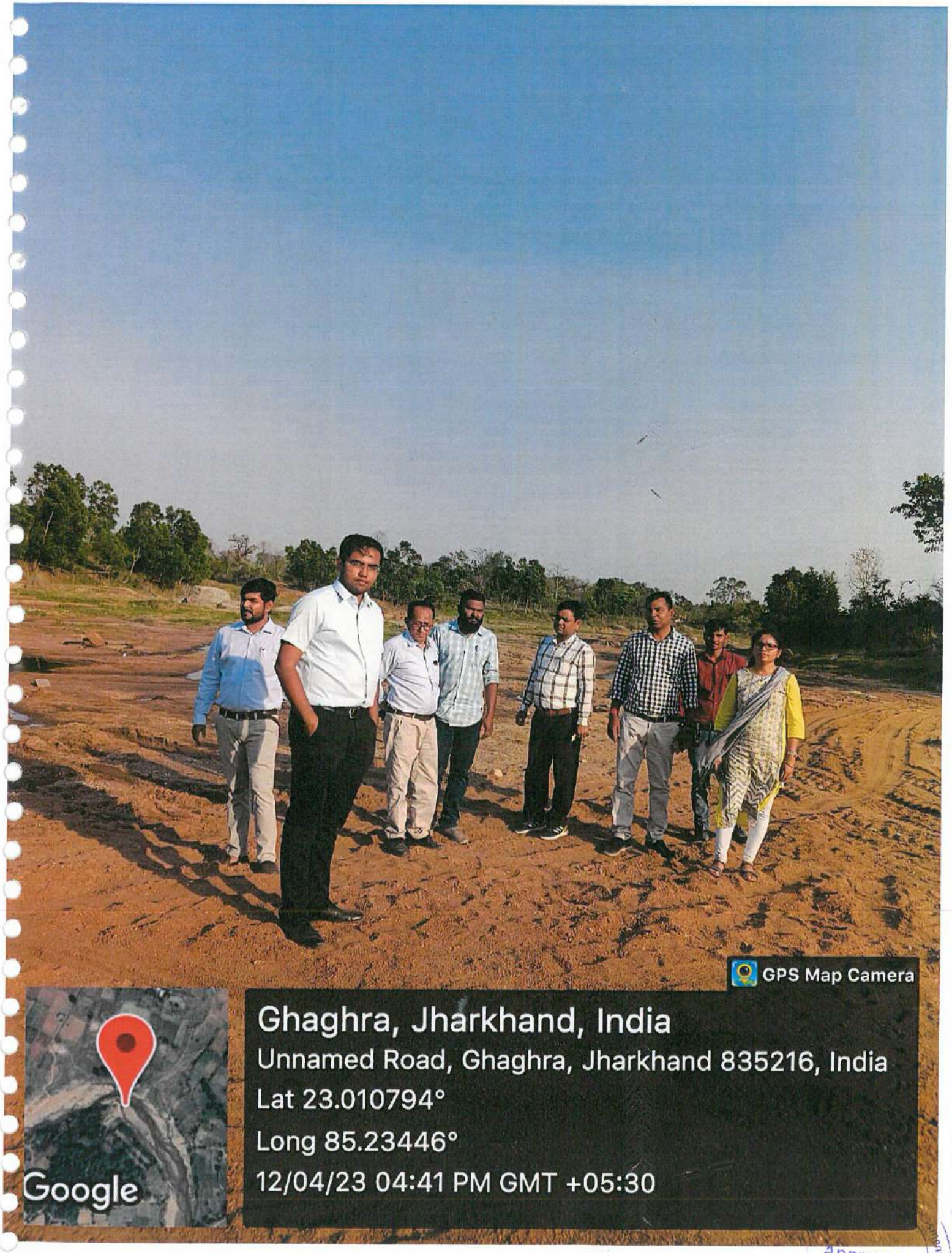
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Unnamed Road, Ghaghra, Jharkhand 835216, India
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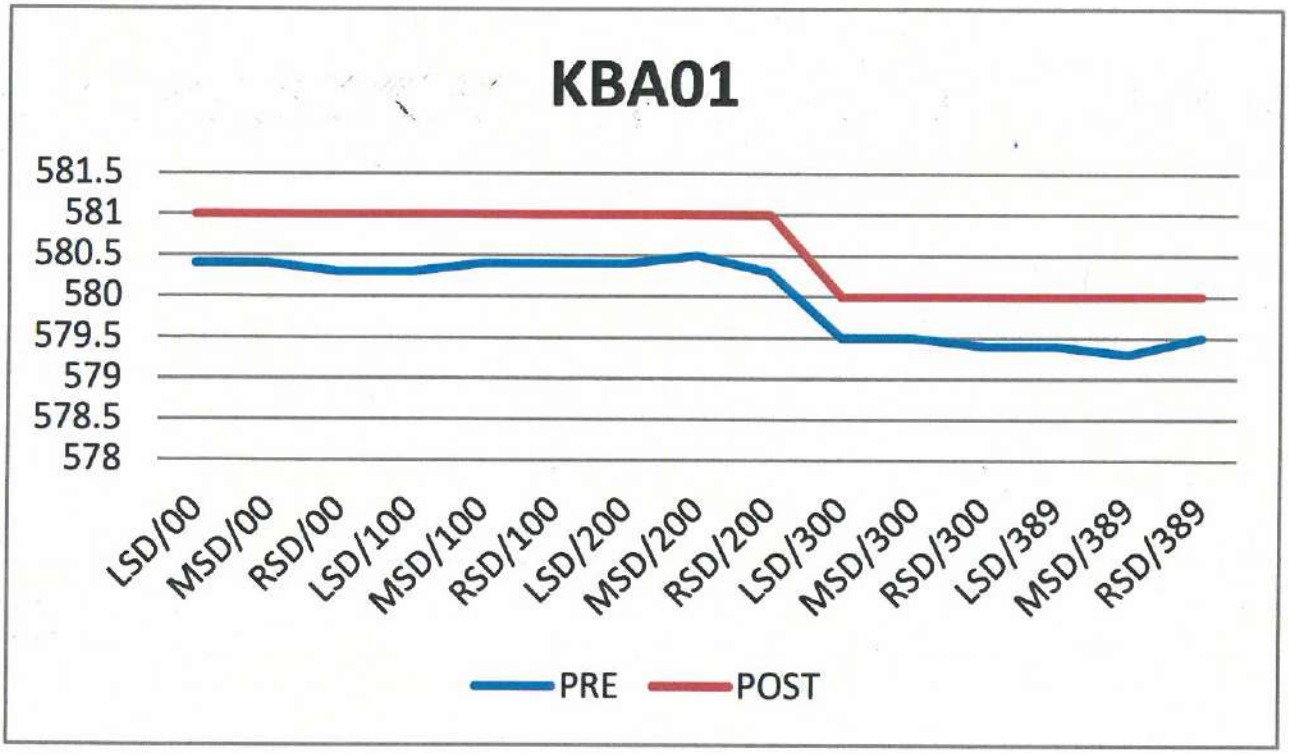
Google

Approved

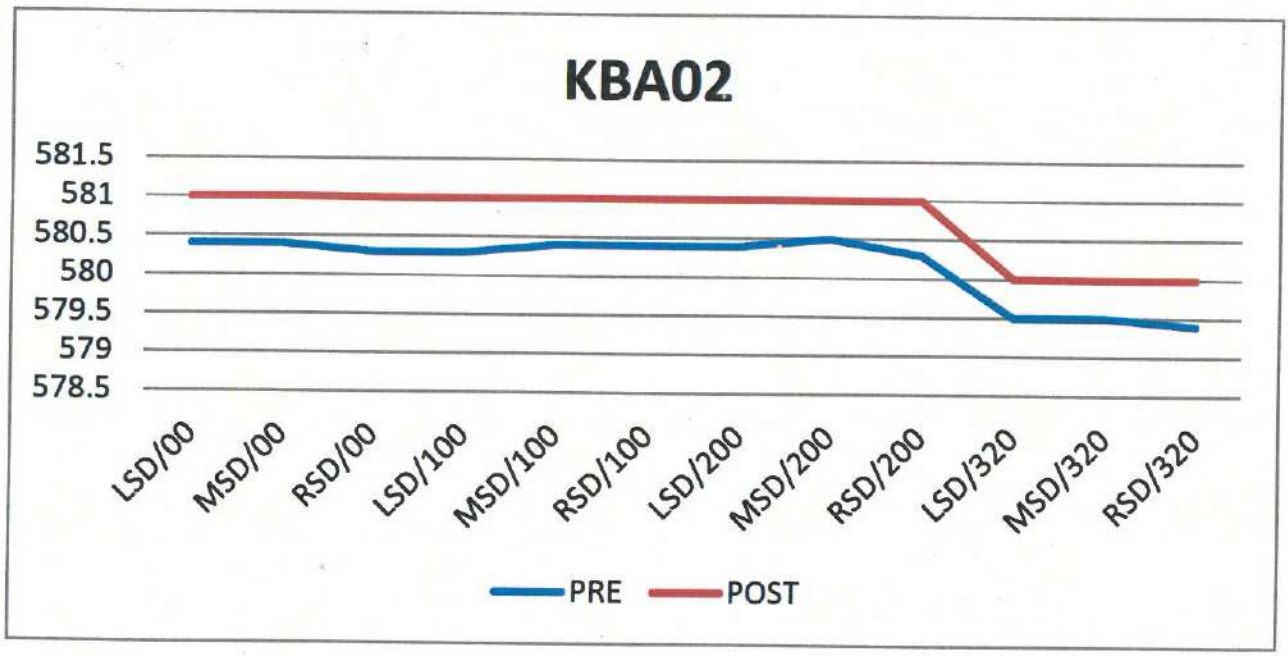
ANNEXURE - J

Pre & Post Monsoon RL Graph



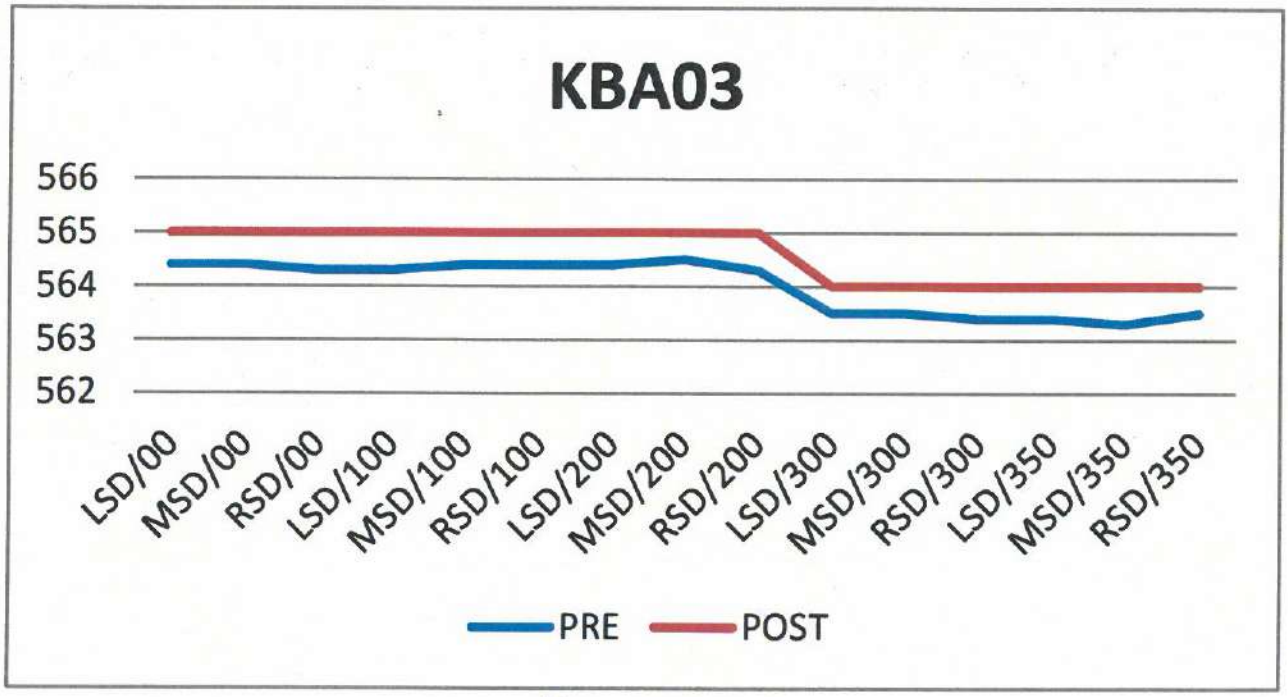
Sigma R.D. Consultants (P) Ltd.
Consortium with Cyber Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority (SEIAA) Jharkhand, Ranchi



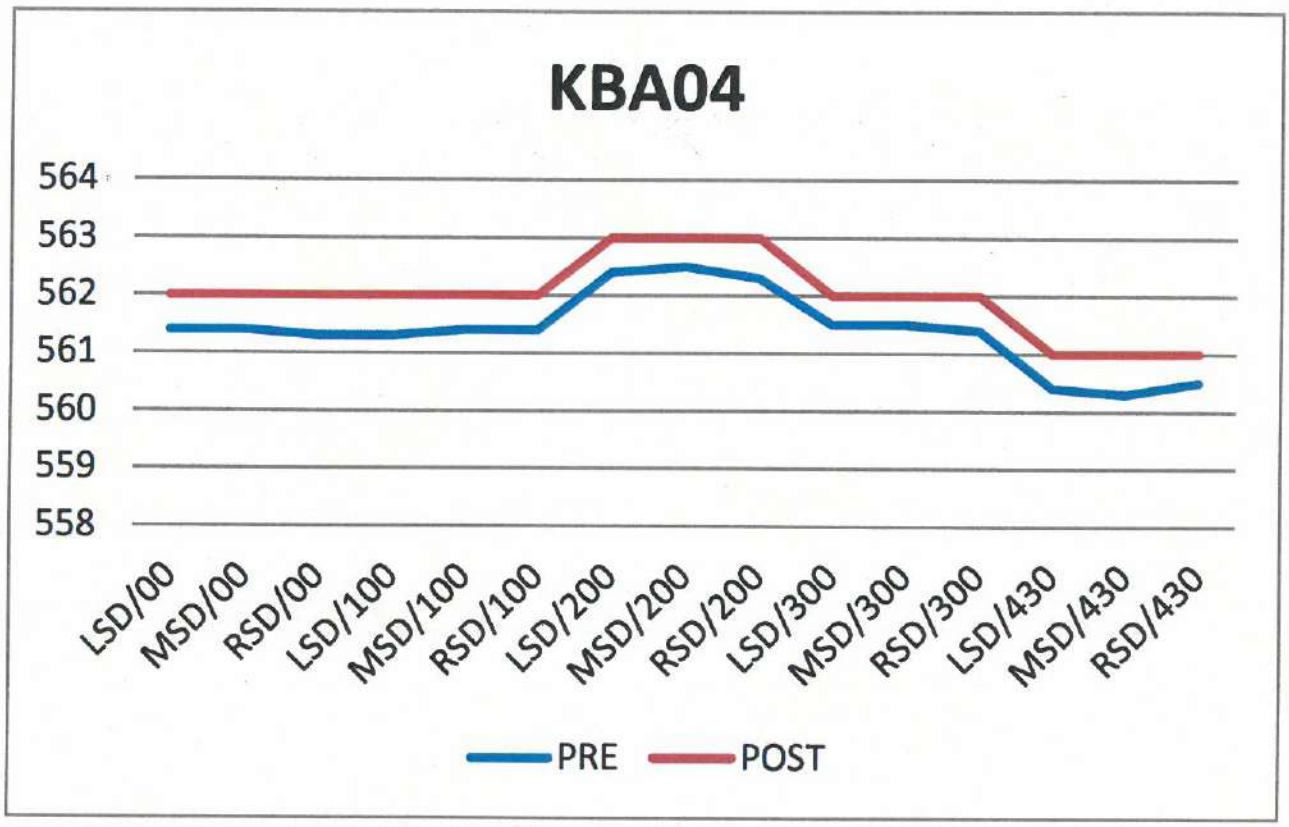
Sigma E.D. Consultants (P) Ltd.
Consortium with Hydel Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi



Authorized Signatory

State Level Environment
Jharkhand, Ranchi



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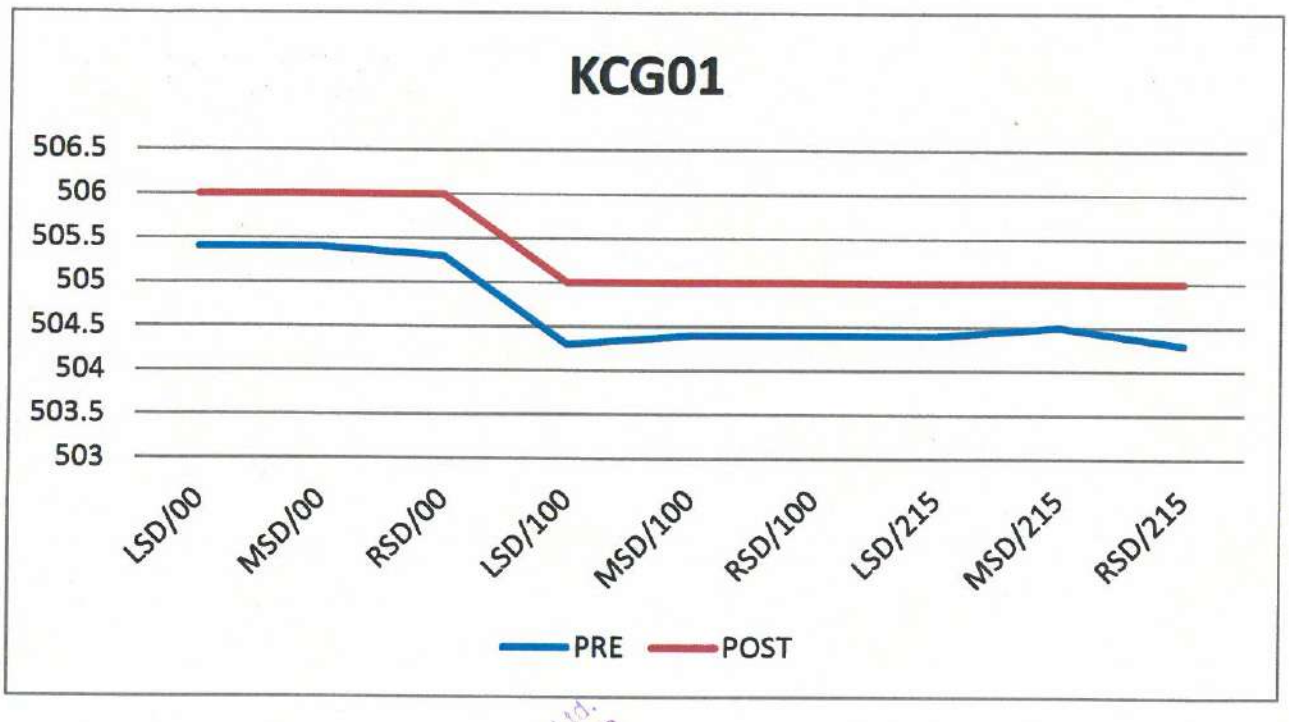

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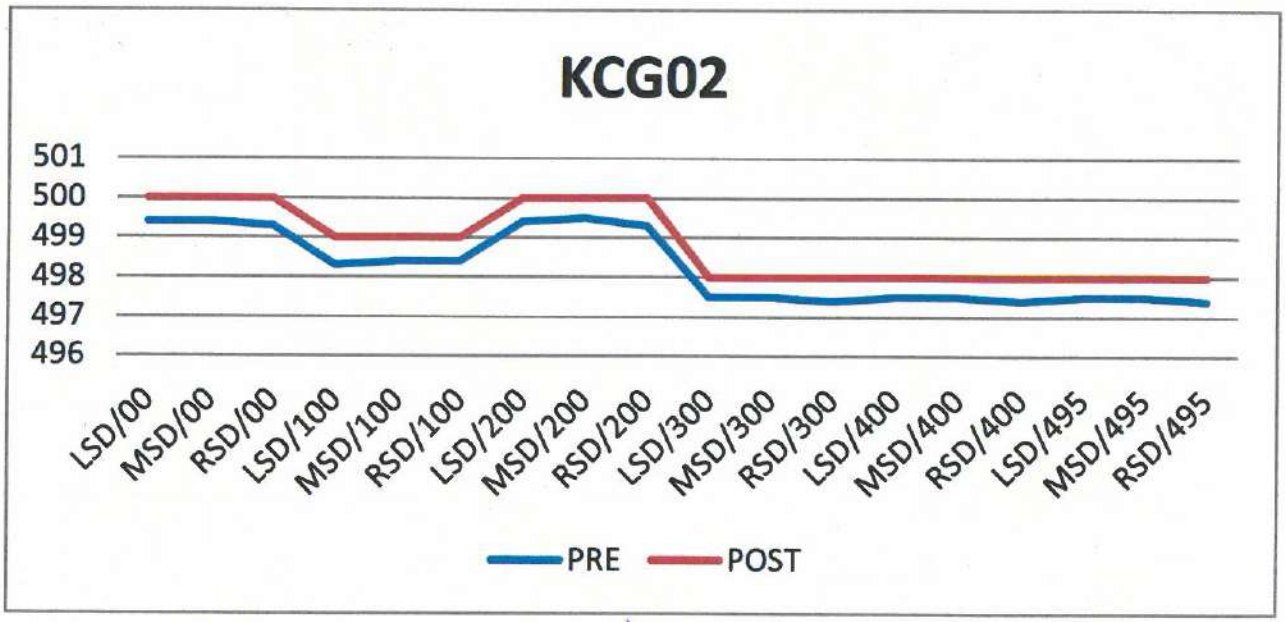
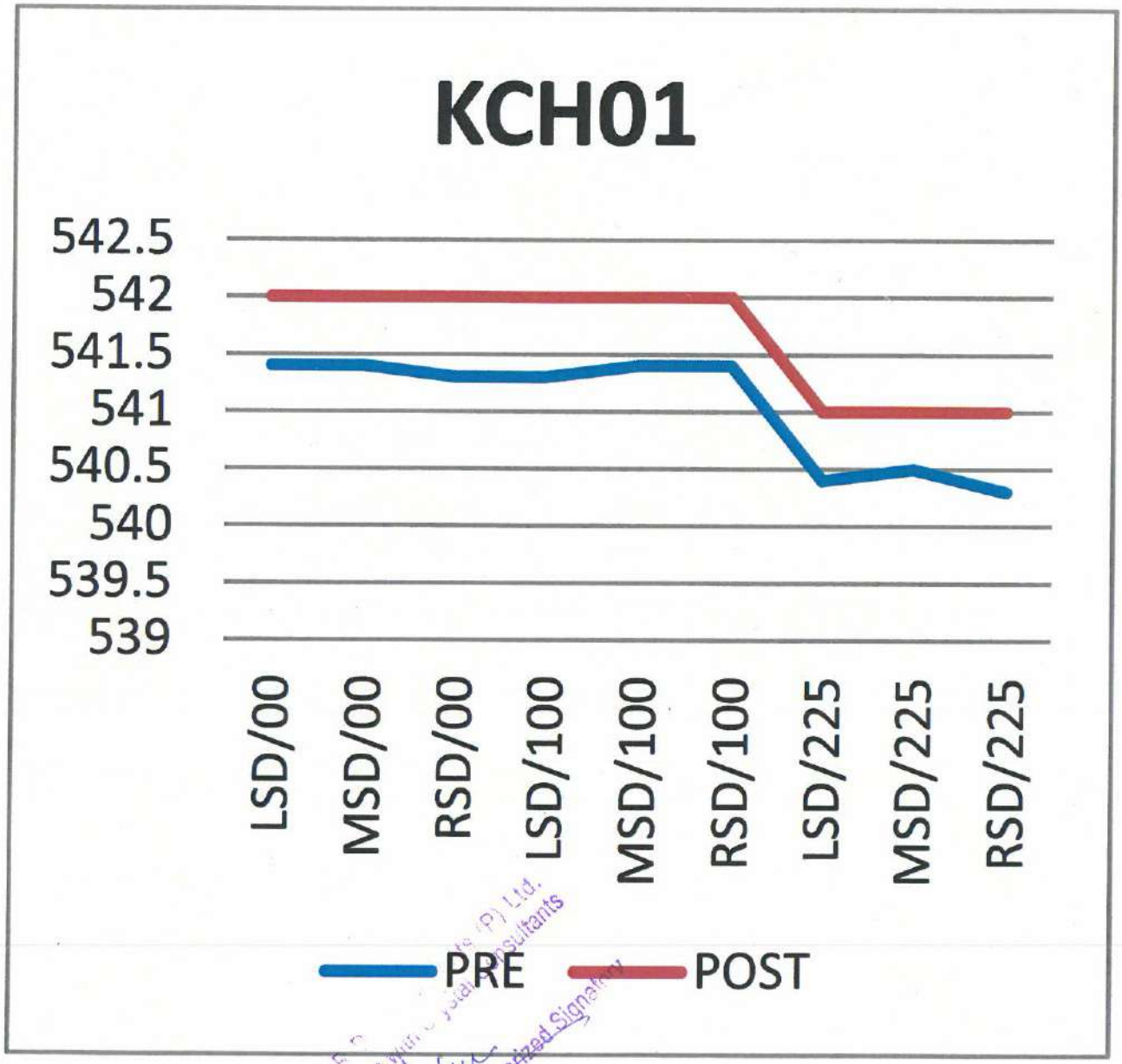
State Level Environment
Jharkhand, Ranchi



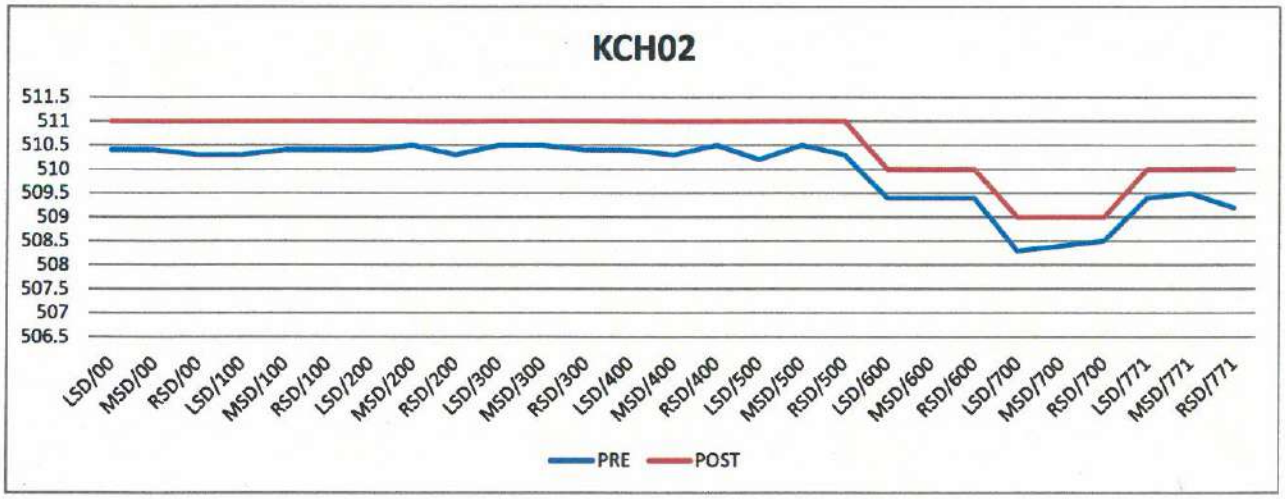
Sigma E... ...nts (P) Ltd.
Consortium with ...ystar Consultants
Authorized Signatory

State Level Environment ... Jharkhand, Ranchi
APF



Sigma E... (P) Ltd.
Consortium ... Consultants
Authorized Signatory

Approved
State Level Environment ... Jharkhand, Ranchi



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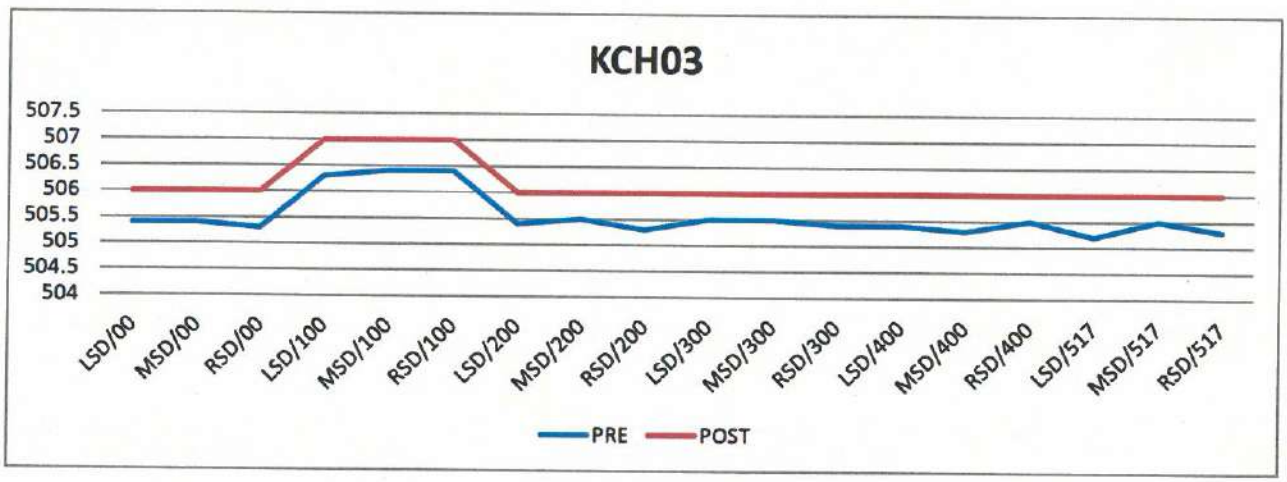
Approved



Sigma R D Consultants (P) Ltd.
Consortium with Crystal Consultants

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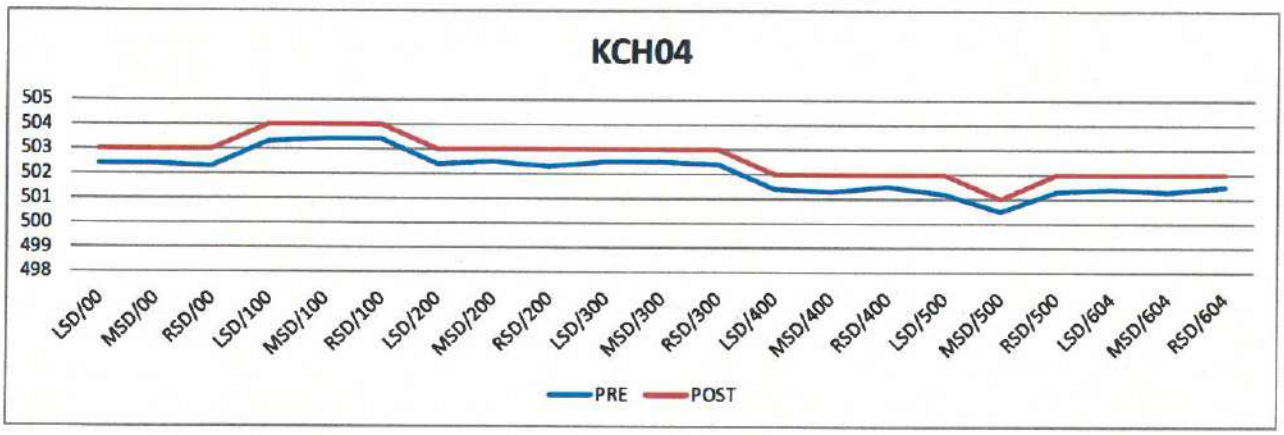
Approved
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *



Sigma R.D. Consultants (P) Ltd.
Consultant with Crystal Consultants

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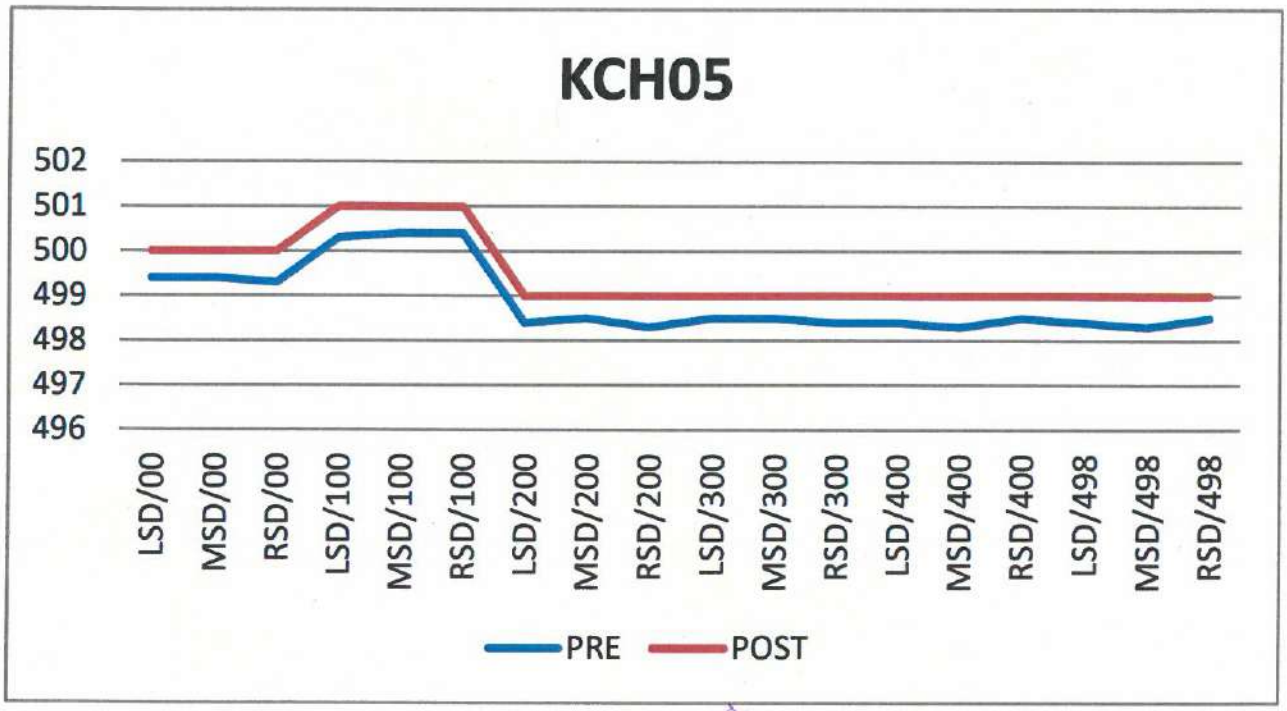
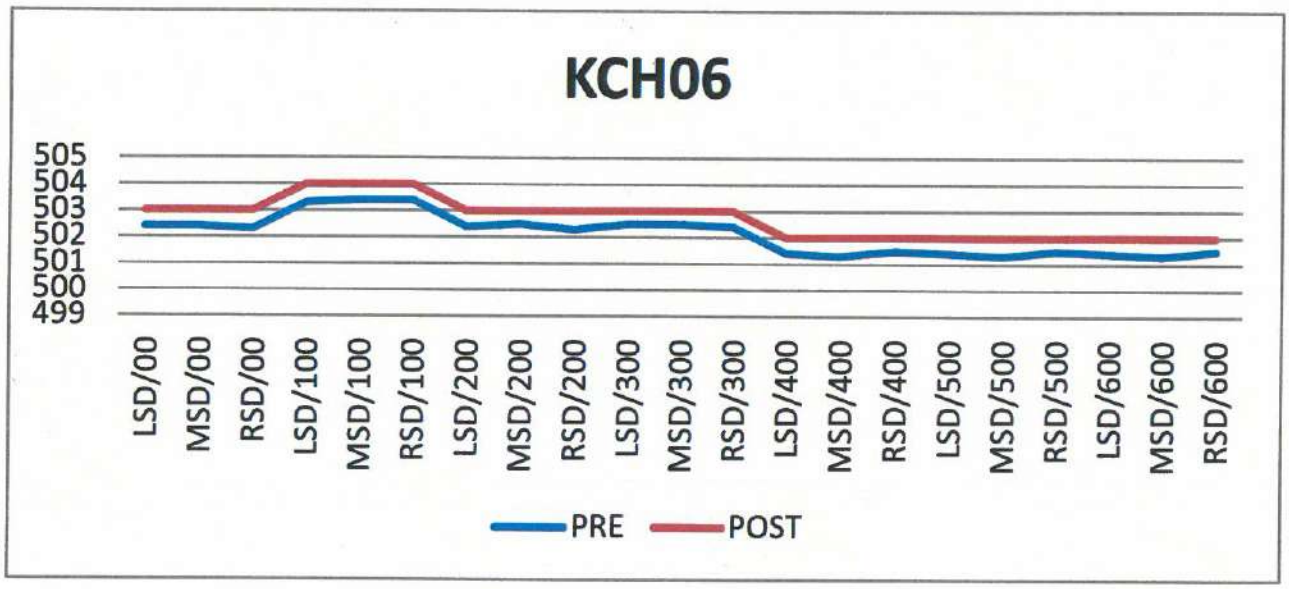
Approved
State Level Environment
Jharkhand, Ranchi



Sigma R.D. Consultants (P) Ltd.
Consortium with Crystal Consultants
Authorized Signatory

State Level Environment ... Jharkhand, Ranchi



Sigma R.D. Consultants (P) Ltd.
Consortium with Crystal Consultants

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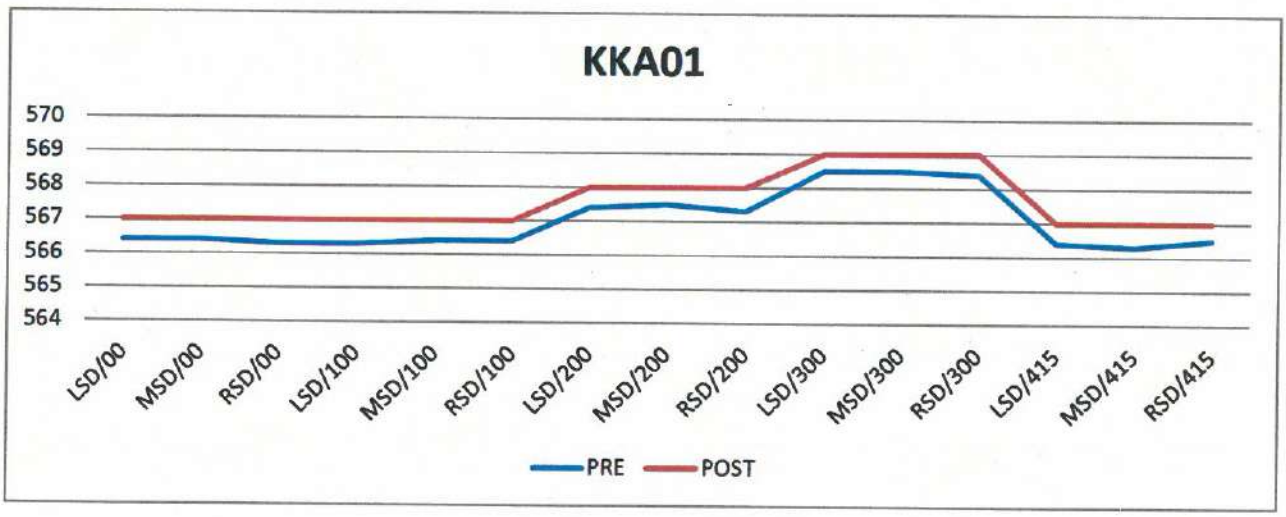
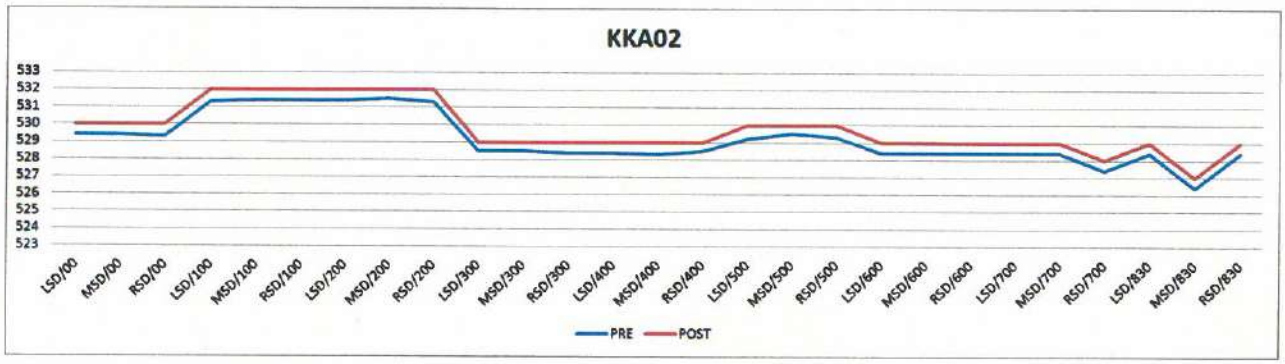
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *



Approved
State Level Environment Impact Assessment Authority (SEIAA) Jharkhand, Ranchi



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Consortium with Crystal Consultants
Authorized Signatory

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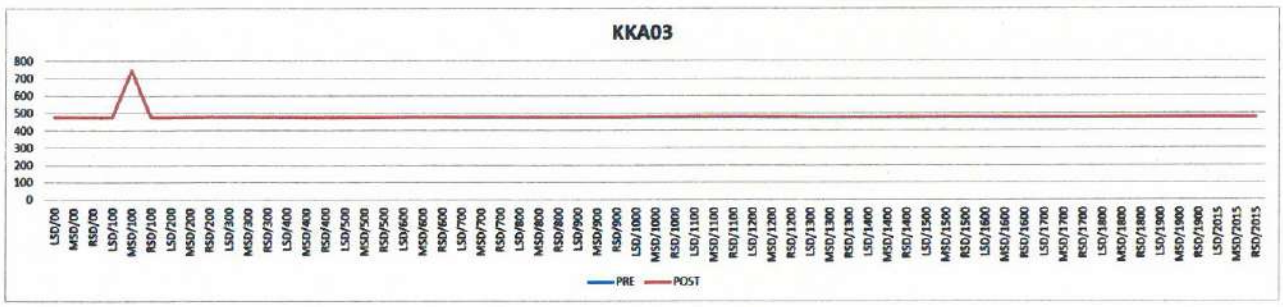
State Level Environment
Jharkhand, Ranchi



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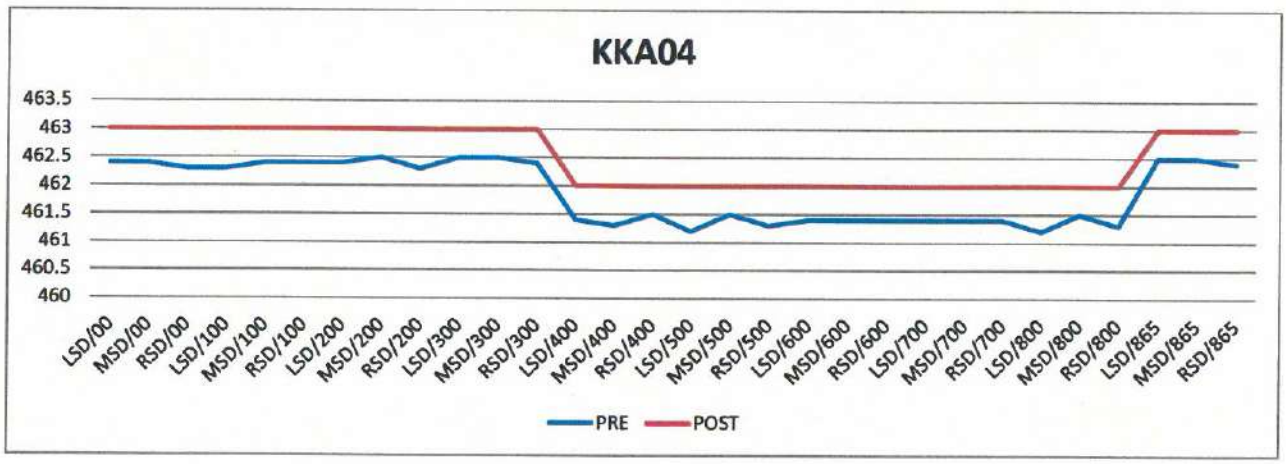
Consortium with Crystal Consultants
Authorized Signatory

Approved
State Level Environment ... Jharkhand, Ranchi



Sigma R.D. Consultants (P) Ltd.
Conservation Crystal Consultants

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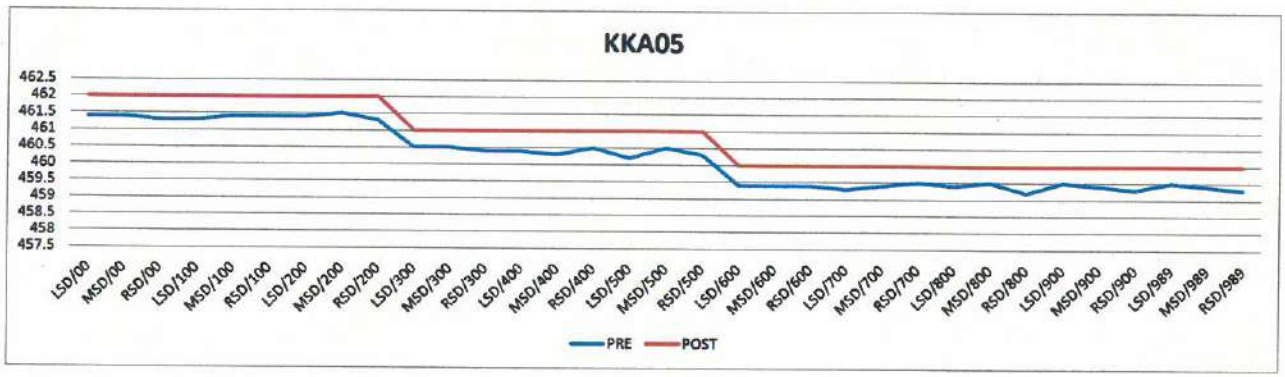

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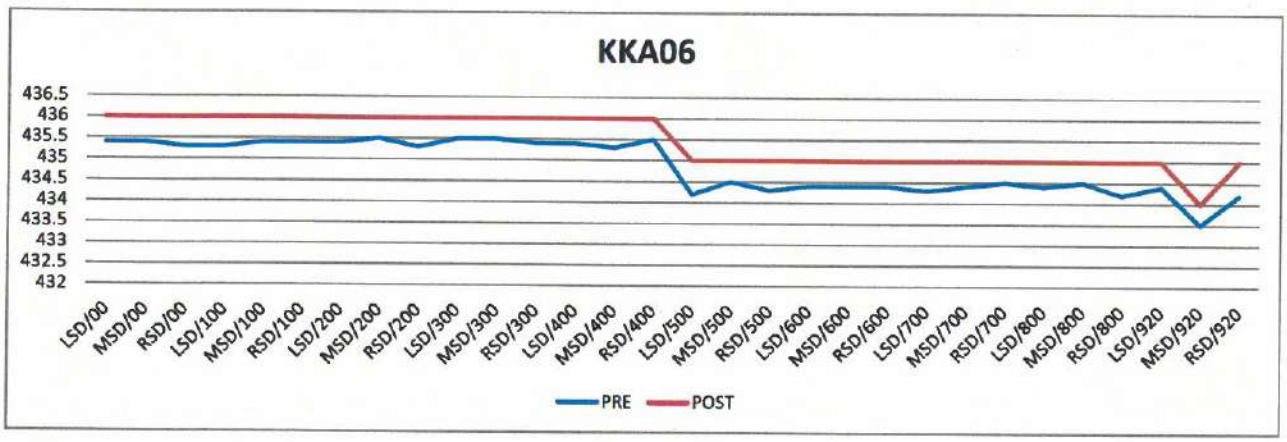
State Level Environmental Impact Assessment Authority * Jharkhand, Ranchi *
Approved



Sigma R.D. Consultants (P) Ltd.
Consortium with Crystal Consultants

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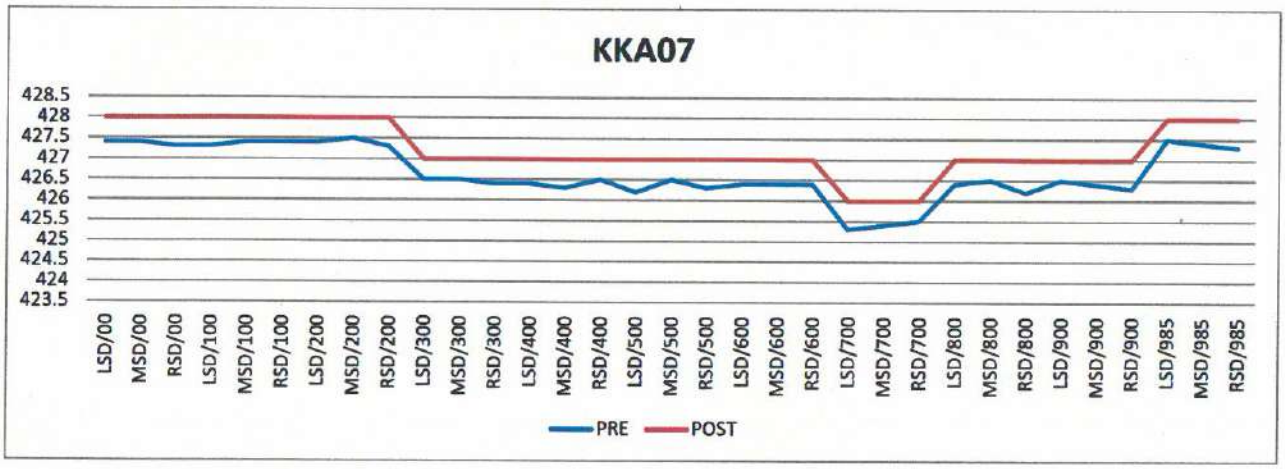
State Level Environment Impact Assessment Authority * Jharkhand, Ranchi * Approved



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Consortium with Crystal Consultants

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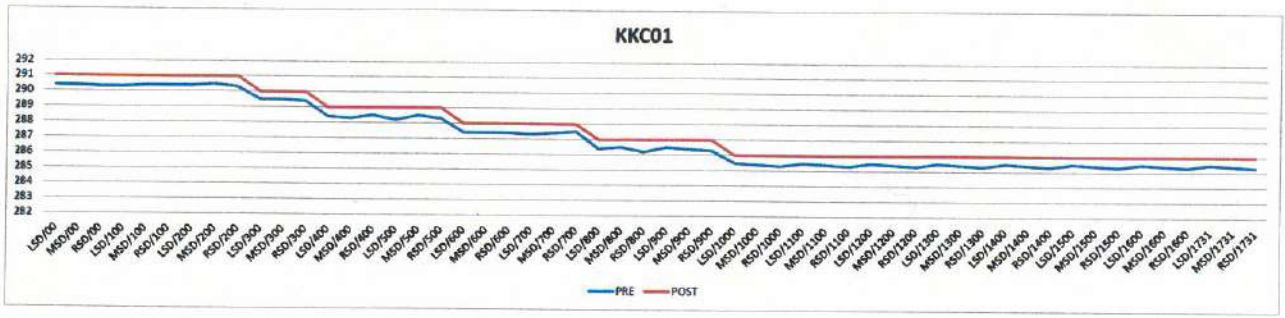
State Level Environ... Jharkhand, Ranchi



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Consortium with Krystal Consultants

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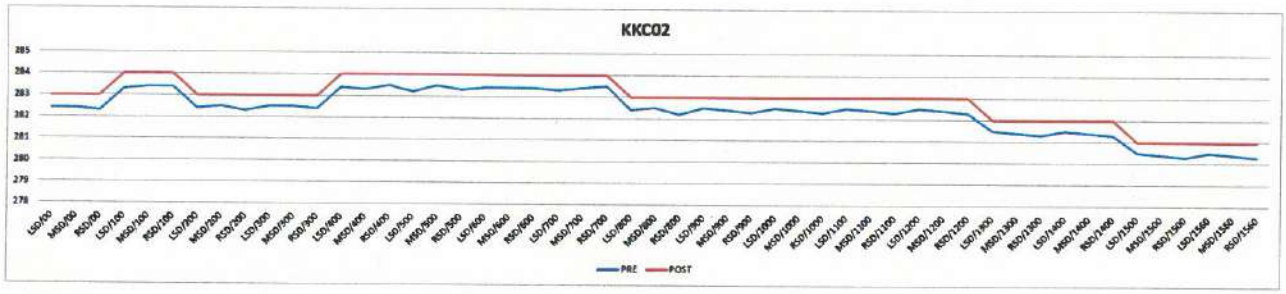
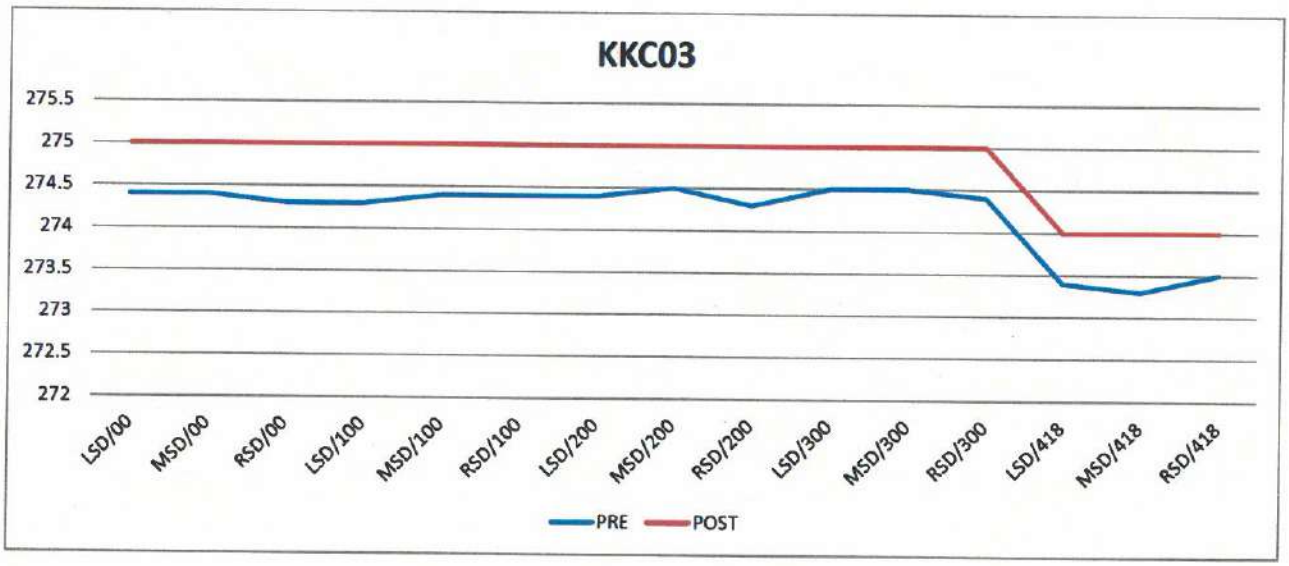
State Level Environment ... Jharkhand, Ranchi



Sigma R.D. Consultants (P) Ltd.
Consortium with Crystal Consultants
Authorized Signatory

State Level Environ... Approved ... Jharkhand, Ranchi



Sigma R.D. Consultants (P) Ltd.
Consortium with Crystal Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
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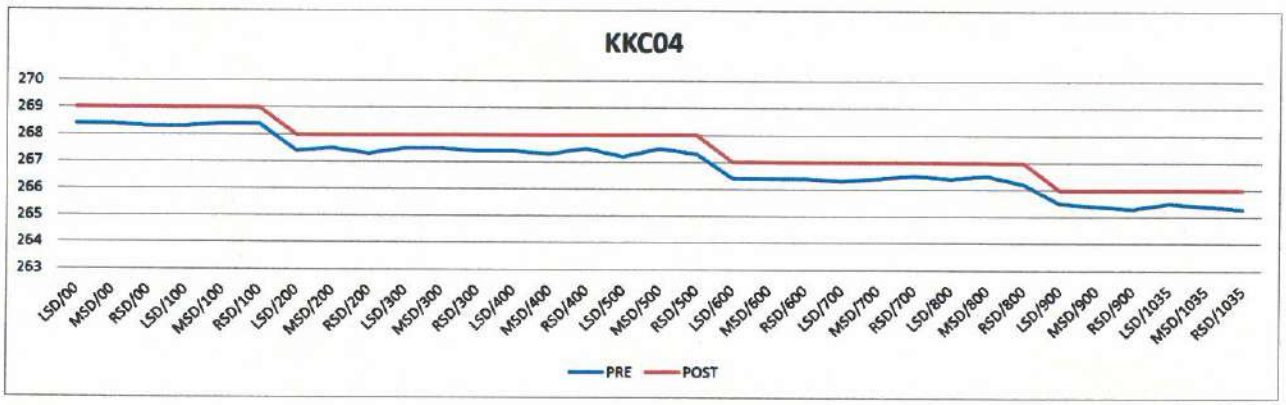
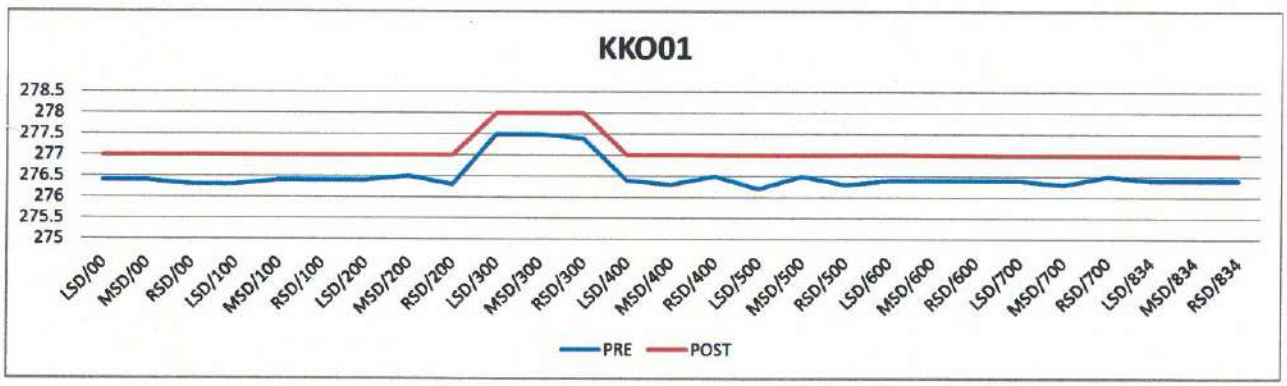


Sigma R.D. Consultants (P) Ltd.
Consortium with Crystal Consultants
Authorized Signatory

State Level Environ... Authority * Jharkhand, Ranchi *



Sigma R.D. Consultants (P) Ltd.
Consortium with Crystal Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi *
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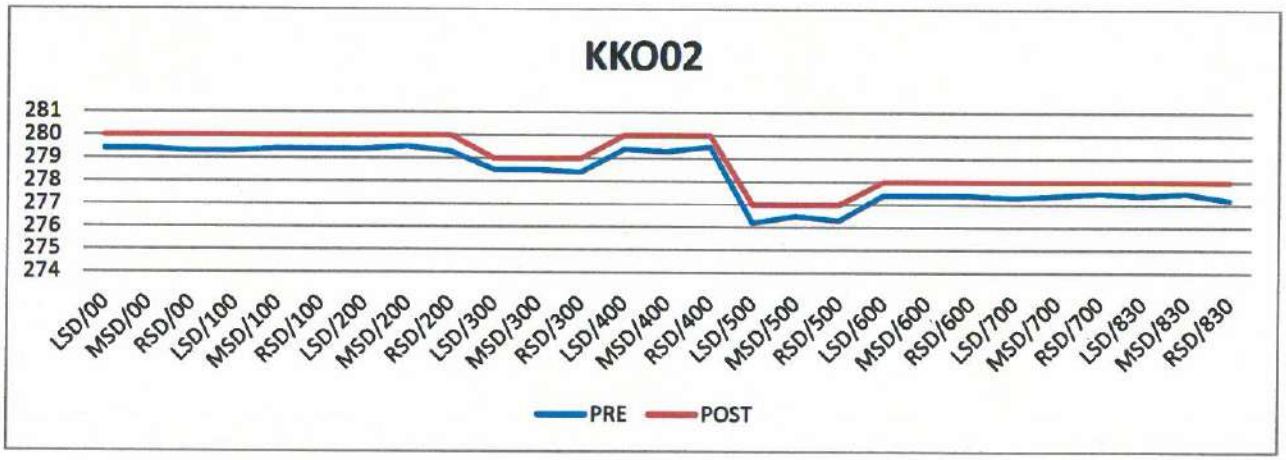

Sigma R.D. Consultants (P) Ltd.
Consortium with Crystal Consultants
Authorized Signatory

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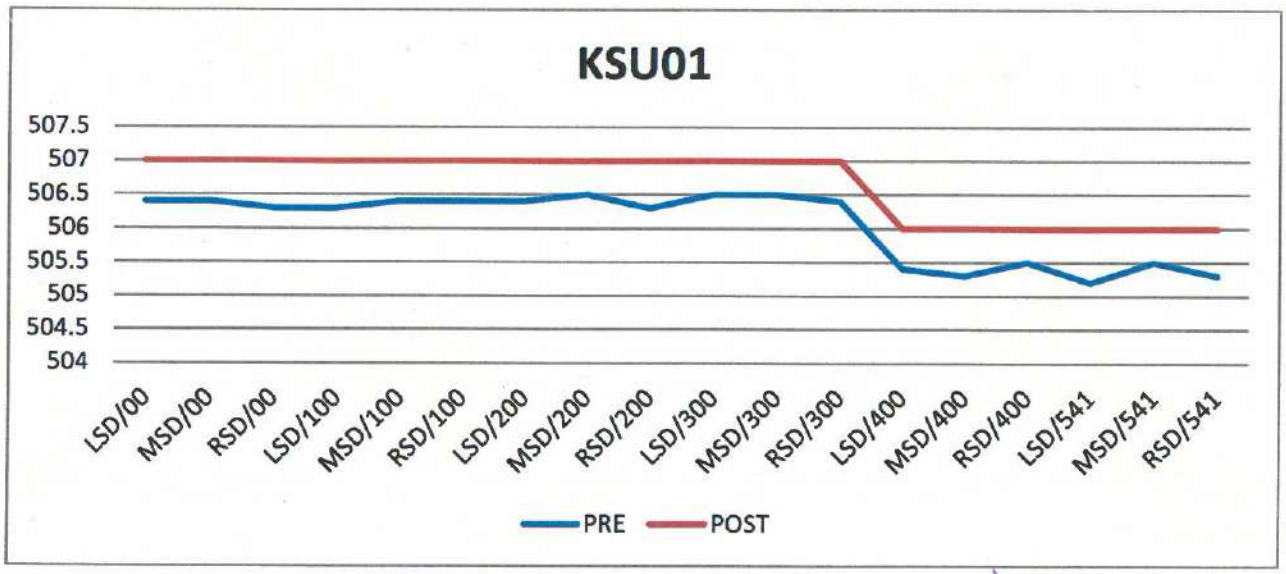

Sigma R.D. Consultants (P) Ltd.
Consortium with Jyoti Star Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

ANNEXURE - K

Annexure – K

जिला खनन कार्यालय, खूँटी

पत्रांक:– 135 / एम० दिनांक:–13 / 03 / 2023

आम सूचना

एतद् द्वारा सर्वसाधारण को सूचित किया जाता है कि खूँटी जिले का बालू खनिज का District Survey Report (जिला सर्वेक्षण रिपोर्ट) तैयार की गई है, जिसे खूँटी जिला के website https://khunti.nic.in पर Enforcement and Monitoring Guidelines for Sand Mining, 2020 के तहत आम जनता की आपत्ति / सुझाव के लिए प्रकाशित किया जाना है।

अतएव उक्त DSR, में यदि कोई आपत्ति / सुझाव हो तो DSR प्रकाशित होने की तिथि से 30 दिनों के अन्दर अपनी आपत्ति / सुझाव जिला खनन कार्यालय, खूँटी अथवा email ID:- dmo.khunti@jharkhandmail.gov.in पर प्रेशित करने की कृपा की जाए।

ह० /–
जिला खनन पदाधिकारी
खूँटी

PR 292450 Mines and Geology (22-23)_D

Advertisement on Local Newspaper

District Survey Report (DSR) of Sand Mineral Khunti

District Survey Report (DSR) of Sand Mineral Khunti		
Title	Date	View / Download
District Survey Report (DSR) of Sand Mineral Khunti	17/03/2023	View 29 Files

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Consortium with Crystal Consultants
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Draft DSR uploaded on NIC Portal from 17/03/2023

State Level Environ... Authority Jharkhand Ranchi
Approved

ANNEXURE - L

Annexure – L

Towhomitmayconcern

This is tocertify that all siting criteria/provisions of JSPCB&SEIAA,JHARKHANDhasbeencompiled. As per JSPCBnotificationno. B-21, Ranchi dated 16/08/13.

Sl.No	Minimumdistancefrom	Distance(in meter)
1	NH	100
2	SH	100
3	Distancemetal road	50
4	Railway line	100
5	River	100
6	Any otherriver	100
7	Habitation	200
8	Forest/Forestland	400

As per58th-MOM-of-SEIAAJharkhand

III. Revised format for PP to get the following information/certification from Circle Officer:-

क्रम सं०	निर्धारित बिन्दु	हाँ/नहीं
1.	क्या आवेदित भूमि की जाँच सर्वे खतियान तथा रजिस्टर–II में जंगल झाड़ी के रूप में दर्ज है?	
2.	क्या 500 मीटर की दूरी के अंदर कोई मानव बसाहट (Habitation) स्थित है?	
3.	क्या 500 मीटर की दूरी के अंदर कोई जलीय निकाय (Dam/Reservoir) स्थित है?	
4.	क्या 500 मीटर की दूरी के अंदर कोई नदी (River) स्थित है?	
5.	क्या 500 मीटर की दूरी के अंदर कोई शैक्षणिक संस्थान (Educational Institute) स्थित है?	
6.	क्या 500 मीटर की दूरी के अंदर कोई चिकित्सालय (Hospital) स्थित है?	
7.	क्या 10 कि०मी० की परिधि में कोई अंतर्राज्यीय (Interstate) सीमा है?	
8.	क्या 500 मीटर की दूरी के अंदर कोई राष्ट्रीय धरोहर/पुरातात्वीय (Monuments/Archaeological) महत्व के स्थल स्थित है?	

As per67th-MOM-of-SEIAAJharkhand

iv. Revised format for project proponent to get the following information / certification from Divisional Forest Officer concerned :-

क्रम सं०	निर्धारित बिन्दु	हाँ / नहीं
1.	2.	3.
1.	क्या परियोजना स्थल से आरक्षित वन / संरक्षित वन भूमि से दूरी 250 मी० है?	
2.	क्या परियोजना स्थल No Mining Zone अंतर्गत आता है?	
3.	क्या परियोजना स्थल से 10 किलो मीटर की दूरी के अंदर कोई नेशनल पार्क है?	
4.	क्या परियोजना स्थल से 10 किलो मीटर की दूरी के अंदर कोई अभ्यारण्य एवं जैव विविधता क्षेत्र है?	
5.	क्या परियोजना स्थल से 10 किलो मीटर की दूरी के अंदर कोई इको सेंसेटिव जोन (Eco Sensitive Zone) है?	
6.	क्या आवेदित परियोजना ESZ के अन्तर्गत प्रदर्शित श्रेणी में आता है अथवा नहीं?	

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Consortium with Krystal Consultants
Authorized Signatory

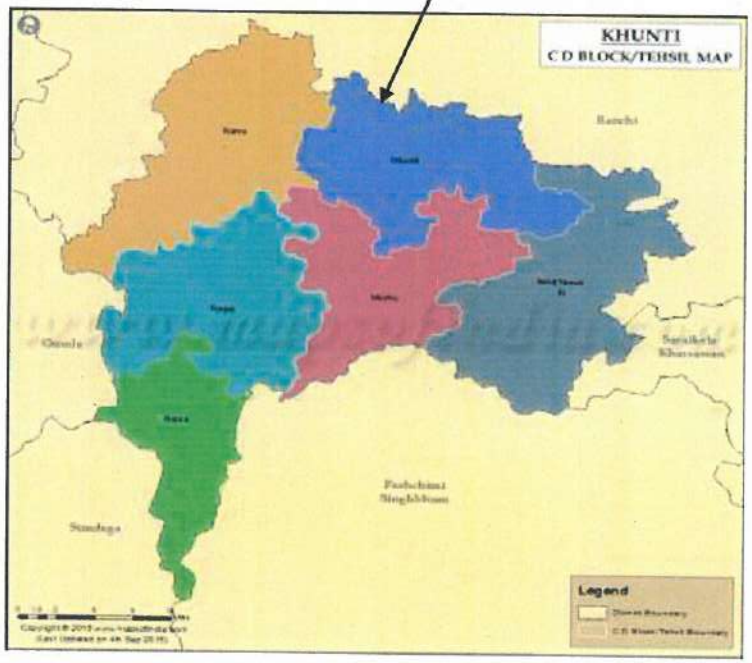
State Level Environment Impact Assessment Authority Jharkhand, Ranchi
APP

District Mining Officer,
Khunti

PLATE - 1
INDEX PLAN

State Level Environment ... Approved ... Jharkhand, Ranchi

INDEX MAP



Sigma R... Consortium wi...

Authorized Signatory

State Level Environ... Jharkhand, Ranchi ... Authority

PLATE - 2
MASTER PLAN ON TOPOSHEET

Approved
State Level Environment
Jharkhand, Ranchi

Distance from Bridge of Potential Resource Areas

UIN	Bridge Name	Distance(m)
K KA 03	Kanakloiya Bridge	1620
K BA 01	Bichna Bridge	1673
K BA 02	Bichna Bridge	506
K CH 02	Barkuli Bridge	640
K CH 03	Barkuli Bridge	540
K CH 03	Kasmar Bridge	654
K CH 04	Kasmar Bridge	502
K CG 02	Churgi bridge	673
K KC 01	Sarjamdih bridge	535
K KC 02	Sarjamdih bridge	510
K KA 04	Koinara- Jarakel Bridge	330
K KA 05	Koinara- Jarakel Bridge	510
K KA 06	Gutuhatu - Kelo bridge	817
K KO 01	Sode Bridge	987
K KO 02	Sode Bridge	537
K CH 01	Kanti Bridge	260

District Mining Officer

Khunti

Assistant Director, Geology

Ranchi

State Level Environment Impact Assessment Approved Jharkhand

Approved
Environmental Impact Assessment Authority * State Level

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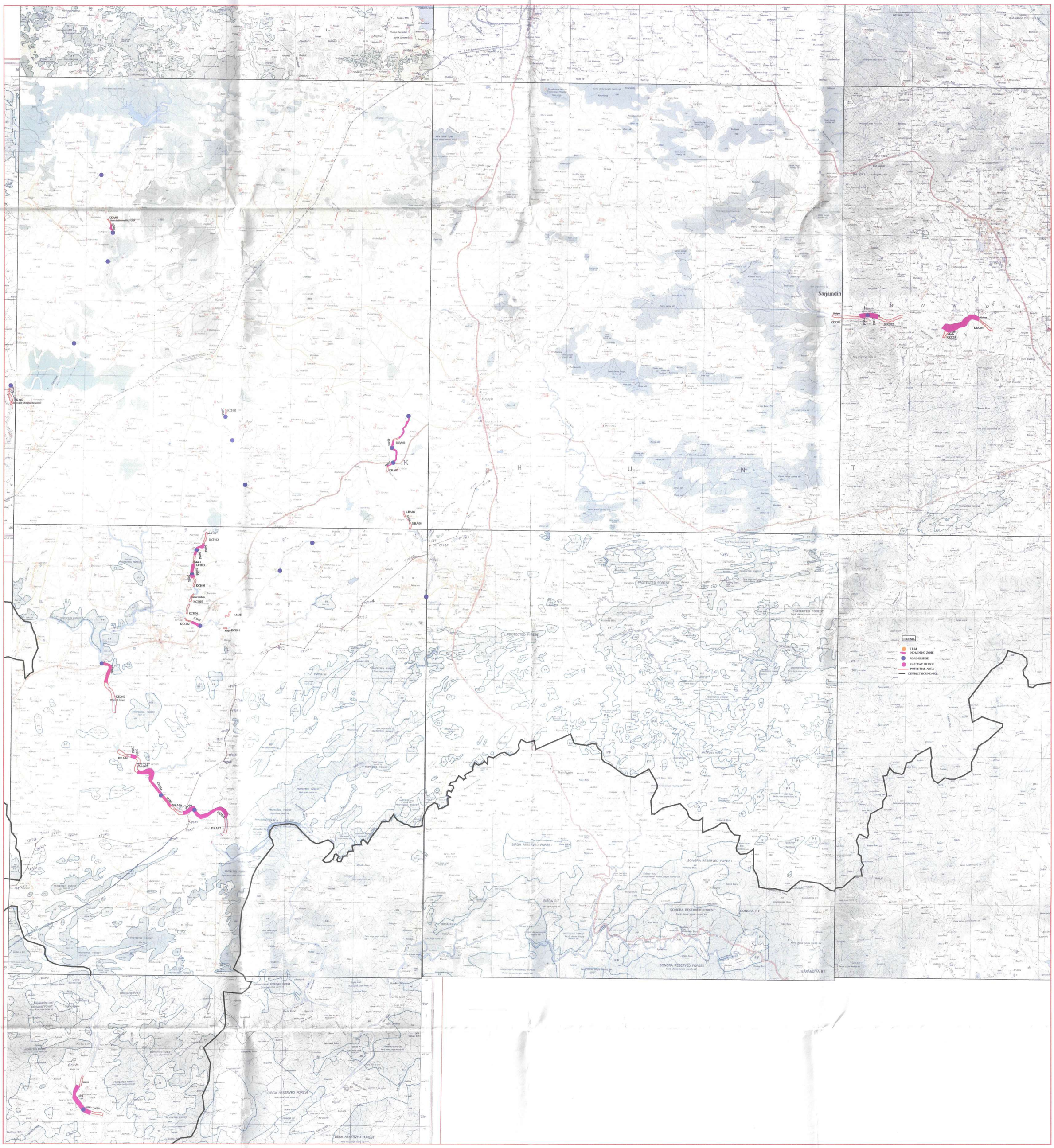

PLATE - 3
CADASTRAL MAP

Approved

KBA01

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
PANDU	1683(P)	2.80Ha
	TOTAL AREA -	2.80Ha

PANDU

BICHNA

Sigma R.D. Consultants (P) Ltd.
Consortium with Crystal Consultants
Authorised Signatory

नम्बर	नाम	गाँव
१०८४	मुंडेरी मौजा नम्बर ५	मजदूर
११६७	टोला सरना टोली	
१२४८	गिर्जा (जर्मन मीशन)	
१२८४	टोला पैलीलटोली	

Scale 16 Inches =

Approved
State Level Environment Impact Assessment Authority, Jharkhand, Ranchi

KBA02

हैसेलन०२६१

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
BICHNA	2512(p)	2.59Ha
	TOTAL AREA -	2.59Ha

KBA03

सारंदकेल
थाना तोरपा नं० ९

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
MAHIL	2188(P)	1.20Ha
GHAGHARA	1482(P)	1.30Ha
	TOTAL AREA -	2.50Ha

MAHIL

GHAGHRA

MAHIL

GHAGHRA

KBA04

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
MAHIL	2058(P)	1.68Ha
GHAGHRA	1482(P)	1.60Ha
	TOTAL AREA -	3.28Ha

Scale 16 Inches = 1 Mile.

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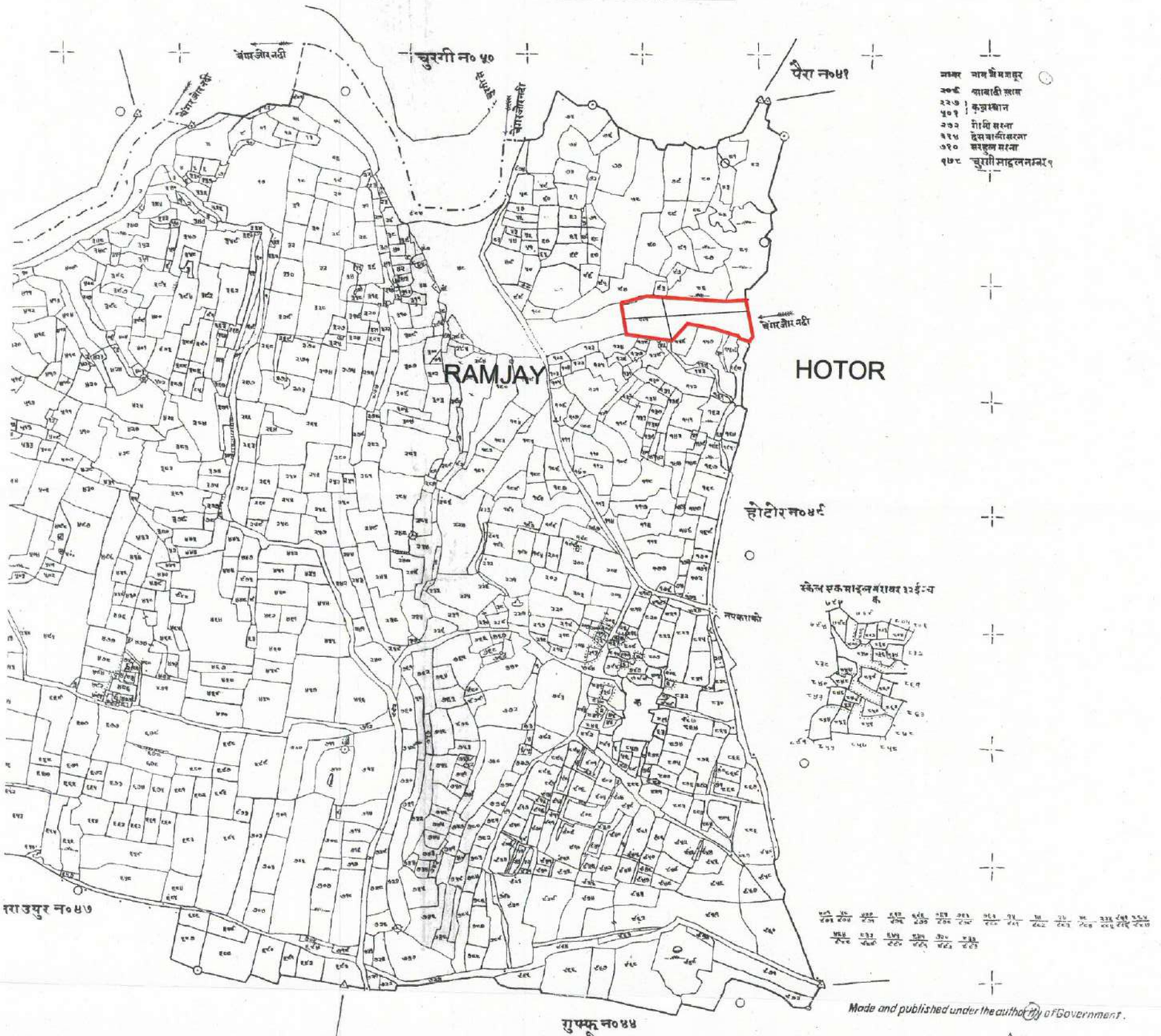
Environment Impact Assessment Authority
Approved
Ranchi

KCG01

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
RAMJAY	101(P)	1.30Ha
	TOTAL AREA -	1.50Ha



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KCH06

Index to Sheets

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
DIYANKEL	1(P)	2.92Ha
KASMAR	2218(P)	2.50Ha
	TOTAL AREA -	5.42Ha

KCG02

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
DIYANKEL	571(P)	2.45Ha
	TOTAL AREA -	2.45Ha

KASMAR

DIYANKEL

DIYANKEL

DIYANKEL

मनहातू न०२२

चुरगी न०५०

तोरपा न०५३

डोमानदी

Scale 16 Inches = 1 Mile.

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Approved
State Level Environment Impact Assessment Authority

Sungi

नाममौज़ा सुनगी शीट नम्बर १

नाम थाना कर्रा

थाना नम्बर ३५

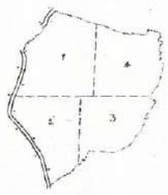
ज़िला राँची

रेल एक माइल बराबर १६ इन्च

सन् १६ ३८ - २८ इसवी

KCH01

Index to Sheets.



नम्बर नाममौज़ा भजहुर
४७० बिसु सरना

घोरपिन्डा न०५८

Scale 16 Inches = 1 Mile.

Potential area

VILLAGE NAME	PLOT NO..	AREA(Ha)
SUNGI	565(P)	0.80Ha
KANTI	2452(P)	0.50Ha
TOTAL AREA -		1.30Ha

जवहा न०५२

कर्रा नदी

SUNGI

KANTI

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State Level Environment Impact Assessment Authority
Approved

KCH04

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
MANHATU	1(P)	2.50Ha
KASMAR	1415(P)	1.95Ha
उपुरन०२१	TOTAL AREA -	4.45Ha

KASMAR

MANHATU

गुड़ियान०२५

ममरलान०२३

चुरगीन०५०

Manhátu

नाममौज़ा मनहातू
नाम थाना तोरपा
थाना नम्बर २२
ज़िला राँची
स्केल एक माइल बराबर १६ इन्च
सब् डि० २० - २५ रवी

Scale 16 Inches = 1 Mile.

स्केल एक माइल बराबर १६ इन्च

नम्बर	नाम शे मशहूर
३०५	कबरस्थान
१३८	टोला-अम्बाटोली
६११	झड़गढ़ी
१४८	आबादी खासी
१२५५	मोमी सरना

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For Superintendent of Survey.

Approved by State Level Environment Impact Assessment Authority (SEIAA)

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Digitally signed by Consultant Monitoring Cell
Date: Authorized Signatory

KCH06

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
DIYANKEL	1(P)	2.92Ha
KASMAR	2216(P)	2.50Ha
	TOTAL AREA -	5.42Ha

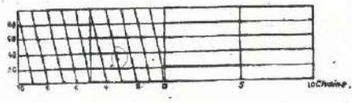
Index to Sheets

KCG02

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
DIYANKEL	571(P)	2.45Ha
	TOTAL AREA -	2.45Ha

Scale 16 Inches - 1 Mile.



KASMAR

DIYANKEL

DIYANKEL

DIYANKEL

मनहातू न०२२

चुरगी न०५०

तोरपा न०५३

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Potential area

KCH02

VILLAGE NAME	PLOT NO.	AREA(Ha)
BARAKULI	1707(p)	6.95Ha
	TOTAL AREA -	6.95Ha

BARAKULI

BARAKULI

उपुर न०२१

Barkuli

नाममौज़ा बरकुली शीटनम्बर 3
थाना नम्बर १८
ज़िला राँची
स्केल एक माइल बराबर १६ इंच

कसमार न०१८

KCH03

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
BARAKULI	1707(p)	3.48Ha
	TOTAL AREA -	3.48Ha

Scale 16 Inches - 1 Mile.

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Consortium with Crystal Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority Jharkhand, Ranchi
Approved

Sode

नाममौज़ा सोदे सीटनम्बर 1

नाम थाना तोरपा

थाना नम्बर १५७

ज़िला राँची

सेल एक मामूल बराबर १६ इन्च

रामू १८२६- ३० इस्वी

Index Sheets

1 2

टूटीकेल न०१५६

नम्बर नाम औ मशकूर

२५१ मुन्डा जमीन

३०८ महादेव मन्दिर

३३४ } मरघट

६२४ } कब्रस्थान

८०१ }

८२३ }

१२६८ }

१२६६ } श्मशान

१२८८ }

१२६२ }

९५३ } बाजार मङ्गलवार को

८४० }

६१३ गिर्जा

१३८६ मस्जिद

१६०५ } चरवाहा

१०३५ }

१२५२ } अड्डा

१२६८ }

KKO01

रामजला

थानाबानीनम्बर ७३

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
SODE	1(P)	3.42Ha
	565(P)	3.30Ha
	TOTAL AREA -	6.72Ha

SODE

दूसरा शीट नं० ७

दूसरा शीट नं० ४

पाडु

थानाबानीनम्बर ३३

SODE

करकेल न०१५८

Scale 16 Inches = 1 Mile.

KKO02

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
SODE	1428(P)	10.21Ha
	TOTAL AREA -	10.21Ha

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Jharkhand, Ranchi

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Burhiroma

नाममौज़ा बुदीरोमा
नाम थाना कर्रा
थाना नम्बर १०५
ज़िला राँची
स्केल एक माइल बराबर १६ इन्च
सन् १९२८ - २९ ईस्वी
झण्डा न०१०६

बिरदा न०११०

कारो नदी

BUDHIROMA

पहाड़टोली न०१०५

जमनीनदी

कुरकुरिया
थानालापुञ्ज न०१७

KKA01

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
BUDHIROMA	221(P)	1.74Ha
	TOTAL AREA -	1.74ha

Scale 16 Inches = 1 Mile.

स्केल एक माइल बराबर २२६अ की

नम्बर नाम मौजाधूर
८७ आबादी ग्रास
१३१ नालडा
३३३ मसना
५६९ टोला पुटकलटोली
५८५ सरना
६२९ कर्रा माइल नम्बर५०

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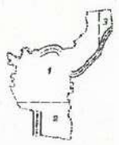
Approved
State Level Environment Impact Assessment Authority (SEIAA) Jharkhand

Gobindpur

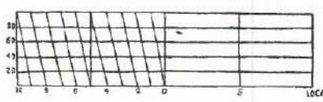
नाममौज़ा गोबिन्दपुर सीटनम्बर1
नाम थाना कर्रा
थाना नम्बर ५९
ज़िला राँची
स्केल एक माइल बराबर १६ इञ्च
लम्बाई २८ – २९ इञ्च

Index to Sheets.



नोट:-
बमौजिब हुक्म सेटलमेन्ट ऑफिसर साहेब बहादुर नाशिब १६-१०-१९३० के नम्बरान जैल ३५५,९९२,वो १००३,मौजा से खारिज होकर इन्दवन रिजर्वड फॉरेस्ट कायम हुआ।

Scale 16 Inches = 1 Mile.



डाड़ी
थानारनापुर-नं०५८

फतेहपुर
थानारनापुर-नं०५९

इन्दवन रिजर्वड फॉरेस्ट ब्लाक

रीगाई को

देखो चादर नम्बर ४

उलगाड़ा
थानारनापुर-नं०५८

रेहड़गाड़ा नं०५०

Potential area
KKA02

VILLAGE NAME	PLOT NO.	AREA(Ha)
GOBINDPUR	100(P)	10.45Ha
	TOTAL AREA -	10.45Ha

नम्बर	नाम जो मौजूद
२८	
२१६	कुबर स्थान
३२१	
२९६	श्मशान
३०५	चारागाह स्थान
३२३	
३२६	श्मशान
३२०	डोड़मामाड़लनं०

गुमाटोली नं०४७

...e authority of Government.

For Superintendent of ...

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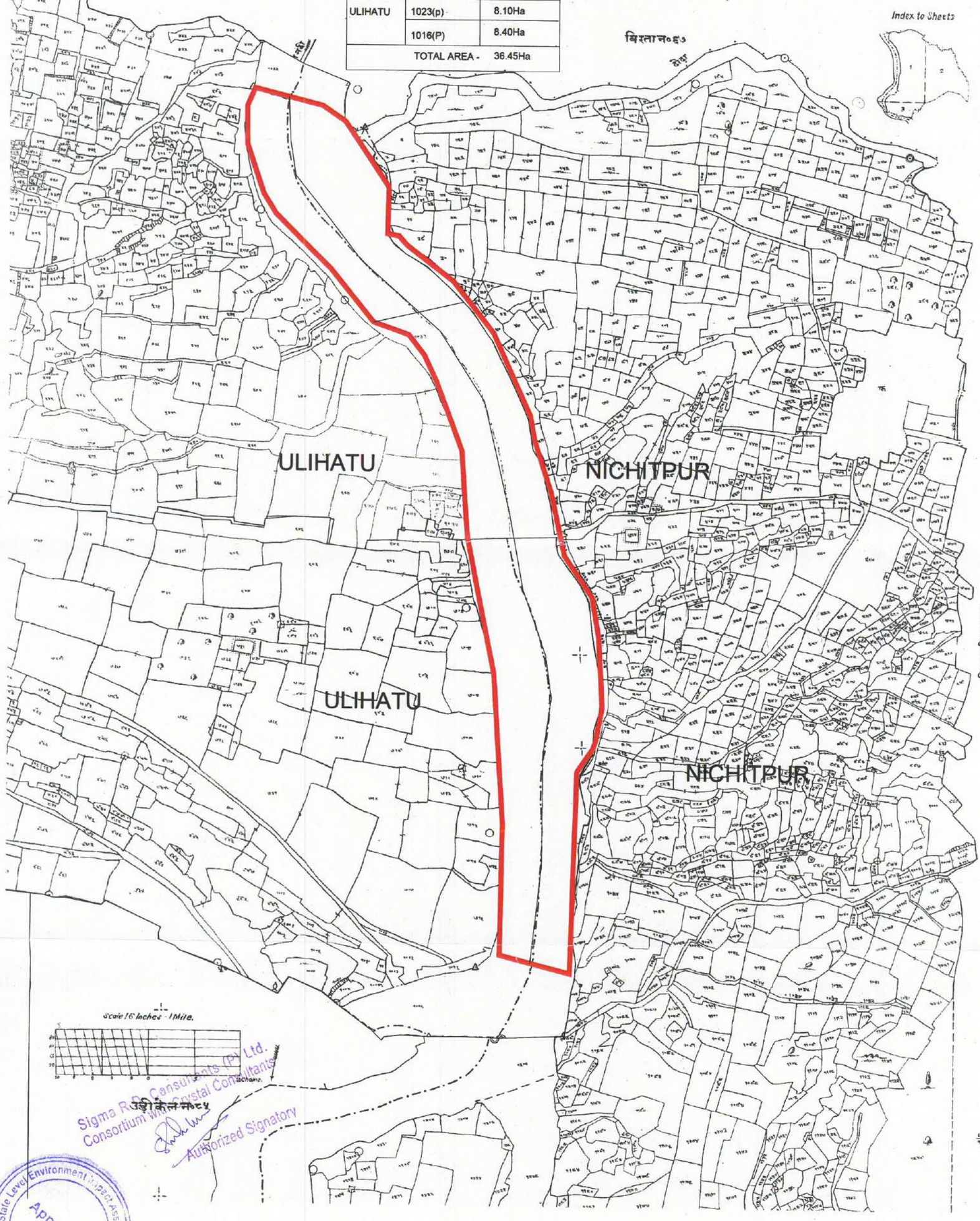
Consortium with Crystal Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority * Jharkhand, Ranchi
Approved

KKA03

Potential area

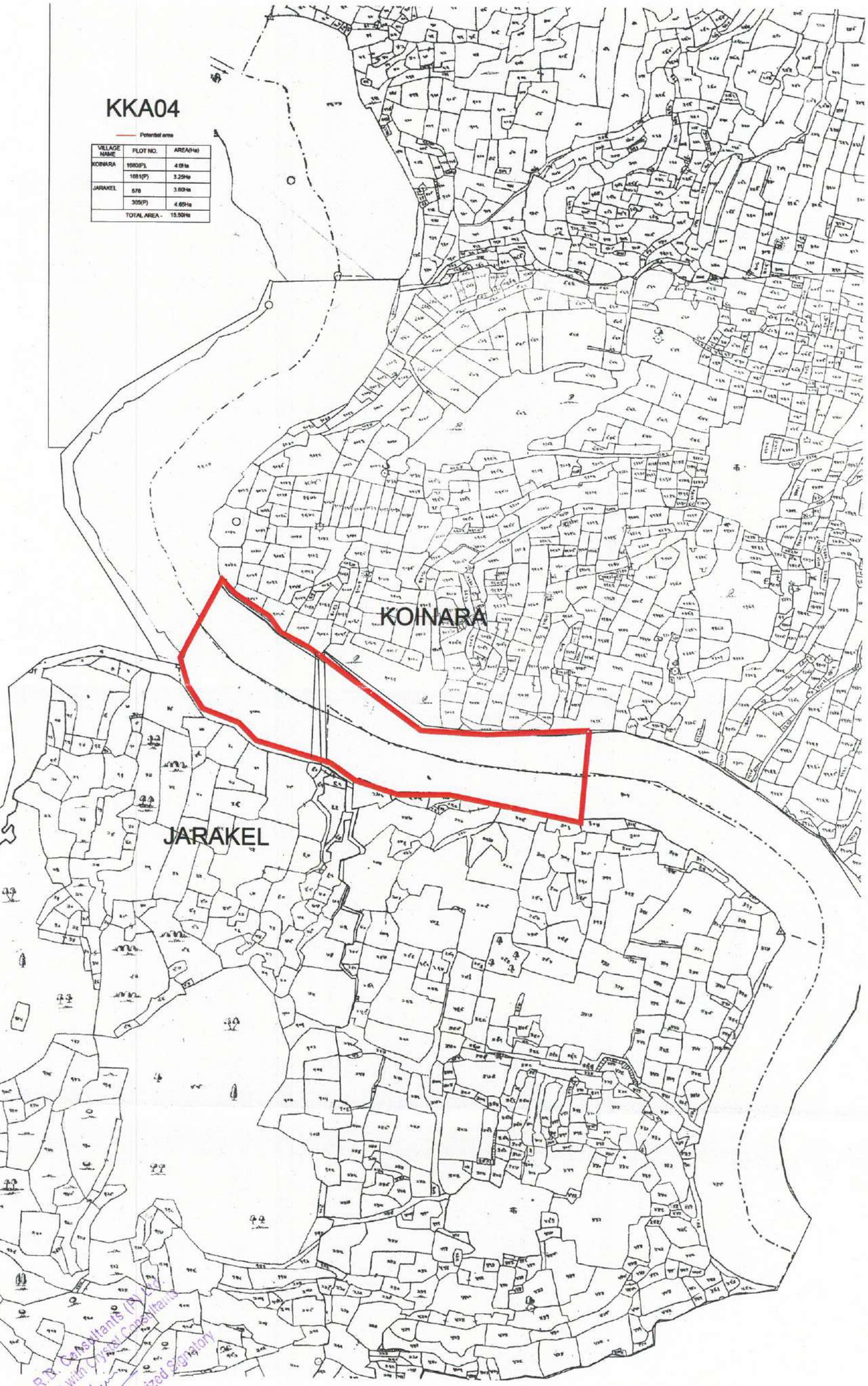
VILLAGE NAME	PLOT NO.	AREA(Ha)
NICHITPUR	1(P)	19.95Ha
ULIHATU	1023(p)	8.10Ha
	1016(P)	8.40Ha
TOTAL AREA -		36.45Ha



KKA04

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
KOINARA	1680(P)L	4.6Ha
	1681(P)	3.2Ha
JARAKEL	578	3.8Ha
	305(P)	4.65Ha
TOTAL AREA -		15.50Ha



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Consortium with Crystal Consultants
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Jarakel

मौज़ा जराकेल शीट नम्बर १

थाना तोरपा

नम्बर ८४

ला राँची

एक माइल बराबर १६ इन्च

मनु १६२८ - २६ इंची

Index to Sheets.

उड़ीकेल न०८५

उदेसोतिया

KOINARA

JARAKEL

KOCHA

KKA05

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
JARAKEL	439	2.00Ha
	305(P)	6.85Ha
KOCHA	1	5.80Ha
KOINARA	1681(P)	2.65Ha
TOTAL AREA -		17.30Ha

वर नाम म मजदूर
साउड़ी बुरू
गाड़ी बुरू
बन्दी बुरू

जाराकेल न०१०५

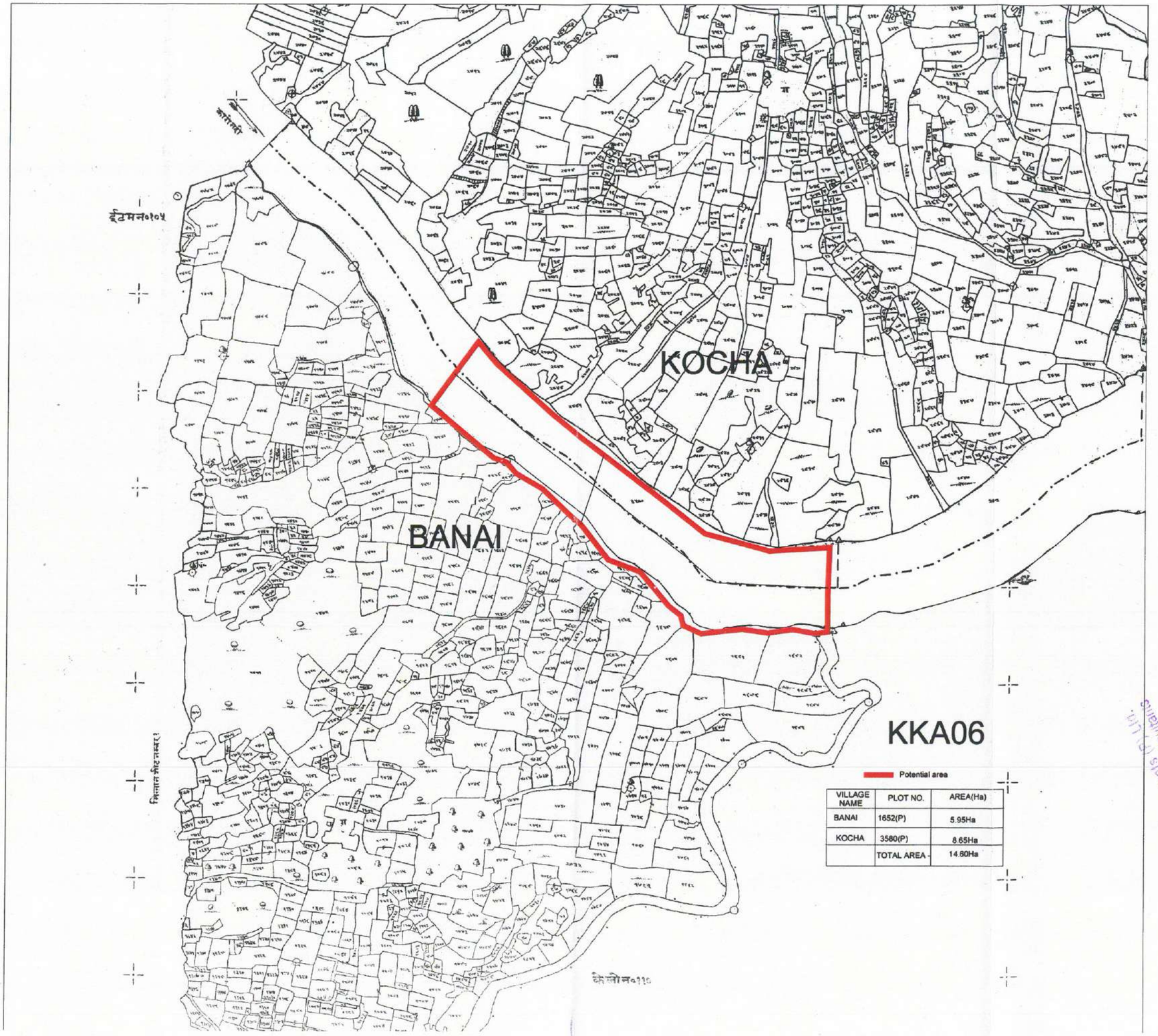
मनहातू न०१२

Scale 16 Inches = 1 Mile.

Authorized Signatory

Sigma R.D. Consultants (P) Ltd.
Consultant Mining Crystal Consultants

Approved



VILLAGE NAME	PLOT NO.	AREA(Ha)
BANAI	1652(P)	5.95Ha
KOCHA	3560(P)	8.65Ha
	TOTAL AREA -	14.60Ha

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Consortium with Crystal Consultants
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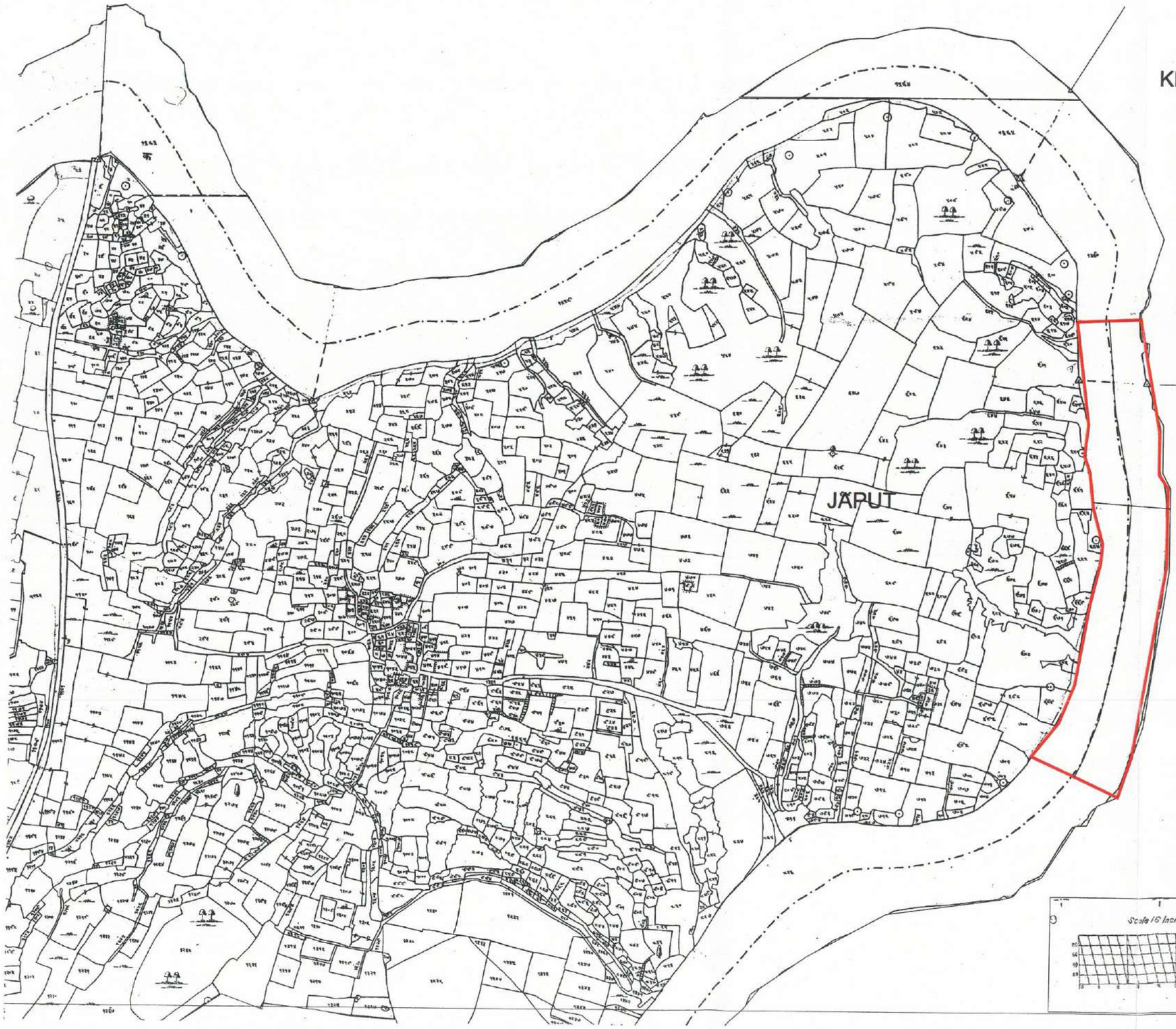
Approved
State Level Environment Impact Assessment Authority
Jharkhand, Ranchi



KKA07

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
JAPUT	1360(P)	0.78Ha
	826(P)	5.31Ha
DERANG	325(P)	0.93Ha
LOHAJIMI	1(P)	6.45Ha
TOTAL AREA -		13.47Ha

DERANG
TH-75

Authorized Signatory
Sisma R.D. Consultants (P) Ltd.
Consolidated with Gujsal Consultants

Approved
State Level Environment Impact Assessment Authority ★ Jharkhand, Ranchi

KKC01

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
BARIGARA	1(P)	4.68Ha
	2827	18.66 Ha
	TOTAL AREA -	23.34Ha

BARGARIA

BARGARIA

Signature of Consultant with Crystal Consultants Pvt. Ltd.

Authorized Signatory

Approved

State Level Environment Impact Assessment Authority * Jharkhand

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
MAIPA	2199	6.51Ha
	805	3.64Ha
	790	8.82Ha
	1(P)	1.15Ha
	TOTAL AREA -	20.12Ha

KKC02

सारजमडिह
थाना बुन्डू न०४२

चिलटीकर
थाना बुन्डू न०४१

कांचीनदी

Maipa

Maipa

आरीगाड़ा न०२६६

मिलानशीट नम्बर ४

मिलानशीट नम्बर ३

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For Superintende

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Sigma R.D. Consultants

Approved
State Level Environment Impact Assessment Authority
Jharkhand, Ranchi

KKC03

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
SARGIA	1(P)	6.28Ha
	TOTAL AREA	6.28Ha

मशहूर नाम सरगिआ शीट नम्बर १
थाना तमाड़
नम्बर २८३
जिला राँची
सन १९८७-९८ ई सी

Index to Sheets.

16 Ins = 1 Mile.

करामू
थाना बुन्डू नं० ३५

कोची नदी

SARGIA

करामू
थाना बुन्डू नं० ३५

पान्डु डिह नं० २८०

कोटा नं० २८४
सरगिआजोड़

मिलान शीट नं० ३

मिलान शीट नम्बर २

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Jharkhand, Ranchi

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Sigma Env. Consultants (p) Ltd.
Consultant with Cygsal Consultants

Gurbera

मशहूर नाम गुरबेड़ा शीटनम्बर १

थाना तमाड़

नम्बर २८८

ज़िला राँची

सन १९४७ ई॰सी॰

KKC04

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
GURBERA	39	6.34Ha
	1	4.72Ha
	TOTAL AREA	11.06Ha

BAREDIH

PANGURA

GURBERA

Index to Sheets.

जीजीहातू न०२८९

नम्बर नामशेमजापुर
६ तड़ाफी

टेकनियां न०२८७

मिलान शीटनम्बर२

16 Ins = 1 Mile.

Inches.

Chains.

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Churgi

नाममौज़ा चुरगी
नाम थाना तोरपा
थाना नम्बर ५०
ज़िला राँची

स्केल एक माइल बराबर १६ इन्च
सन् १९२२-२३ ई०

KSU01

Potential area

VILLAGE NAME	PLOT NO.	AREA(Ha)
CHURGI	79(P)	3.25Ha
	TOTAL AREA :	3.25Ha

मनहातू न०२२

पतराटोली न०३८

दियांकेल न०५१

CHURGI

बेंगरजोर नदी

भैरा न०५१

रामजयन न०४८

नम्बर	नाम मौजादार
२८	इदगही
१२८	सरना
५५१	
५५८	
६७०	
३६८	मसना
५८१	नाम्बाडीडुमा
६२१	अखड़ा
७०७	माइल नम्बर १५

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PLATE - 4
TRANSPORTATION ROUTE SHOWN ON TOPOSHEET

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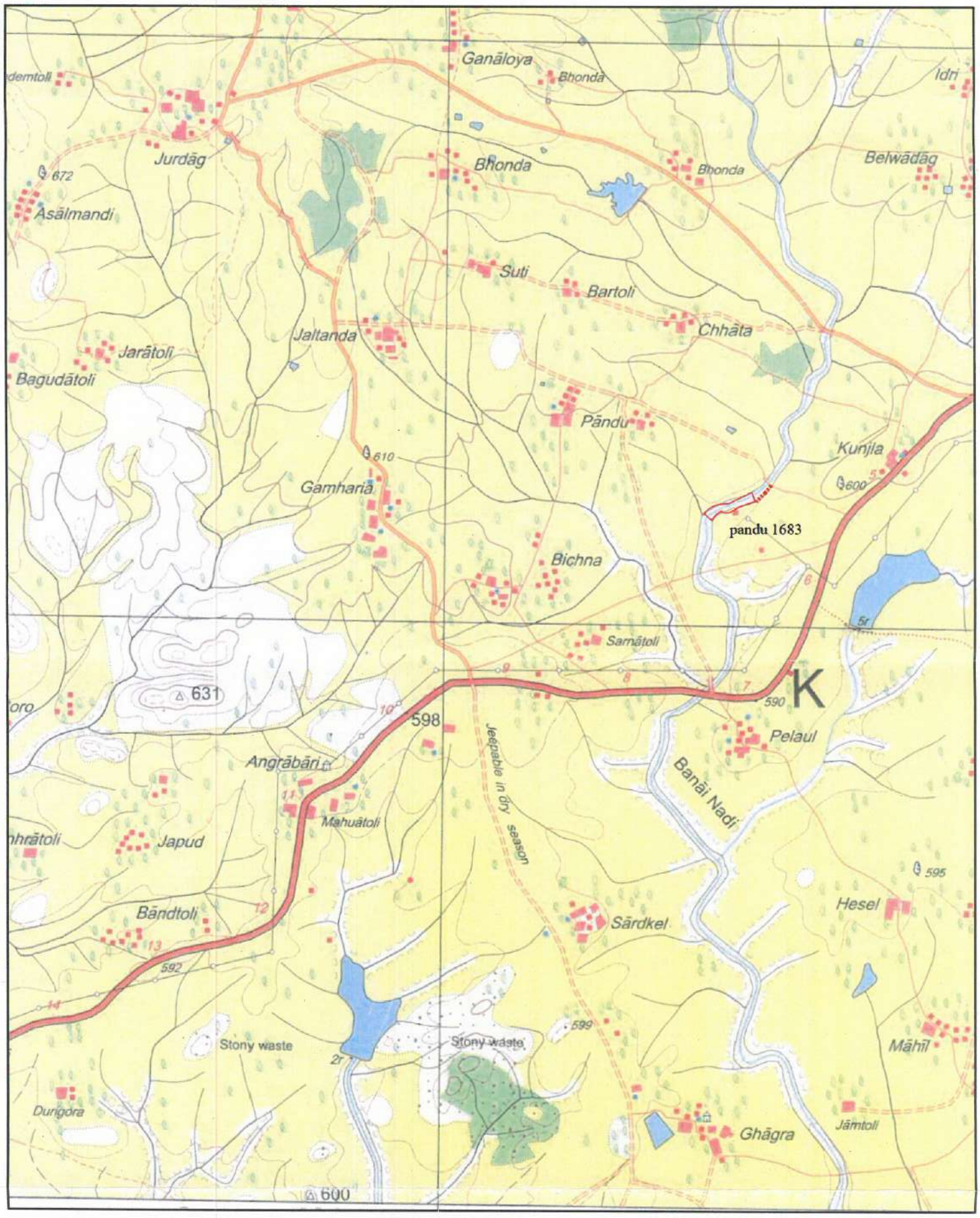
Topo Location Plan of pandu Balu Ghat Superimposed on Survey of India OSM Sheet NO.-73E 4 Village - Pandu, Area - 3.91ha ,

KBA01



23°2'30"

85°12' 30"

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Consortium with Crystal Consultants
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APPROACH ROAD

Topo Location Plan of Bichna Balu Ghat Superimposed on Survey of India OSM Sheet NO.-73E 4 Village - Bichna, Area - 2.75ha ,

KBA02

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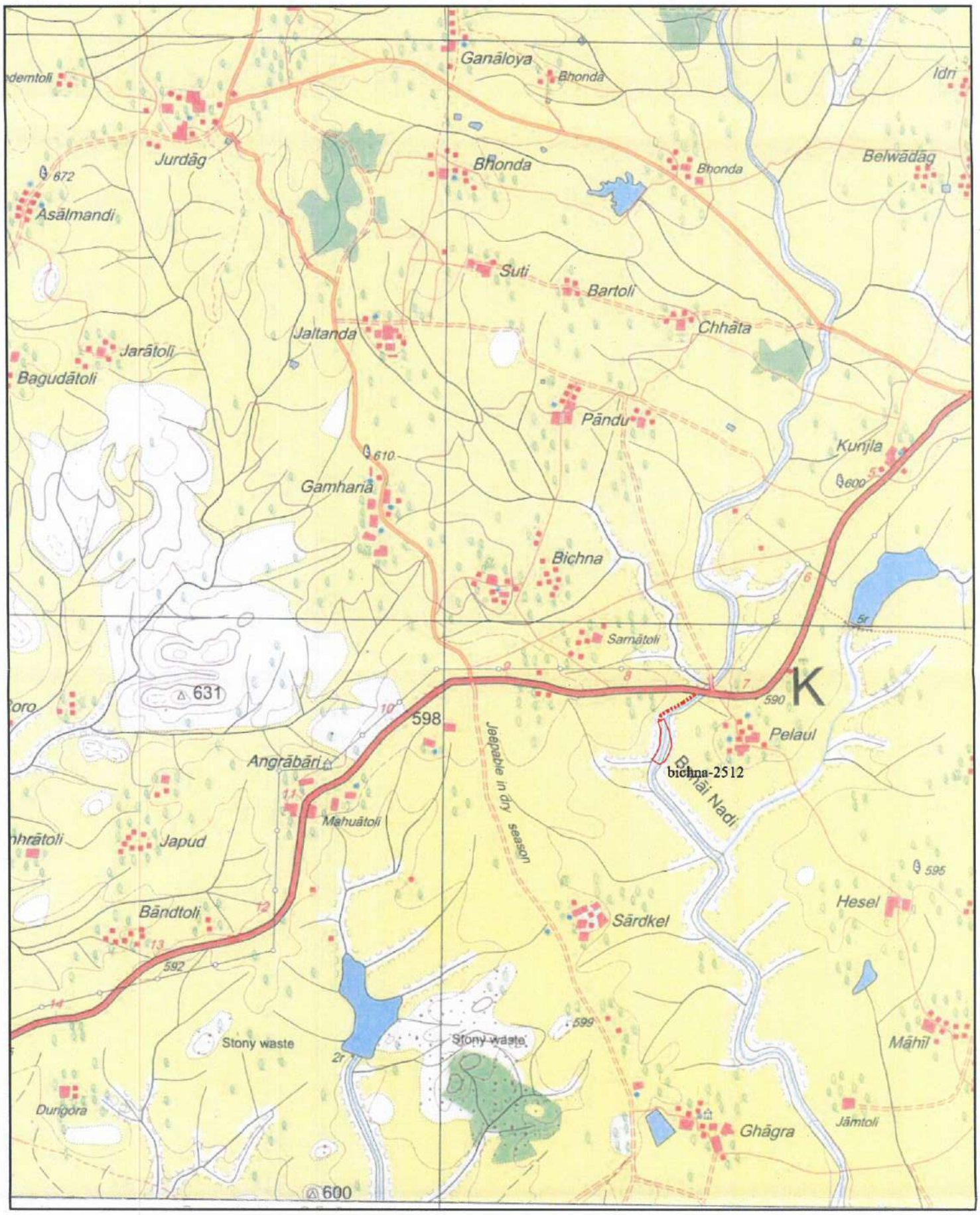

85°12' 30"

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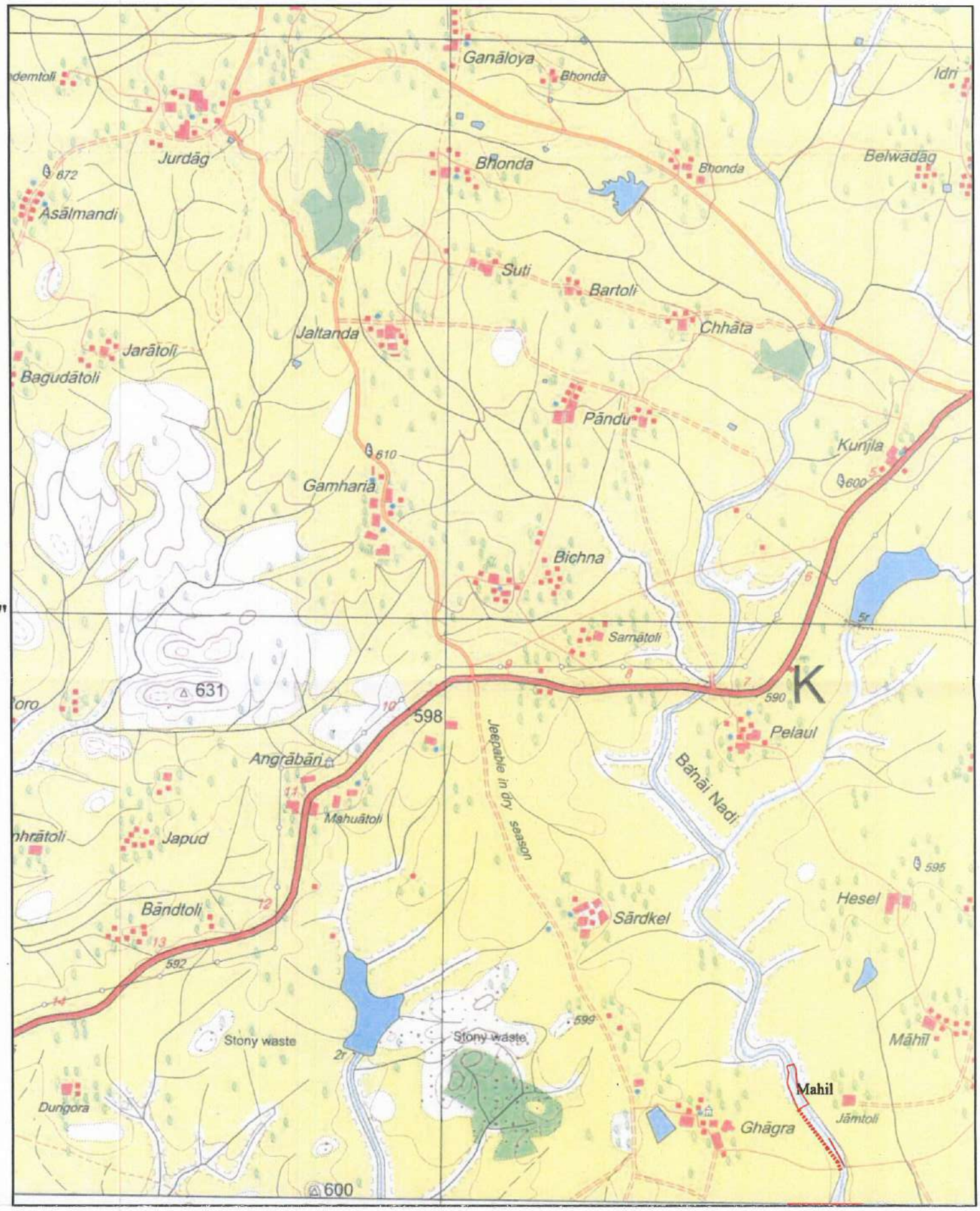
Topo Location Plan of Mahil Balu Ghat Superimposed on Survey of India OSM Sheet NO.-73E 4 Village - Mahil, Area - 2.81ha ,

KBA03



85°12' 30"

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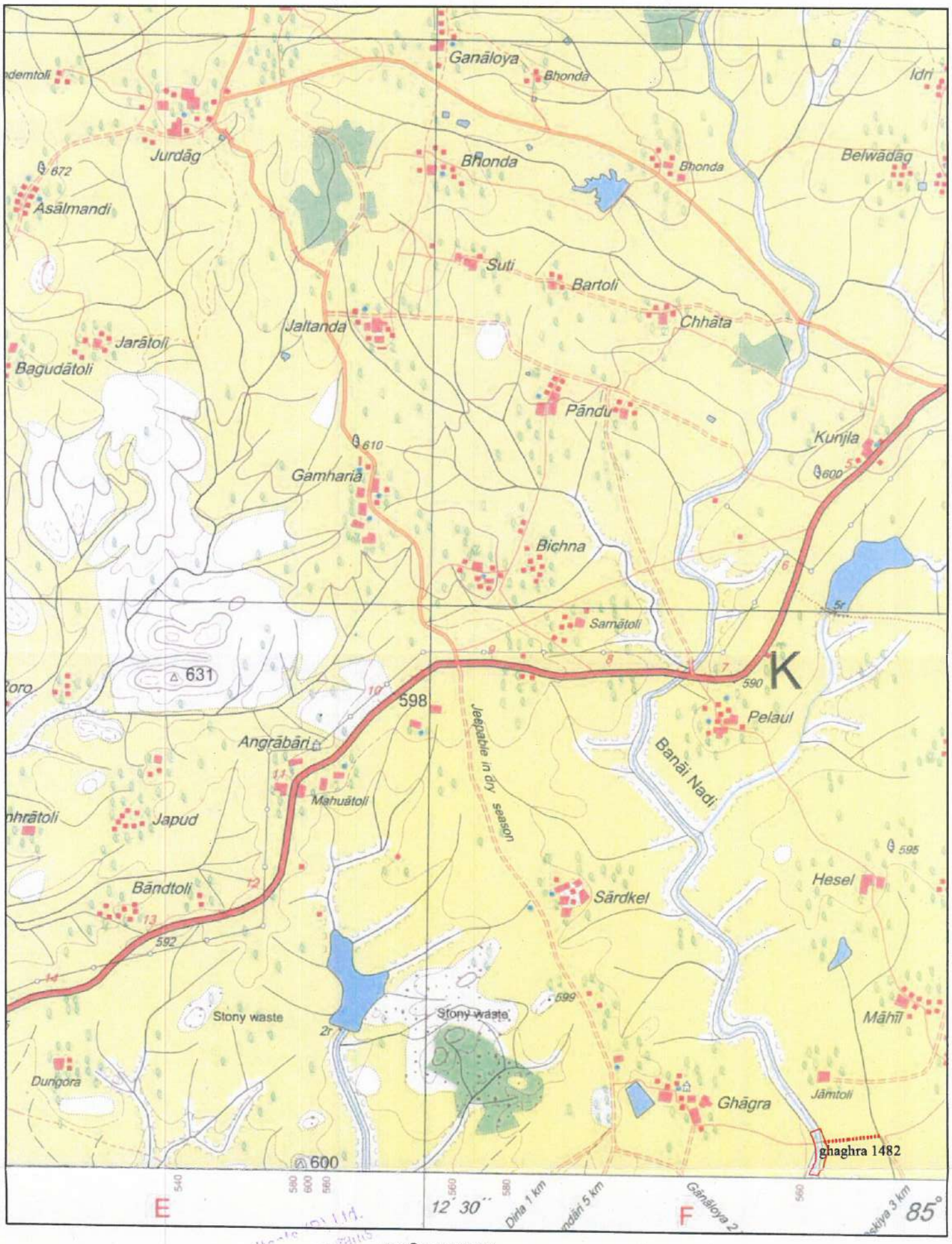
Topo Location Plan of Ghaghra Balu Ghat Superimposed on Survey of India OSM Sheet NO.-73E 4 Village - Ghaghra, Area - 2.57ha ,

KBA04



23°2'30"

85°12' 30"

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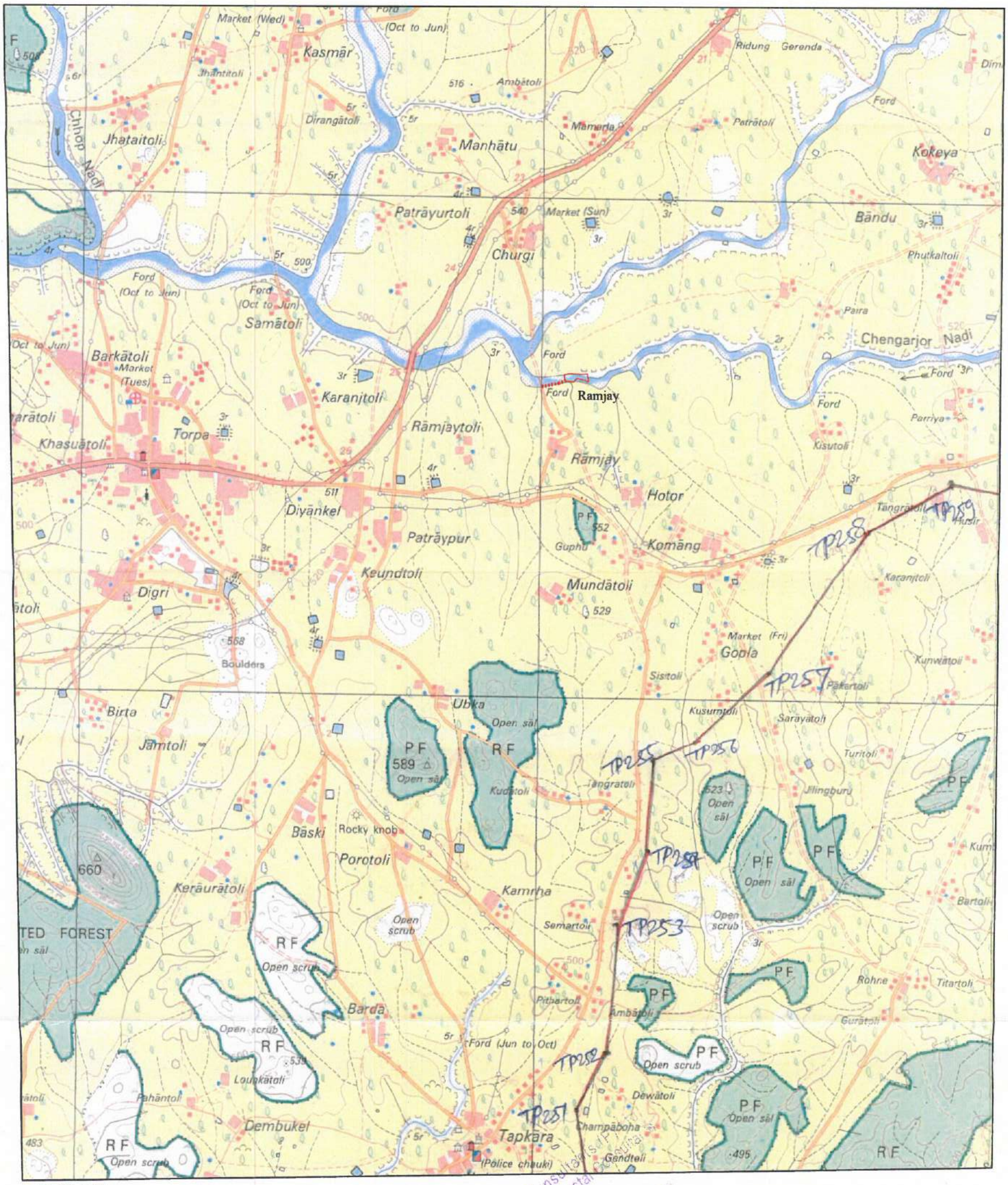
Topo Location Plan of Ramjay Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45H1 Village - Ramjay, Area - 1.66ha ,

KCG01



22° 55'

85° 5'

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Consortium with Crystal Crop Protection Pvt. Ltd.
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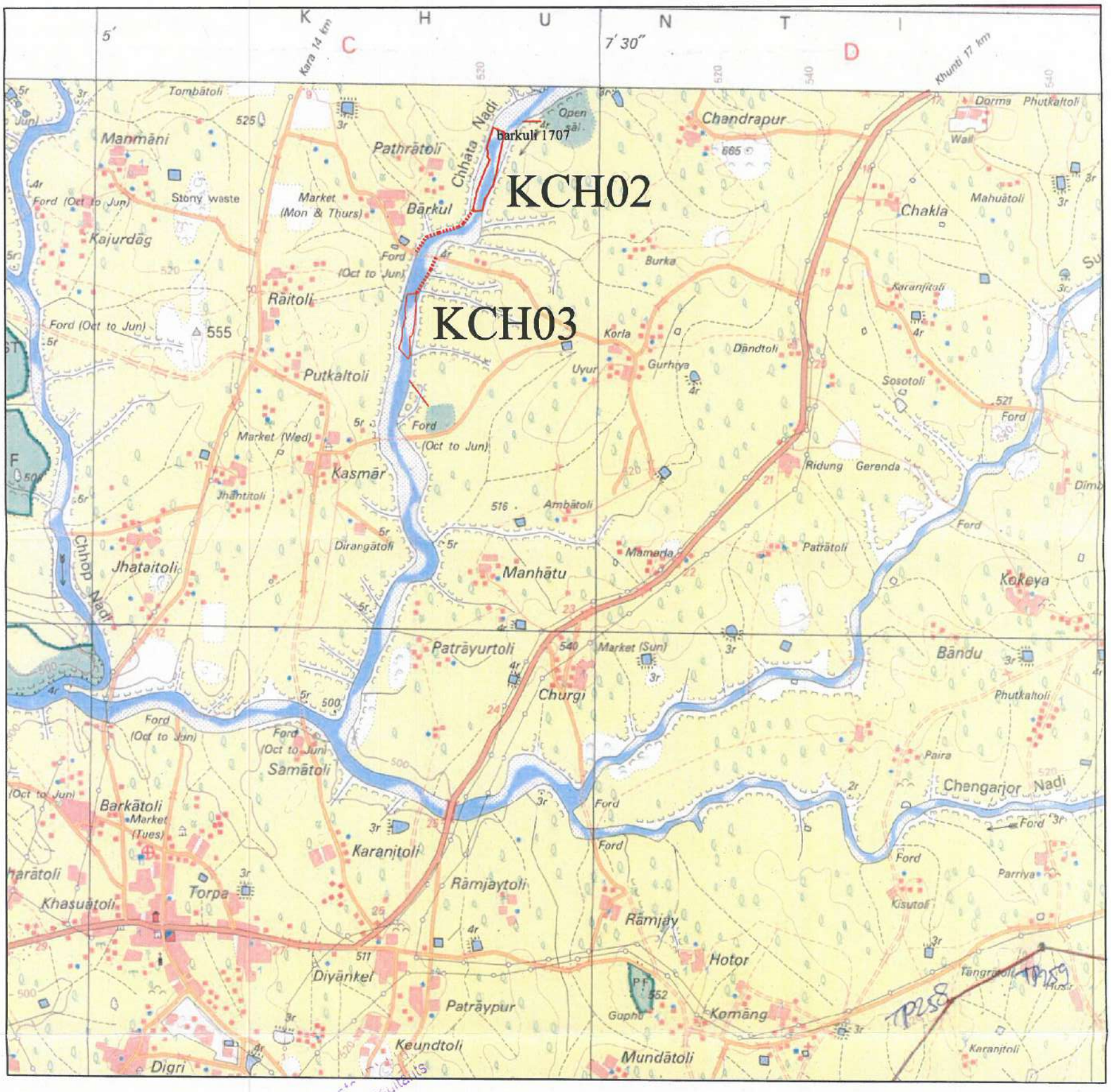
Topo Location Plan of Barkuli Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45H1 Village - Barkuli, Area - 8.11ha &8.61ha,

KCH02,KCH03

23° 0'



85° 5'

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Consortium with Crystal Consultants
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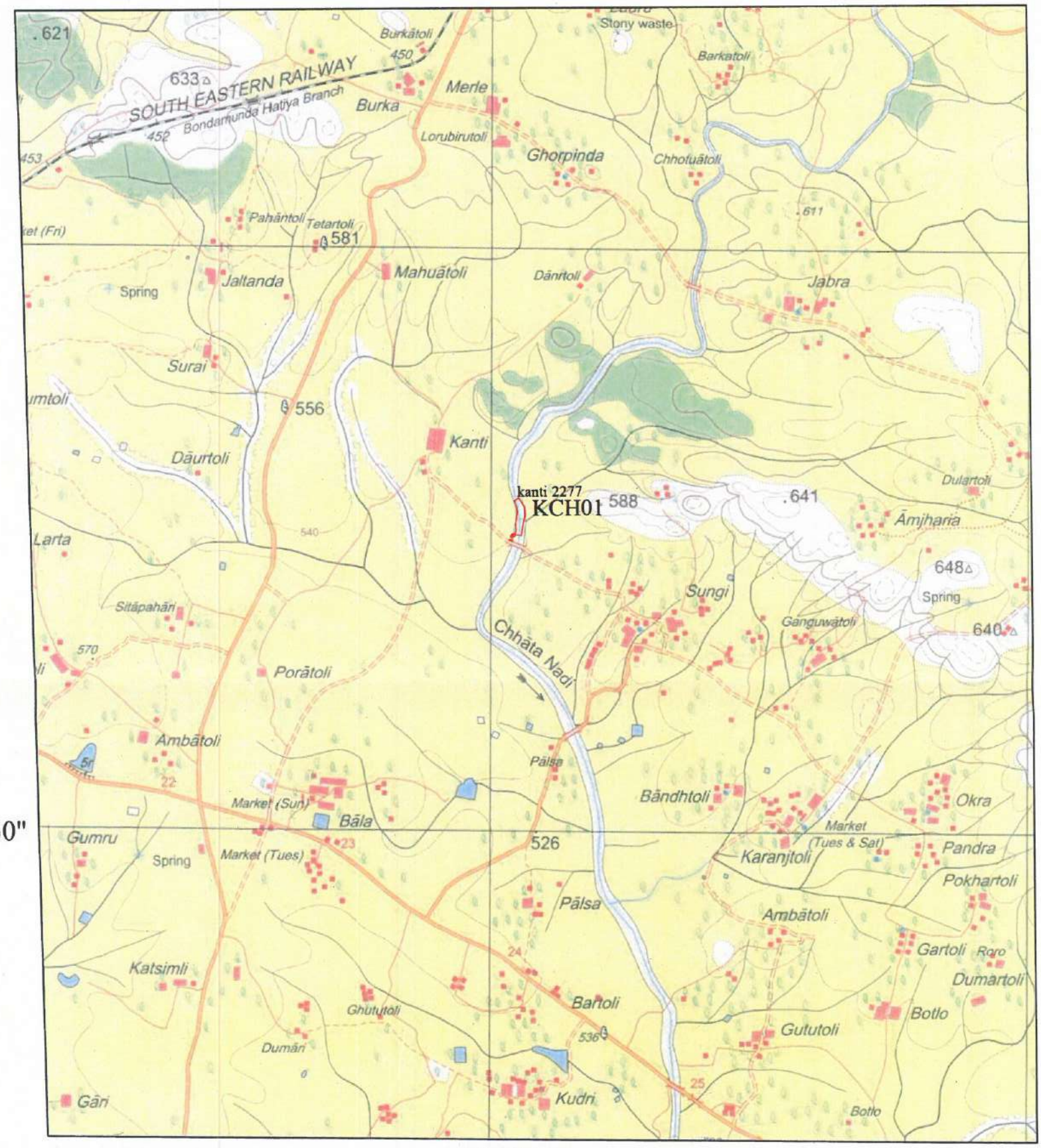
Topo Location Plan of Kanti Balu Ghat Superimposed on Survey of India OSM Sheet NO.-73E 4 Village - Kanti, Area -1.60 ha ,

KCH01



23°2'30"

85°7' 30"

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Consortium with Crystal Consultants
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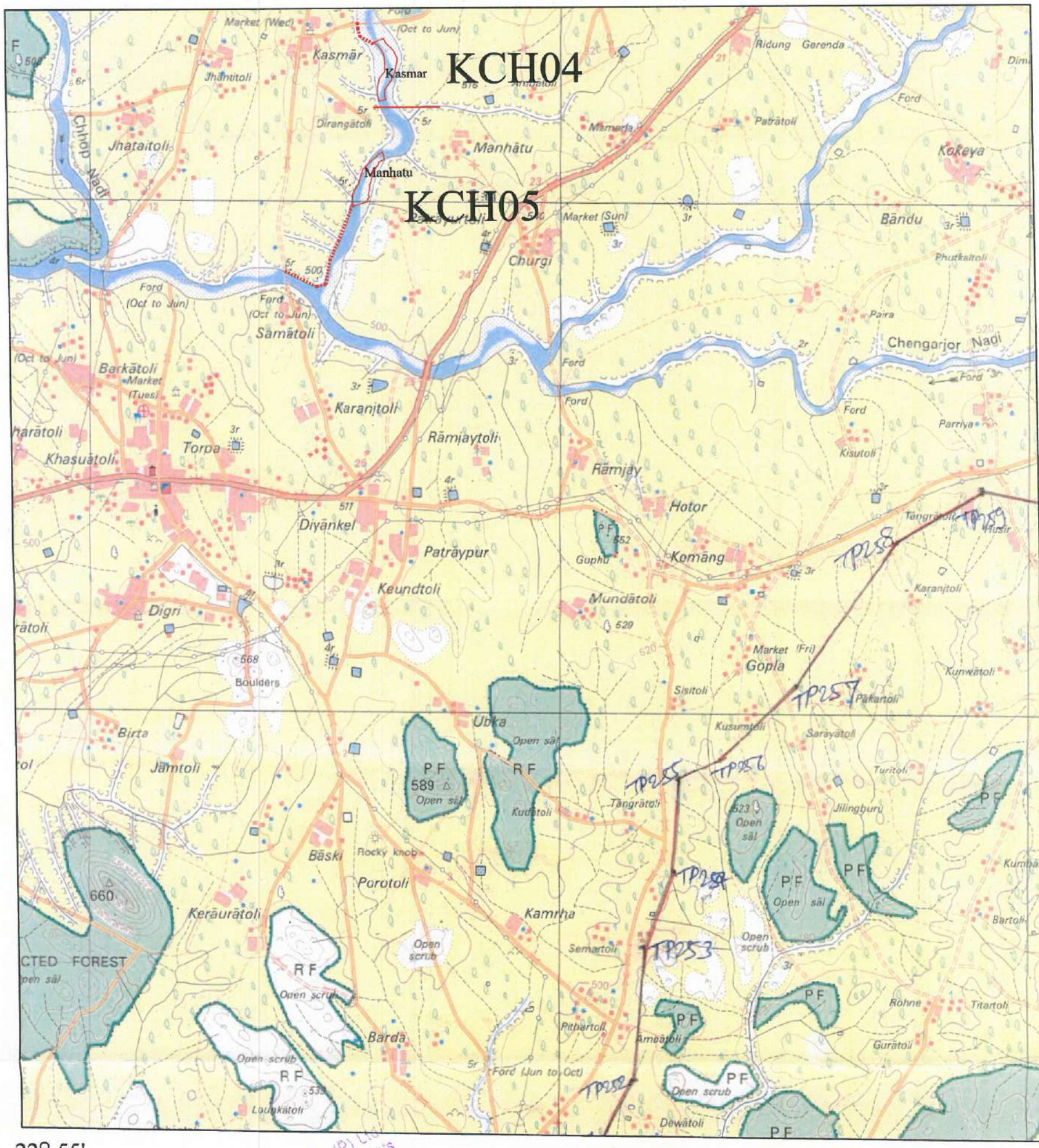
Topo Location Plan of Kasmar &Manhatu Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45H1 Village - Manhatu, Area -4.0 ha &6.0ha,

KCH04,KCH05



22° 55'

85° 5'

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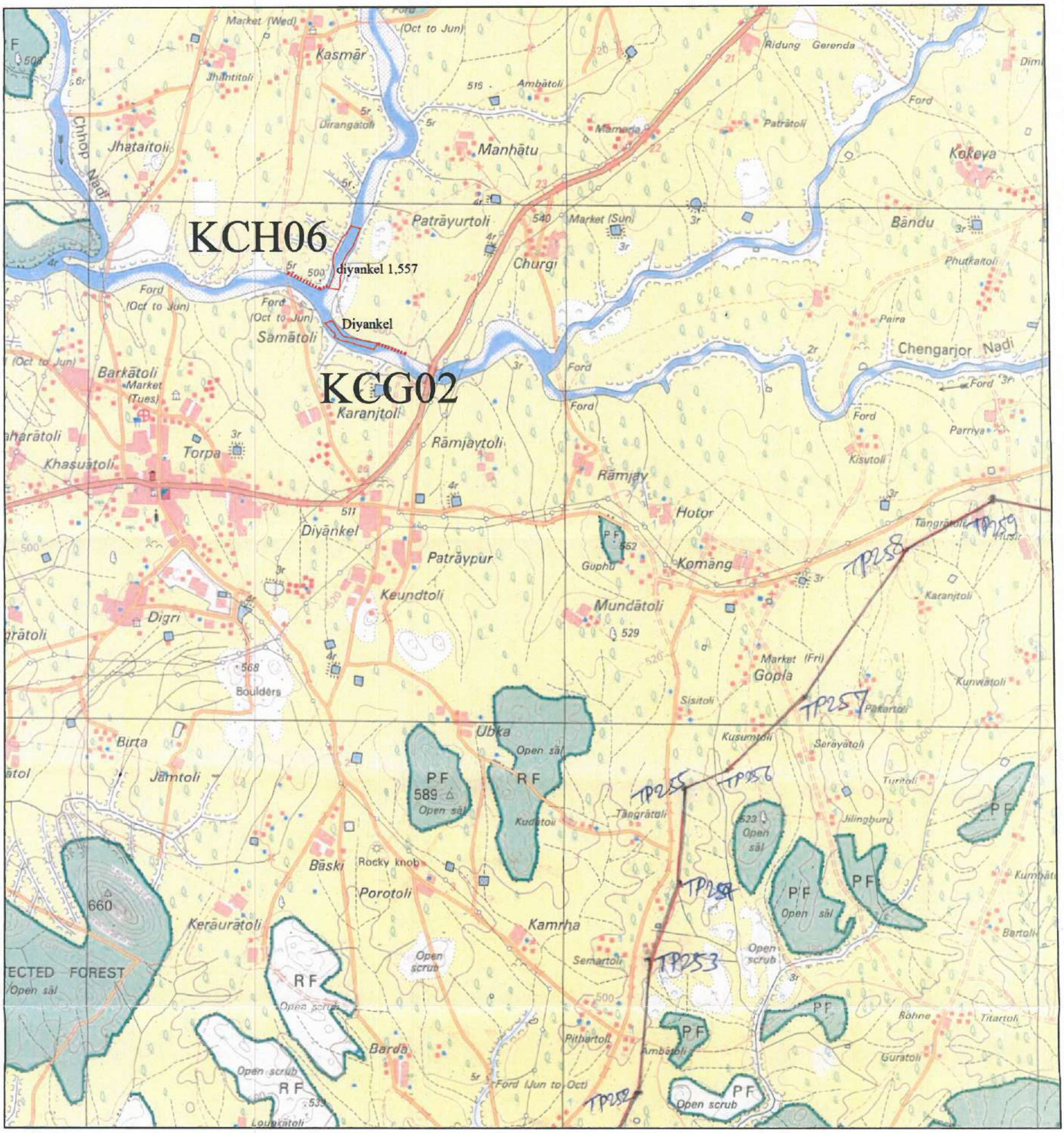
Topo Location Plan of Diyankal Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45H1 Village - Diyankal, Area - 4.52ha &2.61ha,

KCH06,KCG02



22° 55'
85° 5'

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Topo Location Plan of Sode Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45H2 Village - sode, Area - 7.79ha & 7.39ha,

KKO01, KKO02

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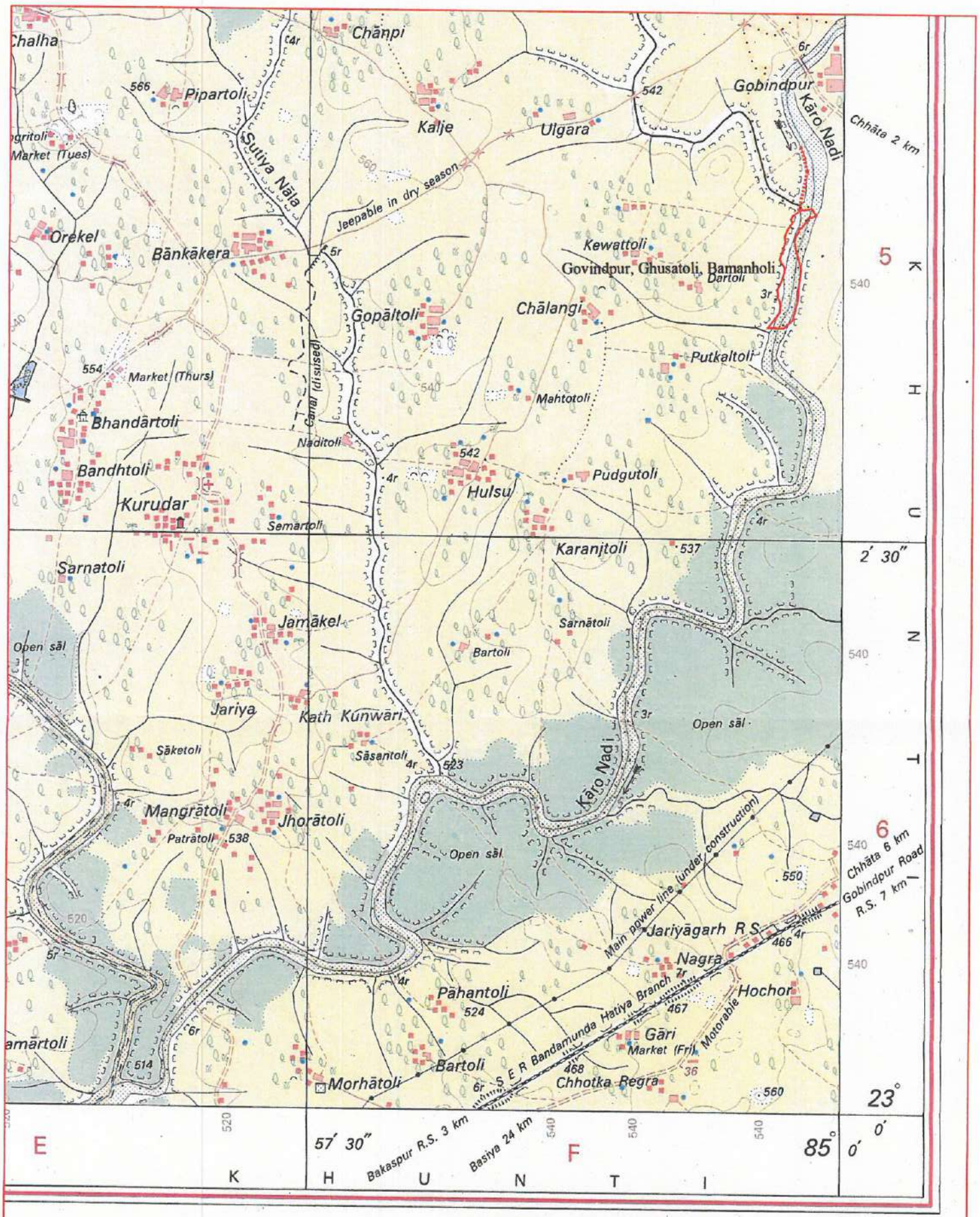
Topo Location Plan of Govindpur Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45A6 Village - Govindpur, Area - 6.0ha , KKA02



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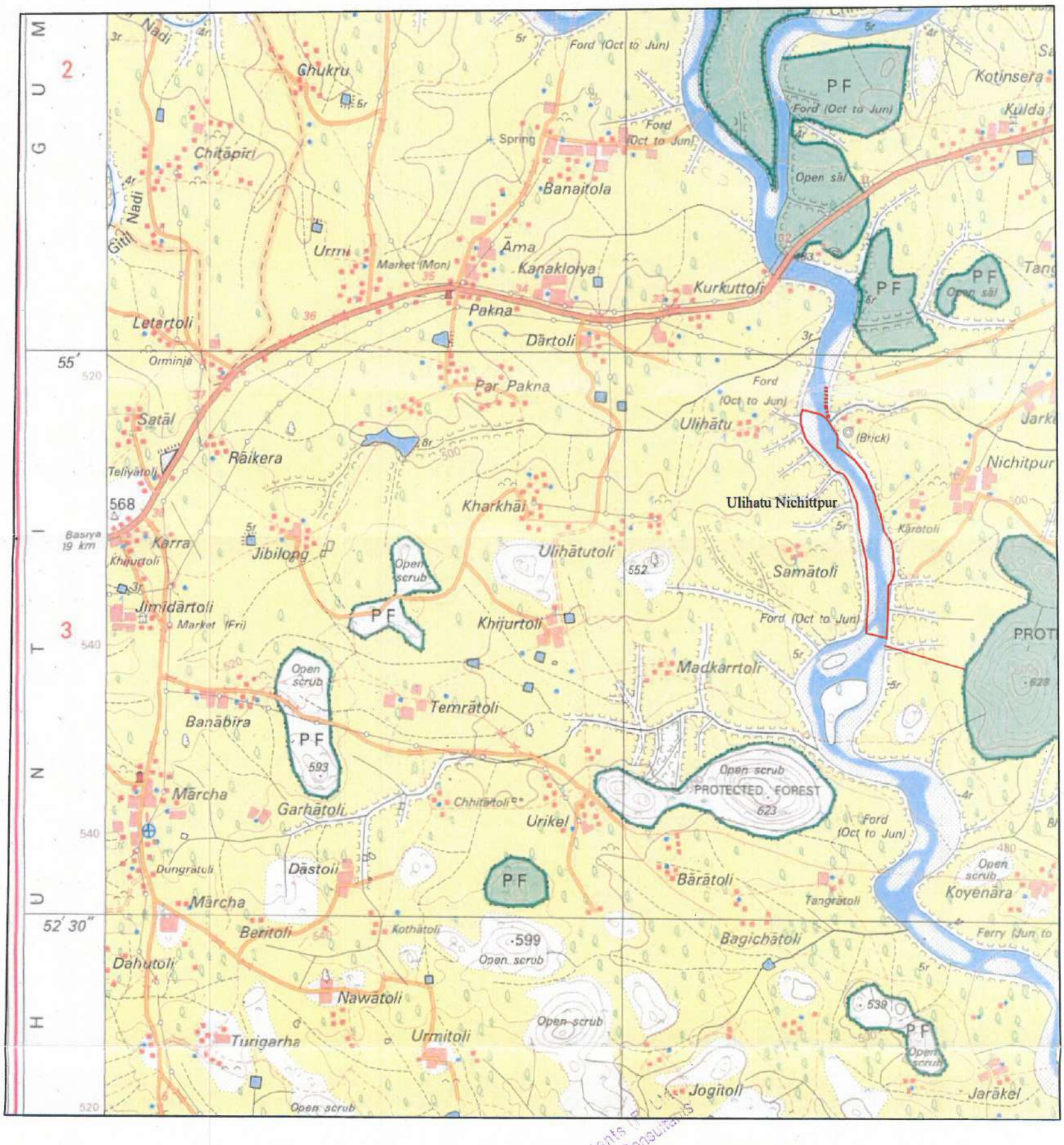
Topo Location Plan of Nichitpur Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45H1 Village - Nichitpur, Area - 33.40ha ,

KKA04



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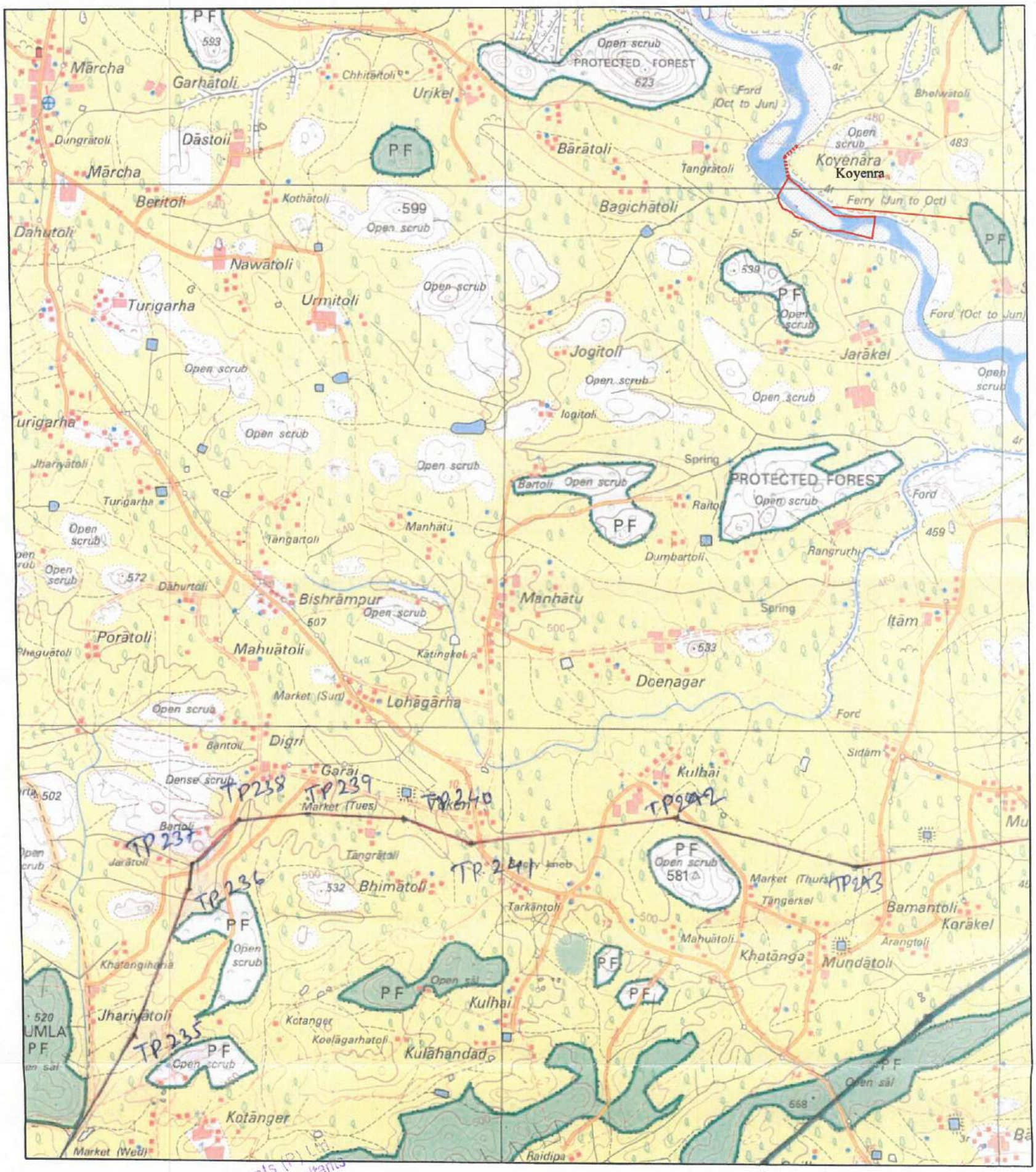

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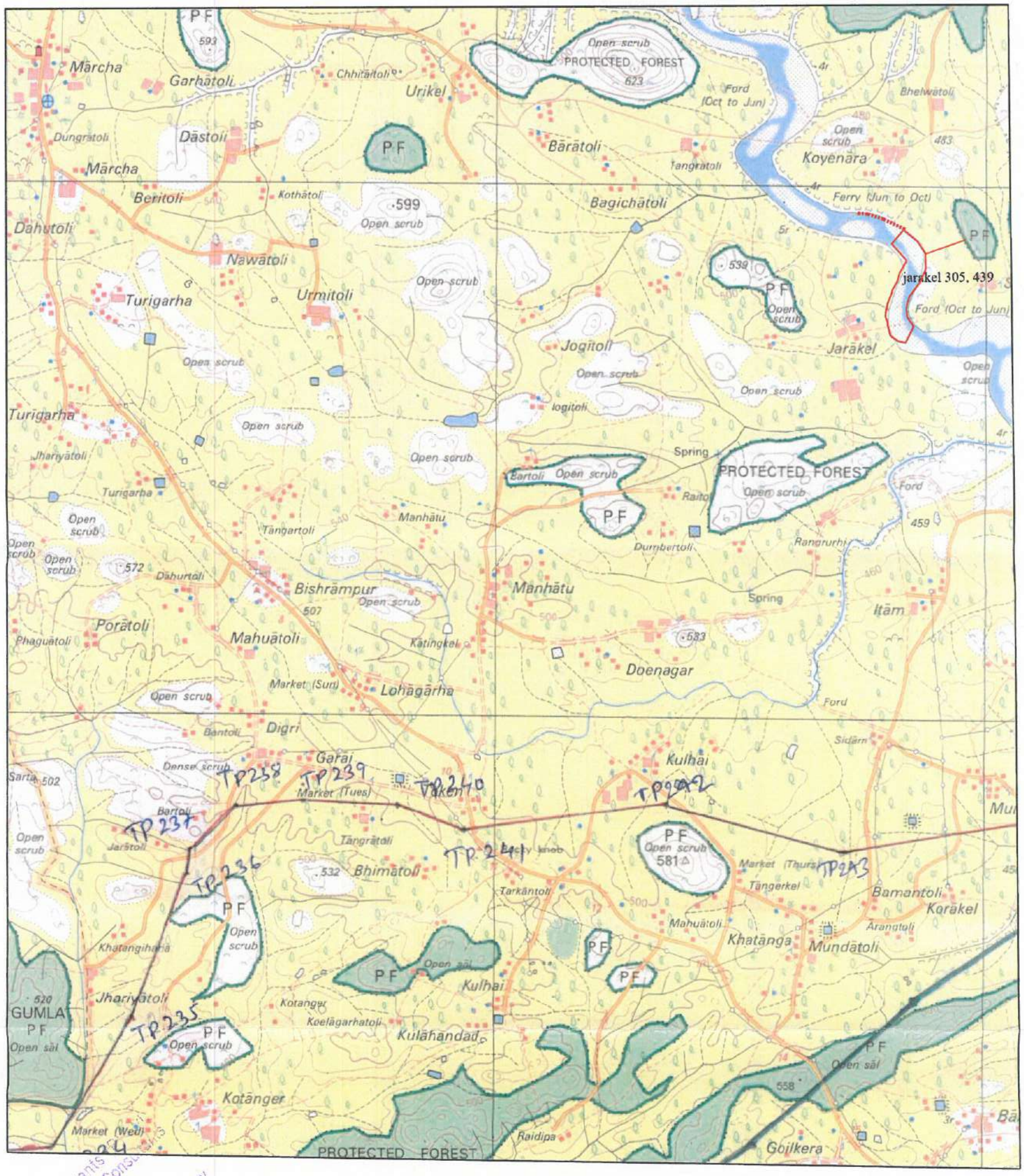
Topo Location Plan of Jarakel Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45H1 Village - Jarakel , Area - 12.40ha ,

KKA06



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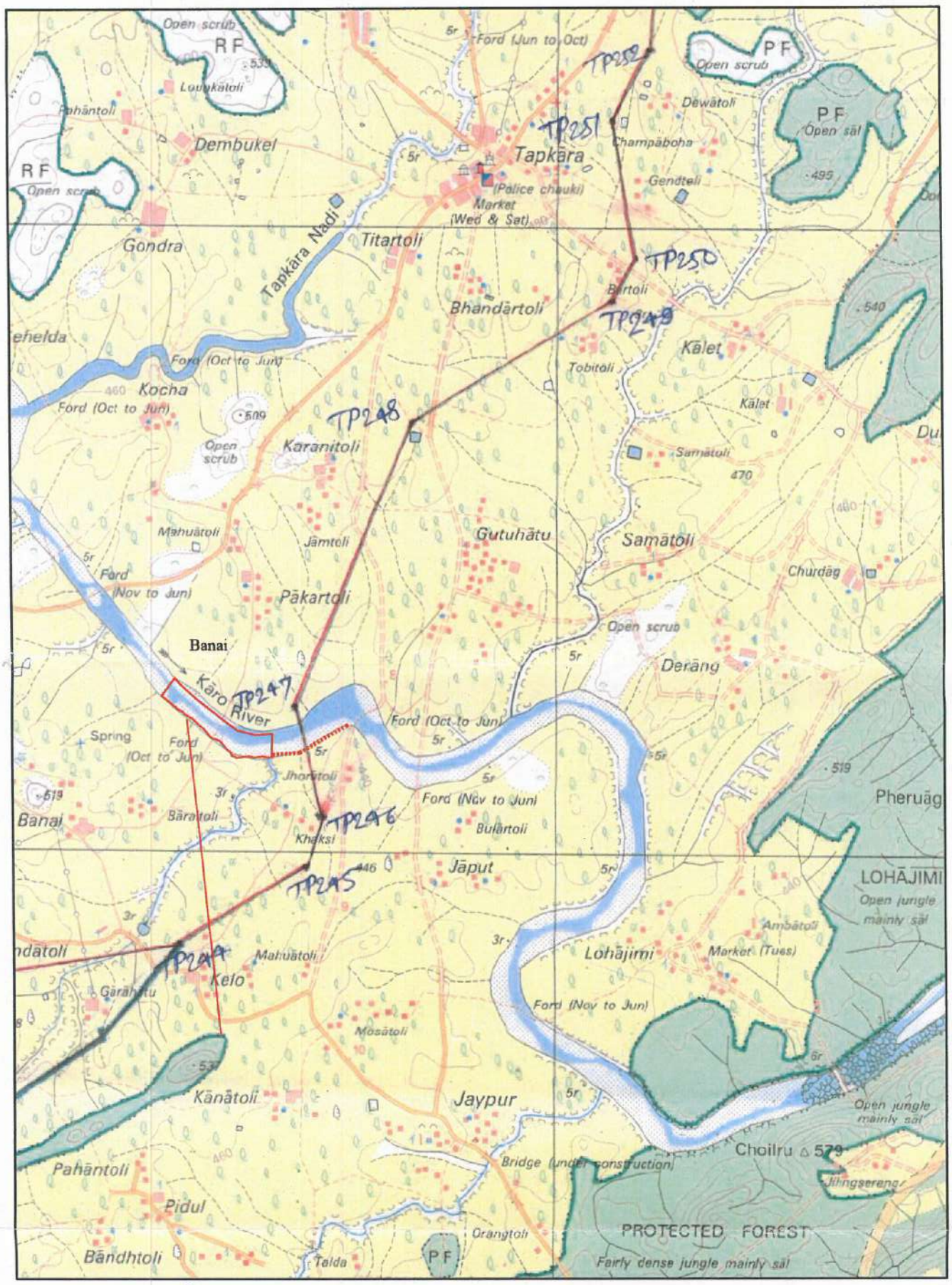
Topo Location Plan of Banai Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45H1 Village -Banai , Area -10.60 ha , KKA07



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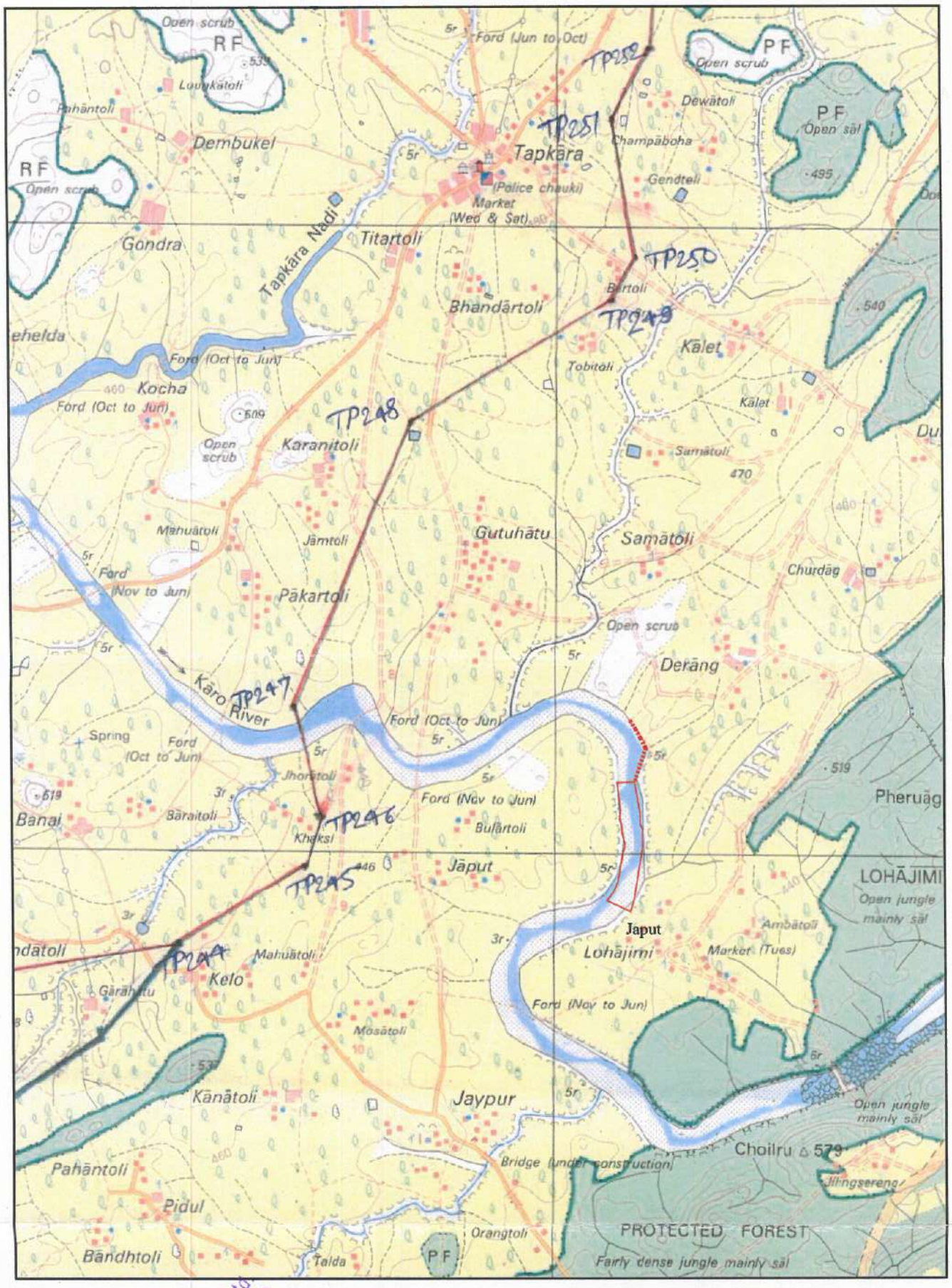
Topo Location Plan of Japut Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45H1 Village - Japut , Area - 20.70ha ,

KKA08



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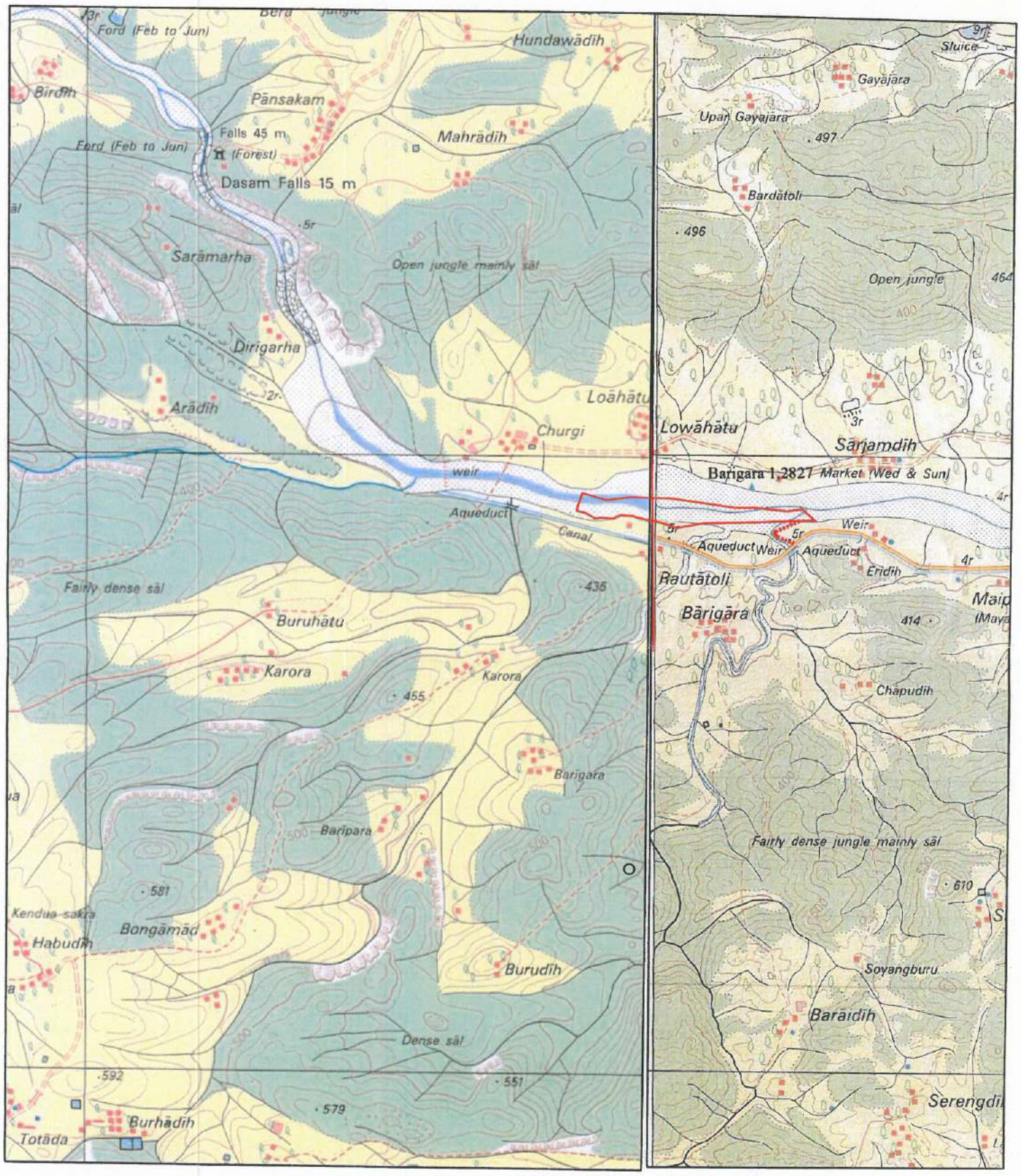
Topo Location Plan of Barigara Balu Ghat Superimposed on Survey of India OSM Sheet NO.-73E8+73E12 Village - Barigara , Area - 23.34ha ,

KKC01



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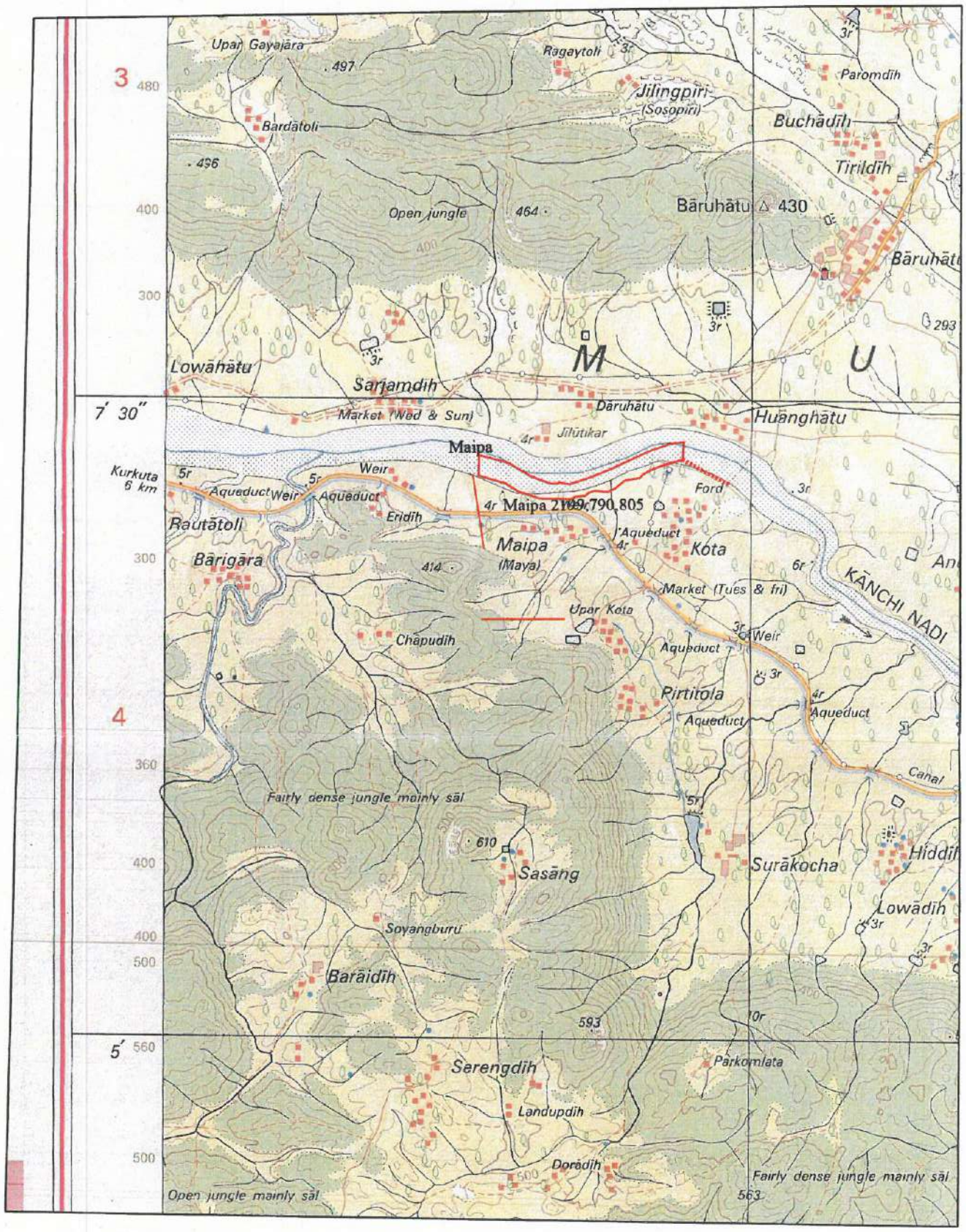
Topo Location Plan of Maipa Balu Ghat Superimposed on Survey of India OSM Sheet NO.-73E 12 Village - Maipa, Area -20.31ha , KKC02



23°5'

85°30'

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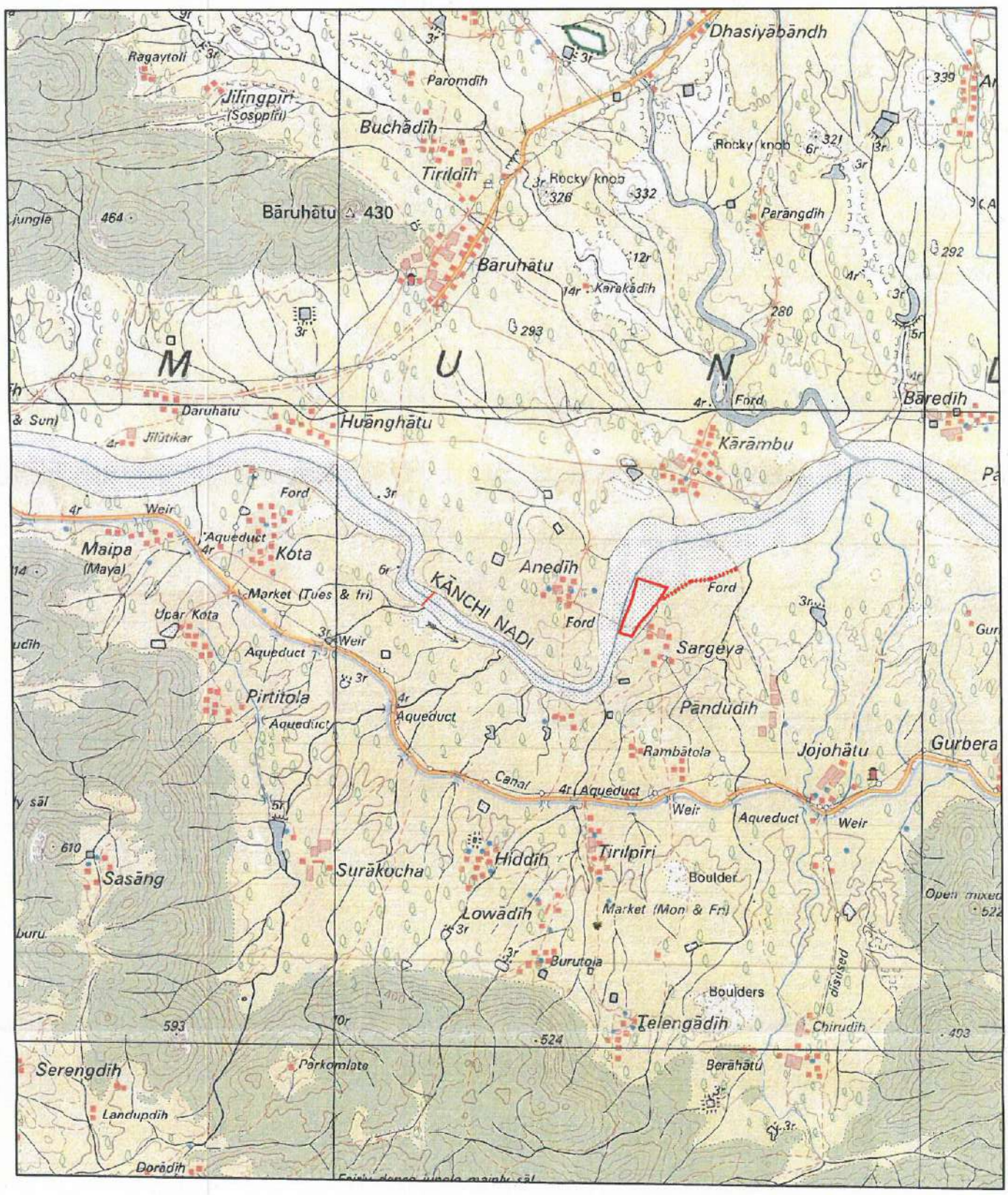
Topo Location Plan of Sargia Balu Ghat Superimposed on Survey of India OSM Sheet NO.-73E 12 Village - Sargia, Area - 6.28ha ,

KKC03



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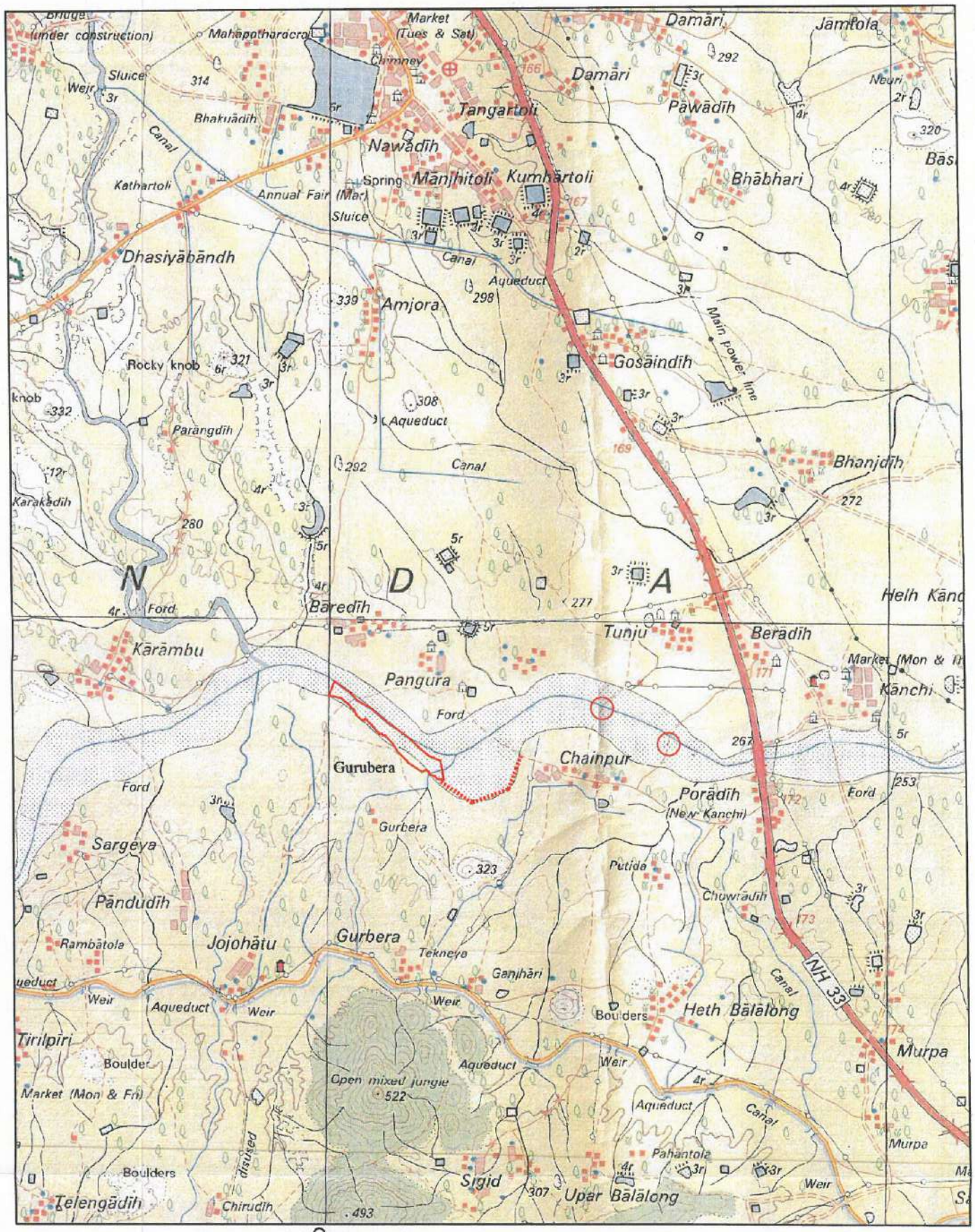
Topo Location Plan of Gurbara Balu Ghat Superimposed on Survey of India OSM Sheet NO.-73E 12 Village - Gurbara , Area -11.06 ha ,

KKC04



23°5'

85°35'

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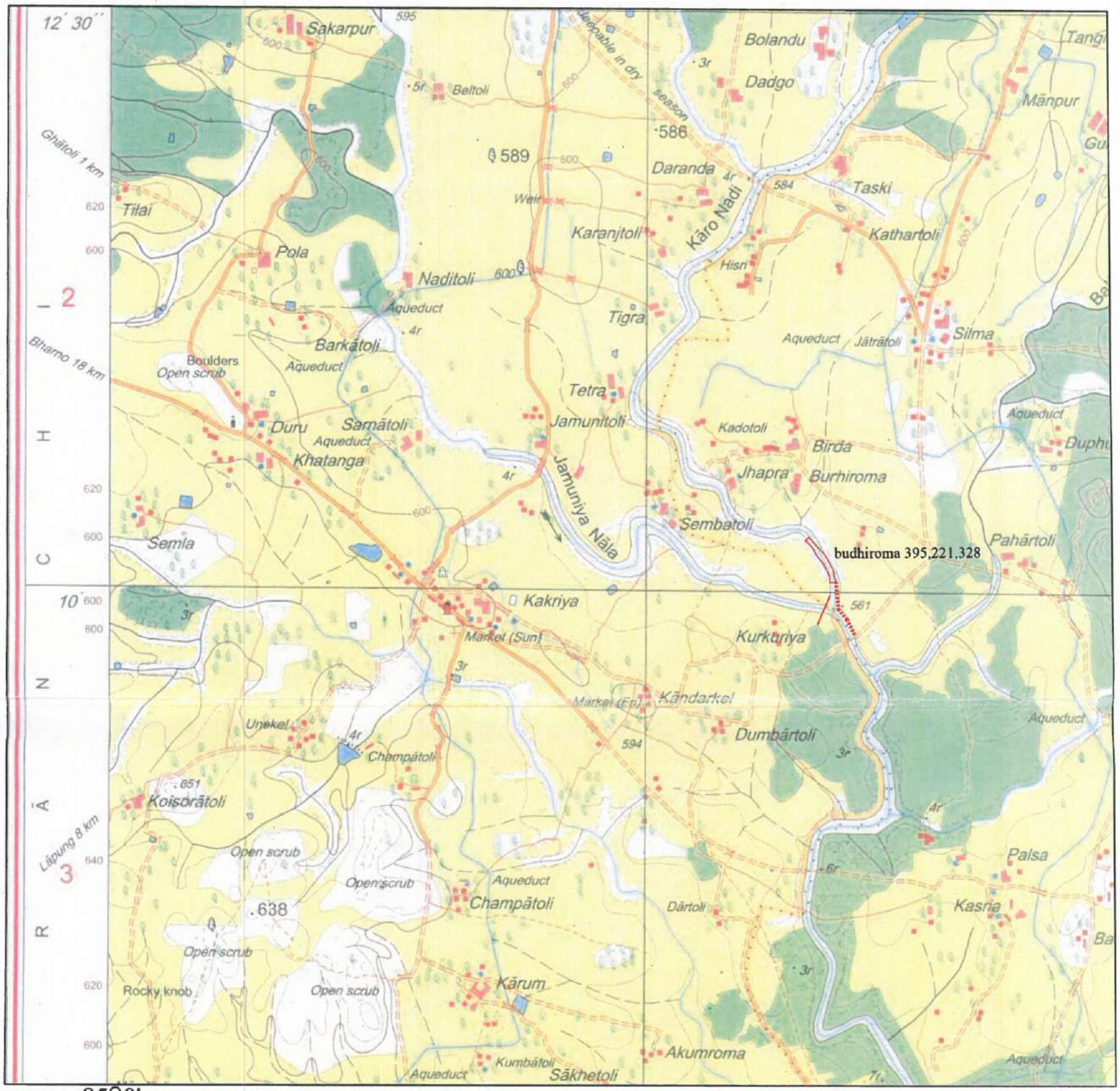
Topo Location Plan of budhiromaBalu Ghat Superimposed on Survey of India OSM Sheet NO.-73E 4 Village - budhiroma, Area -1.39 ha ,

KKCH01

23°12'30"



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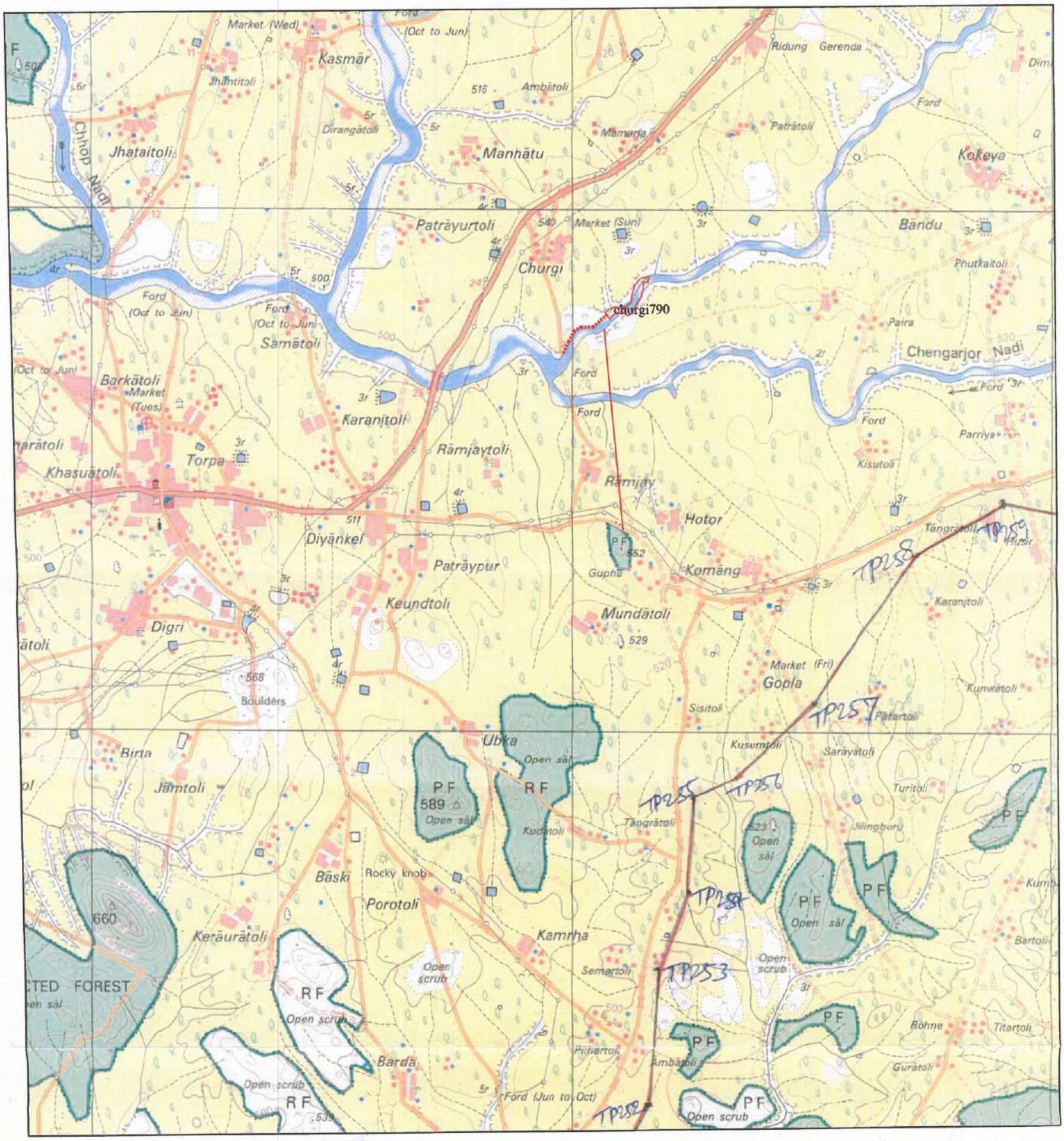
Topo Location Plan of Churgi Balu Ghat Superimposed on Survey of India OSM Sheet NO.-F45H1 Village - Churgi, Area - 2.45ha ,

KSU01



22° 55'
85° 5'

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PLATE - 5
KML MAP

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K KC 04

No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

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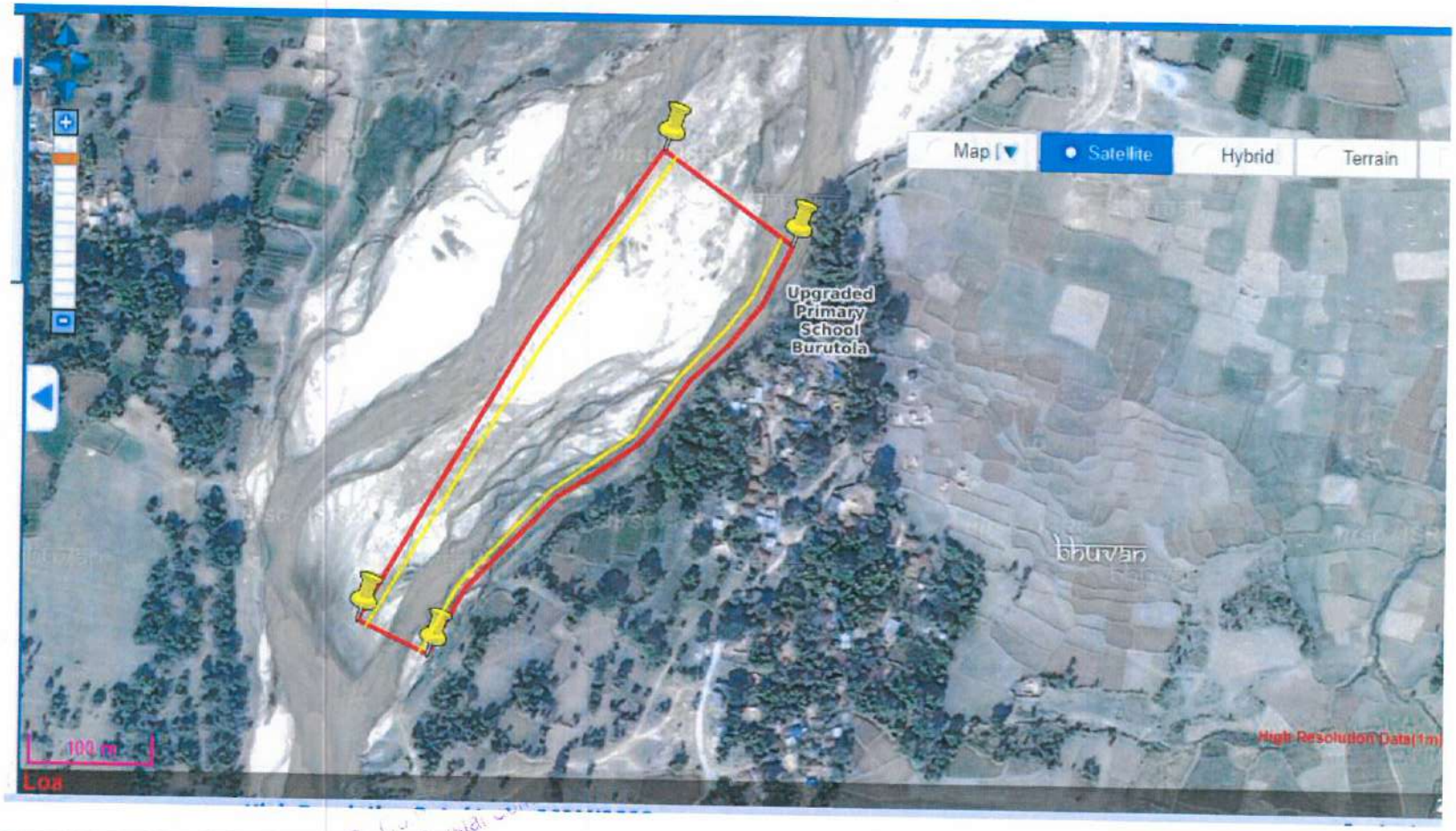

K KC 03	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

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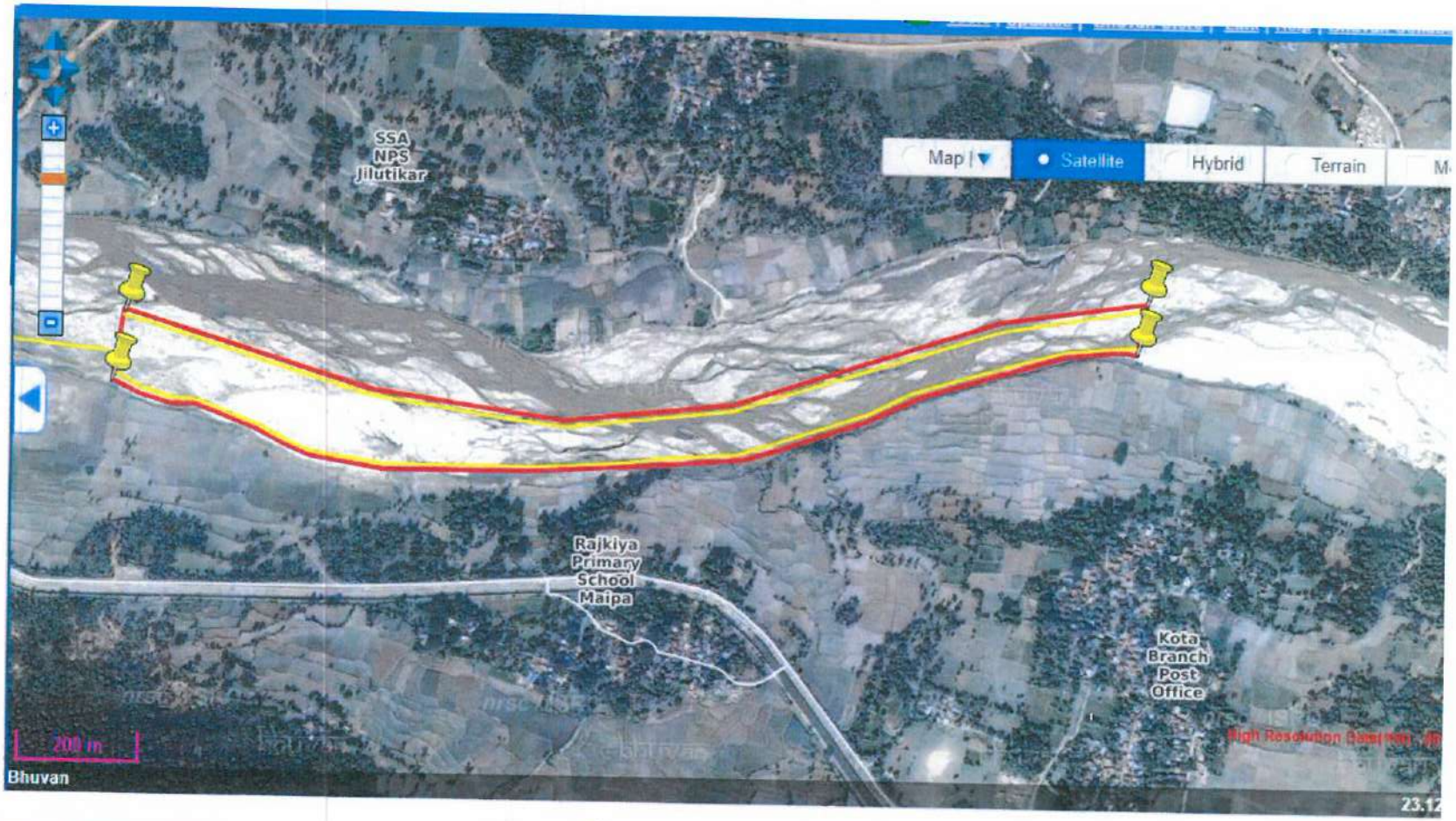

K KC 02	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Sigma R.D
Consortium with E.,
Authorized Signatory

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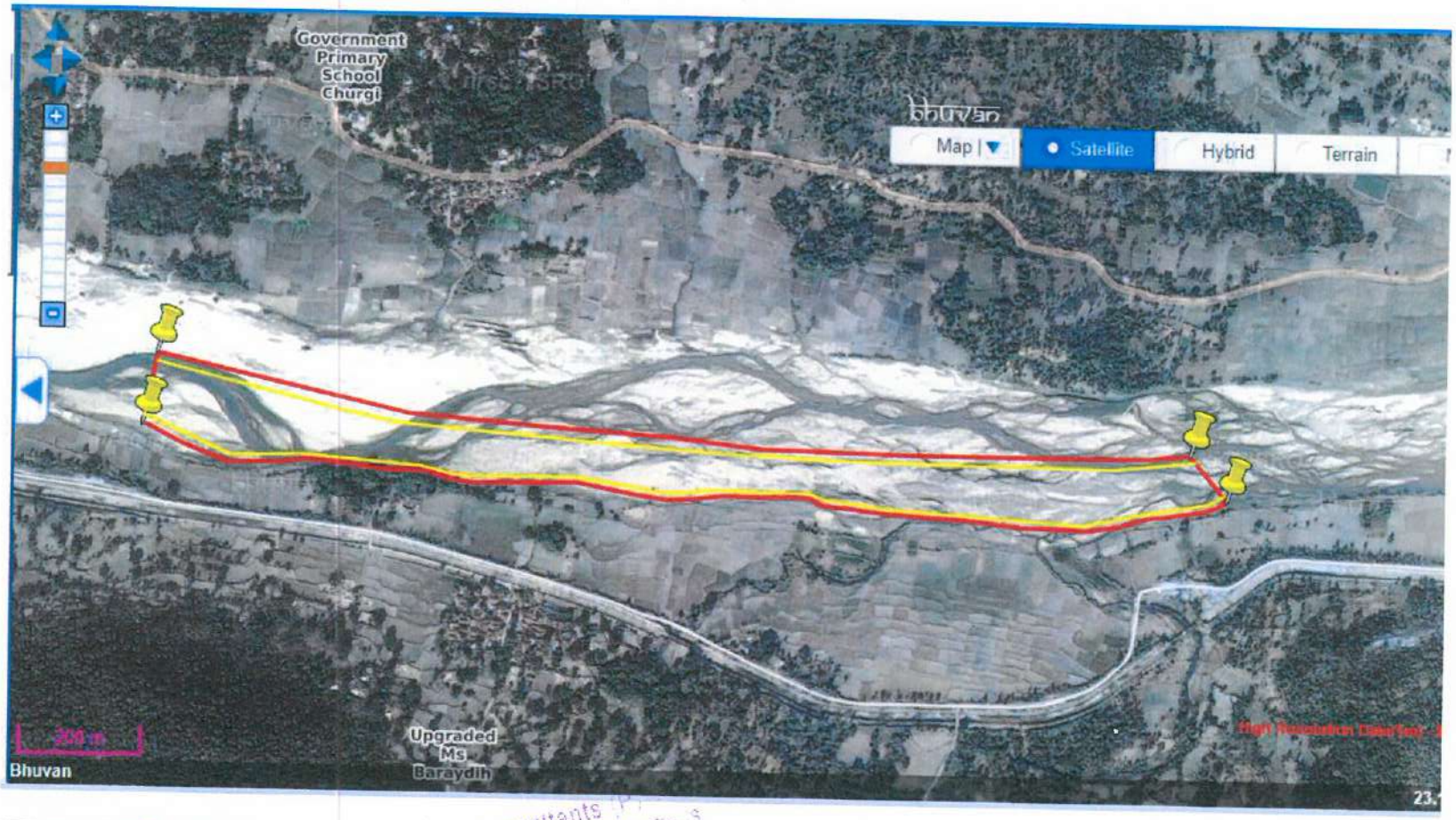

K KC 01	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

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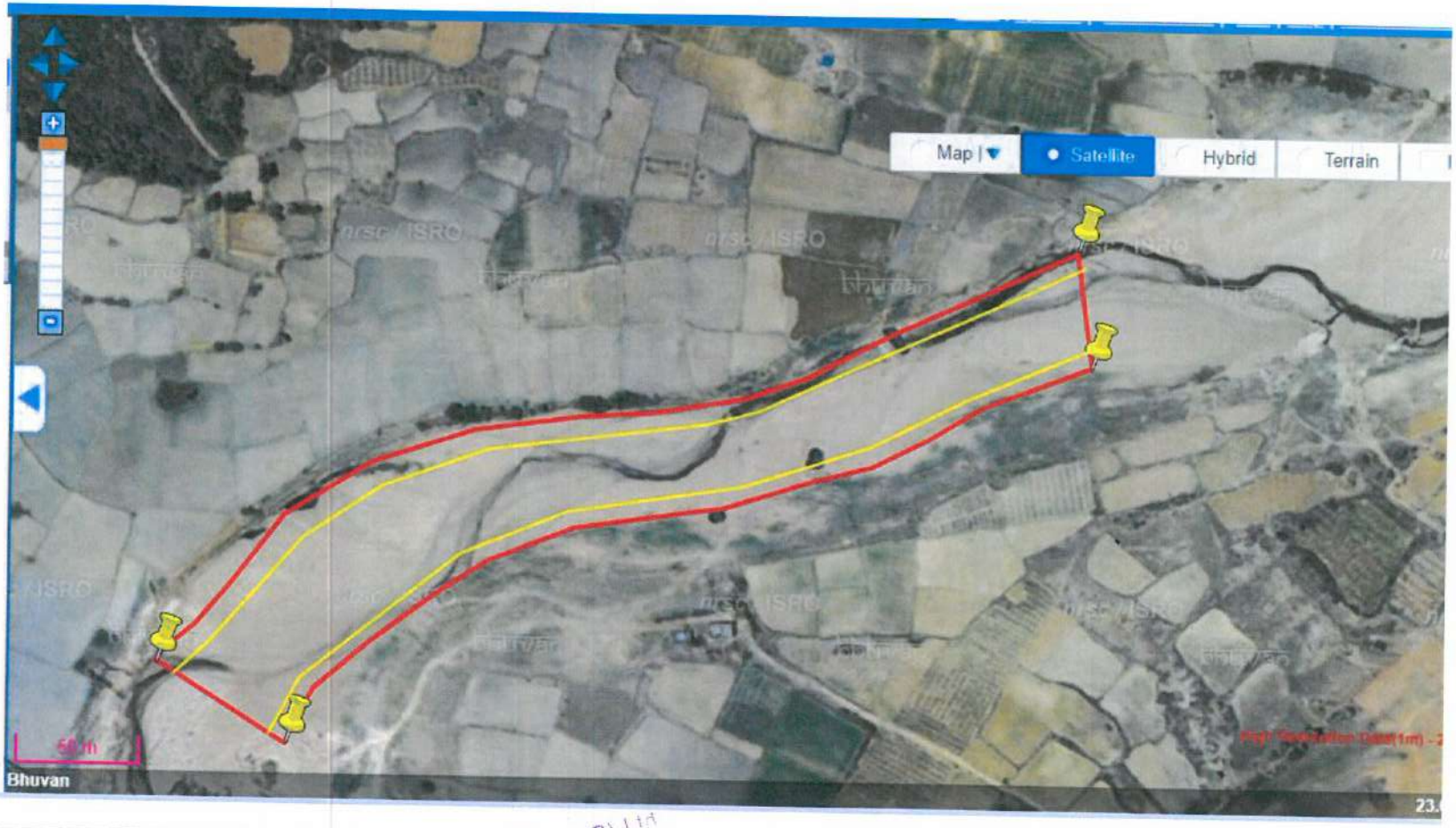

K BA 01

No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

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K BA 02	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

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K BA 03

No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

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K BA 04	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

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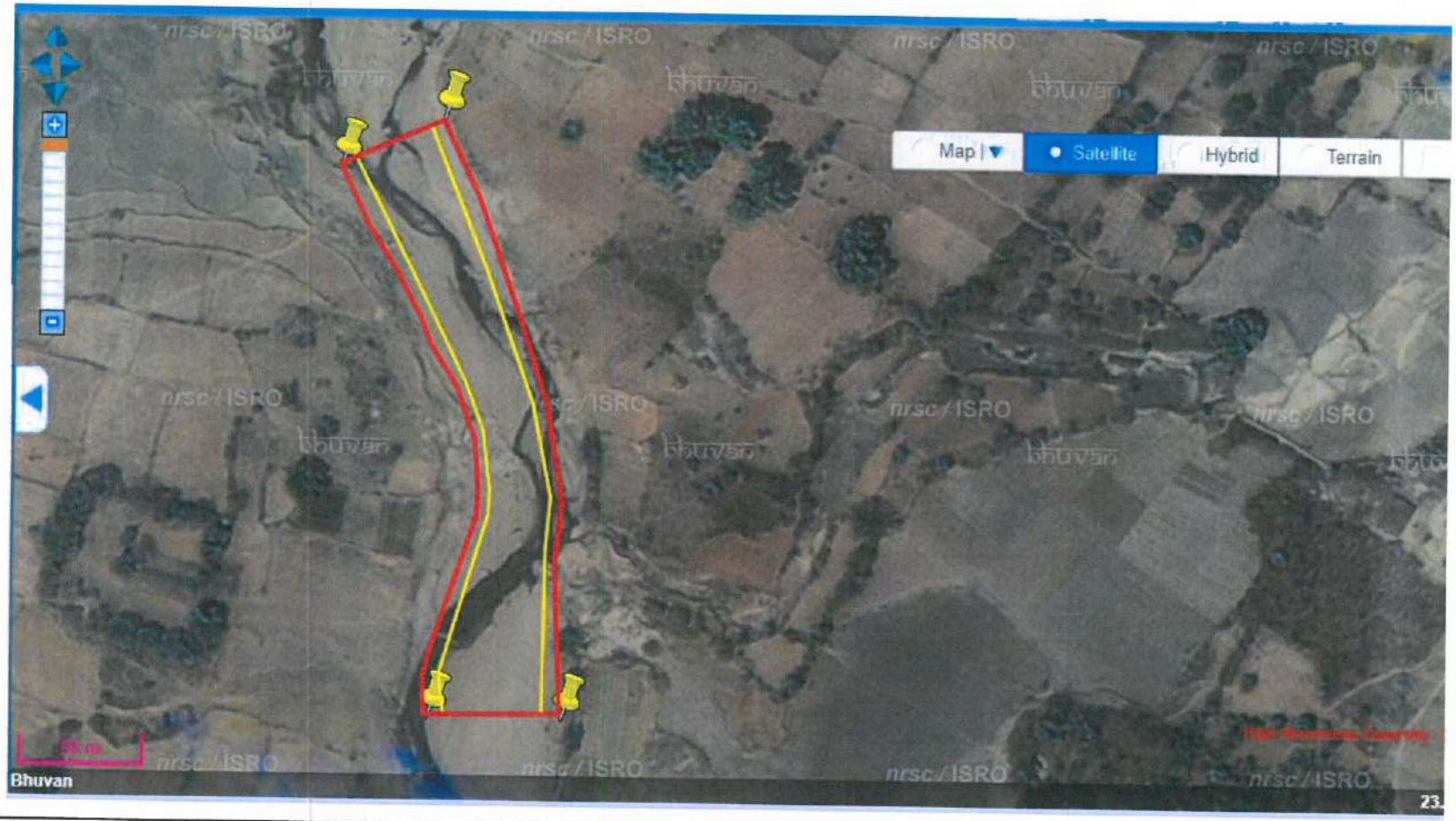


K CH 01	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Authorized Signatory

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

K CH 02

No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Sagm R.D. Consultants (P) Ltd.
Consortium with Crystal Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

K CH 03	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

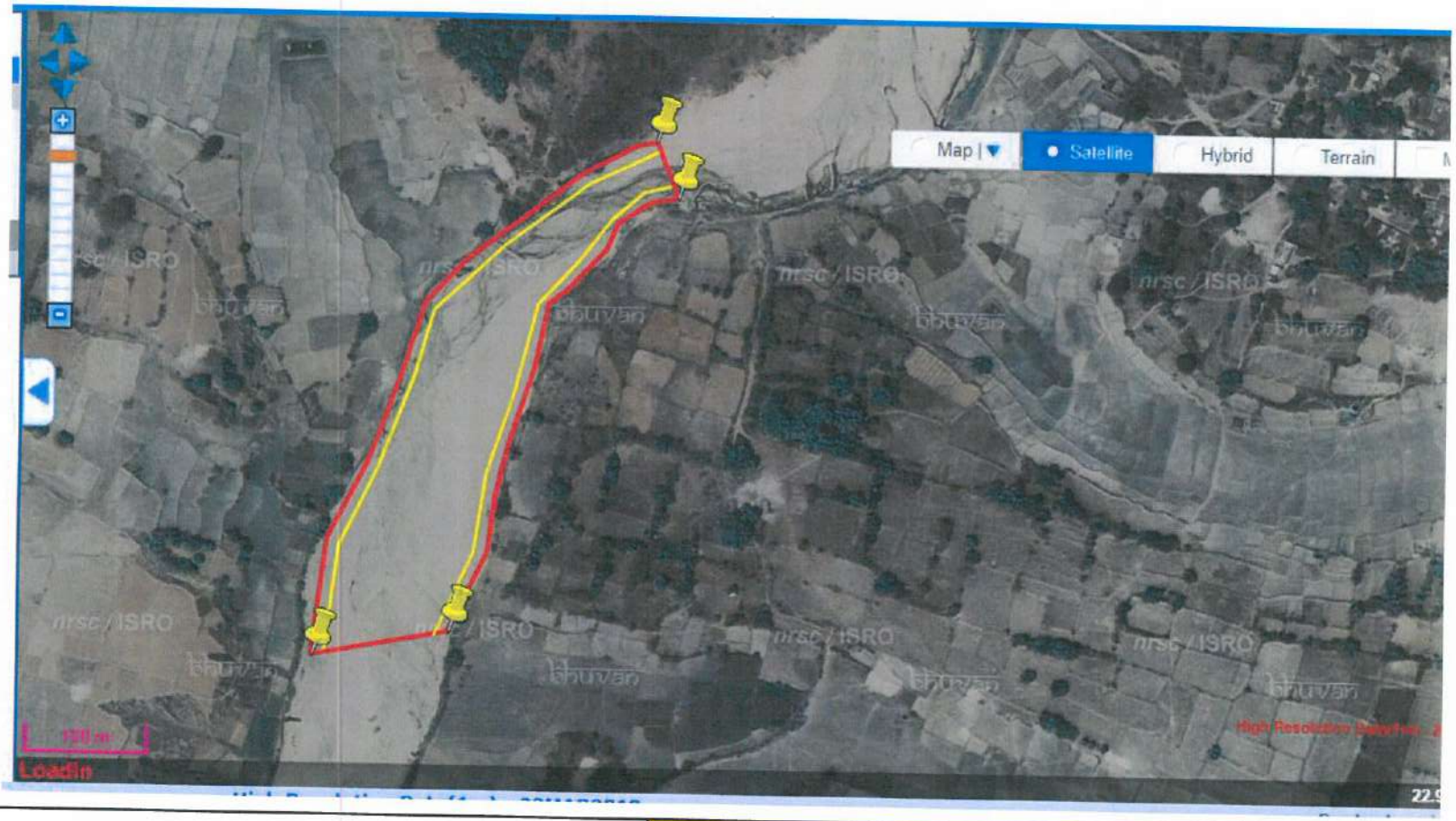
Sigma R.D. Consultants
Consortium with Crystal Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

K CH 04	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

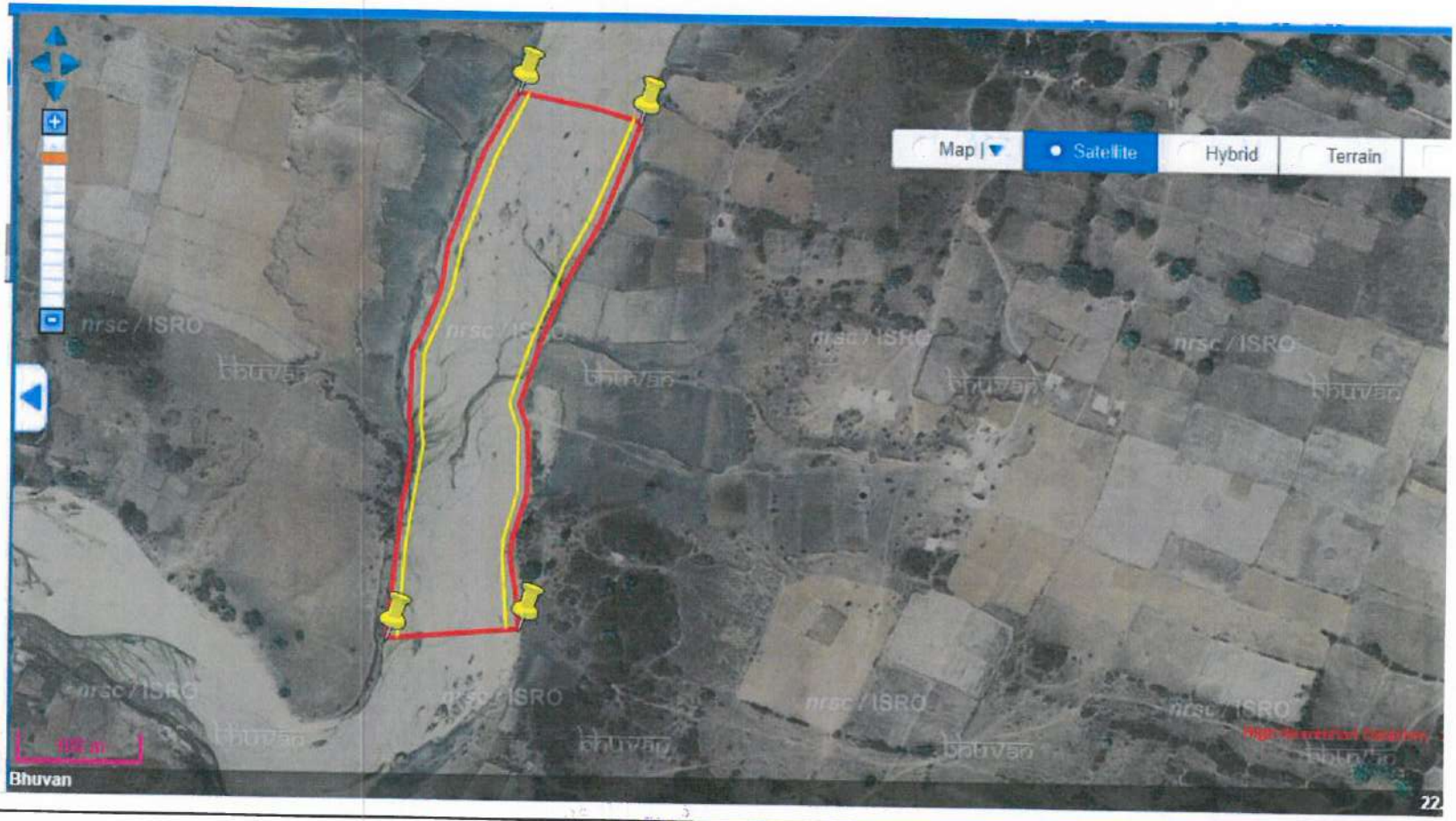
Approved
State Level Environment Impact Assessment Authority
Jharkhand, Ranchi

Signed: Consultants
Consortium with Crystal Consultants
Authorized Signatory



K CH 05	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Approved

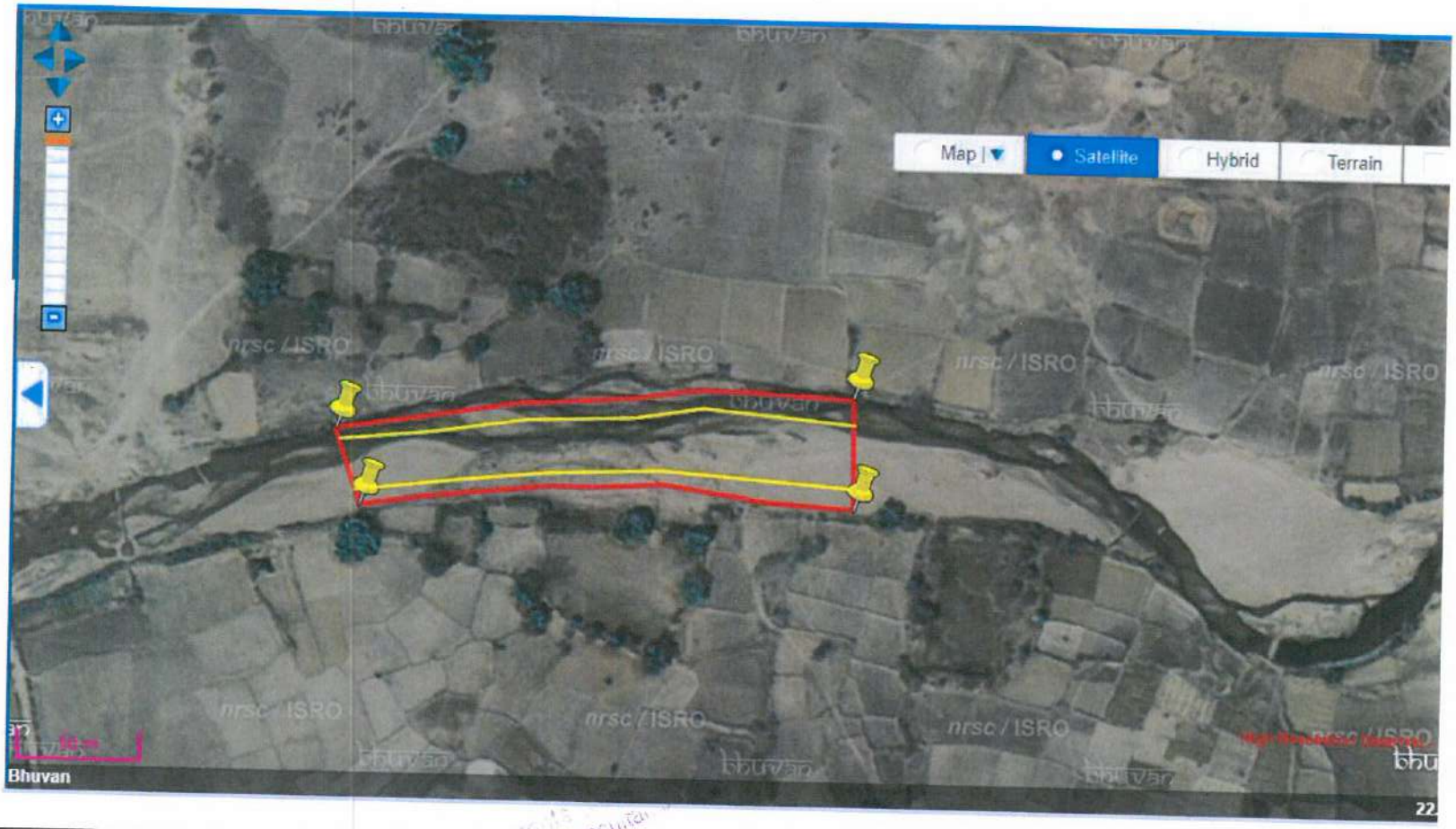


K CH 06	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Signature of Consultant with Crystal Consultants

Authorized Signatory

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi



K CG 01	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Sigma E.D. Consultants Pvt. Ltd.
Consortium with Crystal Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

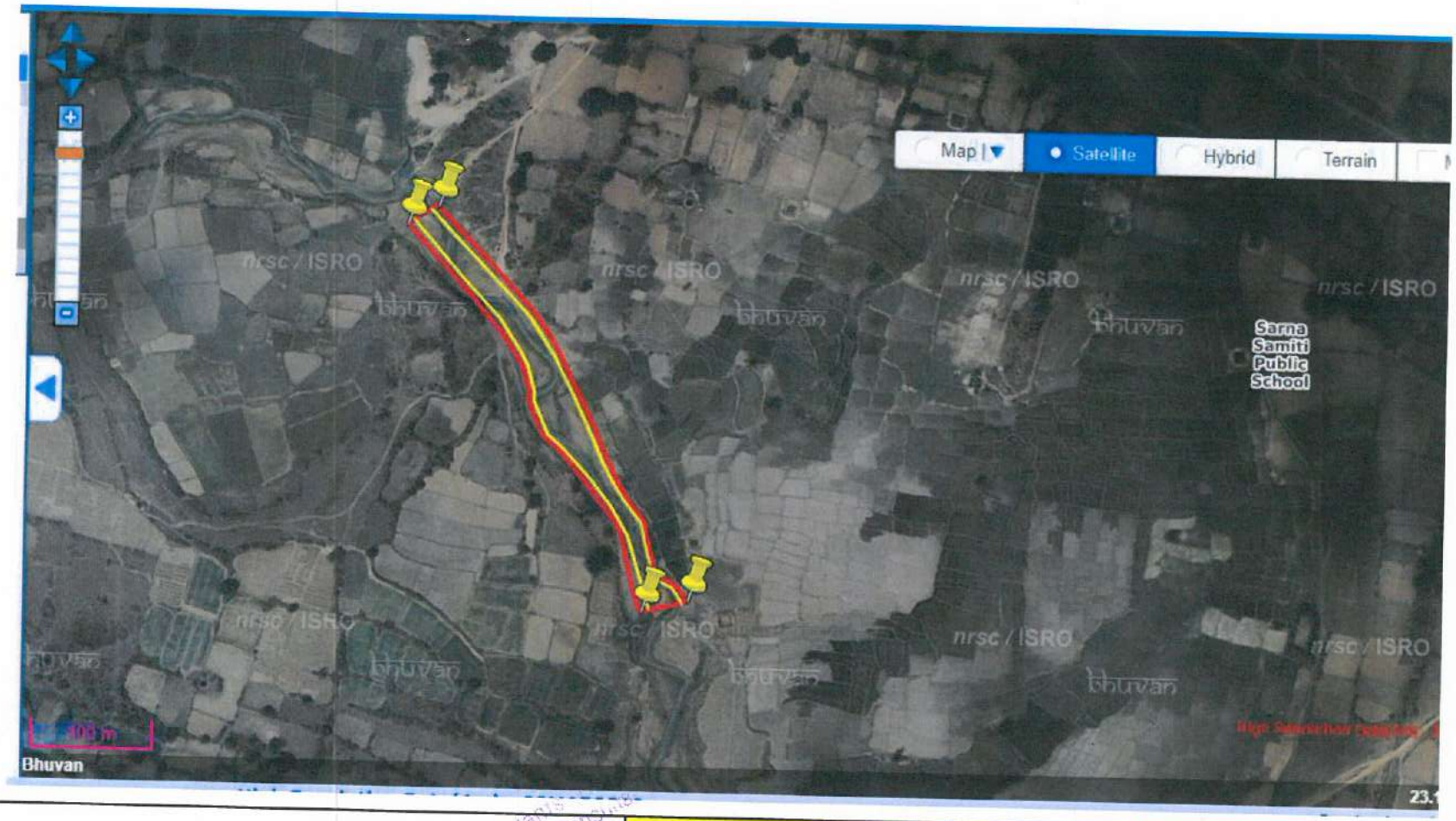
K CG 02

No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi
Sigma E.D. Consultants (P) Ltd.
Consortium with Crystal Consultants
Authorized Signatory

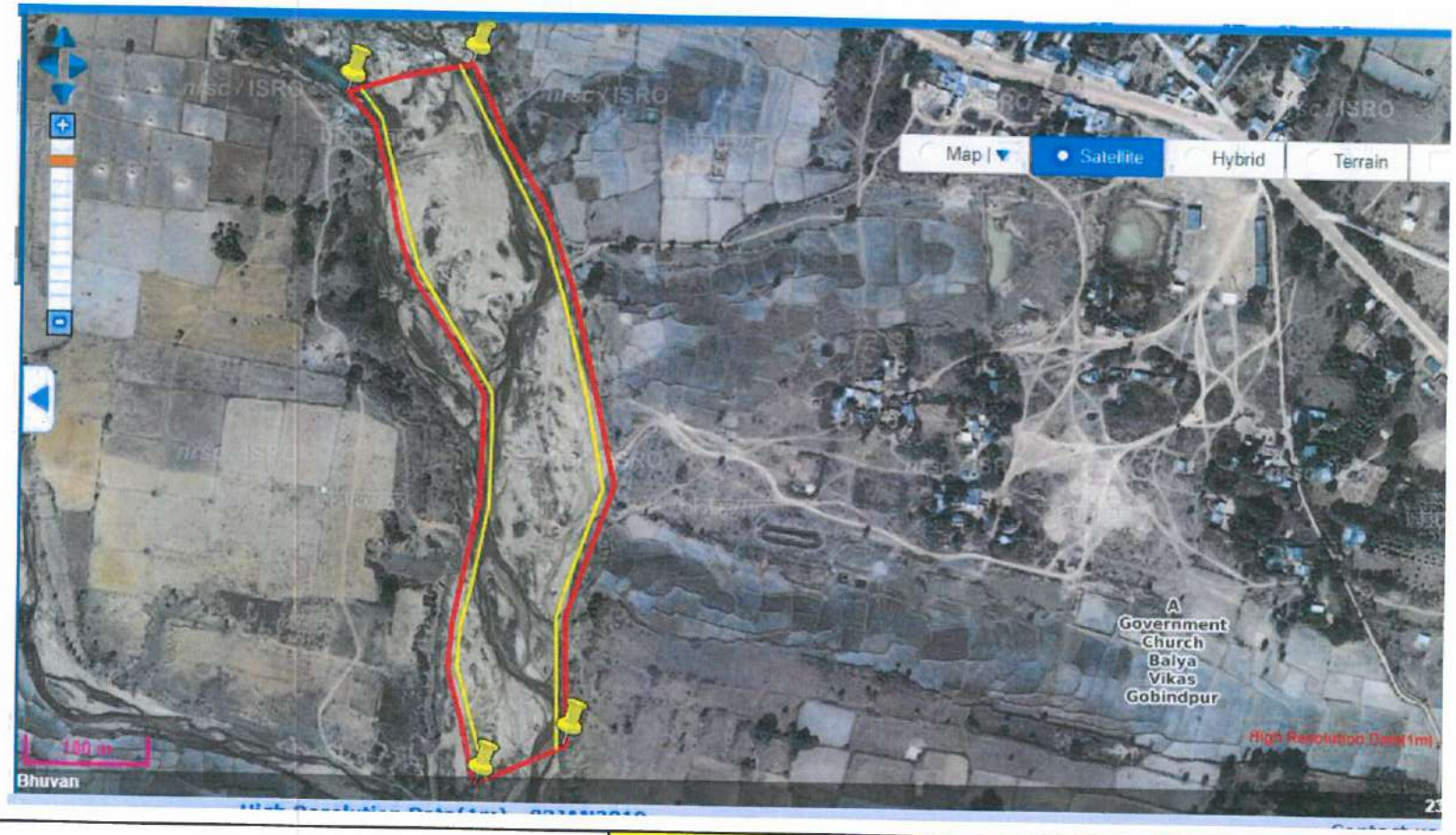
K SU 01	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi



K KA 01	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Authorized Signatory



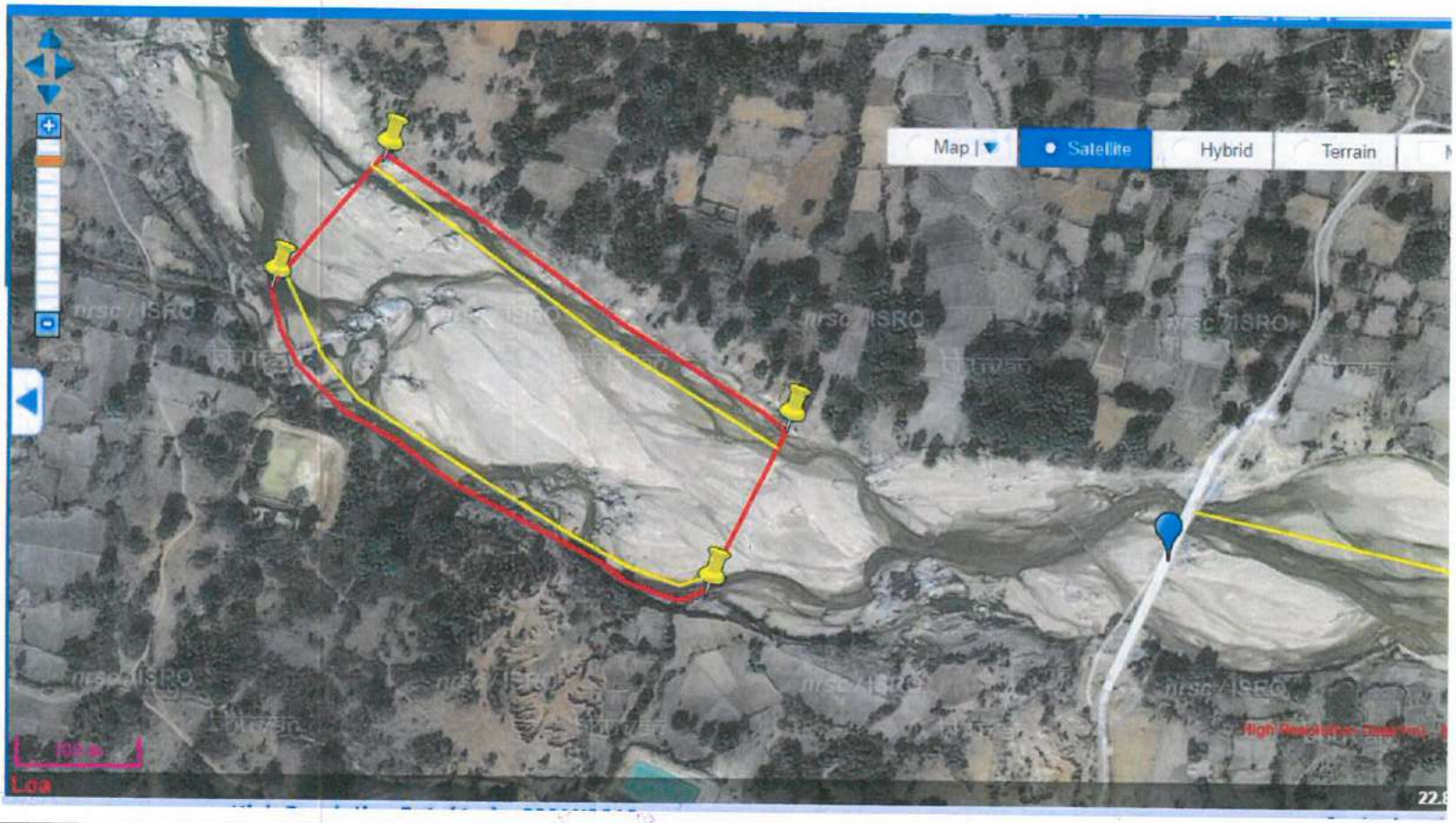
K KA 02

No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Approved
Authorized Signatory

K KA 03	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

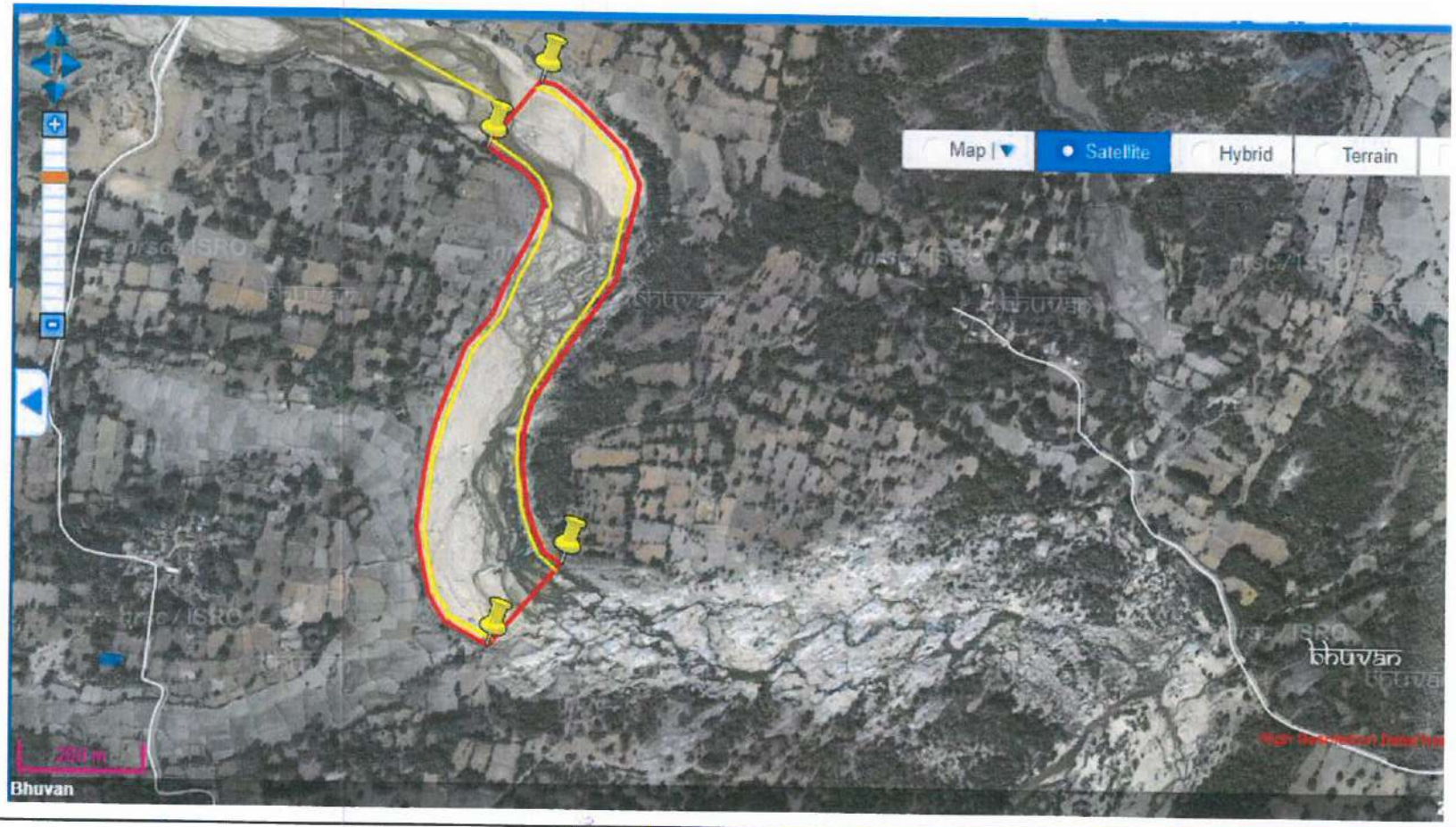
State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi



K KA 04

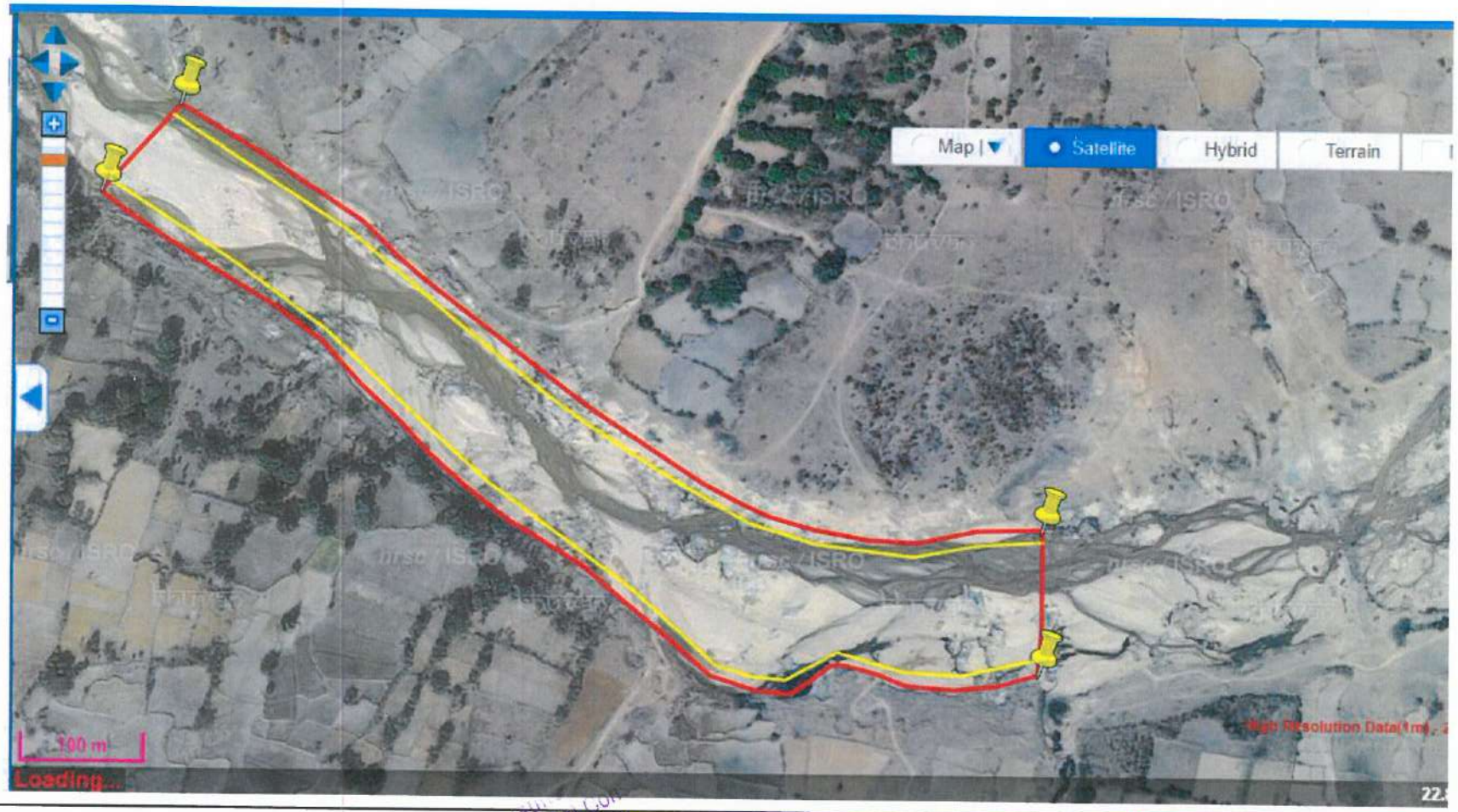
	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Approved



K KA 05	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Approved

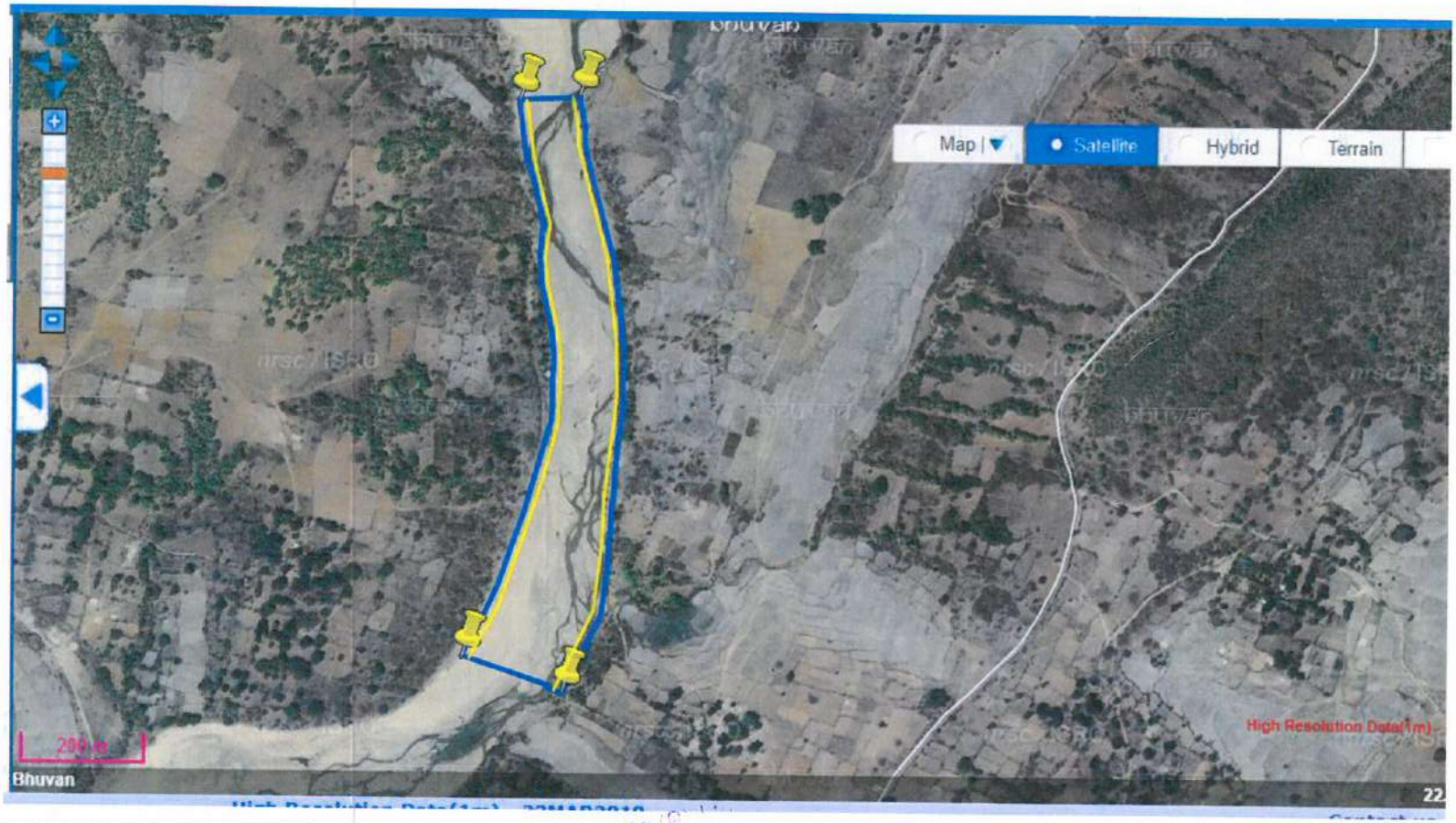


K KA 06

No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi

Authorized Signatory

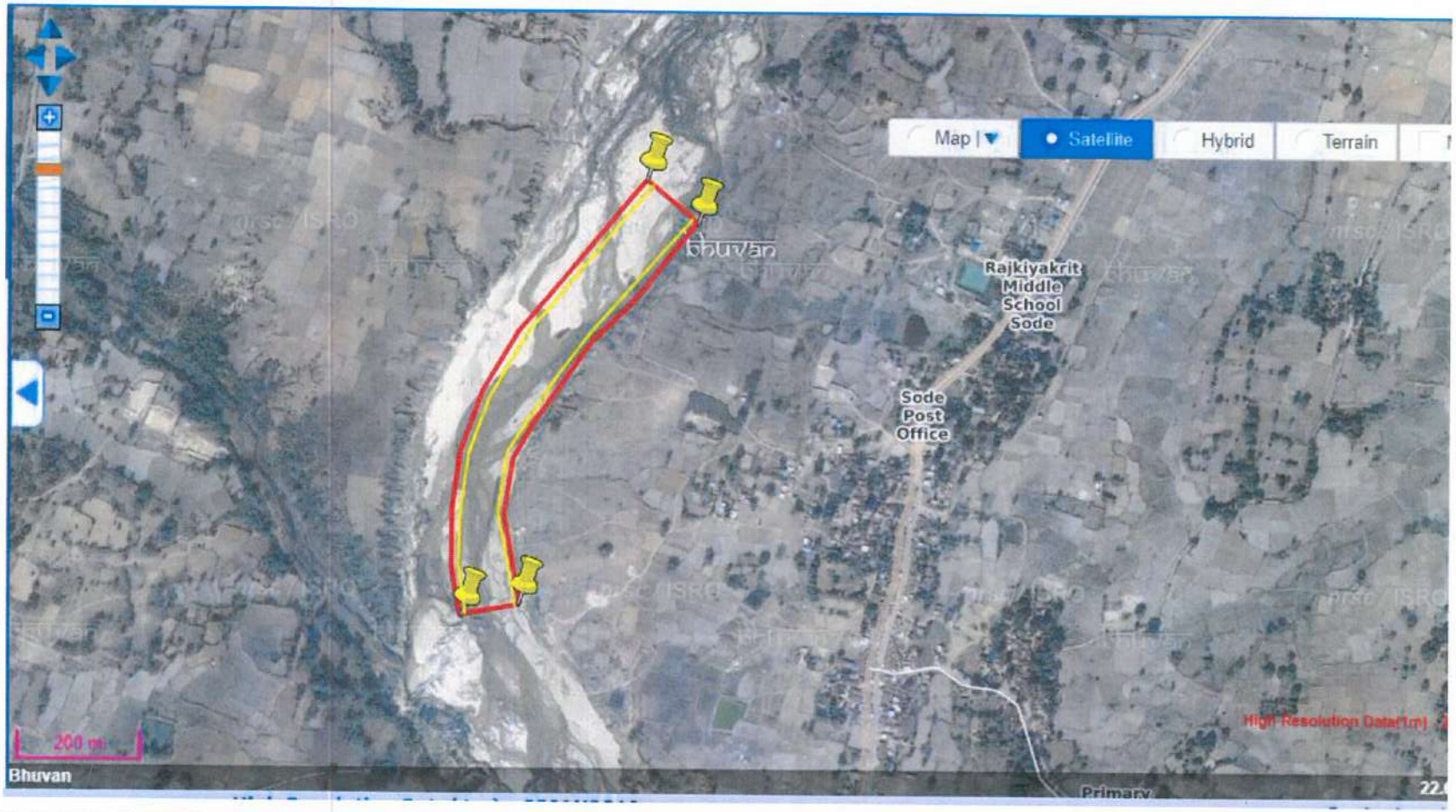


K KA 07

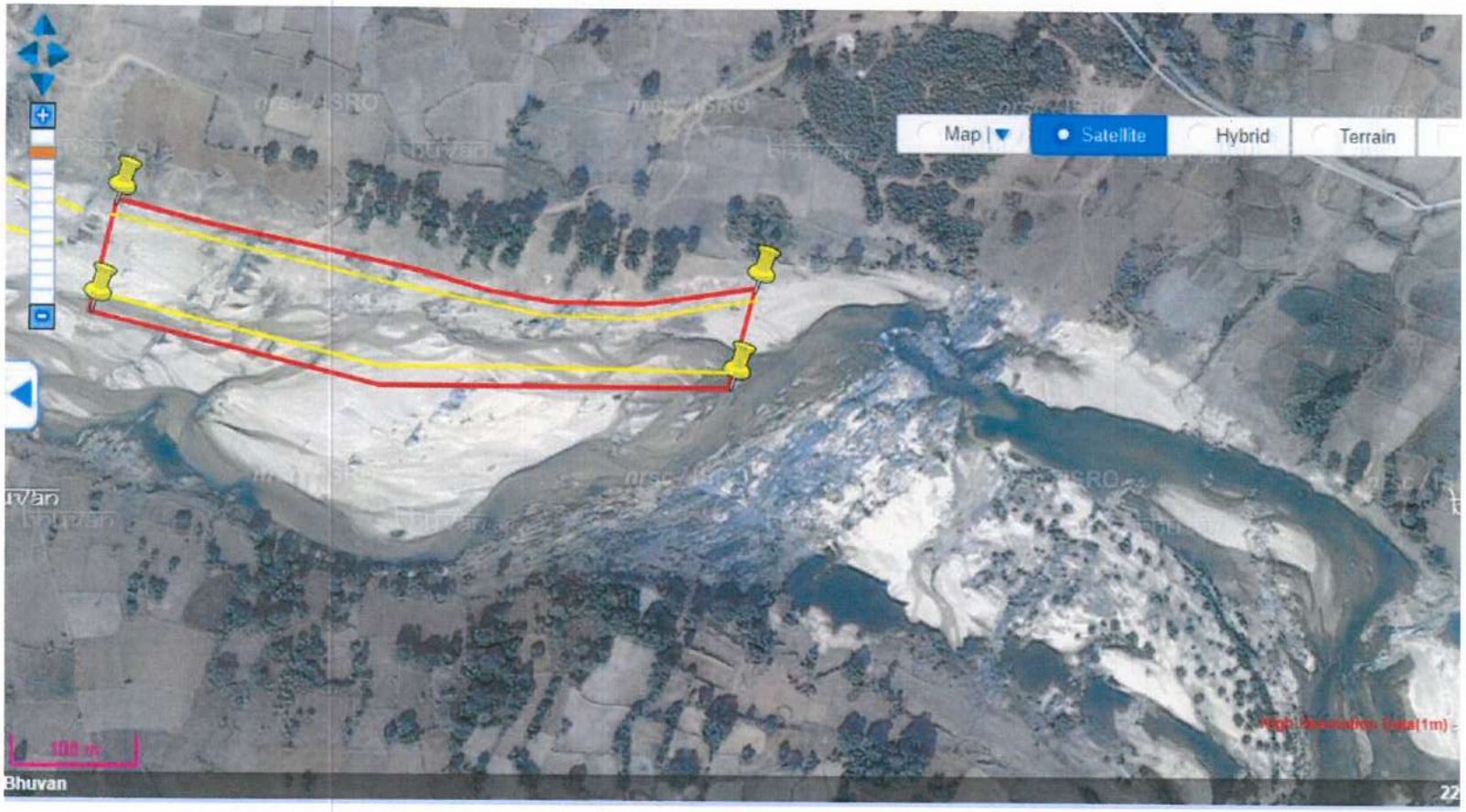
No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Sigma R.D. Consultants
Consortium with Crystal Consultants
Authorized Signatory

State Level Environment Impact Assessment Authority
Approved
Jharkhand, Ranchi



K KO 01	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)



K KO 02	No Mining Zone (1/8th both side River Bank)	Proposed Potential Resource Area (PRA)

Approved
State Level Environment Impact Assessment Authority
Jharkhand, Ranchi

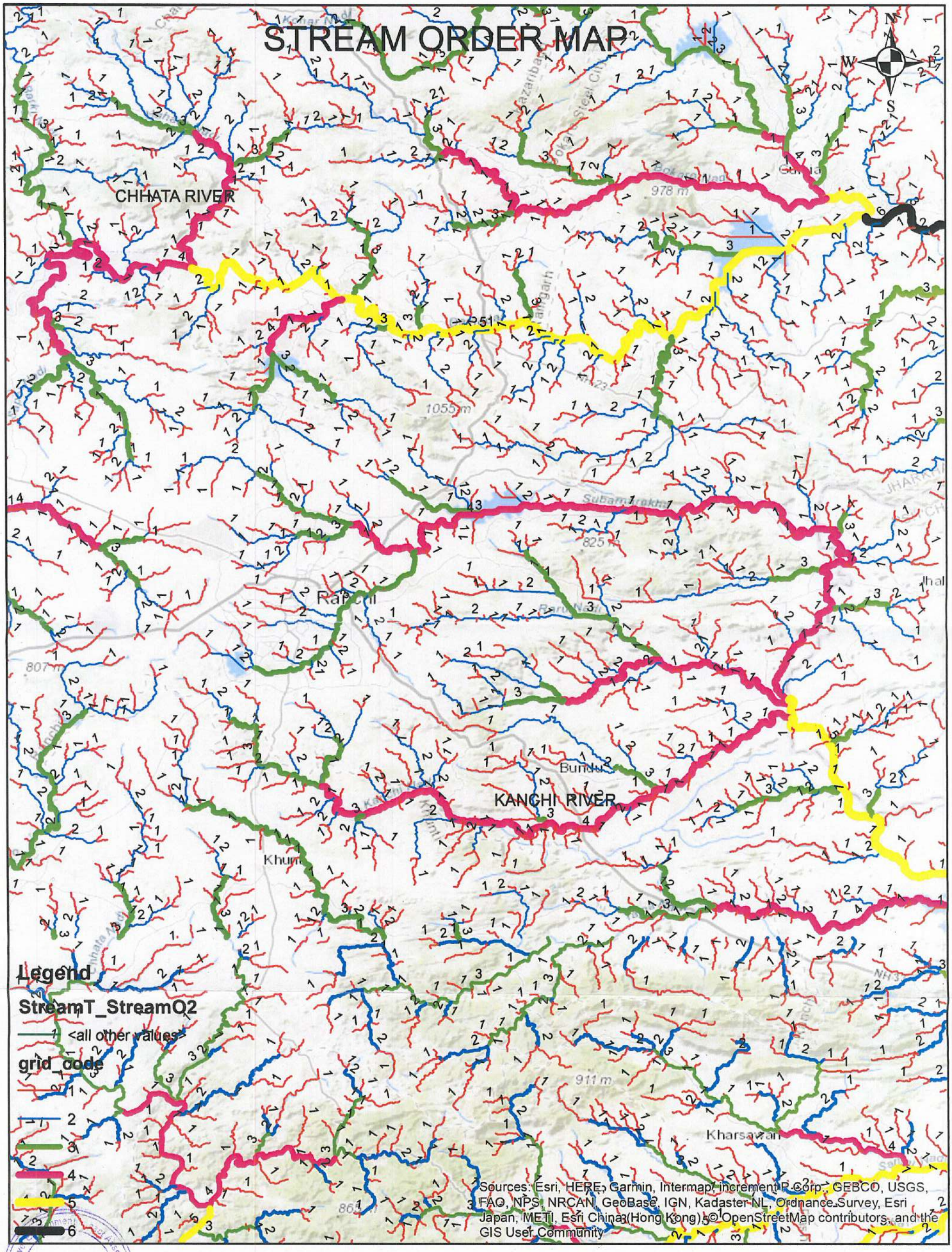
Sigma R.D. Consultants
Consortium with Crystal Consultants

Authorized Signatory

PLATE - 6
STREAM ORDER MAP

Approved
State Level Environment Impact Assessment Authority (SEIAA)
Jharkhand Ranchi

STREAM ORDER MAP



Approved