सत्यमेव जयते

File No.:
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA), ODISHA)
****

Dated **18/04/2025**

To,

Sri Udayabhanu Sahu
Mining Officer, Mayurbhanj
Office of the Mining Officer, Mayurbhanj, Odisha, 757002
mo-mbj@gov.in

Subject: Approval of District Survey Report (DSR) of China Clay Sources of Mayurbhanj District located in District-Mayurbhanj, State-Odisha for the period 2025 to 2030 proposed by Sri Udayabhanu Sahu, the Mining Officer, Mayurbhanj, Odisha under the provisions of EIA Notification 2006-regarding.

Sir/Madam,

This is in reference to your application submitted to SEIAA, Odisha vide proposal number SIA/OR/MIN/527806/2025 dated 07/04/2025 for approval of District Survey Report (DSR) of China Clay Sources of Mayurbhanj District for the period 2025-2030 located in District-Mayurbhanj, State-Odisha in terms of the provision of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986 and subsequent amendment thereto, i.e. Enforcement and Monitoring Guidelines for Sand Mining (EMGSM)-2020 and in pursuance of MoEF & CC, GoI Notification dated 15.01.2016 & 25.07.2018 and as per order of Hon'ble Supreme Court dated 10.11.2021 in Civil Appeal No. 36613662 of 2020 (State of Bihar Vrs. Pawan Kumar and Others)-reg.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC25C0108OR5971437N
(ii) File No.	
(iii) Clearance Type	Mining EC Under 5 Ha
(iv) Category	B2 & B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Proposal for Approval of DSR Mayurbhanj (China Clay)
(ix) Location of Project (District, State)	MAYURBHANJ, ODISHA
(x) Issuing Authority	SEIAA, Odisha

(xii) Applicability of General Conditions No

3. In view of the particulars given in the Para 1 above, the project proposal (PP) interalia including Form-2, forwarding letter, proceeding copy, copy of 30 days public notice period, copy of paper clipping and advertisement for Public notice both in Odia and in English and final District Survey Report (DSR) copy of China Clay sources were submitted to the SEIAA, Odisha for an appraisal by the State Level Expert Appraisal Committee (SEAC) under the provision of EIA notification 2006 and its subsequent amendments.

4. The above-mentioned proposal has been considered by the SEAC in the meeting held on 01.03.2025. The minutes of the meeting and all the documents are available in the PARIVESH portal which can be accessed from the PARIVESH portal by scanning the QR Code above.

5. Details of the DSR and the brief on the salient features as submitted by the project proponent in Form-2 and as presented during the SEAC meeting are annexed as Annexure-2.

6. The SEAC, in its meeting held on 01.03.2025, based on information submitted & clarifications provided by the project proponent and after detailed deliberations on all technical aspects and compliance thereto furnished by the Project Proponent, the SEAC, Odisha recommended that the SEIAA, Odisha may consider for approval of the DSR of Mayurbhanj District for implementation, subject to insertion/correction of the above as observed by the SEAC on the following points as mentioned below.

    1. In overall DSR, a chapter on sand mineral availability and its potential to be incorporated (including in DSR of sand) as per OMs and Guidelines of MoEF&CC, Govt. of India referred above.

    2. All DSR (except overall DSR) to be highlighted as respective mineral (at present it is written Sand in red for all)

    3. KML file for respective mineral to be incorporated as overall KML file does not give any information.

The PP has submitted the additional document sought by SEAC.

7. The SEIAA, Odisha has examined the DSR proposal in 194th Meeting held on 10.04.2025 in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986 and subsequent amendment thereto, Sustainable Sand Mining Management Guideline (SSMMG) 2016,Enforcement and Monitoring Guidelines for Sand Mining (EMGSM)-2020 and in pursuance of MoEF & CC, GoI Notification dated 15.01.2016 & 25.07.2018 and as per order of Hon'ble Supreme Court dated 10.11.2021 in Civil Appeal No. 36613662 of 2020 (State of Bihar Vrs. Pawan Kumar and Others) and clarification submitted by Project Proponent (PP) against the query raised by SEIAA based on the recommendations of the SEAC and accordingly modified revised DSR. After detailed deliberation in the matter, the authority hereby approved the DSR for China Clay of Mayurbhanj District for a 5 years period.

8. The SEIAA, Odisha reserves the right to stipulate additional conditions, if found necessary.

9. The Validity of DSR of China Clay is upto 5 years i,e. from 2025 to 2030 from the date of issue of this approval letter.

10. This issue with an approval of the Competent Authority.

Copy To

1. Additional Chief Secretary, Forest, Environment & Climate Change Dept., Government of Odisha for information.

2. Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for information.

3. The Director of Mines, Steel & Mines Dept, Govt. of Odisha Bhubaneswar for information.

4. Additional Principal Conservator of Forests, Integrated Regional Office (IRO), Ministry of Environment & Forests, A/3, Chandrasekharpur, Bhubaneswar for information.
5. Additional Chief Secretary, Revenue and DM Department, Govt. of Odisha Bhubaneswar for information.
6. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi-110032 for information.
7. Chairman/Member/Member Secretary, SEIAA for information.
8. Member Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for information.
9. Collector & DM, Mayurbhanj, Sub-Collector, Mayurbhanj, Deputy Director of Mines, Mayurbhanj, DFO, Baripada & Karanjia, RO, SPCB, Balasore, All Tahasildar of Mayurbhanj District/Mining Officer, Baripada for Information and necessary action.
10. The Director, Minor Mineral, Steel & Mines Dept, Govt. of Odisha Bhubaneswar for information.
11. Guard file for record/Website/Parivesh Portal

Annexure-2

1. Proposal in brief:

The highlights of the proposal as ascertained from the application and as revealed from proceedings/discussion held during the meeting of SEAC/SEIAA, are given as under.

i) The need for District Survey Report (DSR) have been necessitated by Ministry of Environment, Forest and Climate Change (MoEF&CC) vide their Notification No. S.O. 141 (E), dated 15th January 2016. The notification was addressed to bring certain amendments with respect to the EIA notification 2006 and in order to have a better control over the legislation. District level committees have been introduced in the system. As a part of this notification, preparation of District Survey Reports has been introduced.

ii) The MoEF&CC in compliance of the Hon'ble Supreme Court's and NGT'S order has prepared "Sustainable Sand Mining Guidelines (SSMG), 2016" in consultation with State governments, detailing the provisions on Environmental Clearance (EC) for cluster, creation of District Environment Impact Assessment Authority, preparation of District survey report and proper monitoring of minor mineral.

iii) Subsequently, Ministry of Environment, Forest and Climate Change has published Notification No. 3611 (E), dt. 25th July, 2018 regarding inclusion of the "Minerals Other than Sand" and format for preparation of the DSR has been specified. The notification stated about the objective of DSR i.e. "Identification of areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area".

iv) Enforcement & Monitoring Guidelines for Sand Mining (EMGSM) January 2020 has been published modifying Sustainable sand Mining Guidelines, 2016 by MoEF&CC for effective enforcement of regulatory provisions and their monitoring. The EMGSM 2020 directed the states to carry out river audits, put detailed survey reports of all mining areas online and in the public domain, conduct replenishment studies of river beds, constantly monitor mining with drones, aerial surveys, ground surveys and set up dedicated task forces at district levels. The guidelines also push for online sales and purchase of sand and other river bed materials to make the process transparent. They propose night surveillance of mining activity through night- vision drones.

v) The Hon'ble NGT in O. A. No. 360/2015- NGT Bar Association Vrs. Virender Singh (State of Gujarat) & O. A. No. 173/2018 - Sudarshan Das Vrs. State of West Bengal & Ors issued the following directions to the States:

- As the DEIAA is not functioning as a consequence of the decision of the Tribunal in Satendra Pandey (supra) case, the DSR shall be prepared through consultants accredited by the National Accreditation Board of Education and Training/ Quality Control Council of India in terms of O.M. of MoEF&CC, Govt. of India dated 16.03.2010.
- The DSR so prepared shall be submitted to the District Magistrate who shall verify the DSR only in respect of the relevant facts pertaining to the physical and geographical features of the district which shall be distinct from the scientific findings based on the parameters prescribed in the SSMMG- 2016. After such verification, the District Magistrate shall forward the DSR for examination and evaluation by the State Expert Appraisal Committee (SEAC) having regard to the fact.
- The SEAC after appraisal of the report shall forward it to the SEIAA for consideration and approval if it meets all scientific/technical requirements.

- While preparing the DSR, the MoEF&CC, Govt. of India Accredited Agency/Consultant shall scrupulously follow the procedure and the parameters laid down under the SSMMG-2016 and EMGSM - 2020 read in sync with each other."

vi) The order of the Hon'ble NGT clearly specifies that DSR to be prepared by the MoEF&CC, Govt. of India Accredited Agency/Consultant and sent to the SEIAA by the technical appraisal by the SEAC.

vii) The SEAC observed that requirement of preparation of DSR by MoEF & CC, Govt of India Accredited Agency/Consultant as per order of Hon'ble NGT has been withdrawn by the Hon'ble Supreme Court of India in civil appeal nos. 3661 – 3662 of 2020.

viii) The SEAC has received the District Survey Reports (DSR) for Mayurbhanj, for examination and evaluation. The SEAC has examined and evaluated the Draft DSRs of Mayurbhanj, Districts as follows:

COMMENTS ON DSR OF MAYURBHANJ

(SAND, STONE, MORRUM, BRICK EARTH, QUARTZ, DECORATIVE STONE, SOAP STONE, CHINA CLAY, FIRE CLAY, TALC, PYROXENITE AND ARTISAN GRADE STONE)

There are repetition of basic facts till clause 9 (about particular mineral), over all reports are satisfactory.

3 major observations:

1. In overall DSR, a chapter on sand mineral availability and its potential to be incorporated (including in DSR of sand) as per OMs and Guidelines of MoEF&CC, Govt. of India referred above.
2. All DSR (except overall DSR) to be highlighted as respective mineral (at present it is written Sand in red for all)
3. KML file for respective mineral to be incorporated as overall KML file does not give any information.

2. **Whether SEAC recommended the proposal** – Yes, the proposal was placed in the SEAC meeting held on 01.03.2025 and the after detailed discussion, the SEAC, Odisha recommended that the SEIAA, Odisha may consider for approval of the DSR of Mayurbhanj for implementation, subject to insertion/correction of the above as observed by the SEAC.
3. **SEIAA Observation-**Annexure-III is not submitted and transporting route map are not submitted.

SEIAA Observation on Other than Sand DSR-

(i) Point no. 06-Not mentioned area cover for mining
(ii) No details on Eco-sensitive zone
(iii) Impacts of Mining on Environment is very sketchy and not point specific.
(iv) Plantation Green Belt Development in Respect of Lease already Granted in the District:
(v) As per the submission in column no. 8 & 9 of Annexure-B all the 89 sources are new that may be verify.
(vi) No Annexure-II, III & IV (Cluster & contagious cluster and transporting route)
(vii) Reclamation of Mined out area (best practice already implemented in the district, requirement as per rules and regulation, proposed reclamation plan);
(viii) No page numbering.

4. The proposal was placed in 192nd SEIAA Odisha meeting held on 20.03.2025 and the authority decided to return the application in present form for compliance of the objections / corrections recommended by SEIAA and SEAC also with opine that the PP shala apply individual application in the PARIVESH PORTAL 2.0 for each type of minor mineral, after duly incorporating the compliances to the observations raised by SEAC and SEIAA as the case may be for each minor mineral in tabular form in the respective DSRs.
5. Now, the PP has submitted individual application with complying the observation of SEAC and SEIAA.

DISTRICT SURVEY REPORT (DSR)

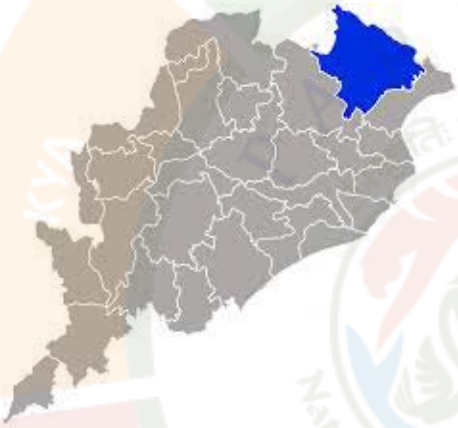
OF

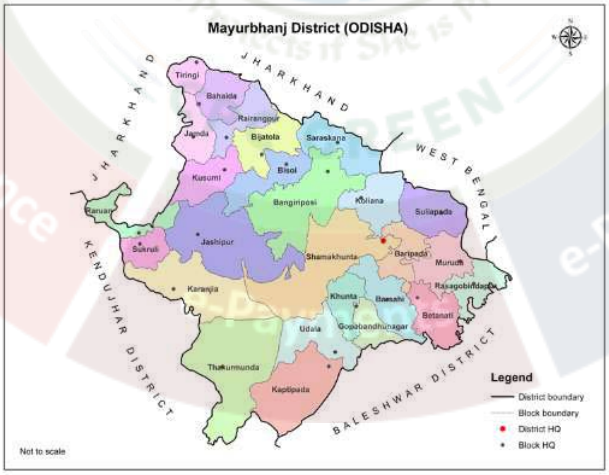
MAYURBHANJ DISTRICT, ODISHA.

FOR

CHINACLAY

(FOR PLANNING & EXPLOTTING OF MINOR MINERAL RESOURCES)





As per Notification No. S.O. 3611(E) New Delhi
dated 25th July 2018 of
Ministry of Environment, Forest & Climate Change
(MoEF & CC)

(Prepared by Sub-Divisional Committee under Guidance of Collector & District Magistrate, Mayurbhanj).

CONTENT

PREAMBLE

Odisha is the major mineral reach in India. Mayurbhanj is a unique district in Odisha lies on the northern most part of the state with varied mineral resources. In pursuance of the order of Hon'ble Supreme Court Petition (C) No. 19628-19629 of 2009, dated 27th Feb. 2012 in the matter of Deepak Kumar Vs State of Haryana and others etc., prior Environmental Clearance has now become mandatory for mining of specified minor minerals irrespective of the area of Mining Lease, and also in view of the Hon'ble National Green Tribunal, order dated the 13th Jan 2015 the matter regarding minor mineral as Road metal/stone, Sand, Brick earth, & burrowed earth cutting for Road Construction with specified minor mineral as Granite as decorative stone, Quartz & Quartzite, China clay, Fireclay, Pyroxenite, Soap stone(steatite), Soft Granite and Khondalite as Artisan Grade Stone and Talc etc. has to take prior Environmental Clearance for Mining Lease area more or less than 5 hectares also suggested making a policy on Environmental Clearance for minor minerals lease and leases in cluster. As per MOEF & CC Notification S.O.-1533(E) dated 14th Sept. 2006 and subsequent MoEF & CC Notification S.O. 141(E) dated 15th Jan. 2016, District Environment Impact Assessment Authority (DEIAA) & District level Expert Appraisal Committee (DEAC) has been formed for Category –B2 Minor Minerals having area less than or equal to 5 ha. In compliance to the notification issued by the Ministry of Environment and Forest and Climate Change Notification no. S.O.3611 (E) New Delhi dated 25-07-2018; the preparation of District Survey Report of Chaina Clay mining was prepared in accordance with Clause II of Appendix X of the notification. Subsequently the five years period of the last DSR prepared by DEIAA is going to be completed on 27.12.2024 and this fresh DSR is prepared by the Sub-divisional Committee of the district under the guidance of Collector & District Magistrate Mayurbhanj.

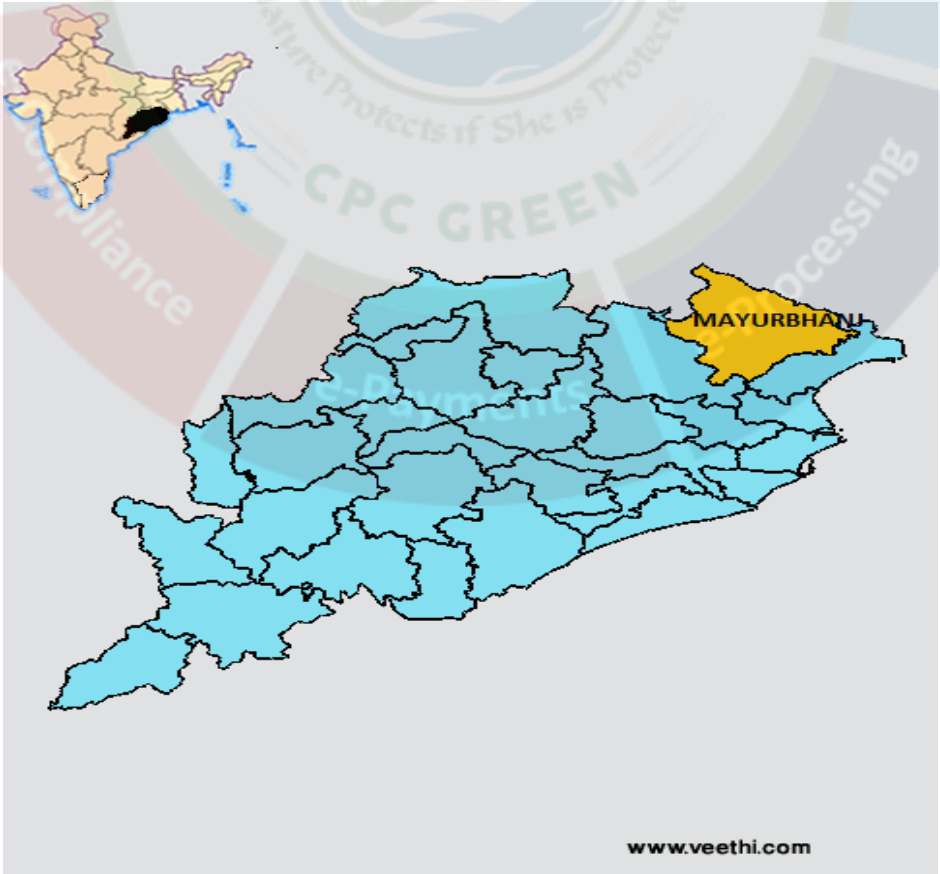
Keeping in view of the prior information of Odisha Minor Mineral Concession Rule 2004, (OMMCR-2004) and amended thereof, the mining operation for specified minor minerals were carried out in unscientific manner. Identifying this fact in exercise of power, Conferred by Section 15 by Mines and Minerals (Development and Regulation) Act 1957 as amended in 2015 and all other powers enabling it in that behalf, the Mining & Geology Department, Govt. of Odisha framed the aforementioned rule. Further, this report will act as a compendium of available mineral resources, geological set up, environmental and ecological set up of the district and based on data of various departments like Revenue, Water Resources, Forest, Geology and Mining in the district as well as statistical data uploaded by various state Government departments for preparation for district survey report.

1. INTRODUCTION:

Mayurbhanj at a Glance:

1.1 Location and Geographical Area:

Mayurbhanj district is the largest among the thirty districts of Odisha and Baripada is the District head quarter, spreading over an area of 10,418 sq.km lies between latitudes 21° 17′ North and 22° 34′ North and longitudes 85°40′ East and 87°10′ East. It is bounded on the north by the Singhbhum district of Jharkhand and Midinipur district of West Bengal, on the south by the districts of Balasore and Keonjhar, on the east by the Midinipur and Balasore districts and on the west by the districts of Keonjhar and Singhbhum. Mayurbhanj occupies a unique position being endowed with lush green vegetation, different fauna & flora and rich cultural heritage. The district has a rich mineral base and is home to the Similipal Biosphere. Iron-ore (hematite), vanadiferous and titaniferous magnetic, china clay, galena (lead ore), Kyanite, asbestos, steatite (soap stone) and quartzite constitute the principal mineral resources of Mayurbhanj district, of these the iron-ore deposits of Gorumahisani, Badampahar and Suleipat, which have been exploited for a period of about half a century, deserve special mention.



1.2 Administrative Units:-

Baripada is the administrative headquarter of Mayurbhanj district. It is located at a distance of 263 km from Bhubaneswar, state capital of Odisha. In order of size, the district is the largest among the thirty districts of Odisha. It has 3980 villages (including 178 uninhabited villages) covering 26 Blocks, 26 Tahasils and 4 Sub-Divisions. The district is divided into 4 Sub-Divisions namely 1) Sadar Sub-Division Baripada, 2) Kaptipada Sub-Division Udala, 3) Bamanghaty Sub-Division, Rairangpur, 4) Panchapir Sub-Division, Karanjia which are given below:-

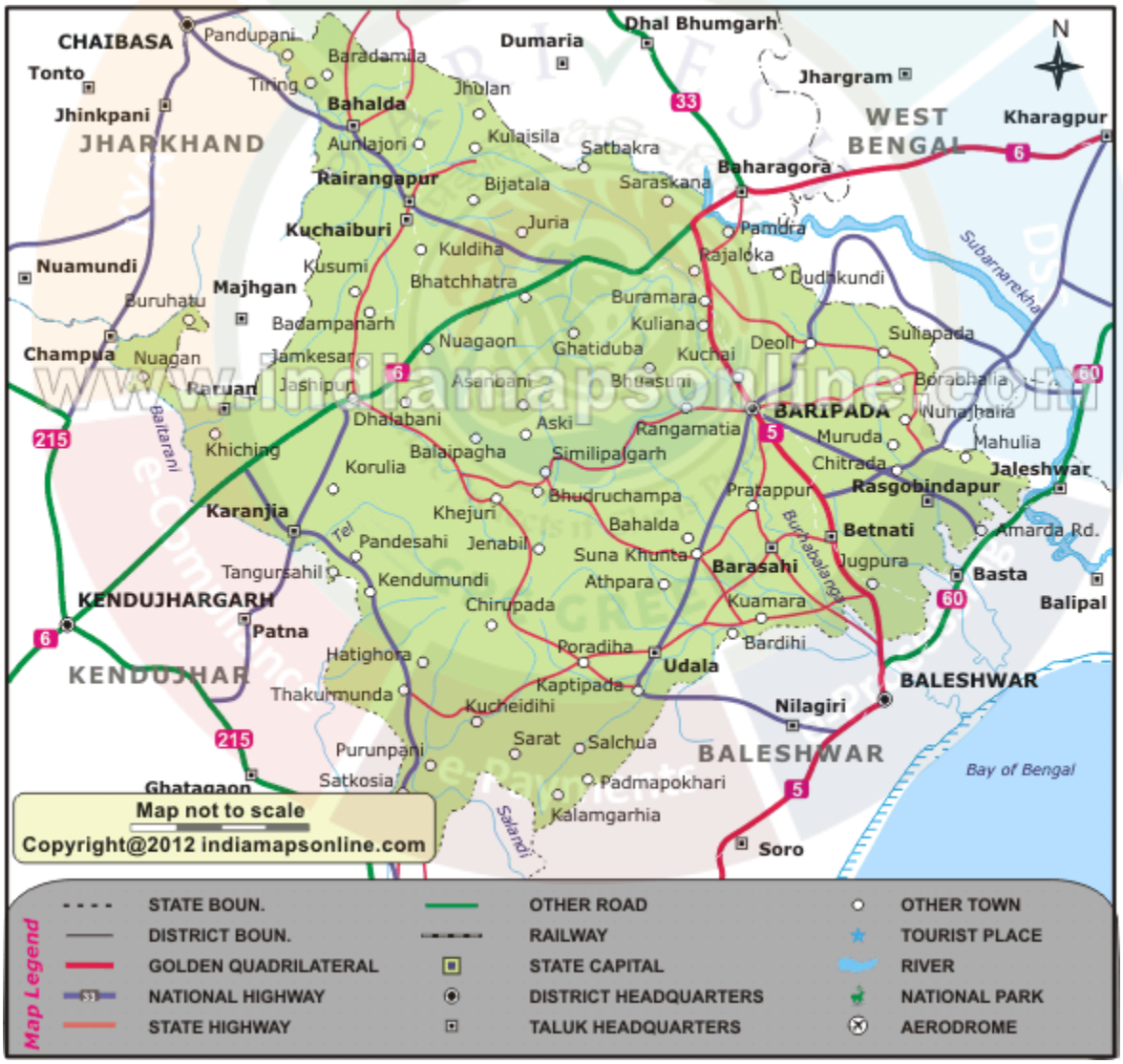
Sl No	Name of the Block/Tehsil	Name of the Sub-Division with Head quarter
1	Baripada	Sadar Sub-Division, Baripada
2	Samakhunta	
3	Kuliana	
4	Bangriposi	
5	Saraskana	
6	Suliapada	
7	Betnoti	
8	Badsahi	
9	Rasgovindpur	
10	Moroda	
11	Udala	Kaptipada Sub-Division, Udala
12	Kaptipada	
13	Khunta	
14	Gapabandhu Nagar	
15	Rairangpur	Bamanghaty Sub-Division, Rairangpur
16	Bisoi	
17	Bijatala	
18	Kusumi	
19	Bahalda	
20	Tiring	
21	Jamda	
22	Karanjia	Panchpir Sub-Division, Karanjia
23	Jashipur	
24	Sukruli	
25	Thakurmunda	
26	Raruan	

The population of the district 25,19,738 according to the 2011 Census. The district accounts for 6.69% of the state's territory and about 6% of state's population. The density of population of the district is 242 per square km as against 270 per square km of the state. As per 2011 census, the population of Scheduled Caste is 1,84,682 (7.30%), that of Scheduled Tribe is 14,79,576 (58.7%). The literacy percentage of the district covers 63.2 against 72.9 of the state.

1.3 Connectivity facilities:-

Road Network

The district is well served by a network of good roads and has been called the motorists' paradise. The chief roads NH-18 and NH-49 pass through the district. Baripada is 60 kms from Balasore, 103 Kms from Kharagpur, 163 Kms from Jamshedpur, 231 Kms from Cuttack, 255 Kms from Bhubaneswar and 368 Kms from Rourkela. It is also connected with other cities such as Sambalpur, Puri, Bolangir, Bhadrak, Jhargram, Angul, Ranchi and Kolkata via Odisha State Road Transport Corporation and some private travel services.



Rail Network

Mayurbhanj district is well connected by rail link to different places, the city of Baripada is well connected to many places in India like Mayurbhanj, Bhubaneswar, Kolkata, Jamshedpur and Cuttack,

Air Network

At present, Mayurbhanj has no connection by airway. The site selection for aerodrome is presently under process. Nearest aerodrome is Dum Dum Airport (International Airport) Kolkata, roughly 195 Kms from Baripada. The other nearest airport to Baripada is Biju Patnaik Airport, Bhubaneshwar, 207 Kms from Baripada.

2. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT:

Mayurbhanj district is land features of both plain and hilly region. Most of the mineralized area coming under safety zone eco-sensitive zone, mining activity only confined out of safety zone of eco-sensitive zone. The mining activity in the district is not only restricted to minor minerals i.e. of sand, stone, granite and brick clays. Altogether there are leases of Iron-ore (hematite), vanadiferous and titaniferous magnetic, pyrophylite, pyroxene, chaina clay, fire clay, galena (lead ore), Kyanite, asbestos, steatite (soap stone), quartz & quartzite and decorative stone constitute the principal mineral resources of Mayurbhanj district, of these the iron-ore deposits of Gorumahisani, Badampahar and Suleipat, which have been exploited for a period of about half a century. Stone, granite and sand which has been granted to the district is regulated as per minerals concession rules of Odisha. At present Leases of stone, sand and bricks making units are operational in the district. Stone chips, granite

stones, ordinary sand constitute the principal mining activity of Baripada, Udala Bangirposi, Badasahi, Kaptipada, Kuliana, G.B Nagar, Morada, Bahalda, Tiring, Jamda, Raiarangpur, Karanjia, Sukuruli area etc. of Mayurbhanj district. Subsequently instead of minor mineral, specified minor mineral also takes a tremendous role in the development of district. Out of these major potential specified minor mineral, China Clay are available near Bisoi, Joshipur, Karnjia and Sukurili area etc. of Mayurbhanj district, which have been provides tremendous scope for development of few more industries based on this resources.

Iron-ore (hematite), vanadiferous and titaniferous magnetic, chaina clay, galena (lead ore), Kyanite, asbestos, steatite (soap stone) and quartzite constitute the principal mineral resources of Mayurbhanj district, of these above the iron-ore deposits of Gorumahisani, Badampahar and Suleipat, which have been exploited for a period of about half a century.

3.0 GENERAL PROFILE OF THE DISTRICT:

3.1 Demography:

Census - 2011	
Geographical Area	10,418 Sq. Km.
Total population	25,19,738
Male Population	12,56,213
Female Population	12,63,525
Male Literacy	794,171
Female Literacy	575,226
SC Male	92,127
SC Female	92,555
ST Male	730,487
ST Female	749,089
OBC	855,480
Illiterate Male	462,042
Illiterate Female	688,299

4.0 GEOLOGY OF THE DISTRICT:

Mayurbhanj is a unique district in Odisha with rich and varied geology. Similipal Complex being at its central part. The mountain ranges comprise mainly of highland plateau and valleys with intrusive running through them. The second physiographic

unit is Tertiary Plain occurring in the eastern part of the district. The third physiographic unit is Alluvial Plain .The drainage density is observed to be fairly moderate and drainage pattern is dendritic in nature. The major rock types encountered in the district are Granite Gneiss, Quartzite, Orthoquartzite, Arkose, Shale, Phyllite, Gabbro, Px-granite. The geology of the district is constituted by the Similipal complex at its central part belonging the Archaean age, unconformably lying over Singhbhum Granite and Banded Iron Formation (BIF). It consists of three alternate bands of volcano sedimentary units uniquely disposed in a ring like circular pattern formed under sub- marine conditions. Baripada Beds outcrops of tertiary formation occur around Baripada town. These comprise stratified clay and sand with marly clay or limestone interbands. Important mineral resources include iron, copper, titanium, vanadium, chinaclay, nickel, kyanite, quartz & quartzite, talc, steatite, soapstone and bauxite.

4.1 Physiography & Geomorphology:

Mayurbhanj district presents diverse physiographic features, Physiographically the study area can be divided into 3 categories. The first physiographic unit of the district is high mountain ranges, Similipal Complex being at its central part (Figure 1). The mountain ranges comprise mainly of highland plateau and valleys with intrusive running through them. The second physiographic unit is Tertiary Plain occurring in the eastern part of the district. The third physiographic unit is Alluvial Plain which lies partly in Rasgovindpur, Morada, Samakhunta, Betnoti, Baripada, Badasahi and Suliapada Blocks. The highest elevation of about 559m at Bahalda near Similpal hill and higher elevations of the district, due to scarp landforms some waterfalls are observed in the district. The general slope of the district is from north to south. Geologically the area is comprised with Archean granites and gneisses. Geomorphologically the district is divided into 3 units:

i) The denudational hills with moderate to high slope occurring in the western part of the district.
ii) Dissected pediments having gentle slope.
iii) Pediplain having slope between 0^{o} to 5^{o}

4.2 Stratigraphy:

Geological Age	Geological Formation / Group
Quaternany	: Recent Alluvium, Clays, silt, Sand, Gravel
Tertiary	: Older Alluvium, Laterite, Baripada Beds.
Mesozoic/ Palaeozoic	: Volcanics / Epidiorite
Precambrian	: Slate/ Phyllite/ Schist / Gneiss
Archean	: Granite/ Granite Gneiss

4.3 Mineral Resources:

The earliest known geological survey in Mayurbhanj dates back to 1903, when P.N. Bose brought to light the extensive iron-ore deposits of high quantity on the Gorumahisani and Suleipat hills in Bamanghaty Sub-Division. These deposits were considered to be almost inexhaustible and were pronounced to be of excellent quality, perhaps second to none in the whole of Asia by the famous American and English experts like M/s Perin, Weld and Colonel Staddart, who visited these deposits during 1905-06. This discovery was a momentous one as the steel plant of the Tata Iron & Steel Co. at Jamshedpur was entirely based on the exploitation of these deposits. By 1915, important discoveries of Steatite near Lulung and placer gold from the sands of Subarnarekha, Kharkhai and Barhai rivers had been made. The placer gold deposits were being worked by M/s J.B. Bettie of Calcutta, Mr. V.G. Piggot of Ghatsila and the Mayurbhanj Prospecting Concession Syndicate.

Gold: The mid-Archaean Gorumahisani-Badampahar schist belt composed of basic ultrabasic, volcanic rocks and volcanogenic sediments. This belt has been prognosticated as a rift-type of volcanic dominated one and is highly potential for economic grade gold mineralization. Likely targets include: a) auriferous quartz veins close to the contact of sulphide chert volcanics, b) sheared and sulphidised Fe-rich tholeiite with anomalous copper, c) epigenetic vein type of mineralization and BIF volcanic association, and d) sulphidic conglomerate resting over the basic volcanics. Placer gold occurrences are known from rivers and stream of Mayurbhanj district. An area of about 5 square kilometers of alluvium at the headwaters of Sapgora and Borai rivers near Kudersai was indicated as promising.

Iron: Bose discovered iron ore deposits in Gorumahisani and Badampahar in the

eastwhile princely state of Mayurbhanj (now Mayurbhanj District). Gorumahisani deposits were investigated by Perin & Weld (1905). Gorumahisani- Badampahar-Suleipat deposits are associated with banded hematite / magnetite grunerite and BHJ.

Gorumahisani – Badampahar- Suleipat (Broad geological sequence)

Laterite & Alluvium
Newer Dolerite
Gabhro-Anorthosite Granite
---Unconformity---
Ultramafic dyke
Singhbhum Granite
Banded magnetite/ Martite quartzite with Fe-Ores
Quartzite
Basal Conglomerate
----Unconformity----
Older metamorphic

Vanadium Ores & Titanium*:* Vanadium is an important alloying element. Magnetite associated with gabbro- anorthosite suite of rocks contains vanadium and titanium. Deposits of vanadium-magnetite occur in association with gabbro-Anorthosite suite of rocks in the precambrian metamorphites. Vanadium bearing magnetite belts are :-

(a) Rairangpur – Bisoi belt (Kumardubi, Betjharan Amdabeda)

(b) Bisoi – Joshipur belt (Mayurbeka, Kesham, Sialnoi)

(c) Baripada – Podadiha belt (Andipur, Bahalda)

Bauxite: In Similipal complex (Mayurbhanj) aluminous laterite/ Bauxite are observed around 1000 m AMSL. The spongy aluminous laterite/bauxite occurs as sheets and boulders occupying the flat-topped hills made up of metavolcanics. Both ultramafics and metavolcanics are lateritised giving rise to nickeliferous laterite and aluminous laterite respectively.

Kyanite: Kyanite deposits of refractory grade occur in Panijia area of Mayurbhanj dist, where it is associated with dumortierite bearing rocks, qtz-veins, quartz-mica-schists and talc-tremolite-schist. Other kyanite occurrence include Purnapani & Similipal.

Pyrophyllite: is mainly used as a high grade ceramic product, electric insulator and refractory material. The comp. is $Al_2O_3 4SiO_2\ H_20$. It is formed as an alteration product of feldspar. Pyrophyllite occurrences are reported at Kankrani, Jashipur, Gorumahisani, Bangriposhi and Manada in Mayurbhanj dist. Ichinda, Khairakocha,

Jamukunda, Nakulkocha, Kapadiha, Dunguridiha, Maheshpur, Kashidiha, Sagragora and Pokpoka. Dimension stone of the district are granite, granite-gneiss, migmatites, syenite, gabbro, anorthosite, charnockite, leptynite, pyroxene granulite, dolerite, pyroxinite and dunite etc.

China Clay: is clay like material approximating the mineral Kaolinite (Al_2O3, $2SIO_2$, $2H_2O$). China clay is found to occur in a long belt stretching from Singhbhum to Mayurbhanj. Badampahar-Joshipur- Karanjia – Ramachandrapur belt is the most important china-clay producing area of the state. The important deposits in Mayurbhanj district are found near Joshipur, Chanchbani, Dumuria, Jamda, Kodadiha, Jamkeswar and Thakurmunda. China clay has many industrial applications as filler in paper, textile, rubber, in the manufacture of potteries, ceramics, sanitary wares, glazed tiles, white cement, insecticides, paints, cosmetics, refractory bricks etc. Soap stone and Steatite Asbestos is mined from Mayurbhanj area.

Fire Clay: Important deposits are found in Mayurbhanj district of Brukshyabhanupur belongs to Saraskana area.

Pyroxenite: Important deposits are found in Suruda, Samsaijunji, Chandri, Palsa and Dharamdihi belongs to Tiringi & Balada area of Mayurbhanj district.

Talc and soapstone (steatite): Important localities of these deposits in Mayurbhanj dist are Bangiriposi, Tiring, Kendumundi and Kharidamak.

Quartz & Quartzite: Quartz and silica sand are mostly used in glass foundry, ferrosilicon alloy, ceramic industry, abrasive, paint, rubber, textile industries. Transparent varieties of quartz such as rock crystal, amethyst, citrine, Rosequartz and smoky quartz are used as semi-precious gemstone. Quartz is a piezoelectric material and is used in radio circuit, Radars and ultra-sonic devices. Quartzite is a monomineralic rock constituted predominantly of quartz. There are 6 mining leases for quartz and quartzite in Mayurbhanj dist.

Decorative Stone Deposit: Important deposits are found in Sirathali, Brundabanchandrapur and Balijodi belongs to Udala, Khunta & G. B. Nagar area of Mayurbhanj district.

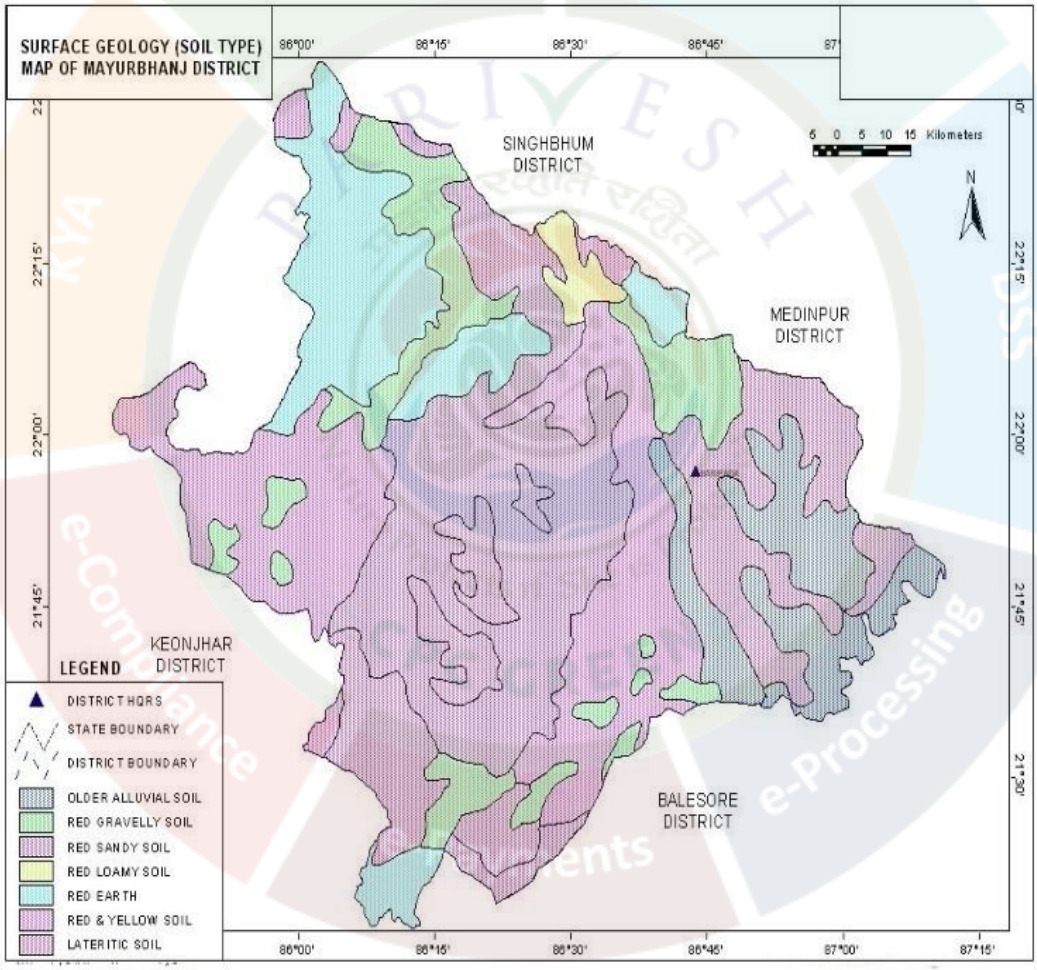
High Magnesia rock: are found in Notapahar, Thakurmunda, Amjori and Badampahar of Mayurbhanj Dist.

Nickel: Nickel is concentrated within chemically weathered ultramafic rocks and

found in the laterite and soil capping in Similipal area. The mineral occurs in silicate form i.e. garnierite. The important patches of prospective ore zones are: Gurguria and Nawana.

4.4 Soil:

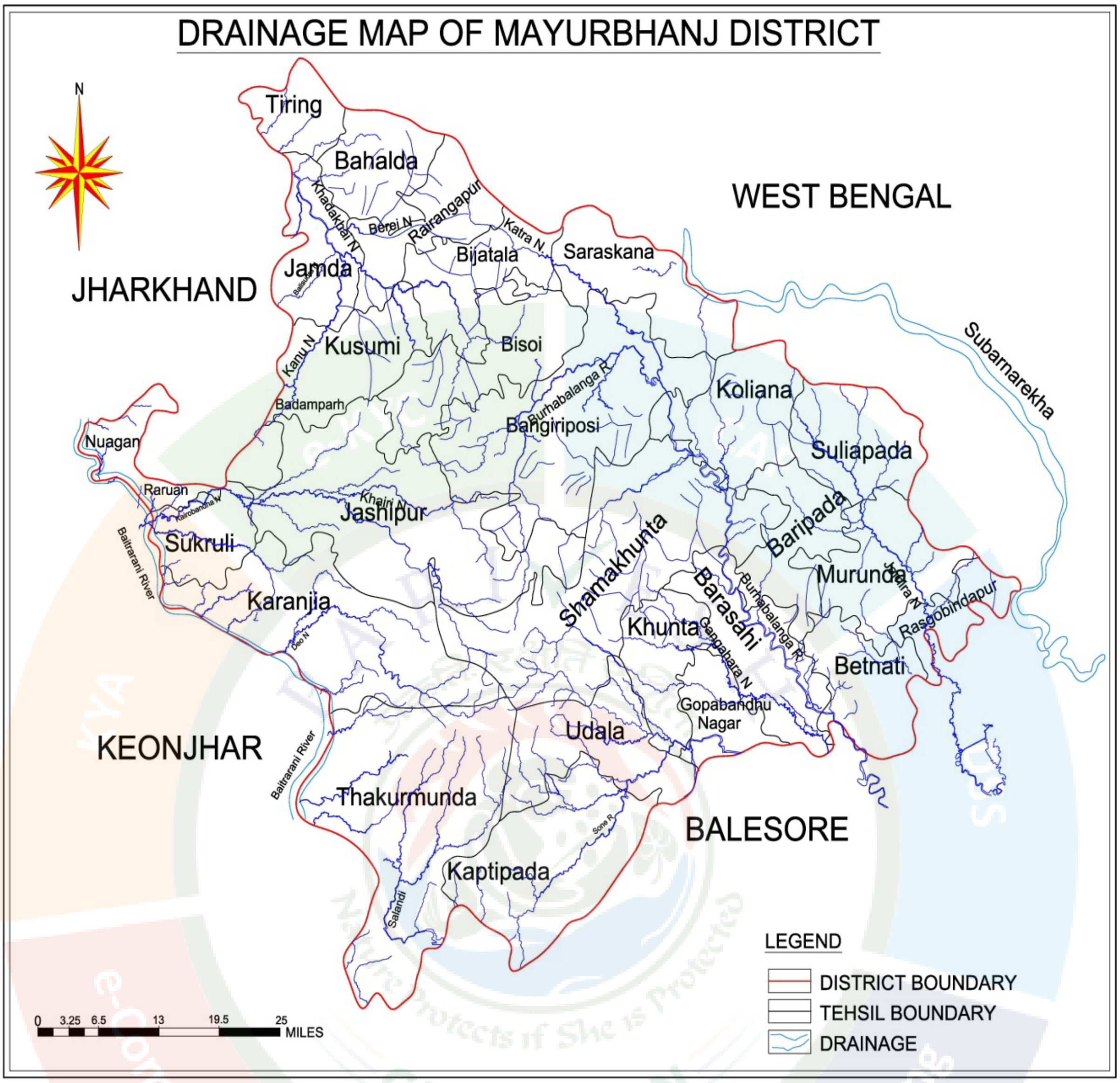
The district comprises chiefly of lateritic, sandy loam and clayey loam type of soil (Figure 3). Laterite soil is mostly marked in the area occupied by crystalline rocks. The low lying valley fields are covered with clayey loam type of soil.



5.0 DRAINAGE OF IRRIGATION PATTERN

The district has considerable flat land, which provide suitable site for agricultural use. The hilly areas are mostly under forest with patches of cultivation on scarp areas. Major rivers flowing in the district are Budhabalanga, Subarnarekha, Jambhira, Sona, Khadkhai, Deo, Katra, Khairibandhan & Baitarani. Major crops grown in the district are rice Only. 14.82 percent area of agricultural use are net irrigated and major source of irrigations are well and tube-wells.

Sl. No.	Name of the River	Area drained (Sq.Km.)	% Area drained in the District
1	Budhabalanga	2143	21%
2	Subarnarekha	265	0.25%
3	Jambhira	1377	13%
4	Sona	1062	10%
5	Khadkhai	1131	10.8%
6	Khairibandhan	1014	0.09%
7	Deo	473	0.04%
8	Katra	352	0.03%
9	Gangahar	594	0.057%
10	Baitarani	260	24.6%
11	Tel	96	0.009%
12	Kantamauli	82	0.007%
13	Sim	165	0.015%
14	Jhagada	30	0.002%
15	Balijori	56	0.005%
16	Kantakhaira	186	0.017%
17	Kanhu	383	0.036%
18	Balisudura	170	0.016%


DRAINAGE MAP OF MAYURBHANJ DISTRICT
N
JHARKHAND
WEST BENGAL
KEONJHAR
BALESORE
Tiring
Bahalda
Jamda
Bijatala
Saraskana
Kusumi
Bisoi
Badamparh
Bangiriposi
Koliana
Suliapada
Nuagan
Raruan
Jashipur
Sukruli
Karanjia
Shamakhunta
Baripada
Murunda
Barasahi
Khunta
Rasgobindapur
Betnati
Gopabandhu Nagar
Udala
Thakurmunda
Kaptipada
Subarnarekha
Baitrarani River
Burhabalanga R.
Katra N.
Rairangapur
Kanu N.
Khairi N.
Sone R.
Salandi
LEGEND
DISTRICT BOUNDARY
TEHSIL BOUNDARY
DRAINAGE
0 3.25 6.5 13 19.5 25
MILES

17

5.1 River System

The Budhabalanga River (also called Balanga River) flows through the districts of Mayurbhanj & Balasore and finally reached Bay of Bengal. The Budhabalanga, rises from Similipal hills and plunges through Barehipani Falls, the second-highest waterfall in India, located in Similipal National Park. It then flows in a northerly direction up to the village Karanjiapal in Bangiriposi police-station. Thereafter, it turns to the north-east and flows along the railway track up to the village Jhankapahadi. There it changes its course to the south and meets the Katra nala. The other tributaries are the Palpala and the Chipat both of which are hill streams rising from the Similipal hills. Then the river passes through Baripada. It later flows through Balasore district and into the Bay of Bengal. The Budhabalanga is about 175 kilometres (109 mi) long and has a total catchment area of 4,840 square kilometres (1,870 sq mi). Its major tributaries are the Sona, Gangahar, and the Katra. Burhabalang and its tributaries, viz. Sona Nadi, Amrutia Nadi, Gangahar Nadi drain almost round the year in the present area. Sona Nadi receives the watery effluent load through a nalah (Sankh nalah) from the Balgopalpur Industrial Estate and flows from west to east. Amrutia Nadi flows from NNW to SSE and carries the waste water load of East Coast. Subarnrekha originate from Nagri of Jharkhand and then enter into Mayurbhanj district, very less portion of the river flows within Mayurbhanj district, Major portion of Subarnarekha River passes in the Balasore district. Another river Jambhira runs in Mayurbhanj district then enters into Balasore district and Renamed as river Jalaka flows into Bay of Bengal. Other small rivers run in this district like River Khadkhai originates from Tunhgru R.F. and plunges through Suleipat Dam (Khadkhai Reserviour). It then runs towards Rairangpur, Bahalda, Tiringi area of western direction of Mayurbhanj district and finally reached at River Subarnarekha. River Deo rises from Similipal R.F. and runs towards western part of the district and flows through Karanjia area and then joins with Baitarani River. River Khairabandhan originates from Similipal R.F. and flows towards western part of the Mayurbhanj district through Jashipur, Raruan, Sukruli area of district and then joins with River Baitarani This river maintains a sluggish flow in the pre-monsoon period, but swells menacingly with the onset of monsoon often flooding large tracts. Another small tributary named as Kanhu starts from River Khadkhai and branched into Jalapa, Ghagera nala meets at Jharbeda area

of Mayurbhanj District.

Sl. No.	Name of the River or Stream	Total Length in District (in Km.)	Place of Origin	Altitude at Origin
1	Budhabalanga	161	Similipal Hill	940 mrl.
2	Subarnarekha	4	Nagri, Jharkhanda	610 mrl.
3	jambhira	64	Chandra R.F. Mayurbhanj	60 mrl.
4	Sona	70	Jaymal Hill, Dugdha Mayurbhanj.	340 mrl.
5	Khadkhai	75	Tunhgru R.F.	500 mrl.
6	Khairibandhan	65	Similipal R.F.	800 mrl.
7	Deo	65	Similipal R.F.	930 mrl.
8	Katra	55	Jari R.F.	700 mrl.
9	Gangahar	55	Similipal R.F.	740 mrl.
10	Baitarani	48	Gonasika, Guptaganga Hills	900 mrl.
11	Tel	20	Similipal R.F.	940 mrl.
12	Kantamauli	25	Similipal R.F.	360 mrl.
13	Sim	85	Similipal R.F.	900 mrl.
14	Jhagada	15	Jhagada R.F.	430 mrl.
15	Balijori	22	Similipal R.F.	520 mrl.
16	Kantakhaira	36	Similipal R.F.	420 mrl.
17	Kanhu	42	Similipal R.F.	400 mrl.
18	Balisudura	15	Similipal R.F.	450 mrl.

6.0 LAND UTILIZATION PATTERN IN THE DISTRICT

6.1 Forest and non forest land

The forest of Mayurbhanj district is full variety of medicinal plants, Kendu leaves, Bamboo, Sal, Teak, other timber species and a wide range of carnivorous & herbivorous wild animals. The district has one Wildlife Sanctuaries known as the Similipal Wildlife Sanctuary situated at the heart of the district, which hosts all type of wildlife even tigers. The area of the sanctuary is 26, 886.23 hectares. And two kilometer safety zone of eco-sensitive zone of Similipal Wildlife Sanctuary are coming in Mayurbhanj district. In these sanctuary areas the principal animals that are found are Elephant, Bear, Nilgai, Sambhar, Peacock, Wild Boar and Deer, together with variety of snakes and birds.

District-wise Forest Cover Area in Odisha (Area in Km^2)

2017 Assessment								
District	**Geographical Area Km^2**	**Very Dense Forest**	**Moder-ate. Dense Forest**	**Open Forest**	**Total**	**Percent of GA**	**Change**	**Scrub**
Angul	6375	371	1380	1004	2755	43.22	43	84
Bolangir	6575	70	224	837	1131	17.2	151	142
Balasore	3806	23	127	234	380	9.98	30	48
Bargarh	5837	176	371	484	1031	17.66	88	47
Bouda	3098	263	546	480	1289	41.61	27	57
Bhadrak	2505	0	9	66	75	2.99	2	0
Cuttack	3932	53	226	517	796	20.24	11	68
Deogarh	2940	191	667	614	1472	50.07	-3	14
Dhenkanal	4452	174	418	825	1417	31.83	9	82
Gajapati	4325	84	1490	946	2520	58.27	12	262
Ganjam	8206	164	1075	864	2103	25.63	15	655
Jagatsinghpur	1668	0	5	131	136	8.15	6	0
Jajpur	2899	6	72	225	303	10.45	3	50
Jharsugada	2114	3	140	179	322	15.23	9	36
Kalahandi	7920	362	729	1327	2418	30.53	36	362
Kandhamal	8021	661	2588	2143	5392	67.22	16	380
Kendrapada	2644	84	88	133	305	11.54	14	2
Keonjhar	8303	289	1404	1519	3212	38.68	4	55
Khorda	2813	21	186	250	457	16.25	0	92
Koraput	8807	94	740	1255	2089	23.72	120	944
Malkangiri	5791	158	709	1475	2342	40.44	20	45
Mayurbhanj	**10418**	**1335**	**1718**	**1027**	**4080**	**39.16**	**42**	**34**
Nabarangpur	5291	168	428	507	1103	20.85	8	47
Nayagarh	3890	189	965	556	1710	43.96	28	173
Nuapada	3852	86	482	705	1273	33.05	33	109
Puri	3479	0	54	160	214	6.15	8	11
Rayagada	7073	422	853	1851	3126	44.2	7	349
Sambalpur	6624	499	1675	1106	3280	49.52	13	40
Subarnapur	2337	2	187	161	350	14.98	26	29
Sundargarh	9712	1019	1814	1431	4264	43.9	107	89
Grand Total	**155707**	**6967**	**21730**	**23008**	**51345**	**32.98**	**885**	**4306**

(Source: India state of forest report 2017-Odisha)

The major portion of the district is covered by forest (39.16 % of TGA) and has

scattered settlement pattern. The forest is full of variety of medicinal plants. The district has considerable flat land, which provide suitable site for agricultural use. The hilly areas are mostly under forest with patches of cultivation on scarp areas. Major crops grown in the district are rice and pulses. Only 14.82 percent area of agricultural use are net irrigated and major source of irrigations are well and tube wells.

Source: Fertilizer and Agriculture Statistics, Eastern Region

Tahasil	Forest Area	Misc Tree	Permanent Pasture	Cultivated waste	Non Agricultural uses	Barren land	Current Fallow	Other Fallow	Net area sown
Bahalda	964	471	1397	1262	2590	1900	875	944	14031
Bangiriposi	3712	281	1037	1688	3046	684	2054	922	16951
Baripada	216	6733	128	1628	1376	8	2752	2156	4219
Badasahi	288	1807	1194	1874	3840	24	3378	2110	17630
Betnoti	2271	911	1198	1728	3227	21	1915	578	17022
Bijatala	2841	224	681	3100	1792	1636	1214	600	11228
Bisoi	3116	471	757	2508	2193	459	2298	1643	15860
G.B.Nagar	191	116	683	582	1147	590	643	1209	10960
Jamda	408	100	1650	434	2060	785	840	1149	13608
Jashipur	8932	141	1389	2655	3637	400	3873	2634	17754
Kaptipada	8745	387	3292	5596	4123	2165	3123	4930	19932
Karanjia	1644	838	1444	2441	3065	462	3493	1362	16690
Khunta	400	2260	314	672	2061	21	1332	2213	12879
Kuliana	1749	1626	2222	1902	2529	608	4919	1504	11108
Kusumi	1434	32	2320	2679	2337	587	1086	1682	18032
Morada	993	4127	513	4340	1941	61	1909	3633	10179
Rairangpur	2260	107	1759	1373	2027	504	1276	631	9713
Raruan	1210	171	890	1120	1899	503	1609	1020	12818
Rasgovindpur	288	2145	665	1091	2774	142	2002	1537	10054
Shamakhunta	1354	764	1378	2472	1859	334	1861	941	6695
Saraskana	3464	275	689	2658	4042	115	1864	1837	15384
Sukruli	412	211	734	1295	1271	502	1286	1294	10352
Suliapada	2937	5535	97	2262	2148	86	1589	2906	8971
Thakurmunda	10885	96	1530	1438	2034	795	5317	2670	17681

6.2 Mining land:

Mayurbhanj district in Odisha has diverse mineral resources, including iron ore, vanadiferous and titaniferous magnetic, china clay, Fireclay, talc, pyroxenite &kyanite,asbestos, steatite (soap stone), artisan grade stone, quartz &quartzite and decorative stone etc. constitute the principal mineral resources of district, out of these the iron-ore deposits of Gorumahisani, Badampahar and Suleipat, which have been exploited for a period of about half a century.Instead of these the district has deserve a special mention with mining activities primarily focused on minor minerals like sand, stone asweathered granite, and brick clays, with some leases for morrum quarry.Total

land covered for all these above mineral is chalked out tentatively 7657.085 hectares which may increase in future with reconnaissance survey.

6.3 Agriculture Land:

Mayurbhanj is surrounded by no of forest areas as well as Rocky Mountains. People used to cultivate Paddy in most parts of the hill slopes and in plain lands. Most of the cultivators grow short duration local paddy in the un-bonded upland during Kharif season. The crop suffers moisture stress at different stages due to inadequate rainfall. The primary objective of Agriculture Department is increase of production as well as productivity of major crops like paddy, groundnut, mustard, Mung, Biri & vegetables which is widely covered in this District in both Kharif & Rabi season. Another key objective is the all round development of the farming community of the District. The Deputy Director of Agriculture is the head of office so far as agriculture is concerned & he is the Principal Agriculture Officer of the District. Under him there are 5 District Agriculture Officers & the block under them. As already pointed out, that agriculture is the main livelihood of the people in Mayurbhanj District. It is therefore also designated as the food bowl of Odisha. Rice is the principal crop grown in this district, followed by other cereals, pulses, oilseeds, vegetables, spices and sugarcane. The agricultural statistics for the district is shown in subsequent tables below:

Table – 3.6a: Crop Coverage Area of Mayurbhanj District, Odisha

Crop	Khariff		Rabi		Annual	TOTAL	
	Area (ha)	(% of Cropped Area	Area (ha)	% of Cropped Area	Area (ha)	Gross Croppe d Area (ha)	% of Gross Cropped Area
Rice	301.37	82.353%	3.80	4.015%	---	305.17	62.051%
Cereals	9.99	2.730%	2.17	2.293%	---	12.16	2.472%
Pulses	32.37	8.846%	36.20	38.255%	---	68.57	13.943%
Oilseeds	5.92	1.617%	28.30	29.906%	---	34.22	6.958%
Vegetables	12.39	3.386%	21.74	22.974%	---	34.13	6.940%
Fibres	2.43	0.664%			---	2.43	0.494%
Spices	1.48	0.404%	2.42	2.557%	---	3.90	0.792%
Sugarcane	---	---	00	---	---	00	---
Tobacco	---	---	00	---	---	00	---
Fruits	---	---	---	---	---	31.23	6.350%
TOTAL	**365.95**	**100.00%**	**94.63**	**100.00%**	**---**	**491.81**	**100.00%**

6.4 Horticulture Land:

The primary objective of Horticulture Department is increase of production as well as productivity of major fruits like Mango, Guava, Citrus etc., which is widely covered in this District. Another key objective is the all round development of the farming community of the District. The Deputy Director of Horticulture is the head of office.

7.0 SURFACE WATER AND GROUND WATER SCENARIO OF THE DISTRICT

7.1 Hydrogeology

Distribution of Saline / fresh water aquifers:

The occurrence of fresh water aquifers in coastal tract of Mayurbhanj restricted by two important factors- (i) Occurrence of hard rocks in the western side and (ii) Salinity hazard problems in the eastern part. The water bearing formation of the area can be divided into (a) areas underlain by fractured, fissured and consolidated basement rock formations (b) areas underlain by recent unconsolidated alluvial formations.

(a) Consolidated Formation - These are most predominant rock types occurring in the undulating plains of the district. Groundwater occurs under unconfined condition in the shallow weathered zone and circulates through fractures and joints. The thickness of the weathered zone varies from 3 to 35 m. Depth of open wells in these formations varies from 5 to 14 m below ground level.

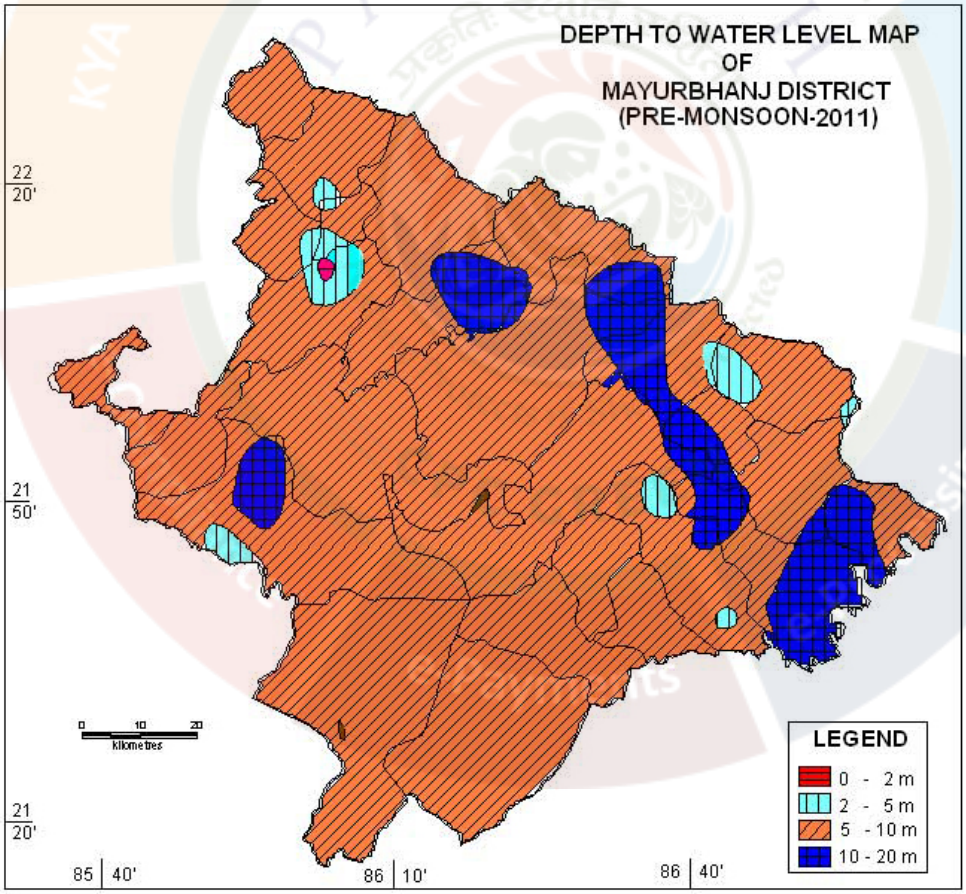
(b) Unconsolidated alluvial formations - The unconsolidated formations consists of laterite and alluvium. Laterites at places are highly consolidated and used as building stones. The laterites have high degree of effective porosity and form potential aquifers commonly tapped in dug wells. The alluvium comprises an admixture of clay, silt, sand and calcareous concretions in varying proportions. The coarse sediments like sand and gravel form the main repository of ground water. Ground water occurs under both unconfined condition in shallow aquifers and in confined condition in deeper parts.

7.2 Depth of water level:

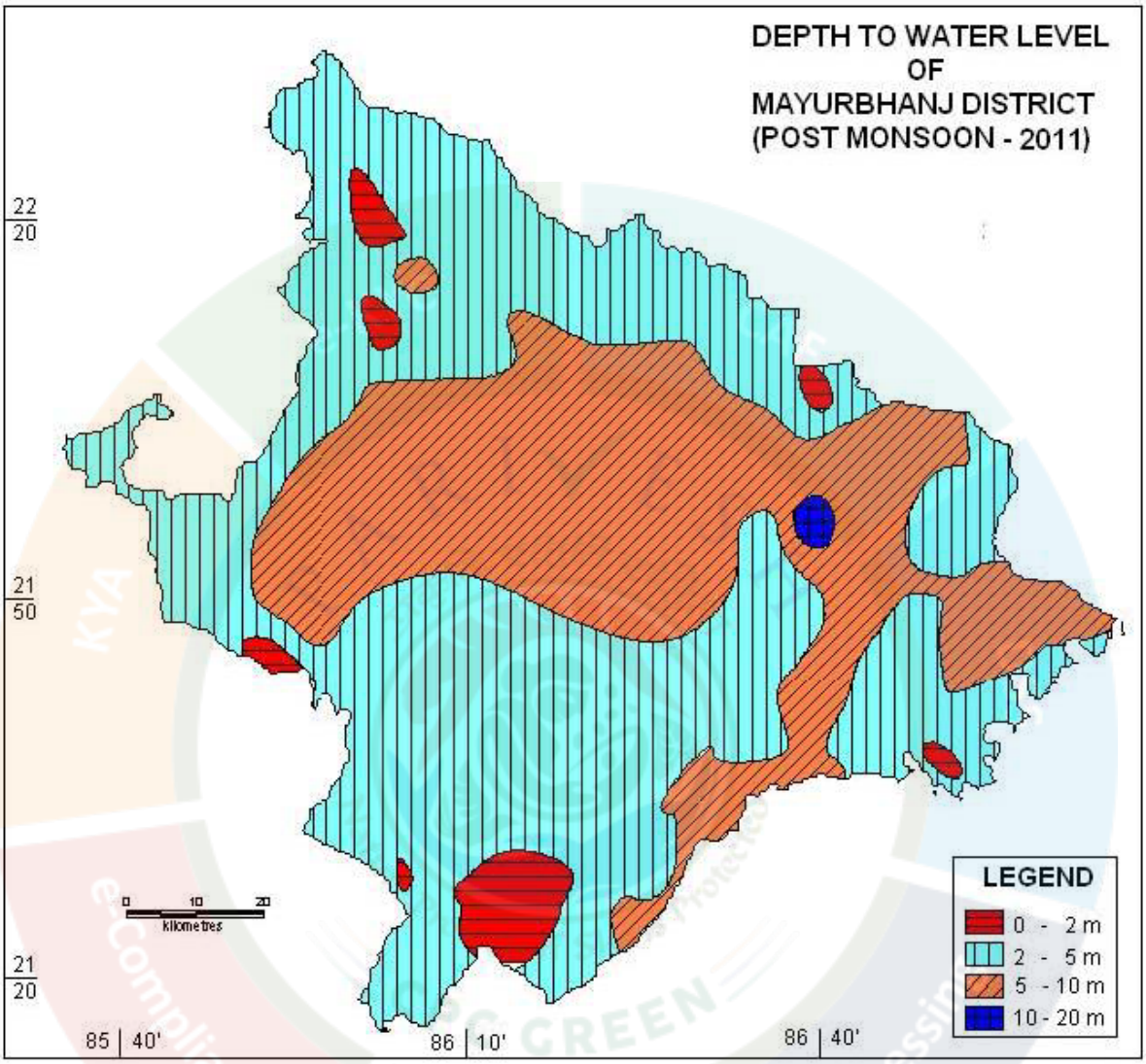
The depth to water level map for pre and post monsoon periods 2011 are prepared based on the ground water monitoring data of 77 Nos of National Hydrograph

Stations of C.G.W.B. monitored during the month of April and November 2006 are presented below respectively**.** The pre and post monsoon depth to water levels in the district range from 3.54 to 14.50 m below ground level and 1.39 to 8.20 m below ground level respectively. It is observed that during pre monsoon about 75% of the total areas show the water level varying between 5 to 10 m below ground level. During post monsoon nearly 60% of the area has water levels within 2 to 5 m, while the rest part has between 0 to 2 and 4 to 6 m below ground levels. In localized part of Morada, Kaptipada and Thakurmunda the water level is > 5 mt.

Depth & categorization of ground water levels during pre monsoon period (April 2011) of Mayurbhanj districts is presented below:



Depth & categorization of ground water levels during pre monsoon period (November 2011) of Mayurbhanj districts is presented below:



7.3 Ground Water Quality

The chemical quality of ground water in the district has been assessed on the basis of chemical analysis of ground water samples collected during groundwater monitoring, Hydrogeological surveys and groundwater exploration. The results of the chemical analysis are presented in Table.

Table showing chemical constituents in aquifers

Constituent	Shallow aquifer	Deeper aquifer
pH	6.97 – 8.25	6.84 – 8.25
Sp. Conductance (micromohs/cm at 25^0 C)	53 – 974	92 – 867
TDS (mg/l)	58 – 1430	106 – 429
Calcium (mg/l)	6 – 92	16 – 86
Magnesium (mg/l)	0.6 – 17	3.6 – 22
Sodium (mg/l)	1.6 – 100	3.5 – 168
Potassium (mg/l)	0.4 – 8	<1 --6.4
Bicarbonate (mg/l)	15 – 256	49 – 366
Chloride (mg/l)	7 – 238	5.3 – 85
Sulphate (mg/l)	0.1 – 9	<1 – 82
Nitrate (mg/l)	<0.01 – 53	0.1 – 78
Fluoride (mg/l)	0.08 – 20.3	0.21 – 0.61
Total hardness as calcium carbonate	10 – 245	35 - 285

7.4 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. In general dug wells are of 2 m diameter and the depth ranges between 8 to 15 m depending on the thickness of the weathered zone, tapping the shallow aquifer 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) less susceptible to contamination from surface sources and ii) 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. Over all the present level of ground water development is only 27.21 percent in the district with the maximum in Badasahi Block viz. 64.65% and minimum in Bijatala Block. Block wise development figure indicate that all the blocks come under the white categories. Thus there is ample scope for development of groundwater in the district to augment irrigation potentials through suitable ground water abstraction structure

7.5 Ground Water Related Issue and Problems

Some of key ground water related issues are

I. Locating suitable sites for bore wells

II. Suitable design of dug wells and hand pumps

III. Taking up artificial recharge projects to augment the resource availability in Mayurbhanj district.

IV. Optimal development of irrigation potential by developing ground water available for future uses.

V. Creating public awareness for conserving ground water through awareness camps, NGO's and mass media.

7.6 Mass Awareness Campaign (MAC) & Water Management Training Programme (WMTP) by CGWB

NIL

7.7 Area Notified by CGWB/SGWA

NONE

7.8 RECOMMENDATIONS:

1) Intensive groundwater exploration should be taken up to delineate deeper potential water saturated fracture zones and to compute aquifer parameter.
2) Large scale planning for ground water development should be preceded by intensive hydrogeological and geophysical surveys aided by remote sensing studies.
3) Effective measures may be taken to conserve the surface run off by contour bonding at suitable sites. Also proper maintenance of reservoir, tanks and spring channels by periodical disiltation should be carried out.
4) Existing dug-wells should be deepened to tap the maximum saturated thickness of the weathered mantle or vertical bores may be drilled through the bottom to enhance the well yield.
5) Energy station of wells already constructed should be stepped up to ensure optimal utilization of the irrigation potential already created.
6) The farmers should be educated through agricultural extension services fro adopting suitable cropping pattern for optimal utilization of available groundwater resources.

7) Programmes for artificial recharge may also be taken up for augmentation of groundwater through construction of percolation tanks, subsurface dykes, and check dams and through contour bonding etc.
8) An intensive network of groundwater monitoring stations are required to be established in the command areas of irrigation projects to monitor the changes in groundwater regime consequent on application of surface water irrigation.

8.0 RAINFALL OF THE DISTRICT AND CLIMATE CONDITION

8.1 Month wise rainfall:

The driest month is November, with 3 mm of rain. There is on average 0 mm of precipitation in December. In July, the precipitation reaches its peak, with an average of 324 mm. May is the warmest month of the year. The temperature in May averages 32.3 °C. January has the lowest average temperature of the year. It is 16.5 °C.

Year		2022	2023	2024	Average
Sl. No.	Month	(mm)	(mm)	(mm)	(mm)
1	Jan	28.83	0.00	21.50	16.78
2	Feb	22.83	0.00	15.39	12.74
3	Mar	4.65	68.75	88.12	53.84
4	Apr	23.66	33.74	2.26	19.89
5	May	89.22	73.79	96.40	86.47
6	Jun	164.70	115.17	94.87	124.91
7	Jul	294.01	304.17	278.37	292.18
8	Aug	487.45	363.42	342.10	397.66
9	Sep	178.75	274.08	391.10	281.31
10	Oct	119.34	87.27	29.18	78.59
11	Nov	0.00	16.86	0.00	5.62
12	Dec	0.00	38.67	0.00	12.89
Total		**1413.44**	**1375.92**	**1359.29**	**1382.88**

Source: District Emergency Operation Centre, Mayurbhanj.

The District Emergency Operation Centre, Mayurbhanj, Baripada vide letter No. 1558/Emg, dated 15th October, 2024 has provided the period of Rainy Season viz. Normal dates of Onset and Withdrawal of South West Monsoon over India as state-wise. The duration for the period is 10th June to 15th October.

8.2 Climate

The climate in Mayurbhanj is warm and temperate. In winter, there is much less rainfall in Mayurbhanj than in summer. The general climate of the district is characterized by oppressive heat in summer, severe cold in winter with high humidity throughout the year. The rainfall distribution is equal during the monsoon period. The period from June to October is the rainy season and the district experiences it from the southwest monsoon. May is the hottest month when the mean daily maximum temperature rises up to 47° Celsius. The Köppen-Geiger climate classification is Cwa & as per they the average temperature in Mayurbhanj is 24.7 °C. The temperature in May averages 32.3 °C. January has the lowest average temperature of the year, it is 16.5 °C. There is a difference of 321 mm of precipitation between the driest and wettest months. During the year, the average temperatures vary by 15.8 °C., when the mean daily minimum temperature dips to 4º Celsius. The higher reaches of the Similipal experiences frosting during the peak of winter.

9.0 DETAILS OF MINING LEASE OF CHAINA CLAY IN THE DISTRICT

9.1 List of Mines is operation in the district:

Attached as **Annexure- H**

9.2 List of Mines not in operation in the district:

Attached as **Annexure- H**

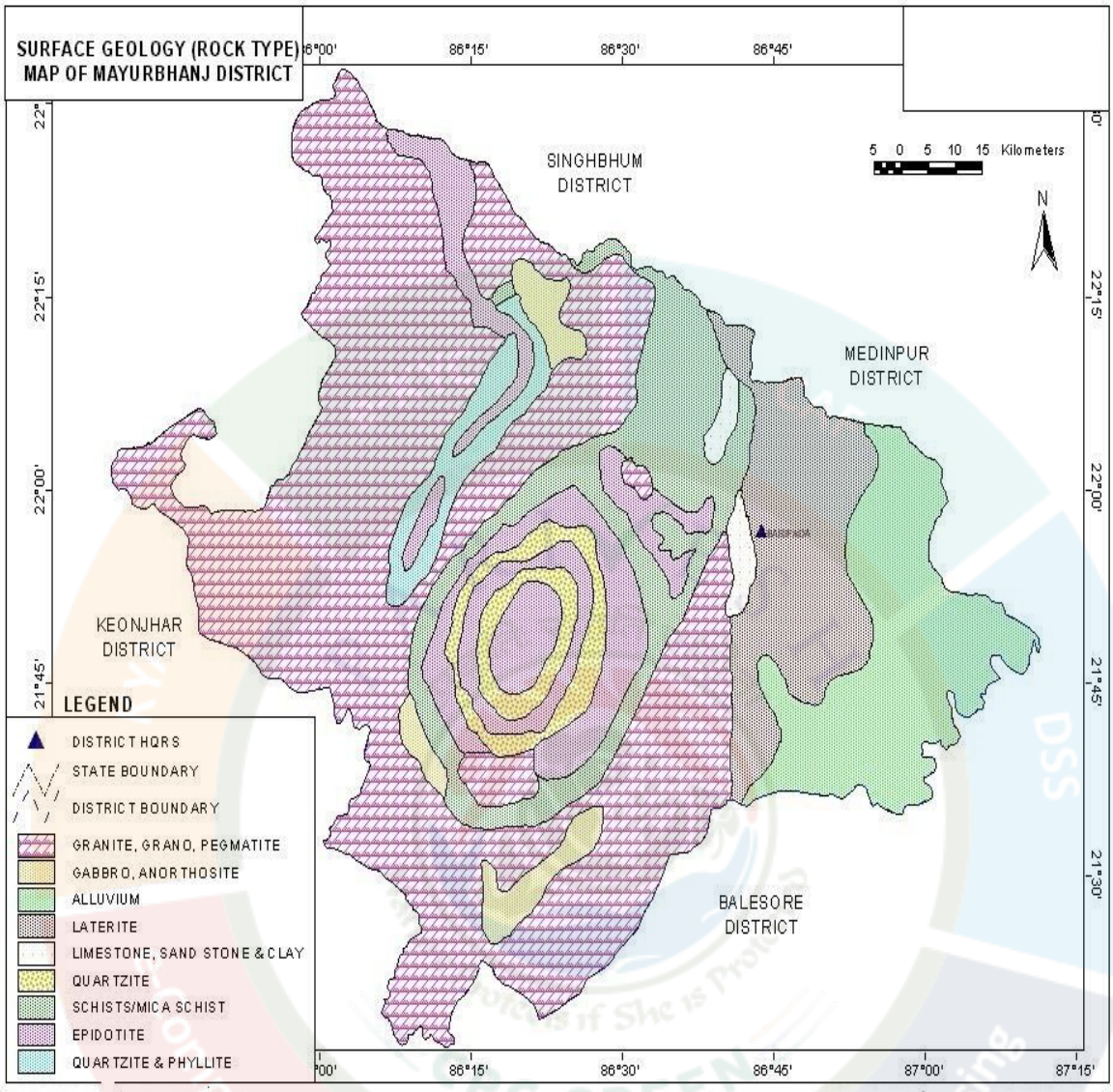
10. DETAIL OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS:

Sl. No.	Name of the Mining Circle	2021-22	2022-23	2023-24	Total Amount (Rs.)
1	Baripada	Nil	Nil	Nil	**Nil**
Grand Total		**Nil**	**Nil**	**Nil**	**Nil**

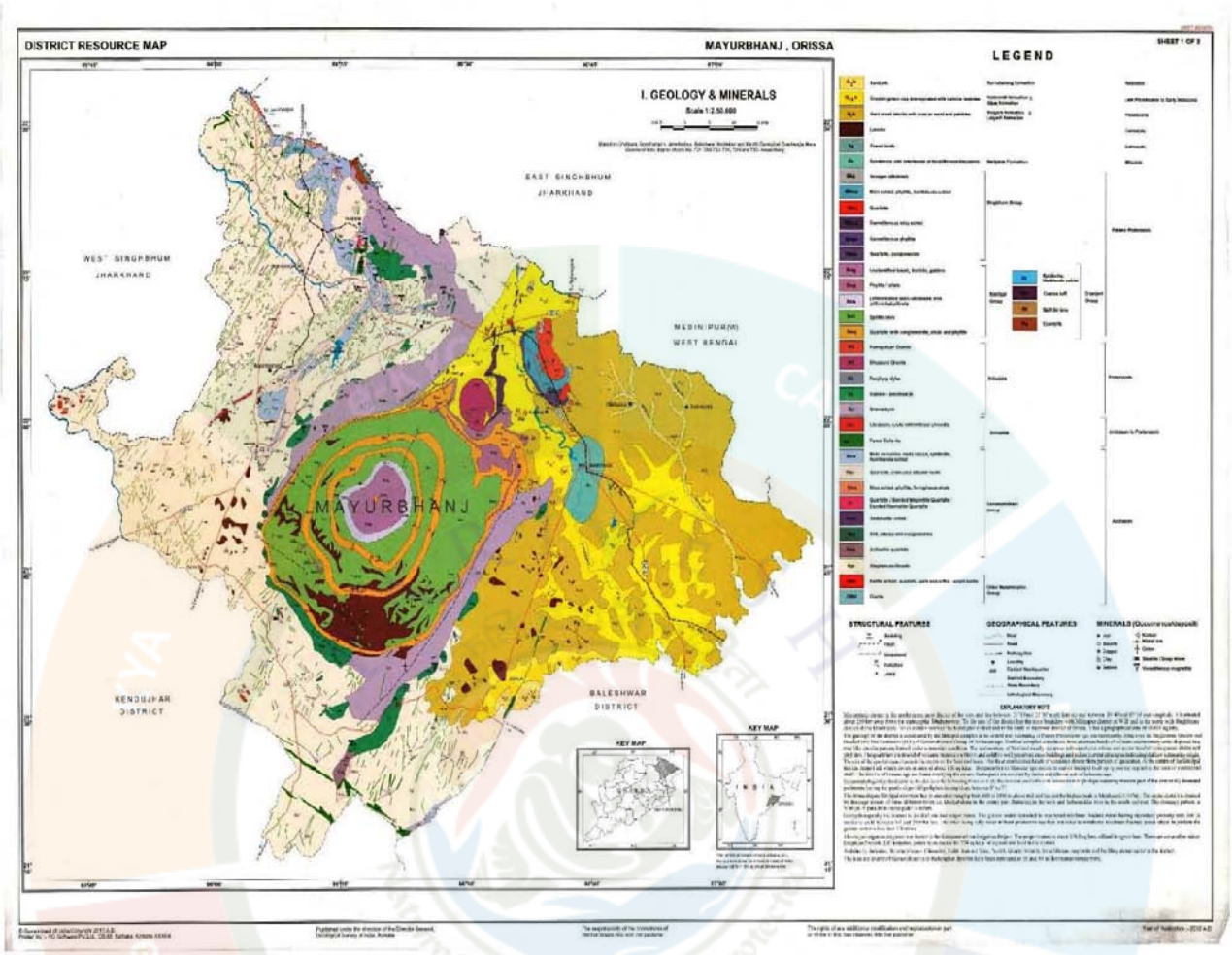
11. DETAIL OF PRODUCTION OF CHINA CLAY IN LAST THREE YEARS:

Sl. No.	Name of the Mining Circle	2021-22	2022-23	2023-24	Total in tonne.
1	Baripada	Nil	Nil	Nil	**Nil**
Grand Total		**Nil**	**Nil**	**Nil**	**Nil**

12. MINERAL MAP OF THE DISTRICT:



Geological Map of the District:



13. LIST OF LETTER OF INTENT (LOI) HOLDERS IN THE DISTRICT ALONG WITH ITS VALIDITY

Sl. No.	Name of the Mineral	Name of the Lessee	Address	Letter of Intent Grant Order No. & date	Area of Mining lease to be allotted	Validity of LoI	Use (Captive / Non-Captive)	Location of the Mining lease (Latitude & Longitude)
1	2	3	4	5	6	7	8	9
Attached as **Annexure-H**								

14. TOTAL MINERAL RESERVE AVAILABLE IN THE DISTRICT

Total mineral resource of China Clay is estimated as **15,931,531** tonne which will produce over 1976.358 hectare of land and may increase after detail investigation as

per details below.

(i) Blocks were identified based on geological studies through field observation.

(ii) Mineable resource was calculated by considering detail prospecting.

(iii) Area calculated as per GPS co-ordinates and information obtained from local people. Land detail need to be verified from revenue record.

(iv) Since this is an interim report, as per the present requirement of minerals, more such blocks need to be identified and the data should be updated periodically, after certain intervals to update the data bank of DSR.

Summary of Identified Mineral Potential:

Sl. No.	Name of the mineral	Name of the lessee	Address and contact No. of the lessee	Letter of Intent Grant Order No. and date	Area of mining lease to be allotted	Validity of LoI	Use (Captive/ Non-Captive	Location of the Mining lease (Latitude & Longitude)
1	2	3	4	5	6	7		
Attached as **Annexure-H**								

Sl. No.	Name of the Mining Circle	Mineral Resources in tonne.	Mineable Reserve in tonne.
1	Baripada	19,1,13,436	159,31,531
Total		**19,1,13,436**	**159,31,531**

15. QUALITY/GRADE OF MINERAL AVAILABLE IN THE DISTRICT:

Rocks and Minerals found in Mayurbhanj District:-

The district is endowed with various types of mineral resources like Iron ore, China Clay, Quartz, Soap stone, Granite, Manganese, etc. Due to presence of huge mineral resources, mining activities have been undertaken in a big scale. Bahalda, Jashipur, Karanjia, Kesharpur, Bisoi, Gorumahisani and Rairangpur are the places in the district having deposits of the above mineral products. The availability of mineral deposits is given in the table below. The district's mineral deposits have not been utilized to maximum extent for industrial purpose. Some of the items like China clay, Soap stone, Asbestos, etc. can be used in small scale sector. So the available resources of the district need harnessing properly for industrial and

productive use. China Clay of the district are very much suitable for various industrial purposes after crushing and screening.

16. USE OF MINERAL:

Uses of China Clay:

Kaolin, also called china clay, soft white clay that is an essential ingredient in the manufacture of china and porcelain and is widely used in the making of paper, rubber, paint, and many other products. Kaolin is named after the hill in China (Kao-ling) from which it was mined for centuries. In its natural state kaolin is a white, soft powder consisting principally of the mineral kaolinite, which, under the electron microscope, is seen to consist of roughly hexagonal, platy crystals ranging in size from about 0.1 micrometer to 10 micrometers or even larger. Kaolin as found in nature usually contains varying amounts of other minerals such as muscovite, quartz and feldspar. In addition, crude kaolin is frequently stained yellow by iron hydroxide pigments. It is often necessary to bleach the clay chemically to remove the iron pigment and to wash it with water to remove the other minerals in order to prepare kaolin for commercial use. When kaolin is mixed with water in the range of 20 to 35 percent, it becomes plastic (i.e., it can be molded under pressure). Approximately 40 percent of the kaolin produced is used in the filling and coating of paper. In filling, the kaolin is mixed with the cellulose fibre and forms an integral part of the paper sheet to give it body, colour, opacity, and printability. In coating, the kaolin is plated along with an adhesive on the paper's surface to give gloss, colour, high opacity, and greater printability. Kaolin is used extensively in the ceramic industry, where its high fusion temperature and white burning characteristics makes it particularly suitable for the manufacture of white ware (china), porcelain, and refractories. The absence of any iron, alkalies, or alkaline earths in the molecular structure of kaolinite confers upon it these desirable ceramic properties. In the manufacture of whiteware the kaolin is usually mixed with approximately equal amounts of silica and feldspar and a somewhat smaller amount of a plastic light-burning clay known as ball clay. Kaolin is generally used alone in the manufacture of refractories.

Substantial tonnages of kaolin are used for filling rubber to improve its mechanical strength and resistance to abrasion. For this purpose, the clay used must be extremely pure kaolinite and exceedingly fine grained. Kaolin is also used as an

extender and flattening agent in paints. It is frequently used in adhesives for paper to control the penetration into the paper. Kaolin is an important ingredient in ink, organic plastics, some cosmetics, and many other products where it's very fine particle size, whiteness, chemical inertness, and absorption properties give it particular value.

17. DEMAND AND SUPPLY OF THE MINERAL IN THE LAST THREE YEARS:

As such there are huge infrastructural and industrial activities are coming up by State Govt., Govt. of India & PSUs under "Make in India" programme. The China Clay are the main raw material for the above activities and considering the last three years' actual production with respect to the requirement of the state has a huge gap. It is proposed to start the stone production from larger block/area to at least double the production of the district which will enhance the revenue of the district and also support the livelihood of the local people.

Sl No.	Name of the Mining Circle.	Financial Year	China Clay in tonne
1	Baripada	2021-22	Nil
		2022-23	Nil
		2023-24	Nil
Total			**Nil**

18. MAP OF EXISTING MINING LEASES IN THE DISTRICT:

Enclosed as Plate-I

19. DETAILS OF THE AREA OF WHERE THERE IS A CLUSTER OF MINING LEASE VIZ. NUMBER OF MINING LEASES, LOCATION (LATITUDE AND LONGITUDE)

Currently there are no clusters of mining lease area in the district. However, it is proposed to consider the cluster of mining lease if required while planning for new lease area in coming years.

20. DETAILS OF ECO-SENSITIVE AREA, IF ANY, IN THE DISTRICT:

Eco sensitive zone of Similipal **National Park** is located within the district Mayurbhanj of Odisha, the primary **Eco Sensitive Zone** is the Similipal Tiger Reserve, National Park and known for its rich biodiversity. Apart from Similipal **National Park** of Mayurbhanj district another two Wildlife Sanctuaries namely Hadgarh and Kuldiha

Wildlife Sanctuaries partly situated adjacent to Mayurbhanj district, however major part is situated in Keonjhar and Balasore district respectively; those are known for its diverse wildlife and is a crucial part of the protected area network. The Government of Orissa declared Similipal as a wildlife sanctuary in 1979, which derives its name from *'Simul'* (Silk Cotton) tree, is a national park and a Tiger Reserve situated in Mayurbhanj district of Orissa. Apart from the tiger, the major mammals are Elephant, Leopard, Sambar, Barking Deer, Gaur, Jungle Cat, Wild Boar, Four-Horned antelope, Giant Squirrel and Common Langur. Grey Hornbill. The park also has a sizeable population of reptiles, which includes the longest venomous snake, the King cobra and the Tricarinate hill turtle. The Mugger Management Programme at Ramatirtha has helped the mugger crocodile to flourish on the banks of the Khairi and Deo Rivers. The tiger reserve is spread over 2750 Sq Km and has some beautiful waterfalls like Joranda and Barehipani. The park is surrounded by high plateaus and hills, the highest peak being the twin peaks of Khairiburu and Meghashini above 1515 m MSL. At least twelve rivers cut across the plain area, all of which drain into the Bay of Bengal. The prominent **water Course are** Burhabalanga, Palpala Bandan, Salandi, Kahairi and Deo. About 1078 species of plants including 94 species of orchids with the vegetation is a mix types and habitats, with Northern tropical moist deciduous dominating some semi-evergreen patches. Sal is the dominant tree species here. The area also has extensive grasslands that are grazing grounds for many of the herbivores. These forests boast of many plants that have medicinal and aromatic properties. Apart from the biodiversity of the district, mining does not have any effect the eco-sensitive region of the district as no mining operation is carried out inside the eco-sensitive region as per the guidelines of Ministry of Environment, Forests & Climate Change (MoEF & CC) Govt. of Odisha.

21. IMPACTS OF MINING ON ENVIRONMENT:

The project activities with respect to mining & beneficiation as discussed in this chapter have certain effects on various environmental domains that proposed in the area. A scientific assessment of these impacts those are likely to influence the existing environmental scenario is needed. This could also facilitate in formulating a suitable environmental management plan depicting all mitigation measures. It can help in

implementing the project in an eco-friendly manner. The project activities influencing the following environmental attributes have been studied and their impacts on the following attributes have been assessed.

- Land Environment
- Water Environment
- Air Environment
- Noise Environment
- Biological Environment
- Waste Management
- Transportation
- Socioeconomics

22. REMEDIAL MEASURES TO MITIGATE THE IMPACT OF MINING ON THE ENVIRONMENT:

Following are the remedial measures to mitigate the degradation of Environment due to the mining project.

❖ LAND ENVIRONMENT:

Anticipated Impacts:

- Excessive and unscientific riverbed material mining may impact to nearby structures.
- River bank cutting and erosion of river bed.
- Waste water, heavy metal, stack emissions and fugitive emission may leads the oil pollution
- Damage of river bank due to access ramps to river bed, causing damage to vegetation, soil erosion, micro disturbance to ground water, possible inducement of charged river course.
- Loss of riparian vegetation standing along the bank due to making roads connecting successive access to river bed.
- Contamination of sand aquifer water due to pounding: Due to uneven rocky bed of river, sand bed thickness vary considerably and digging more sand from a pocket where thickness of sand is more may cause pounding. In this stagnant water,

biodegradable materials especially flora waste gets accumulated causing contamination and inducing an unhealthy environment.

- Surface degradation due to stockpiling and road network.

Mitigation Measures:

Adopting suitable, site-specific mitigation measures can reduce the degree of impact of mining on land & soil. Some of the land & soil related mitigation measures are as follows:

- Present land use pattern of the lease area is riverbed and at the conceptual stage the land use pattern will remain the same, hence will not be changed.
- Mining activity will be carried out in dry bed only.
- There will be no mining near the banks. This is to protect the bank erosion and river migration.
- There will be no mining activity when there is a flow of water.
- Mining on the concave side of bank shall be avoid to prevent the bank erosion.
- There is no generation of waste material in case of River Bed mining. No back filling is proposed as river Bed will be replenished by sediments during rainy season.
- Minimum number of access roads to river bed for which cutting of river banks will be avoided and ramps are to be maintained.
- Access points to the river bed will be decided based on least steepness of river bank and least human activity.
- Mining is avoided during the monsoon season and at the time of floods.
- Mining schedule is synchronized with the river flow direction and the gradient of the land. Haulage roads parallel to the river bank and roads connecting access to river bed will be made away from the bank.
- Care will be taken to ensure that ponds are not formed in the river bed.
- Access roads from public roads and up to river bank will be aligned in such a way that it would cause least environmental damage.
- Vegetation development is proposed along the road sides of the approach roads, to arrest soil erosion. While selecting the plant species, preference will be given for planting native species of the area.

❖ **WATER ENVIRONMENT:**

Anticipated Impact:

There will be impact on ground water due to mining process. Mining shall be done above the ground water table. For drinking purpose ground water shall be utilized. Since the mining process is totally dry, no effluent will be generated hence, no adverse impact on water is anticipated. The deposit will be worked from the top surface up to 6 m below ground lavel and above ground water table, whichever comes first neither water table (aquifer) will be intersected by the mining activities. Hence there will not be any adverse impact either on the quality or quantity of ground water.

Mitigation Measures:

Ground water table will not be intersected during the mining activity. During the entire lease period, the deposit will be worked from the top surface up to 6 m below ground lavel and above ground water table, whichever comes first. For management of surface runoff check dams shall be constructed at strategic location if required.

❖ **NOISE ENVIRONMENT:**

Anticipated Impact:

Noise generation is likely to be from vehicular movement. Noise will be generated by the digging of mine area using shovels, crowbars etc..

Mitigation Measures:

- Proper maintenance of all transportation vehicles will be carried out which help in reducing noise during operations. No other equipment except the transportation vehicles will be allowed.
- Noise generated by hand equipment shall be intermittent and does not cause much adverse impact.
- No such machinery is used for mining which will create noise to have ill effects.
- Awareness will be imparted to the workers about the permissible noise levels & maximum exposure to those levels.

❖ **AIR ENVIRONMENT:**

Anticipated Impact:

Mining Operation carried out by opencast manual method generate dust particles due to various activities like Loading & Unloading of mining material , and Transportation. The impact on ambient air quality in the area surrounding the mining area depends upon the pollutant emission rate and prevailing meteorological conditions. As it is an

open cast manual mine, particulate Matter (Dust) of various sizes is the only pollutant of any significance.

- The major sources of air pollution in the mine is dust generation due to extraction, loading and haulage of mineral (sand) and wind erosion of exposed material.
- Emissions of particulate matter and gaseous emissions like SO2 and NO× generated during plying of vehicles have potential to affect the surroundings of the site.
- The air quality of the study area is far away from the permissible limit as prescribed by the CPCB.

Mitigation Measures:

- Water sprinkling will be done on the roads regularly.
- Care will be taken to prevent spillage by covering the carrying vehicles with tarpaulin and sprinkling of water, if dry.
- Fortnightly scraping of road in order to keep the roads almost leveled.
- This will ensure smooth flow of vehicles and also prevent spillage.
- Proper tuning of vehicles to keep the gas emissions under check.
- Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.

❖ **BIOLOGICAL ENVIRONMENT:**

Anticipated Impacts:

The project site and its buffer zone is devoid of any wild life sanctuary. So the wild life found within the project site and its buffer zone is very less. However few wild animals like fox, wild cat, mongoose, snakes and few bird species were occasionally found in the lease area. The most possible impacts on wild life are being illustrated below:

- Accident of animal with vehicle carrying mining materials.
- Dust pollution due to movement of vehicles,
- Wild life may disturb due to movement of vehicles

Mitigation Measures:

- Speed of vehicle movement shall be controlled and symbol will be provided at the animal movement area.

- Greenbelt shall be developed for creating barrier to decrease the impact of noise on wildlife.

❖ **SOCIO ECONOMIC ENVIRONMENT:**

Anticipated Impacts:

Beneficial anticipated

The direct & indirect employment generated due to mining operation has a great impact for balancing overall socio-economic condition of the people around the area. The impact of mining activity in the area is positive on the socio-economic environment of the region. This project will improve socio-economic status of the joining areas and will help to meet the energy demand of the nation.

Mitigation Measures:

Mining in this lease will give job opportunities to the local people. Thus, mining will create beneficial effect on local people. With the operation of mining lease, various indirect employment opportunities will also be generated. Several persons of the neighboring villages have been benefited with contract works, employment through contractors, running jeeps, Tractors, tractors and buses on hire, running canteens, different kinds of shops and transport related business avenues. Villagers have been provided with either direct employment or indirect employment such as business, contract works and development work like roads etc. Villagers also get access to the other welfare amenities such as drinking water, foods and provisions, shed.

❖ **SOLID WASTE:**

Anticipated Impacts:

Solid waste will be generated during mining activity. This mining waste material would be used for road making purpose. Thus, waste dump sites are needed for temporary period.

Mitigation Measures:

The mining process will not lead to any waste generation. The waste to be generated is of temporary nature. Solid wastes generated from the personal habits of people such as bidis, waste paper, food residues etc. cannot be ruled out. Dustbins shall be provided at the rest places.

23. RECLAMATION OF MINED OUT AREA

Necessity of Reclamation & Rehabilitation:

i. Reclamation:

Reclamation means return the mined-out land with useful life. It implies restoring the land to a form and productivity that is useful and inconformity with a prior land use. Reclamation always may not be a single - phase operation.

a. Exponential growth in mineral production since 1980.
b. Mining activities causes physical, chemical, biological and socio-economic changes in the area.
c. Reclaimed area is backfilled with fencing with barbed wire.
d. Surface mining activities disturb the original land profile.
e. In India, mineral production comes mostly from opencast mines & hence land degradation problems are of serious concern.
f. An intricate, in-depth and site-specified techniques involving integrated approach is necessary.
g. Reclamation programme of operational quarry belonging other specified mineral are being carried out in progressive manner as per specification with time period.

The following Reclamation of various Extinct/Exhausted quarries is given below:

Sl.No.	Name of Extinct Mine	Reclamation By	Reclamation By
1.	Gajaridamodarpur Murrum Quarry	---	Water Reservoir
2.	Kaladihi Stone Quarry No. 2	Backfilling	---
3.	Kaladihi Stone Quarry No. 3	Backfilling	---
4.	Gambharia Stone Quarry	Backfilling	---
5.	Taladiha Stone Quarry	Backfilling	---
6.	Dhanpota Murrum Quarry	---	Water Reservoir
7.	Kainpur Stone Quarry-II	Backfilling	---
8.	Hillblock 89-I Stone Quarry	Backfilling	---
9.	Hillblock 89-II Stone Quarry	Backfilling	---
10.	Banakati Stone Quarry	---	Water Reservoir
11.	Dholabeda Stone Quarry	Backfilling	---
12.	Patpur Stone Quarry	Backfilling	---
13.	Raipada Stone Quarry	Backfilling	---
14.	Tirildihi Stone Quarry	Backfilling	---
15.	Purunapani Stone Quarry	Backfilling	---
16.	Sovapur Stone Quarry	Backfilling	---
17.	Randisahi Stone Quarry	Backfilling	---
18	Talgoan Stone Quarry	Backfilling	---

19.	Jagannathkhunta Stone Quarry-A	Backfilling	---
20.	Jagannathkhunta Stone Quarry	Backfilling	---
21.	Kumbharmundakata Stone Quarry	---	Water Reservoir
22.	Nafri Stone Quarry	Backfilling	---
23.	Ramachandrapur Stone Quarry.	---	Water Reservoir
24.	Purunapani Murrum Quarry	---	Water Reservoir
25.	Murgapat Stone Quarry	---	Water Reservoir
26.	Dari Stone Quarry	Backfilling	---
27.	Nada Stone Quarry	Backfilling	---
28.	Satkosai Stone Quarry	Backfilling	---
29.	Jamuti Stone Quarry	Backfilling	---
30.	Tikhia Stone Quarry	Backfilling	---

N:B- (---) as Not applicable.

ii. Rehabilitation – Rehabilitation is to bring batch the degraded land to a normal stage by a special treatment. It is a process of taking some mitigation measures for disturbed environmental condition created through mining activities.

iii. Restoration – Restoration is the process of returning the mined out land being fit to an acceptable environmental condition. However, the general acceptable meaning of the term is bringing the disturbed land to its original form. Restoration is often used to indicate that biological properties of soil are put back to what they were. This is a rate phenomenon.

When active mining ceases, mine facilities and the site are reclaimed and closed. The goal of mine site reclamation and closure should always be to return the site to a condition that most resembles the pre-mining condition. Mines that are notorious for their immense impact on the environment often made impacts only during the closure phase, when active mining operations ceased. These impacts can persist for decades and even centuries.

Mine reclamation and closure plans must describe in sufficient detail how the mining company will restore the site to a condition that most resembles pre-mining environmental quality; how it will prevent – in perpetuity – the release of toxic contaminants from various mine facilities (such as abandoned open pits and tailings impoundments); and how funds will be set aside to insure that the costs of reclamation and closure will be paid for.

Proposed future land use after reclamation:

a. Forestry, b. Recreation, c. Water Reservoir, d. Crop Land, e. residential/Commercial, f. Fish & wildlife Habitat, g. Undeveloped Land, h. Grazing/Pasture Land

Statutory requirement:

As per the Mineral Conservation Development Rule, 2017, the following rules must be bared in mind by the mine owner/agent/manager, which is a part of reclamation activities –

Rule 22, Mine Closure Plan

Rule 23, Submission of Progressive Mine Closure Plan Rule 24, Submission of Final Mine Closure Plan

Rule 26, Responsibility of holder of mining lease Rule 27, Financial Assurance

Rule 35, Sustainable Mining

24. RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN:

Mining activity because of the very nature of the operation, complexity of the systems, procedures and methods always involves some amount of hazards. Hazard identification and risk analysis is carried for identification of undesirable events that can leads to a hazard, the analysis of hazard mechanism by which this undesirable event could occur and usually the estimation of extent, magnitude and likelihood of harmful effects. The activities which can cause high risk related to face stability and the person blasting the shots. It was observed that on a working face of the mine, there were large cracks and unsupported rocks were present, which can lead to a serious hazard and injure workers engaged in loading operation and machineries because of rock falls or slides. This type of condition turn out because improper dressing of the bench and improper supervision. To avoid the hazards due to fall of rocks the face must be examined, made suitable for working and the remedial measures must be taken to make it safe if there is any doubt that a collapse could take place. Working of the face should be in the direction taking into account the geology of the area such that face and quarry side remain stable. Another major risk identified in mines is due to the firing of explosive by an unqualified person. In the mines there is problem of fly rocks and the village is located close to the mine and so it is rated high as it can affect may people. Explosives by nature have the potential for

the most serious and catastrophic accident. Planning of round of shots, holes correctly drilled, direction logged, weight of explosive suitable for good fragmentation are the few of the steps necessary to ensure its safe use and if the shots are not properly designed can result in misfires, early ignition and flying rocks. No person is allowed to use explosives without being properly trained in its handling. In the mine a large numbers of heavy vehicles were in operation and the roads were not proper for haulage purpose. The haulage roads were not even and were not wide enough for the crossing purpose and hence the chances of hazards are very high. The main hazards arising from the use large earth moving vehicles are incompetent drivers, brake failure, lack of all-around visibility from the driver position, vehicle movements particularly reversing, roll over, and maintenance. Those most at risk are the driver and pedestrians likely to be struck by the vehicle, and drivers of smaller vehicles, which cannot be seen from the cabs of large vehicles. Edge protection is always necessary to prevent inadvertent movement over the edge of roadway or a bench. Seatbelt will protect driver in case of roll. Good maintenance and regular testing are necessary to reduce the possibility of brake failure. Access to the vehicles should always be restricted to those people necessary for the work in hand. The use of personal protective equipment and proper arrangements is essential to check if the person is wearing protective equipment or not. The personal protective equipment includes helmet, non-skid safety boots, safety glasses, earmuffs etc. The required personal protective equipment should be provided and used in a manner that protects the individual from injury. Few minor injuries which can be prevented are slip, trip, or fall hazards; hazards due to rock falls and collapse of unstable rocks, atmosphere containing toxic or combustible gases; protects from chemical or hazardous material etc. A disaster management plan should be prepared for taking care of for any disaster. Other risks which are included in this category are noise, as it occurs and it can lead to permanent disability. There are problems related to road traffic in and out issuers; inappropriate exposure of moving machines; mechanical failure and because of large number of moving trucks and dumpers there is large quantity of dust present in roadways which affects the operators and can lead to accidents causing injury. They are in acceptable range because of precautions measures taken but no step is taken it can cause hazard hence steps should be taken to reduce the hazards such as

for dust suppression system should be installed. Other problems like occurrence of lots of mosquitoes in the area due to unhygienic conditions which affect the human health causing malaria, dengue etc. and causing a person to be hospitalized.

Disaster in the mines like fires, explosions, entrapments, and inundations can occur any time, so emergency preparedness is a must. The Disaster management plan and risk assessment in the mines will include all sorts of above mentioned emergency and the extent that this plan will be implemented will depend on the nature and scope of the emergency. The basic purpose of Disaster management plan and risk assessment to ensure that mine rescue and recovery activities are conducted safely for rescuer and survivors. According to MMR act 1961 a standard operating procedure should be drawn for involvement different category of staff and officers. The SOP should be updated periodically to reduce the chaos and response to the emergency should be quick and smooth. The responsible person should be familiar with his responsibility during the mock drills. One or two standby should be there to replace the person in Emergency situation. Rescue operations should not include the survivors for any assistance.

First Information of Disaster / Emergency should go to the attendance clerk on duty. Duties of attendance Clerk (Emergency Siren) the attendance clerk or other designated person should on getting information of major accident, sound a hooter or a siren immediately declaring a state of emergency at the mine and then to contact the manager and on his advice to call key personnel using the information listed in the Emergency Organization Chart. It is important that all telephone calls are recorded in a telephone log book. Duties of Other Officials should be displayed and handed over to all concerned. Copy the same should be kept at Manager's Office for ready reference. Establishment of Control Room at Unit Level, Area Level and Company Level is essential. Control Room should keep the contact information about –

- ☐ Company Manager
- ☐ Company owner/ Administrative officer.
- ☐ District Administration
- ☐ Govt. Hospitals in Nearby Localities,
- ☐ Private Nursing Homes of Localities

Attendance roaster and duty charge register should be properly maintained so the record of missing people can be obtained.

25. DETAILS OF THE OCCUPATIONAL HEALTH ISSUE IN THE DISTRICT:

The persons employed in the mines are exposed to a number of hazards at work which adversely affect their health. Some of the important ones are dust, noise, heat, humidity, vibration etc. In recent times, there has been increasing awareness among mining industry and the workers about occupational diseases like Pneumoconiosis, Silicosis, Tuberculosis, Hearing Impairment etc. caused by exposure to health hazards at work. Almost all occupational diseases can be prevented by adopting proper occupational health measures and engineering control on airborne dust pollution at workplace. Occupational Diseases in mines or industry is required to conduct medical examinations and health surveillance of workers as per the provisions of Mines Act. The present efforts of mines management are concentrated on detection of silicosis, Pneumoconiosis and other notified diseases. The essential features of health surveillance programme required to be carried out in mines are:

(a) Initial Medical Examination of persons to be conducted at the time of appointment.

(b) Periodic Medical Examination or General physical examination to be conducted once in every year.

(c) Maintenance of medical records and health services till the person is in service.

The Details of Tuberculosis cases in last 5 years is given below

RNTCP Activities from 2014 to 2018

Year	Projected Population	No of Sputum Examined	Sputum Examined per Lakh/Qr	No of Sputum Positive	Sputum Positive %	Total Case put on DOTS /No of TB cases	Child DOTS out of Total DOTS	Case detection per Lakh/Yr	Sputum Conversion Rate	NSP Cure Rate	NSP Death Rate
	(in Lakh)		Norm-150		Norm-8-15 %			Norm-170 /L/Y	Norm-90 %	Norm-90%	Norm < 5%
2014	26.01	16848	161.9	2825	16.8%	4883	103	187.7	90.2%	89.0%	7.4%
2015	26.30	18118	172.2	2836	15.7%	4831	123	183.7	90.5%	89.0%	6.7%
2016	26.59	20060	188.6	2975	14.8%	5171	119	194.5	95.0%	90.9%	6.5%
2017	26.88	31035	289.4	3152	11.4%	5127	111	190.7	94.0%	91.6%	5.5%
2018	27.18	21273	195.6	2853	13.4%	4894	95	173.4	95.3%	92.7%	6.4%

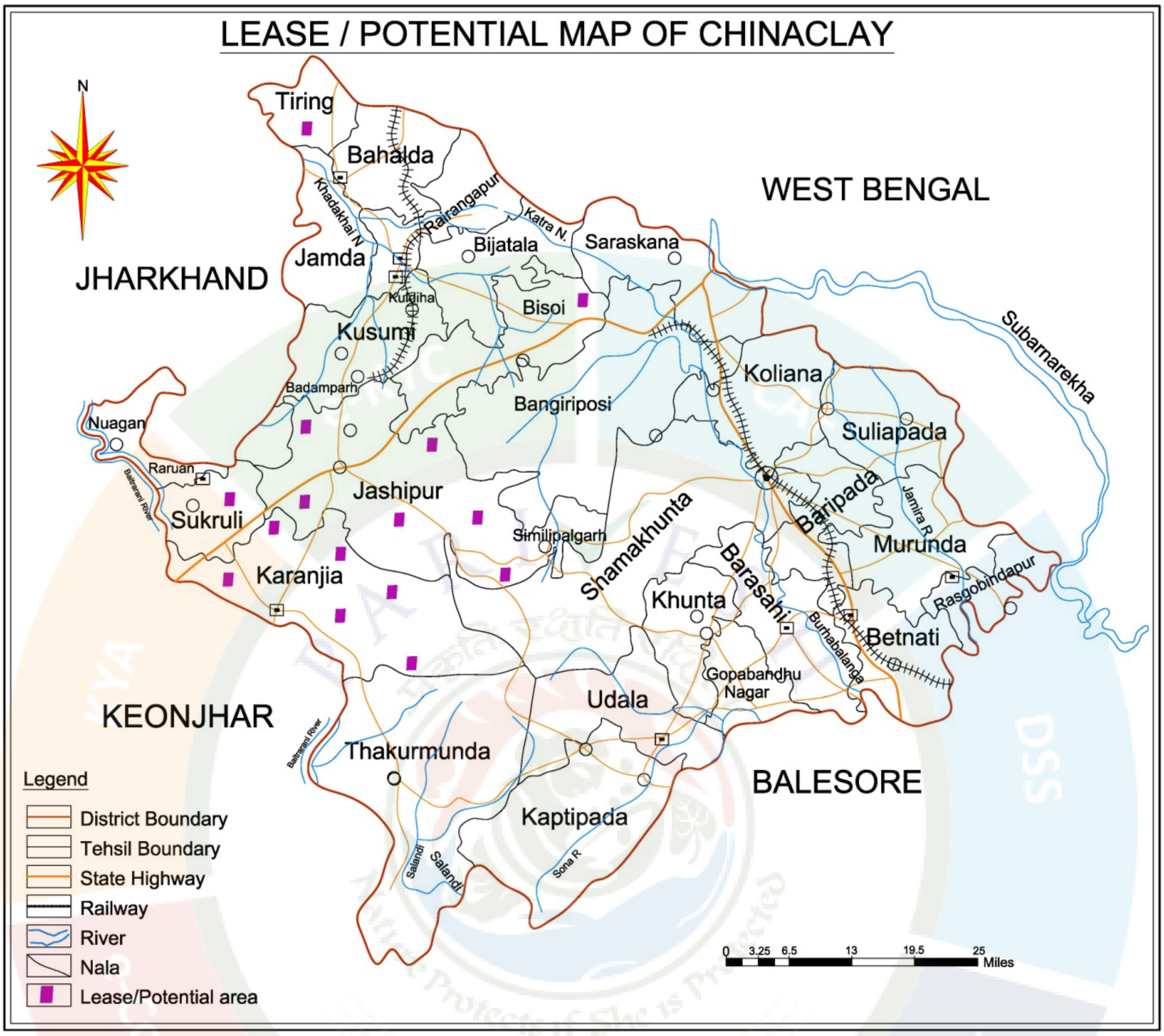
26. PLANTATION GREEN BELT DEVELOPMENT IN RESPECT OF LEASE ALREADY GRANTED IN THE DISTRICT:

During mining operation green belt development through plantation is most important for environment safe guard, which should be supervision by mining department. Different type of species should be planted near lease periphery to keep environment clean at post mining period through reclamation. Where specific usefulness of land could be decided, a forestation is normally planned through the site could have been considered for better possibilities of land use.

27. CONCLUSION:

To meet the requirement of minerals in the present scenario, it is proposed to identify such potential areas at certain interval and get the data bank of DSR to be updated. The insitu mining activity in any area is on one hand bring revenue and employment (Direct and indirect) and on other hand if not done properly potential pollution and ecological imbalance increases, the ability of the ecosystem can also be reduced. Particulate matter transported by the wind as a result of excavations, blasting, transportation of materials, heavy equipments used raise these particulate levels; and Gas emissions from the combustion of fuels in stationary and mobile sources, explosions, and mineral processing. All these activities indirectly affected the biodiversity of area. Larger potential and smaller areas have been identified in Mayurbhanj district on the basis of geological study carried out during field observation, which can be considered for mining concession after all the parameters for statutory clearances are verified by consulting with concerned authorities.

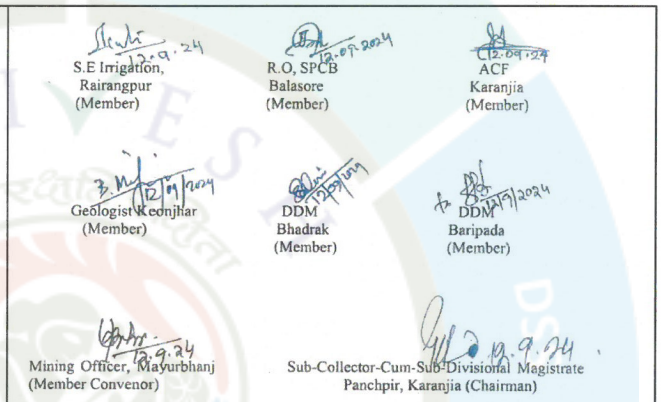
Plate No.-I


LEASE / POTENTIAL MAP OF CHINACLAY
N
JHARKHAND
WEST BENGAL
KEONJHAR
BALESORE
Tiring
Bahalda
Jamda
Bijatala
Saraskana
Kusumi
Bisoi
Koliana
Bangiriposi
Suliapada
Nuagan
Badampahr
Raruan
Sukruli
Jashipur
Baripada
Murunda
Karanjia
Similipalgarh
Shamakhunta
Khunta
Barasahi
Betnati
Rasgobindapur
Gopabandhu Nagar
Udala
Thakurmunda
Kaptipada
Subarnarekha
Legend
District Boundary
Tehsil Boundary
State Highway
Railway
River
Nala
Lease/Potential area
0 3.25 6.5 13 19.5 25 Miles

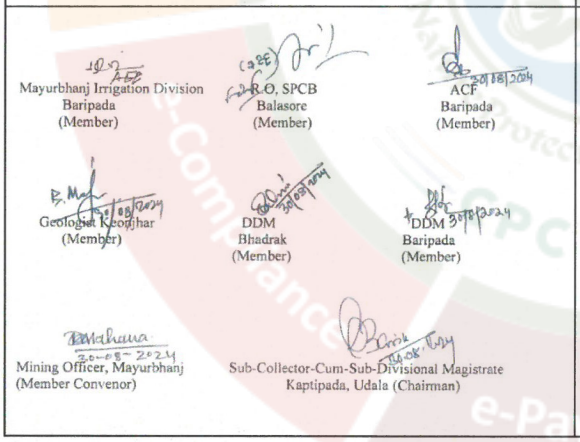
The District Survey Report of China clay (Specified Minor Mineral) of Mayurbhanj District in accordance with Appendix-X, Para-7 (iii) (a) of S.O 3611(E) dt. 25.07.2018 of ministry of Environment, Forest & Climate Change, New Delhi , Enforcement & Monitoring Guideline for Sand Mining-2020 and in compliance with the orders of Hon'ble Supreme Court dt. 10.11.2021 in the connection of C.A Nos-3661-3662, of 2020. Before preparation of this report, a survey has been conducted by the Sub Divisional Committee. The Final DSR is being submitted to SEIAA, Odisha, Bhubaneswar for approval.

Baripada Sub-Division

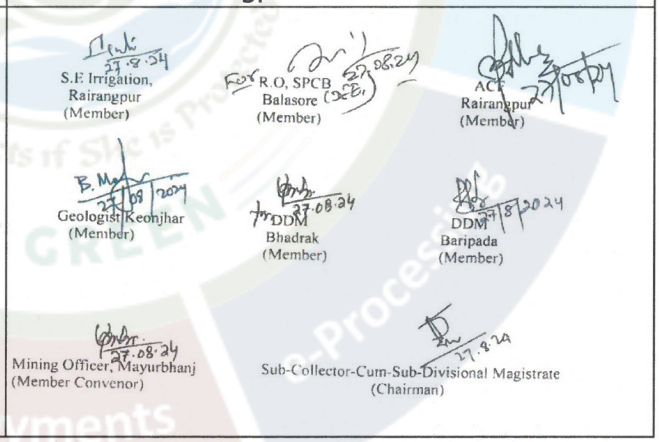
Karanjia Sub-Division



Kaptipada Sub-Division



Rairangpur Sub-Division



Placed for approval of the Authority

Collector & District Magistrate,
Mayurbhanj

SPECIFIED MINOR MINERAL (Chinaclay) ANNEXURE-H

Name of the Tahasil	Sl No	Name of Minerals	Name of Lessee	Address and Contact No. of Lessee	Mining Lease Grant Order No. & Date	Area of Mining lease (Ha.) with Village,Khata No, plot No & Kisam	Period of mining Lease (Initial)		Period of Mining Lease (1st /2nd--Renew		Date of Commencement of mining Operation	Status (Working /non-working/ temp working for dispatch etc.)	Captive/Non-Captive	Obtained environmental Clearance (Yes/No). If yes Letter no with date of EC	Location of Mining Lease (Latitude & Longitued)	Method of Mining Open Cast/ Under Ground)	Geological Reserve (MT/Cums)	Mineable reserve (Cums)
							From	To	From	To								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Karanjia	1	Chinaclay	Ajit Samantray	Lease Expired and Possession taken over		Area - 112.106 Village- Ramachandrapur Khata No.- 2,18,53,52,54,2,56,12,5,16,24,22,32,9,14,55,26,4,46,47,41,7,3,1,50,30,29,15,17,40,25,39,31,78,10,45,42,72,81,64,80,68,6,65,7,71,79,32,51,69,82,57,66,79,57,74,31,13 Plot No.- 59,60,61,62,63,178,180,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366	04.05.1988	03.05.2008	Not Granted		-	Expired and possession taken over	Non-Captive	Not obtained	Lat- 21*50'00" to 21*55'00" Long- 85*55'00" to 86*'00"	Open cast	4570000	4000000

						,367,368,369,370,371,372,502,503,504,505,506,508,509,510,511,512,513,514,515,516,518,519,520,521,522,554,555,556,585,343/861,349/862,362/888,363/890,338/891,334/899,394/906,365/907,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,85,104,105,453,454,473,491,492,554,557,558,561,562,563,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,654,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689 Kissam - Asu,Ghara-II,Patharbani(Hudi),Sarad-I, Sarad-II,Adi, Rajabandha, Village Forest, Dahi-II											
						Sarabasadharana Jogya,Sarad-III,Gochar, Forest, Gharabari, Canal, Bari, Gharabari(Ghara), Road,Gharabari(Hudi), Go-Dandi, Basti Jogya, Forest-II											

Karanjia	2	Chainaclay	R.S. Singhania	Kolkata,West bengal	Lease extention not granted	Area - 119.446 Village- Chanchabani Khata No.- 70,71,4,56,72,62,66,58,20,3 9,5,16,19,17,34,6,46,35,51,1 0,32,33,47,12,59,26,42,45,9, 21,55,28,15,37,52,67,63,31, 13,23,43,22,18,41,133,168,1 51,73,114,126,165,95,166,1 68,129,30,57,85,101,93,160, 116,118,124,150,167,14,96, 94,1, 103,38,3,65 Plot No.- 4,5,6,7,8,9,10,11,12,13,14,1 5,16,17,18,19,20,21,22,23,2 4,25,26,27,28,29,30,31,32,3 3,34,35,36,37,38,39,40,41,4 2,43,44,45,46,47,48,49,50,5 1,52,53,54,55,56,57,58,59,6 0,61,62,63,64,65,66,67,68,6 9,70,71,72,73,74,75,76,77,7 8,79,80,81,82,83,84,85,86,8 7,88,89,90,91,92,93,94,95,9 6,97,98,99,100,101,102,103, 104,105,106,107,108,109,11 0,111,112,113,114,115,116, 117,118,119,120,121,122,12 3,124,125,126,127,128,129, 130,131,132,133,134,135,13 6,137,138,139,140,141,142, 143,144,145,146,147,148,14 9,150,151,152,153,154,155, 156,157,158,159,160,161,16 2,163,164,165,166,167,168, 169,170,171,172,173,174,17 5,176,177,178,179,180,191, 192,193,194,195,196,197,19 8,199,200,201,202,203,204, 205,209,210,211,240,241,	25.04.1977	24.04.1997	25.04.1997	24.04.2027	-	-	Non captive	Non obtained	-	open cast	514800	191100

						242,243,244,245,263,264,265,266,267,268,269,270,279,280,281,282,289,291,293,294,295,296,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,388,389,390,391,392,393,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,484,485,486,487,488,192/735,761/738,167/737,189/709,168,/740,162/744,168/739,148/745,179/758,146/794,146/793,264/812,196/734,147/791,127/715,127/716,127/717,140/741,716/784,715/785,140/786,44/805,47/760,46/761,47/762,197/815,146/813,405/833,404/834,32/708,8/725,8/726,244/714,167/736,144/759,145/790,13/727,451/767,130/779,419/819,282/830,337/724,383/783,724/747,746/814,173/779,506/755,387/724,496,500,503,506,45/763,46/764,44/765,42/766,44/788,266/792,140/787,166/730,124/716,62/729,61/728,68/731,71/773,54/77												

						54/774,89/832,89/831,497,498,499,501,502,203,204,205,207,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,432,446,417,449,452,292,293,450/1345,451/1346,257/1167,257/1168,256/1246,233/,1190,229/1194,230/1191,225/1274,219/1200,239/1277,215/1195,215/1196,215/1197,219/1193,219/1999,214/1273,209/1272,209/1271,203/1185,225/1275,276/1303,276/1304,229/1192,229/1193,897,898,899,900,901,902,903,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,938,940,941,943,944,945,946,947,948,949,950,951,964,918/1391,952/1461,904/1474,913/1540,916/1541,913/1542,913/1415,916/1552,1374,1375,1376,1377,1378,1379,1380,1381,928,18/305, 18/306 Kissam - Sarad-I, Sarad-II, Patit, Asu, Road, Jalasaya, Gadia, Sarad-III, Khadan, Jalasaya-I, Pokhari, For, Development Plan, Dahi-I, Private Road, Dahi-II, Basti Jogya,												
						Reserve for Cow Compost, Gharabari, Bagayat-I, Bagayat, Factory, For Smasan, Mahara, Gochar, Bandha-Adi, Hudi, Village Road												

Karanjia	3	Chinaclay	Newly created source. Auction has not been done	Area- 138.504 Village- Pumnapani Goridiha, Salanpada Khata No.- 11,44,45,9,47,24,15,17,32,2 5,22,13,28,8,3,6,4,24,17,18, 19,6,22,39,1,47,36,34,32,2,4 0,36,30,43,32,19,28,46,7,33, 29,45,1,183,92,71,155,193,1 68,156,165,46,62,90,136,14 4,167,165,156,135,85,107,1 31,92,155,131,168,163,163/ 12,61,101,148,91,61,132,14 0,38,87,152,53 Plot No.- 3/p,4,5,6/p,7/p,8,9,10/p,11/p, 12/p,13/p,14,15,16,17,18,19, 20,21,22,23,24,25,26,27,28, 29,30,31,32,33,34,35,36,37, 38,39/p,41/p,42/p,43/p,62/p, 63/p,64,65,66,67,68/p,70/p,7 1/p,72/p,73/p,74,75,76,77/p, 79/p,109/p,110/p,111/p,112/ p,113,114,115,116,117/p,11 8,119,120,121,122,123,124, 125,126,127,128,129,130,13 1,132,133,134,135,136,137, 138,139,140,141,142,143,14 4,145/p,146/p,147/p,148/p,1 49/p,150,151,152/p,153/p,15 4/p,163/p,168/p,169/p,311/p, 312/p,316/p,317/p,318/p,319 ,320,321,322,323,324,325,3 26,327,328,329,340,341,342 ,343/p,344/p,345/p,346/p,34 7/p,348,349/p,350/p,351/p,3 52,353/p,8/389/p,8/390,115/ 395,4/396,6/397,6/398,	-	-	-	-	-	-	-	NA	Open cast	NA	NA

						,27/399,65401,114/409,113/410,127/411,126/412,137/413,139/414,141/415,143/418,336/417,1432/p,1473/p,1474/p,1475,1476/p,1477/p,1481/p,729/p,749/p,750/p,751/p,777/p,779/p,780/p,781/p,782/p,783/p,784/p,785,786,787,788/p,789/p,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806/p,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,866,867,868/p,869/p,870/p,871,872/p,873/p,902/p,903,904,905/p,906/p,907/p,908/p,915/p,922,923/p,904/p,925/p,926/p,927/p,928/p,832,833,834,835,836,837,838,839,840,841,842/p,845/p,846,847,848,849,850,851,852,853/p,856/p,857/p,858/p,859/p,860,861,862,863/p,864,865,930/p,955/p,966,957/p,958/p,959/po,979/p,970/p,980/p,981/p,982/p,983/p,1042/p,1043/p,1044/p,1045/p,1046/p,1060/p,1061/p,1062/p,1063,1064,1065,1066,1067,1068,1069,1070,1071,1072,1073,1074,1075,1076,1077,1078,1079,1080,1081,1082,1083,1084,1085,1086,1087,1088/p,1089/p,1111/p,1112/p,1114/p,776/1145/p,776/1146/p,1078/1154/p,905/1157/p,873/1158/p,1053/1212/p,872/1213/p,												

						833/1225,903/1220/p,824/1227,802/1228,802/1229,802/1230,805/1231,749/1233/p,979/1242/p,784/1296/p,861/1299,1076/1327,1077/1328,1078/1329,1077/1330,1088/1331,1088/1332/p Kissam - Sarada-I,Sarada-II,Sarada-III,River,Unnatajajana,Dahi-I,Patit,Asu,Dahi-II,Bastijagya,Gharabari,Patharabani, Jungal-II,Jungal,Rasta,Nadi,Pani Nala,Nala, Jungle- I ,Sarada,Rakhit,Gochar,Rasta												

Karnjia	4	Chinaclay	Newly created source. Auction has not been done	Area- 386.540 Village- Katha Karnjia Khata No.- 59,13,28,24,1,44,52,19,88,17,56,58,59,51,55,49,15,6,20,,20,32,47,9,37,35,56,26,4,49,6,23,38,42,45,29,41,30,19,68,27,14,10,31,15,11,34,47,39,59,46,16,6,49,21,17,49,37,33,12,54,59,31,22,50,37,2,19,69,29,20,3,57,63,53,55,51,19,2,3,48,25,78,98,58,177,150,139,156,135,21,78,68,92,154,177,47,112,27,6,178,91,65,42,93,35,89,94,50,108,107,63,73,90,48,132,110,107,73,72,96,122,124,64,75,77,137,133 Plot No.- 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,	-	-	-	-	-	-	-	-	Lat- 21*50'00" to 21*55'00" Long- 85*55'00" to 86*00'00"	Open cast	2900000	2000000

						161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,245,246,247,248,249,250,251,252,253,267,263,304,315,316,317,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,												

						472,473,474,475,476,477,47 8,479,480,481,482,483,484, 485,486,487,488,489,490,49 1,492,493,494,495,496,497, 498,499,500,501,502,503,50 4,505,506,507,508,509,510, 511,512,513,514,515,516,51 7,518,519,520,521,522,523, 524,525,526,527,528,529,53 0,531,532,533,534,535,536, 537,538,539,540,541,542,54 3,544,545,546,547,548,549, 550,551,552,553,554,556,55 7,558,559,560,561,562,563, 564,565,566,567,568,569,57 0,571,572,573,574,575,576, 577,578,579,580,581,582,58 3,584,585,586,587,588,589, 590,591,592,593,594,595,59 6,597,598,599,600,601,602, 603,604,605,606,607,608,60 9,610,611,612,613,614,615, 616,617,618,619,620,621,62 2,623,624,625,626,627,628, 629,630,631,632,633,634,63 5,636,637,638,639,640,641, 642,643,644,645,646,647,64 8,649,650,651,652,653,654, 655,656,657,658,659,660,66 1,662,663,664,665,666,667, 668,669,670,671,672,673,67 4,675,676,677,678,679,680, 681,682,683,684,685,686,68 7,688,689,690,691,692,693, 694,695,696,697,698,699,70 0,701,702,703,704,705,706, 707,708,709,710,711,712,71 3,714,7145,716,717,178,719 ,720,721,722,723,724,725,												

						726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,751,752,753,754,755,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,413/930,651/920,223/912,318/916,336/,920,9/223,175/925,33/923,7/927,210/923,651/920,413/930,431/931,408/932,361/933,372/934,790/935,793/936,481/937,174/938,123/939,863/940,175/941,176/942,177/943,654/945,846,847,848,849,850,851,852,853,854,855,1069,1075,1076,1077,1078,1079,1080,1081,1082,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1102,1107,1008,1109,1110,1111,1112,1113,1114,1115,1116,1117,1118,1119,1120,1121,1122,1123,1124,1125,1126,1127,1128,1129,1130,1131,1132,1133,1134,1135,1136,1144,1617,856,857,858,859,860,861,862,												

863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,912,913,1142,1143,1144,1169,1193,1194,1196,1197,1198,1199,1200,1201,1202,1203,1204,1205,1206,1207,1217,1218,1219,1220,1221,1222,1223,1224,1225,1226,1227,1228,1229,1230,1231,1232,1233,1235,1236,1237,1240,1241,1441,1442,1443,1444,1445,1446,1447,1448,1449,1450,1453,1487,1488,1489,1490,1491,1492,1493,1494,1502,1503,1504,1505,1506,1507,1508,1509,151015 11,1512,1513,1514,1515,15 16,1517,1518,1518,1520,15 21,1522,1523,1524,1525,15 31,1532,1533,1534,1539,15 40,1861,1934,1935,1936,19 37,1938,1939,1940,1941,19 42,1943,4944,1945,1946,19 47,1948,1949,1950,1951,19 52,1953,1954,1955,1956,19 57,1958,1959,1960,1961,19 62,1963,1964,1965,1966,19 67,1968,1969,1970,2121,21 22,2123,2124,2125 Kisam - Kissam- Gochar, Asu, G sasan, Godhha, Rasta,Road,Dahi-II,Dahi, Gharabari, Village Road, Asu-II,Sarad-III,Sarad-II,Channal,Jal-II,Sarad-I,Nala,W,Nalla, Pokhari,Basti Jogya, Rakhita, Village Forest	Dahi-I, Mahara, House Land, Public Road, S.Forest, S.S.J.,Bali Pota,Public, River,Patit, Nayanjori, Unnat Jojana, Nayan Pori, Pala-II

Karanjia	5	Chinaclay	Newly created source. Auction has not been done	Area- 214.480 Village- Jhardumuria Khata No.- 30,62,4,15,48,65,1,2,3,5,6,7, 8,9,10,11,12,13,14,15,16,18, 19,20,21,22,23,24,25,26,27, 28,31,32,34,35,36,37,38,41, 43,44,45,46,47,48,49,50,51, 52,55,56,57,59,60,61,63,64, 65,66,67,68,69,70,71,72,73, 75,76,80,81,82,85,83,84,86, 87,88,89,90,92,95,94,96,97, 98,99,100,102,103,101,105, 106,107,109,108,110,11,112 ,113,114,115,116,117,120,1 21,122,123,124,126,127,128 ,131,132,133,134,135,136,1 37,138,139,140,141,142,143 ,144,145,147,149, 150,151,152,153,154,9,43,1 12,263,268,271, Plot No.- 209/1321,50,159,160,363,36 4,406,407,428,650,670,363/ 1312,158/1320,382/1380,38 2/1381,317,318,319,320,321 ,325,331,339,346,384,385,3 86,387,405,414,224/1222,15 8/1385,415,412/1392,158,31 6,653,99/1387,801/1394,765 ,49,426,427,647,648,649,67 6,730,781,782,981,777,895, 932,933,956,957,961,962,96 3,1028,1045,1047,1059,109 6,1097,1098,1099,1134,117 0,1171,1175,1180,1194,120 0,1201,1220,344,345,166,16 7,274,276,436,445,447,670, 671,	-	-	-	-	-	-	-	-	NA	-	NA	NA

						1276,1293,1297,1298,1299,304,492,493,180/1385,955,954,958,1019,1020,1023,1024,1026,153/1371,1021/1373,353,354,355,993/1375,833,834,843,859,865,866,868,1050,157,323,324,326,332,846,1055,1056,1058,1070,1074,1078,1079,1081,1082,1083,1084,1081,1167,1168,1181,1189,1030/1336,1030/1337,1181/1349,429,430,791,794,812,813,814,815,872,873,875,685,257,258,261,624,471,472,835,840,1051,774,776,871,1086,836/1400,836/1402,864/1403,864/1407,1048/1410,1048/1413,456,1036,1053,1103,1211,1212,1214,1216,1218,1254,857,844,857,871,947,949,1034,1252,1255,1013,487,487,488,489,986,989,1005,1006,654,799,874,874,894,163,164,296,297,309,510,511,312,444,182/1215,165/1518,163/1319,994/345,994,309,305,315,424,425,628,629,630,631,671,745,746,751,752,923,929,930,1145,286,291,293,459,501,507,508,510,512,513,514,515,516,519,563,566,567,568,569,570,585,569,594,596,598,599,600,601,604,606,607,608,609,610,611,716,718,740,783,784,785,793,797,798,799,800,810,819,818,821,823,824,825,826,827,828,831,848,840,830,912,913,												

					1215,1267,246/1333,285,294,613,614,966,967,965,969,970,971,972,1014,1015,1016,1225,1249,995,996,997,522,997,322,351,352,371,380,395,399/1326,402/1325,402/1326,402/1327,1266,411,412,415,1012,497,498,499,500,502,503,504,506,517,518,537,538,516,562,572,573,574,575,576,577,578,580,582,583,584,586,587,588,589,590,591,592,594,715,769,770,792,811,901,910,911,1262,1265,154,161,313,314,417,801,305/1278,359,360,361,851,852,855,854,856,876,877,878,879,880,881,882,883,884,890,677,769,806,807,816,891,892,529,289,632,637,638,639,642,646,663,664,665,666,667,669,672,678,680,685,687,688,691,692,695,702,105,106,712,713,714,738,755,754,755,928,1294,1295,1296,775,888,1046,776/1596,836/1401,864/1488,664/1406,564/1408,1087/1411,1087/1412,1255,1234,155,156,416,420,421,422,423,788,805,808,817,820,877,1286,1287,342,343,327,347,365,366,367,368,369,370,372,377,361,285,388,3289,393,394,395,396,399,400,401,402,403,404,408,409,410,390/1323,402/1326,1021,1025,1061/1372,1019/1379,1026/1389,1023/1390,1112,1113,1114,936,938,													

						940,942,955,1285,180/1388,616,617,618,622,623,624,625,626,627,647,778,749,750,760,761,887,900,1206,1207,1208,1235/1355,1235/1356,454,455,276/1393,511,1166/1295,1235/1257,1030,1095,1030/1335,892,186,189,253,263,278,298,299,302,303,328,333,334,335,336,337,348,349,350,357,358,374,375,578,579,390,391,392,397,526,527,531,541,543,545,795,802,804,829,830,847,935,975,976,985,986,987,998,999,1065,1066,1068,1080,1071,1073,1075,1060,1118,1129,1124,1125,1127,1128,1135,1136,1144,1146,1236,1237,1238,1239,1250,1256,1257,1258,1259,1260,1272,1277,1279,1281,1288,1299,356/1329,341/1330,994/1344,1285/1547,1263/1366,1264/1367,995/1376,991/1382,88,307,329,330,332,333,340,352,751,828,918,919,934,950,952,1052,1054,1217,1255,1251,1275,291,506,508,416,431,469,494,496,542,612,778,770,780,966,1042,1140,1156,252,280,287,373,376,382,651,652,653,656,657,658,679,681,696,697,721,722,723,724,725,727,728,732,733,772,803,809,1064,1069,1072,1126,1153,1275,1278,1304,382/1506,364/1311,363/1334,1611,2219,2221,2220,2214,1619,											
						1619, 1612,1620, 2072,1597,1617,1621 Kissam - Asu,Sarada-I,Sarada-II,Sarada-III, JungaII,Gharbari, Road,Jalasai,Jalasai-I,Jahara,Debasthali, Patharabani,Gramyajungal, Gochar											

Karanjia	6	Chinaclay	Lease Expired and possession taken over	Area- 142.700 Village- Dumuria Khata No.- 261,158,90,258,218,87,246,89,234,225,243,154,146,27,50,51,37,10,53,31,38,32,28,46,45,16,2,14,43,7,21,6,74,20,26,719,93,19,92,3,65,47,94,8,91,68,79,77,41,32,34,70,60,85,91,69,32,21,33,34,30,71,59,24,12,72,48,60,65,14,97,181,107,140,138,105,180,54,134,47, 183 Plot No.- 53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,335,336,337,338,339,340,341,342,343,344,345,353,355,358,359,374,375,376,377,378,379,381,382,383,384,385,386,387,388,389,390,392,455,456,457,458,459,460,461,462,463,464,465,466,467,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,518,520,540,111,112,113,115,120,121,123,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,351,352	-	-	-	-	-	-	-	-	NA	-	NA	NA

						353,354,551,552,553,554,55 5,556,557,558,559,560,561, 562,563,564,565,566,567,56 8,569,570,571,572,573,574, 575,576,577,578,579,580,58 1,582,583,584,585,586,587, 588,589,590,591,592,593,59 4,595,596,597,598,599,600, 601,602,603,604,605,606,60 7,608,609,610,611,612,613, 614,615,616,617,618,619,62 0,621,622,623,624,625,626, 628,629,633,640,646,647,64 8,649,650,651,652,653,654, 655,656,658,66,662,663,664 ,665,666,667,667,668,669,6 70,671,672,673,674,675,676 ,677,678,679,680,681,682,6 83,684,685,686,687,688,689 ,690,691,692,693,857,858,8 59,860,861,862,863,864,865 ,866,867,868,869,870,871,8 73,874,875,876,879,1,2,4,5, 6,7,8,9,10,11,12,13,14,15,16 ,17,18,19,20,21,22,23,24,25, 26,27,28,29,30,106,440,441, 442,443,458,460,462,476,47 8,1327,1328,1329,1330,133 1,1332,1333,1334,1335,133 6,1337,1338,1339,1340,134 1,1342,1343,1344,1345,134 6,1347,1348,1349,1351,135 2,1353,1354,1359, 1612 Kissam - Village Forest, Sarad-I,Sarad-II, Sarad- III,Jalasaya,Gochar,Asu, Patharbani,Nala,Nadi, Sarbasadharan, River, Sarad-I/2, Patit,Gharabari												

Jashipur	7	Chinaclay	Lease Expired and possession taken over	Area - 15.532 Village- Kumbharpandugadia Khata No.- 183,180,53,109,178,126,85,38,127,81,98,182,85,51,94,126,145,172,37, 182,83,54,64,37,129, 113,168, 81,145 Plot No.- 162,244,245,246,247,248,249,250,251,252,253,254,255,256,259,260,261,262,263,264,265,266,267,268,269,270,271,273,274,275,277,278,281,282,283,284,285,286,291,294,295,296,297,298,299,300,301,302,303,314,315,316,317,318,319,320,321,322,323,324,326,327,328,329,330,333,334,335,336,337,340,339,341,342,343,344,345,346,347,348,349,350,352,353,355,360,361,363,365,366,367,368,369,370,371,374,375,376 Kissam - Road,sarda-II,Sarada-I,Sarada-III,Asu,Nala,Dahi-I,Dahi-II,Patharabani,Gharabari	-	-	-	-	-	-	-	-	NA	-	NA	NA

Jashipur	8	Chinaclay	Lease Expired and possession taken over	Area - 121.567 Village- Joshipur Khata No.- 655,419,76,619,246,530,78, 367,368,389,437, 656,657,612,256,515, 16,187,364,508,450,584,477 ,530 Plot No.- 1092/P,1093,1094,1095/P,1 098/P1099/P,1102/P,1103/P ,1104/P,1105/P,1106/P,1107 ,1108,1109/P,1110/P,1136/P ,1137/P,1143/P,1144/P,1145 /P,1906/P,1908/P,1909/P,19 10,1911,1912,1913,1914,19 15/P,1916/P,1917/P,1918/P, 1919/P,1920,1921,1922/P,1 923/P,1950/P,1951/P,1952/ P,1953/P,1954/P,1868/P,18 69/P,1870/P,1872/P,1882/P, 1883,3542,3496,3354,3260, 3261,1201/P,1002/P,1004/P, 1205/P,1207/P,1211/P,1221/ P,1115/P,1122/P,1121/P,12 58/P,1245/P,1247/P,3269/P, 3270/P,1206/P,1246/P Kisam-Jungle,Dahi-I,Jungle- II,Ghara-II, Dahi-II,Road,karkhana,Nadi, jalasayam,Sarada- II,Gharabari,Pani,Patit, Rasta,	-	-	-	-	-	-	-	-	NA	Open cast	1403967	1121580

Jashipur	9	Chinaclay	Lease Expired and possession taken over	Area - 367.058 Village- Kadodiha, Rugudi, Khandabandha, Kudarbisida Khata No.- 174,115,173,100,37,171/22,176,29,39,97,122,155,175,40,146,68,168,22,24,106,15,84,135,64,49,76,113,16,137,127,80,133,60,138,71,166,66,56,151,14,171/7,27,154,58,121,135,103,75,171/17,162,47,74,97,51,31,17,131,35,09,170,169,171/2,04,85,96,12,128,99,149,136,93,25,95,5,43,51,44,36,69,141,148,242,117,88,244,98,245,105,134,114,33,119,149,170,177,123,231,13,202,117,136,109,240/50,193,23,227,240,148,86,240,240/32,66,62,67,240/68,157,145,84,58,7,140,164,112,194,240/2,72,240/31,237,240/29,221,158,157,206,240/01,77,45,215,240/37,108,21,238,139,218,219,237,239,1212,207,206,178,142,240/38,240/39,13,19,165,53,79,240/29,76,203,191,228,232,2,171,86,58,240,289,23,73,229,239,188,193,124,91,131,90,211,222,240/76,194,199,189,227,240/49,240/05,240/39,240/65,240/54,61,86	-	-	-	-	-	-	-	-	NA	Open cast	14901329	12554845

						Plot No - 1/P,2/P,3,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,43,44/P,45,46,47,48,49,50,51,52,53,54,55,56,57,58/P,59,60,61,62,63,64,65,66,67,68,69/P,70/P.72,73,74,75,76,77/P,78/P,82/P,83,84,85,86,87,88,89,90/P,91,92,93,94,95,96,97,98,99,100,101,102,103,104/P,429/P,430/P,433/P,434/P,435,436,437,438,439,440,441,442/P,143/P,447/P,440/P,451/P,453/P,454,455,456,457,458/P,460/P,461/P,463/P,464,465,466/P,468/P,469/P,472/P,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497/P,498/P,499/P,500/P,511/P,512,513/P,525/P,523/P,527/P,582/P,529,530/P,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548/P,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567/P,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586/P,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,												

						619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636/P,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696/P,697/P,698,699/P,700/P,701,702,703,704,705/P,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,817,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,												

						870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,892,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929/P,931,932/P,934/P,945/P,946/P,1377/P,1378,1379,1380/P,1387/P,1388/P,1389,1390/P,1391,1392,1394,1395,1396,1397,1398,1399,1400,1401,1402,1403,1404,1405,1406,1407,1408,1409,1410,1411,1412,1413,1414,1415,1416,1417,1418,1419/P,1420/P1424/P,1441/P,1471/P,1472/P,1486/P,1487/P,1488/P,1489/P,1490/P,1491/P,1492/P,1493,1494/P,1495,1496,1497,1498,1499,1500,1501,1502,1503,1504,1505,1506,1507,1508,1509,1510,1511,1512,1513,1514,1515,1516,1517,1518,1519,1520,1521,1522,1523,1524,1525,1526,1527,1528,1529,1530,1531,1532,1533,1534,1535,1535,1536,1537,1538,1539,1540,1541,1542,1543,1544,1545,1546,1547,1548,1549,1550,1551,1552,1553,1554,1555,1556,1557,1558,1559,1560,1561,1562,1563,1564,1565,1566,1567,1568,1569,1570,1571,1572,1573,1574,1575,1576,1577,1578,1579,												

						1580,1581,1582,1583,1584,1585,1586,1587,1588,1589,1590,1591,1592,1593,1594,1595/P,1596,1598,1600,1601,1602,1603,1604,1605,1606,1607,1608,1609/P,1610/P,1611/P,1612/P,1623/P,1624/P,1625,1626,1627/P,1628,1629,1630,1631,1632,1633/P,1634/P,1654/P,1655/P,1657,1658,1659,1660,1661,1662,1663,1664,1665,1666,1667,1668,1670,1671,1672,1673,7674,1675,1676,1677,1678,1679,1682,1683,1684,1685,1686,1687,1688,1689,1690,1691,1692,1693,1694,1695,1696,1697/P,1698/P,1699/P,1700/P,1701/P,1702,1703,1704,1705,1706,1707,1708,1709,1710,1711,1712,1713,1714/P,1716/P,1717/P,1720/P,528/1872/P,802/1875,1575/1878,889/,1879,525/1884/P,1389/189,738/1892,1389/1893,1565/1902,553/1904,771/1914,771/1915,701/1916,701/1917,705/1918,705/1919,814/1920,740/1921,740/1922,1575/1923,931/1953/P,931/1954,931/1955,888/1956,888/1957,801/1958,801/1959,800/1906,800/1961,800,1962,800/1963,800/1964,873/1965.873/1966,873/1967,1394/1968,33/1970,582/1971,1018/,P,1028/P,1029/P,1030/P,1031/P,1031/1824,435/P,657/P,658/P,659/P,660,661,662,												

						663,664,665,666,667,668,669,673,674,675,676,677,678,679,680,681/P,682/P,683/P,684,685,686,687,688,689,690,691,692,693,694/P,753/P,754,755,756/P,757/P,757/1100,661/1157,661/1158/P,196/P,197,198/P,202/P,203/P,204,205,206,207,208,209,210/P,211/P,264/P,266/P,267,268,269,270,271,273,274,275,276,277,278/P,279/P,280/P,290,291/P,292/P,293,294,295,296,297,298,301,302,303,304,305,306,307,308/P,310/P,311,312/P,317/P,318/P,319/P,325/P,326/P,504/P,589,590,591,592,593,594,595,596,597,598,599,600,601,604,605,606,607,608,609,610,611,613,614/P,615/P,616,618,619,620,621,622,623,624,625,628,630,631,632,634,635,637,638,639,641,642,643,644,645,647,648,649,650,651,652,653,654,655,656,657,658,659,660,664,665,666,667,668,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,												

						746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,778,779,780,781,782,783,784,785,786,787/P,794/P,803/P,804/P,805/P,806/P,807/P,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833/P,835,836,837,838,839,840/P,841/P,842/P,843/P,844,845,846,847/P,849/P,850/P,883/P,884/P,896/P,898/P,899,900,901/P,954,955/P,958/P,960,961,962,963,964,965,966,967/P,968/P,969/P,970/P,972/P,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994/P,999/P,1000/P,1001,1002,1003,1004,1005,1006/P,1007/P,1051/P,1052,1053,1054,1055,1056,1057,1058,1059,1060,1061,1062,1063,1064,1065,1066/P,1067,1068,1069/P,1077/P,1078,1079,1080/P,1081/P,1082/P,1083/P,1084,1085/P,1086/P,1087,1088,1089/P,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1109,1110,1112,1113,1114,1115,1116,1117,1118,1119,1120,1121,1122,1123,1124,1125,1126,1127,												

						1128,1129,1130,1131,1132,1133,1134,1135,1136,1137,1138,1139,1140,1141,1142,1143,1144,1145,1146,1147,1148,1149,1150,1151,1152,1153,1154,1155,1156,1157,1158,1159,1160,1161,1162,1163,1164,1165,1166,1167,1168,1169,1170,1171,1172,1173,1174,1175,1176,1177,1178,1179,1180,1181,1182,1183,1184,1185,1186,1187,1188,1189,1190,1191,1192,1193,1194,1195,1196,1197,1198,1199,1200,1201,1202,1203,1204,1205,1206,1207,1208,1209,1210,1211,1212,1213,1214,1215,1216,1217,1218,1219,1220,1221,1222,1223,1224,1225,1226,1227,1228,1229,1230,1231,1232,1233,1234,1235,1236,1236,1237,1238,1239,1240,1241,1242,1243,1244,1245,1246,1247,1248,1249,1250,1251,1251,1253,1254,1255,1256,1257,1258,1259,1260,1261,1262,1263,1264,1265,1266,1267,1268,1269,1270,1271,1272,1273,1274,1275,1276,1277,1278,1279,1280,1281,1282,1283,1284,1285,1286,1287,1288,1289,1290,1291,1292,1293,1294,1295,126,1297,1298,1299,1300,1301,1302,1303,1304,1305,1306,1307,1308,1309,1310,1311,1312,1313,1314,1315,1316,1318,1319,1321,1322,1323,												

						1323,1324,1326,1327,1328,1329,1330,1331,1331,1332,1335,1336,1337,1338,1339,1340,1341,1342,1343,1344,1345,1349,1350,1351,1352,1353,1354,1355,1356,1357/P,1358/P,1364/P,1365,1366,1367,1368,1370,1371,1372,1373,1374/P,1375/P,1376/P,1377/P,1378,1379,1380,1381,1382,1383,1384,1385,1386,1387,1388,1389,1390,1391,1392,1393,1394,1395,1396,1397,1400,1401,1402,1403,1404,1405,1406,1407,1408,1409,1411,1412,1413,1414,1415,1416,1417,1418,1419,1420,1421,1422,1423,1424,1425,1426,1427,1428,1429,1430,1431,1432,1433,1434,1435,1436,1437,1438,1439,1440,1441,1442,1443,1444,1445,1446,1447,1448,1449,1450,1451,1452,1453,1454,1455,1456,1457,1458,1459,1460,1461,1462,1463,1464,1465,1466,1467,1468,1469,1470,1471,1472,1473,1474,1475,1476,1477,1478,1479,1480,1481,1482,1483,1484,1485,1486,1487,1488,1489,1490,1491,1492,1493,1494,1496,1497,1498,1499,1500,1501,1502,1503,1504,1505,1506,1507,1508,1510,1511,1513,1514,1515,1516,1517,1558,1519,1520,1521,1522,1523,1524,1525,1526,1527,1528,1529,1530,1531,												

						1532,1533/P,1534/P,1535,1536,1537,1538,1539,1540/P,1549/P,1550/P,1565/P,1566/P,1567,1568,1569/P,1571/P,1578/P,15798,1580/P,1585/P,1587/P,1588,1589/P,1638/P,1639/P,1640,1641,1642,1643/P,1645/P,1646/P,1650/P,1651,1652,1654,1655,1657,1658,1660,1661,1662,1663,1664,1665,1666,1667,1668,1669,1670,1671,1672,1673,1674,1676,1677,1678,1679,1680,1681,1682,1683,1684,1685,1686,1687,1688,1689,1690,1691,1692,1693,1694,1697,1698,1699,1701,1702,1703,1705,1706,1707,1708,1709,1710,1711,1712,1713,1715,1716/P,1717/P,1725,1727,1728/P,1857/P,1896/P,1897/P,1898,1899,1900,1901,1902,1903,1904/P,1910/P,1911,1912,1913,1914,1915,1916,1917,1918,1919,1920,1921,1922,1923,1924,1925,1926,1927/P,1928/P,1978/P,1979/P,1981/P,1982/P,1983/P,1984,1985/P,1990/P,1991,1992,1193,1994,1195,1996,1997,1998,1999/P,2002/P,2003/P,2004,2005,2006,2007,2008,2009,2010,2011,2012,2014,2015,2016,2017/P,2018/P,2019,2020,2021,2022/P,2024/P,2025,2026,2027,2028/P,2029/P,2030/P,2048/P,2053/P,2054/P,677/2905,550/2907,270/2908,551/2915,												

						583/2916,598/2917,599/2918,576/2919,574/2920,545/2921,308/2933,616/2934,616/2935,287/2948,783/2949,783/2950,816/2951,1110/2952,1110/2953,1113/2954,1113/2955,848/2958/P,787/2960,787/2961,787/2962,974/2967,815/2970,815/2971,818/2972,1084/2974,1083/2975,834/2979/P,835/2980,1130/2981,1712/2983,1197/2984,1196/2985,787/2986,787/2987,787/2988,1377/2992,1377/2993,695/2998,787/2999,1322/3000,787/3001,787/3002,787/3003,787/3004,1322/3005,1323/3006,622/3009,673/3014,1699/3015,1155/3019,787/3021,787/3022,787/3023,787/3024,1507/3025,1923/3039,1409/3045,1409/3046,1409/3047,1409/3048,1411/3049,1412/3050,1427/3051,1436/3052,1437/3053,1439/3054,1439/3055,2027/3057,1254/3071,787/3072,1665/3073,1668/3084,539/3088,1322/3089,704/3092,689/3103,787/3104,787/3107,1186/3108,1189/3109,1193/3110,1194/3111,1669/3112,1583/3128/P,1328/3131,714/3135,1466/3136,1479/,3137,1401/3139,1584/3140/P,327/3141/P,650/3142,650/3143,1209/3144,1315/3146,1315/3147,807/3156,787/3157,249/3158,729/3162,1707/3168,632/3170,												

						632/3171,632/3173,632/3174,702/3175,715/3176,787/3177,787/3178,947/3183,545/3184,591/3185,1402/3186,987/3189,1109/3191,787/3192,7844/3193,844/3194,635/3195,1217/3196,1497/3206,1500/3207,1500/3208,1500/3209,1175/3212,1215/3218,719/3219,719/3220,620/3221,620/3222,663/3224,673/3225,671/3226,676/3227,665/3228,752/3229,675/3230,720/3348,632/3249,632/3250,622/3251,632/3174/3252,664/3253,664/3254,1413/3559,1172/3281,1294/3282,845/3286,1177/3287,1162/3288,618/3311,618/3310,1322/3301,1710/3317,711/3313,734/3314,1341/3315,1357/3316,1915/3318,734/3321,1665/3323,1710/3340,1357/3322,1665/3335 Kisam-Nadi, Asu,Sarada-I,Sarada-II,Mahara,Nala, Gochar,Sarada-III,Danda,Gharabari,Sarbasabharana,Dahi-D,Patit,Rasta,Jalasai-II,Adi,Dahi-I,Patharabani,Patharahudi,Basti jogya,Dahi-II,Unnatyojanayogya,Jalasay-I,												

Jashipur	10	Chinaclay	Lease Expired and possession taken over	Area- 154.006 Village- Jamda Khata No.- 69,30,177,183,59,33,140,58, 18,66,48,103,160, 52,10,166,111,73,184,, 39,31,132,184,130,104,125, 56,113,139,54,119,27,182/3, 1,127,119,11, 43,13,157,160,96,179,173,6, 43,6,92,63,108,107,46,157,9 1,477,279,450,655,553,265, 279,508, 273,72,143,115,80,153,144, 22,172,89,144,77, 131,150,158,159,184, 174,35,66,138,146,63, 107,186,160,96,179,126,171 ,75,92,184,182/7,75,137,177 ,112,15,146,18 Plot No. - 5/P,6,7/P,8,9,10,11,12,13,14 ,15/P,16/P,567/P,568/P,572/ P,915/P,916/P,917/P,918,91 9/P,922/P,924/P,925,926,92 7,928,929,930,931/P,932,93 3,934,935/P,949/P,955/P,95 7/P,958/P,959/P,960/P,961/ P,962/P,963,964/P,965/P,96 6,967,968,969,970,971,972, 973/P,974/P,977/P,978/P,97 9,982/P,983/P,987/P,986/P, 988/P,989/P,991/P,992/P,99 3,995/P,996,997,998/P,999, 1000,1001/P,1004/P,1005,1 006,1007/P,1008,1009,1010 ,1011/P,1012,1013/P,1019/P ,1020/P,1311/P,1312/P,1313 /P,1315/P,1316,1317,	-	-	-	-	-	-	-	-	NA	-	NA	NA

						1318,/1319,1320,1321,1322,1323,1324/P,1325/P,1329,1330,1331,1332,1333,1337,1338,1339,13340,1341,1342,1343,1344,1345,1346,1347,1348,1642,1644,1645,1646,1648,1653,1655,1670,1672,1719,1758,1759,1761,1762,1763,1764,1766,1767,1768,1769,1770,1771,1772,1805,1806,1807,1808,1809,1809,1810,1811,1812,1813,1814,1815,1816,1817,1818,1819,1822,1823,1836,11192/P,1193/P,1194/P,1195,1196/P,1197/P,1198/P,1199,1200/P,1201/P,1202/P,1203/P,1204/P,1051,1052,1677,1053,1054,1075,1076,1055,1056,1057,1058,1059,1060,1061,1687,1688,1062,1063,1089,1690,1064,1065,1066,1695,1696,1067,1068,1069/P,1070,1071,1072/P,1074/P,1075/P,1081/P,1082/P,1083/P,1697,1698/P,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093/P,1095/P,1699/P,1102/P,1103/P,1104,1105,1106/P,,1107/P,1113/P,1115/P,1296/P,1297/P,1298,1299,1300,1804,1755,1756,1757,1301,1302/P,1303,1304,1305,1306/P,1307,1309,1310,1311/P,1312/P,1313/P,1316,1317,1318,1319,1320,1321,1322,1323,1324/P,1325/P,1326,1327P,1328/P1330/P,1758/P,1759/P,1760,1331/P,1332/P,											

						1762,1763/P,1764/P,1333/P,1335,1337/P,1338/P,1339/P,1340,1765,1766,1767,1768,1769,1341,1771/P,1772/P,1344/P,1345,1346,1348/P,1349,1350/P,1351/P,352,353,358,359,361,362,366,489,490,505,519,520,521,523,524,533,534,536,538,539,540,541,542,1534,1536,1538,1540,1555,1835,323,324/P,326,327,328,329/P,411/P,418/P,419/P,420,421,421,422,423,424,425,426,427/P,428/P,429,430,431,432,433/P,486,487,1205/P,300/P,310,363,739,895,902,923,975,985/P,990,994,1308,1314,1334/P,1336,1346,360,363,364,522,535,537,1537,1539,1749 Kissam - Dahi-I, Bali Put, Bali Char, Patiat, Asu, Sarad-I, Sarad-II, Sarad-III, Dahi-II,Patharbani, Rasta, Adi, Gochar,Nala,River,Pala-II,Jungle, Village Forest, Reserve Forest												

Jashipur	11	Chinaclay	Lease Expired and possession taken over	Area- 24.352 Village- Godapalsa -A Khata No.- 63,98,55,185,134,55,12,186, 143,62,82,188,91, 55,134,185,186,98,51, 124,88,135,188,112,46,96,1 87,30,46,86,64,86, 96,104,36,38,161,180, 66,152,156,117,60,29 Plot No.- 1083,1084,1085,1089,1090, 1092,1092,1093,1094,1095, 1096,1097,1098,1099,1100, 1101,1102,1103,1104,1105, 1106,1107,1108,1109,1110, 1111,1112,1113,1114,1115, 1124,1148,1149,1150,1151, 1195,1197,1199,1200,1201, 1202,1203,1204,1205,1206, 1207,1208,1209,1210,1211, 1112,1113,1114,1115,1124, 1148,1149,1150,1151,1195, 1196,1197,1199,1200,1201, 1202,1203,1204,1205,1206, 1207,1208,1209,1210,1211, 1212,1213,1214,1215,1216, 1217,1218,1219,1220,1221, 1222,1223,1224,1227,1239, 1216/1255,1203/1271,1114/ 1278,1207/1270,1,433,434 Kissam- Asu,Sarada- III,Gochar,patit,Nala,Pathara bani,Rasta,Unnat Jojana Jogya,River,Dahi-I	-	-	-	-	-	-	-	-	NA	-	NA	NA

Jashipur	12	Chinaclay	Lease Expired and possession taken over	Area- 26.422 Village- Godapalsa -B Khata No.- 73,117,98,89,146,149, 101,127,66,133,185,176,88, 5,62,41,91,38,41, 155,171,174,42,162,48,181, 21,100,113,174,181,48,37,1 59,145,146,68, 71,183/2,173,174,180, 259,151,152,40,42,29, 11,132,107,70,150,104,131, 66,67,126,149,2, 105,63,187,134,55,139 Plot No.- 65,771,772,775,783,801,802 ,865,866,867,868,869,870,8 71,872,873,874,875,876,879 ,880,881,882,883,884,885,8 86,934,935,936,937,938,939 ,940,941,942,943,944,945,9 46,947,948,949,950,951,952 ,953,954,955,956,957,958,9 60,963,964,965,966,967,968 ,969,970,971,972,973,974,9 75,976,977,978,979,980,981 ,982,983,984,985,986,987,9 88,989,990,991,992,993,994 ,995,996,997,998,999,1000, 1001,1002,1003,1004,1005, 1006,1007,1008,1009,1010, 1011,1012,1013,1014,1015, 1016,1017,1018,1019,1020, 1021,1022,1023,1024,1026, 1027,1028,1029,1030,1031, 1032,1033,1034,1035,1036, 1037,1038,1039,1040,1041, 1042,1043,1044,1045,1046, 1047,1048,1049,1050,1051,	-	-	-	-	-	-	-	-	NA	-	NA	NA

						1052,1053,1054,1055,1056,1057,1058,1059,1060,1061,1062,1063,1064,1065,1066,1067,1068,1076,1082,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,972/1264,948/1263,913/1253,1009/1267,947/1262,1015/1362,861/1365,1015/1361,949/1246,988/1265 Kissam - Sarada-III,Sarada-II,Sarada-I, Asu,Gharabari, Rasta,												

Jashipur	13	Chinaclay	Lease Expired and possession taken over	Area- 18.451 Village- Godapalsa -C Khata No.- 187,57,103,185,131,186,89,62,104,32,73,83,133,105,152,186,165,168, 188,126,171,109,8,149,133,83,91,73,75,138,38,95,149,84,183,101,127,66,163 Plot No.- 409,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,577,578,579,580,581,582,,583,584,585,586,857,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,626,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,657,856,857,858,859,860,861,862,863,864,865,866,867,871,424/1254,646/1257,437/1284,1082,861/1365 Kissam- Asu,Rasta,Patharabni,Gochar,Patit, Sarada-III,Sarada-II	-	-	-	-	-	-	-	-	NA	-	NA	NA

Sukruli	14	Chinaclay	Lease Expired and possession taken over	Area- 43.674 Village- Khaprasahi Khata No.- 97,93/2,76,94,29,94,22,58,45,45,16,97,61,16,73,20,9,63,26,37,44, 70,9,96,36,77,89,14,70,97,23,61,24,94,95,54,41,86,20,12,23,83,79,9,80,86,83,87,85 Plot No.- 34/P,35/P,36/P,37/P,39/P,100/P,101/P,102,103,104,105,106,107/P,109/P,110,111/P,112,113,114,115,116,120,121,122,123,124,125,128,129,130,132,133,134,135,138,139,140,141,142,144,145,146,147,148,149,152,153,154,155,157,160,161,162,163,164,165,166,167,170,171,173,174,175,176,177,178,179,180,181,182,183,184,185,187,188,190,191,192,193,194,195,196,197,198,199/P,200/P,201,202,203,204,205,206,207,208,209,210,211/P,212/P,213,214,215,216,217,218,219/P,220/P,221,222,223,224,225/P,228/P,229/P,230/P,269/P,270/P,281/P,282,283/P,284/P,285,286/P,289,290/P,291/P,292/P,298/P,309/P,310/P,311,312/P,314/P,668/P,698/P,699/P,700/P,702,703,704,705,706,707,709,710,711,715,716,718,720,721,724,725,726,728,729,731,732,733,736,737,738,739,740,741,742,744,746,748,749,751,752,	-	-	-	-	-	-	-	-	NA	-	NA	NA

						754,757,759,761,762,763,76 4,765,766,768,769,770,771, 772,773,775,776,777,780,78 3,784,787,788,789/P,791/P, 105/847,113/848,788/860/P, 174/861,175/862,740/166,74 2/867,709/874,778/875,766/ 876,710/877,761/878,761/87 9,760/880,712/881,751/882, 789/883/P,771/884,771/885, 771/886,789/887,770/888,77 2/889,157/896,707/898,706/ 899,720/902,787/905,787/90 6/P,701/907,702/908,785/90 9,703/910,703/911,705/912, 703/913,785/914,785/946,91 4/950/P,780/965,780/966,21 5/967,214/968,214/969,214/ 977,214/978 Kissam - Gochar, Sarad-I/2, Sarad-I/4, Sarad-I, Sarad-II, Sarad-II, Asu, Sarad-I/6, Jalasaya-II, Dahi-II, Gharabari, Rasta, Sarbasadharana Jogya, Patharbani, Basti Jogya												

Bisoi	15	Chinaclay	Lease Expired and possession taken over	Area- 91.52 Village- Hizli Khata No.- 31,141,29,47,102,186,187,17,184,168,161,97,82,4,104,125,95,69,112,113,37,81,75,152,73,22,185,65,59,122,179,137,164,78,23,171,187,167,121,80,170,72,38,84,81,80,826,78,20,30,98,166,128,167,84,128,171,167,165,137,42,107,134,61,135,41,147,69,38,25,10,20,149,48,159,26,32,56,157,39,14,173,95,114,11,35,138,119,185,68,49,68,85,153,29,32,34,72,50,22,12,74,43,72,47,63,8,35,61,18,35,22,74,18,64,28,37,97 Plot No.- 780,781,782,783,784,786,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,833,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,	-	-	-	-	-	-	-	-	Lat- 22*24'03" to 22*24'14" Long- 86*11'11" to 86*11'24"	-	2293340.4	2064006.36

916,917,918,919,920,921,92
2,923,924,925,926,927,928,
929,930,931,932,933,934,93
5,936,937,938,939,940,941,
942,943,944,945,946,947,94
8,949,950,951,952,953,954,
955,956,957,958,959,96,961
,962,969,970,971,972,973,9
74,975,976,977,978,979,980
,981,982,983,984,985,986,9
87,988,989,990,991,992,993
,994,995,996,997,998,999,1
000,1003,1004,1005,1006,1
007,1008,1009,1010,1011,1
012,1013,1014,1015,1016,1
017,1018,1019,1020,1021,1
022,1023,1024,1025,1026,1
026,1028,1029,1030,1031,1
032,1033,1034,1035,1036,1
037,1038,1039,1040,1041,1
042,1043,1044,1045,1046,1
047,1048,1049,1050,1051,1
052,1053,1054,1055,1056,1
057,1058,1059,1070,1398,1
318,1319,1320,1321,1322,1
323,1324,1326,1327,1328,1
329,1330,1331,1332,1333,1
334,1335,1336,1337,1338,1
339,1340,1341,1342,1343,1
344,1345,1346,1347,1348,1
349,1350,1352,1353,1354,1
355,1356,1358,1359,1360,1
361,1362,1363,1364,1366,1
372,1373,1391,1392,1394,1
395,923/1430,924/1431,924/
1432,1390/1434,1390/1435,
837/1438,839/1439,839/144
0,934/1441,1390/1444,1361/
1466,1361/1467,888/1470,

						799/1471,1347,/1473,968/1483,1055/1496,821/1500,866/,1502,949//1503,985/1505,917/1525,799/1526,934/1528,845/1529,999/1530,1010/1531,955/1536,312/1428,84/1487,1010/1532,887/1429,382,383,384,385,386,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,441,442,443,444,445,446,447,448,449,450,621,622,623,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,423/698,423/711,4445/714,445/716,427/738,427/739,623/740,2,1/640 Kisam-Gharbari, Bagayt-II, Sarad-III, Road,Gochar, Kenal, Patit, Sarad-I, Sard-II, Patharbani, Asu,Dahi-I,Dhada,Smasan, Sarbasadharana,BastiJogya, River,Unnata,Nala, Nayanjori											
N.B:- (-) Yet to be Settled																		

FINAL **ANNEXURE-V**

LIST OF POTENTIAL MINING LEASES (EXISTING & PROPOSED) (CHINACLAY)

Name of the Tahasil	Sl No	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	Mineral to be mined (Chinaclay)	Existing / Proposed
				BR	PA/WC					
Karanjia	1	Lat-21*50'00 "to 21*55'00" Long-85*55'00"to 86*'00" Village- Ramachandrapur Khata No.- 2,18,53,52,54,2,56,12,5,16,24,22,32,9,14,55,26,4,46,47,41,7,3,1,50,30,29,15,17,40,25,39,31,78,10,45,42,72,81,64,80,68,6,65,7,71,79,32,51,69,82,57,66,79,57,74,31,13 Plot No.- 59,60,61,62,63,178,180,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,46,647,648,649,650,651,652,653,654,654,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689 ...etc Kissam - Asu,Ghara-II,Patharbani(Hudi),Sarad-I, Sarad-II,Adi, Rajabandha, Village Forest, Dahi-II, Sarabasadharana Jogya,Sarad-III,Gochar, Forest, Gharabari, Canal, Bari, Gharabari(Ghara), Road,Gharabari(Hudi), Go-Dandi, Basti Jogya, Forest-II	112.106Ha.	5.68	15.68	2.5	No	100000	China Clay	Existing(Lapsed)

Karanjia	2	Village- Chanchabani Khata No.- 70,71,4,56,72,62,66,58,20,39,5,16...etc Plot No.- 4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29...etc Kissam - Sarad-I, Sarad-II, Patit, Asu, Road, Jalasaya, Gadia, Sarad-III, Khadan, Jalasaya-I, Pokhari, For, Development Plan, Dahi-I, Private Road, Dahi-II, Basti Jogya,Reserve for Cow Compost, Gharabari, Bagayat-I, Bagayat, Factory, For Smasan, Mahara, Gochar, Bandha-Adi, Hudi, Village Road	119.446Ha.	2	7	1.5	No	514800	China Clay	Existing
Karanjia	3	Village- Purnnapani Goridiha, Salarpada Khata No.- 11,44,45,9,47,24,15,17,32,25,22,13,28,8,3,6 …etc Plot No.- 3/p,4,5,6/p,7/p,8,9,10/p,11/p,12/p,13/p,14,15,16,17,18,19,20,21,22,23,24,25,26…etcKisam - Kissam- Gochar, Asu, G sasan, Godhha, Rasta,Road,Dahi-II,Dahi, Gharabari, Village Road, Asu-II,Sarad-III,Sarad-II,Channal,Jal-II,Sarad-I,Nala,W.Nalla, Pokhari,Basti Jogya, Rakhita, Village Forest	138.504Ha.	0.7	4.8	1.7	No	400000	China Clay	Proposed
Karanjia	4	Village- Katha Karnjia Khata No.- 59,13,28,24,1,44,52,19,88,17,56,58,59,51,55,49 …etc Plot No.- 1,2,3,4,5,6,7,8,9,10,11,12…etc Kissam- Gochar, Asu, G sasan, Godhha, Rasta,Road,Dahi-II,Dahi, Gharabari, Village Road, Asu-II,Sarad-III,Sarad-II,Channal,Jal-II,Sarad-I,Nala,W.Nalla...etc.	386.540Ha.	2.5	12.5	1.5	No	1,000,000	China Clay	Proposed

Karanjia	5	Village- Jhardumuria Khata No.- 30,62,4,15,48,65,1,2,3,5,6 …etc Plot No.- 209/1321,50,159,160,363,364,406,407,428,650… etc Kissam - Asu,Sarada-I,Sarada-II,Sarada-III, JungalI,Gharbari, Road,Jalasai,Jalasai-I,Jahara,Debasthali, Patharabani,Gramyajungal,Gochar	214.480Ha.	3	13	2.7	No	700,000	China Clay	Proposed
Karanjia	6	Village- Dumuria Khata No.- 261,158,90,258,218,87,246,89,234,225,243…. etc Plot No.- 53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70…etc Kissam - Village Forest, Sarad-I,Sarad-II, Sarad-III,Jalasaya,Gochar,Asu, Patharbani,Nala,Nadi, Sarbasadharan, River, Sarad-I/2, Patit,Gharabari	142.700Ha.	3.5	13.5	4.5	No	600,000	China Clay	Existing (Expired)
Jashipur	7	Village- Kumbharpandugadia Khata No.- 183,180,53,109,178,126,85,38,….etc. Plot No.- 162,244,245,246,247,248,249,250,376..... etc. Kissam - Road,sarda-II,Sarada-I,Sarada-III,Asu,Nala,Dahi-I,Dahi-II,Patharabani,Gharabari	15.532Ha.	3	13	4.5	No	400,000	China Clay	Existing(Lapsed)
Jashipur	8	Village- Joshipur Khata No.- 655,419,76,619,246,530,78,367,368...etc Plot No.- 1092/P,1093,1094,1095/P,1098/P1099/P,1102/P,1103/P...etc Kisam-Jungle,Dahi-I,Jungle-II,Ghara-II, Dahi-II,Road,karkhana,Nadi, jalasayam,Sarada-II,Gharabari,Pani,Patit, Rasta,	121.567Ha.	1.3	11.3	2.8	No	677,746	China Clay	Existing (Expired)

Jashipur	9	Village- Kadodiha, Rugudi, Khandabandha, Kudarbisida Khata No.- 174,115,173,100,37,171/22,176,29 …etc Plot No- 1/P,2/P,3,5,6,7,8,9,10,11,12,13,14,15 …etc Kisam-Nadi, Asu,Sarada-I,Sarada-II,Mahara,Nala, Gochar,Sarada-III,Danda,Gharabari,Sarbasabharana,Dahi-D,Patit,Rasta,Jalasai-II,Adi,Dahi-I,Patharabani,Patharahudi,Basti jogya,Dahi-II,Unnatyojanayogya,Jalasay-I,	367.058Ha.	4.6	14.6	2.8	No	14,901,389	China Clay	Existing (Expired)
Jashipur	10	Village- Jamda Khata No.- 69,30,177,183,59,33,140,58,18,66…etc Plot No. - 5/P,6,7/P,8,9,10,11,12,13,14,15/P,16/P, 567/P,568/P,572/P,915/P …etc Kissam - Dahi-I, Bali Put, Bali Char, Patiat, Asu, Sarad-I, Sarad-II, Sarad-III, Dahi-II,Patharbani, Rasta, Adi, Gochar,Nala,River,Pala-II,Jungle, Village Forest, Reserve Forest	154.006Ha.	5	15	7	No	1,500,000	China Clay	Existing (Expired)
Jashipur	11	Village- Godapalsa -A Khata No.- 63,98,55,185,134,55,12,186,143....etc Plot No.- 1083,1084,1085,1089,1090,1092,1092… etc Kissam- Asu,Sarada-III,Gochar,patit,Nala,Patharabani,Rasta, Unnat Jojana Jogya,River,Dahi-I	24.352Ha.	8	18	6	No	240,000	China Clay	Existing (Lapsed)
Jashipur	12	Area- 26.422 Village- Godapalsa -B Khata No.- 73,117,98,89,146,149….etc Plot No.- 65,771,772,775,783,801,802,865,866 ….etc Kissam - Sarada-III,Sarada-II,Sarada-I, Asu,Gharabari, Rasta,	26.422Ha.	8	18	6	No	260,000	China Clay	Existing (Lapsed)

Jashipur	13	Village- Godapalsa -C Khata No.- 187,57,103,185,131,186,89,62,104,32,73,83,133,105…etc Plot No.- 409,417,418,419,420,421,422,423 ...etc Kissam- Asu,Rasta,Patharabni,Gochar,Patit, Sarada-III,Sarada-II	18.451Ha.	7	17	6	No	200,000	China Clay	Existing (Lapsed)
Sukruli	14	Area- 43.674 Village- Khaprasahi Khata No.- 97,93/2,76,94.. etc Plot No.- 34/P,35/P,36/P,37/P,39/P,100/P,101/P,102,103….etc Kissam - Gochar, Sarad-I/2, Sarad-I/4, Sarad-I, Sarad-II, Sarad-II, Asu, Sarad-I/6, Jalasaya-II, Dahi-II, Gharabari, Rasta ..etc	43.674Ha.	15.56	25.56	3.4	No	400,000	China Clay	Existing (Lapsed)
Bisoi	15	Village- Hizli Khata No.- 31,141,29,47,102,186,187…etc Plot No.- 780,781,782,783,784,786,788,789,790……etc Kisam-Gharbari, Bagayt-II, Sarad-III, Road,Gochar, Kenal, Patit, Sarad-I, Sard-II, Patharbani, Asu,Dahi-I,Dhada,Smasan, Sarbasadharana,BastiJogya, River,Unnata,Nala, Nayanjori	91.52Ha.	1	7.3	3.5	No	1,981,863	China Clay	Existing (Lapsed)

FINAL	Annexure-VI					
Cluster & Contiguous Cluster details Clusters:						
Tahasil	Cluster No.	Lease No.	Location (Patta Land)	Village	Area (in Ha)	Total Excavation (Ton/Cum)
NA	NA	NA	NA	NA	NA	NA

Contiguous Clusters:

Tahasil Name	Contiguous Cluster No.	Cluster No	Number of leases in the cluster	Location (River bed / Patta land)	Distance between clusters	Village
NA	NA	NA	NA	NA	NA	NA

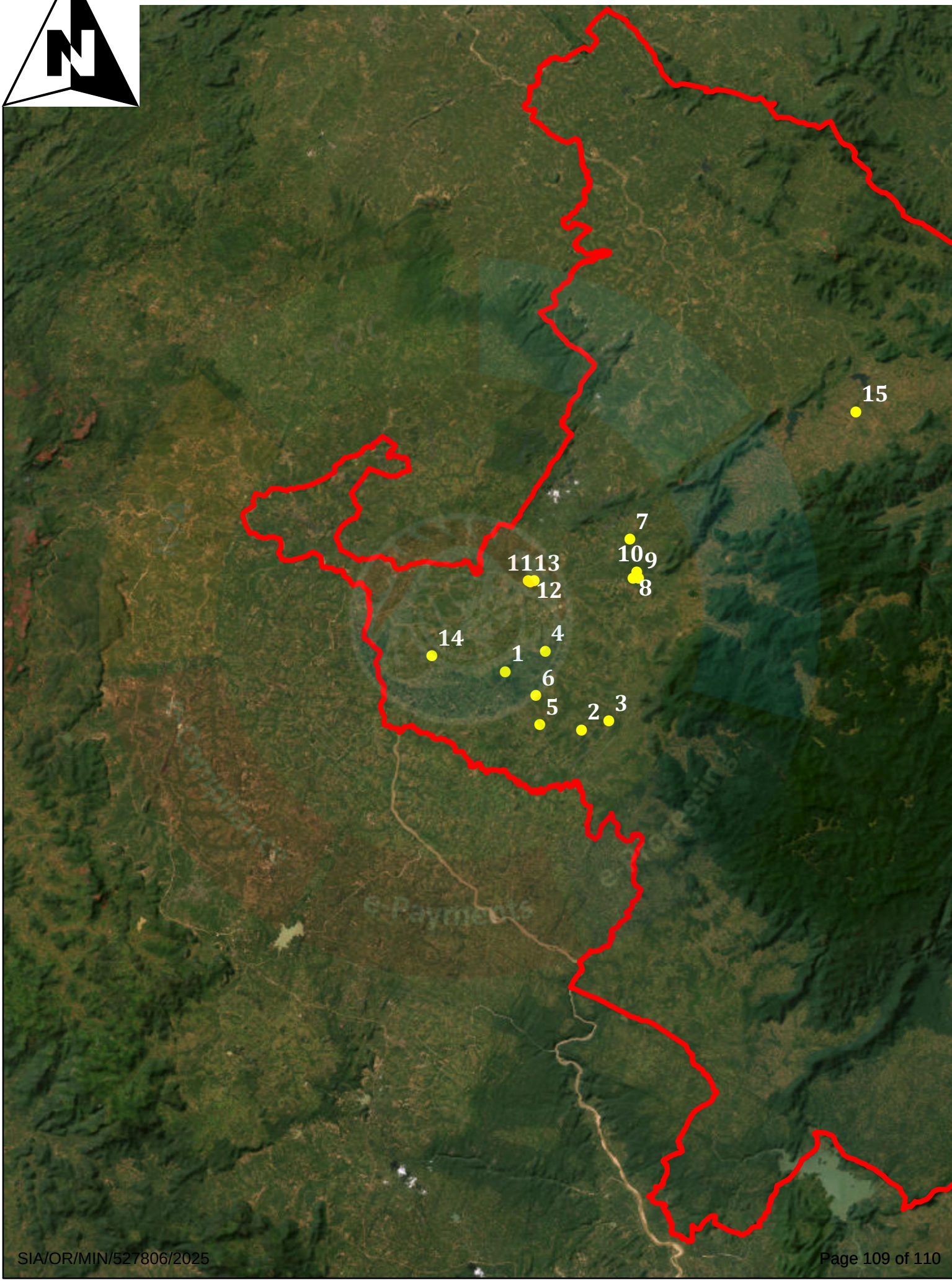
NA : - NOT AVAILABLE

Transportation Routes for individual leases and leases in Cluster FINAL Annexure-VII

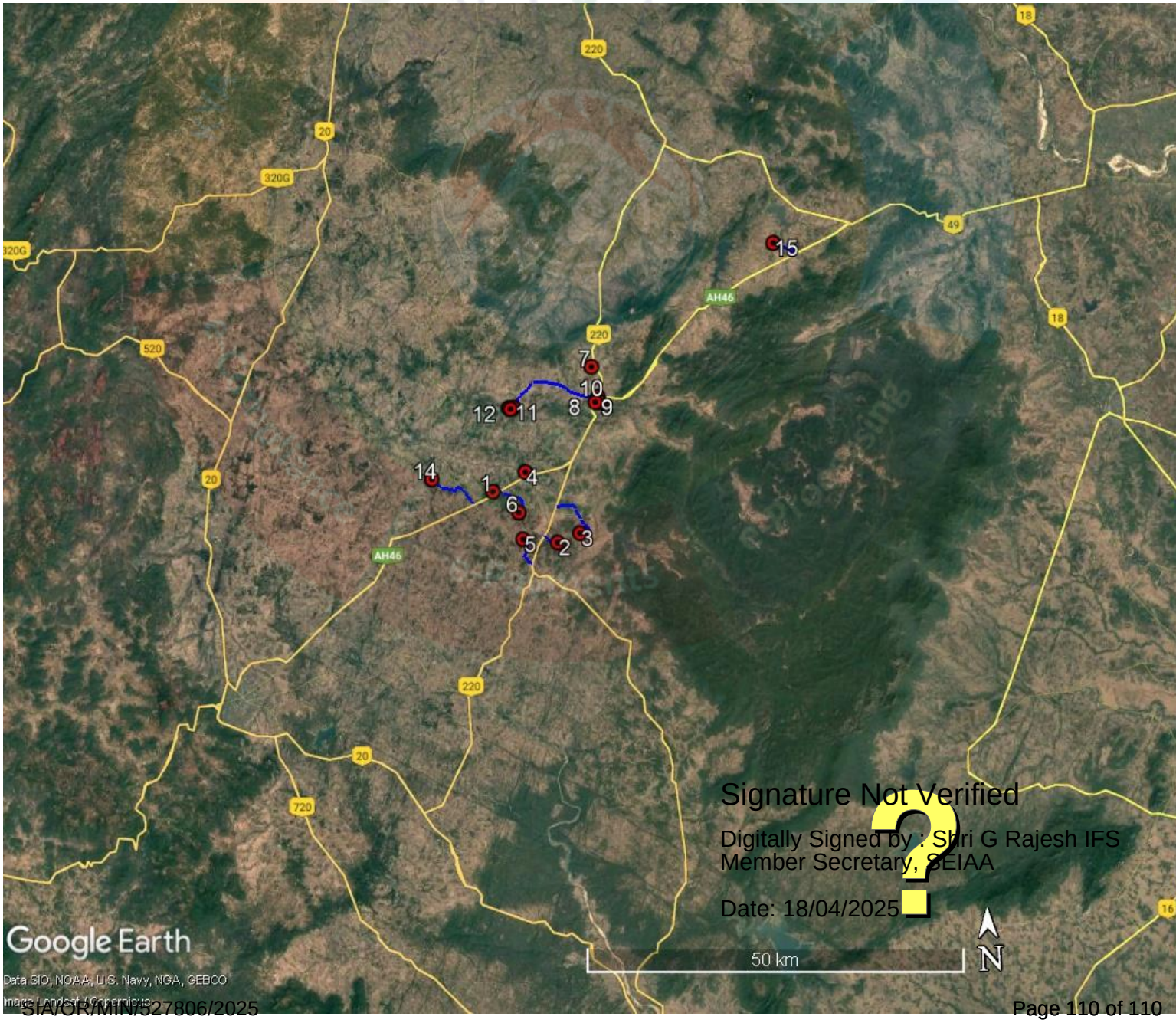
Sl No	Name of the Tahasil	Lease No	Transportation Route No	Number of tippers / days of lease	Number of tippers / days of all the lease on route	length of Route in KM	Type of Road (Black Topped/unpaved	Recommendation for road (Black Topped/unpaved)	The road will be constructed by Govt / Lease Owner	Route Map & Location
1	Karanjia	Ramachandrapur China clay	Ramachandrapur	1	1	6	Black topped	Black topped	Govt.	Ramachandrapur
2	Karanjia	Chanchabani China clay	Chanchabani	2	2	5	Black topped	Black topped	Govt.	Tangabila-Karanjia NH-220
3	Karanjia	Purnnapani Goridiha, Salarpada China clay	Purnnapani Goridiha, Salarpada	1	1	4	Black topped	Black topped	Govt.	Purnnapani-Karanjia NH-220
4	Karanjia	Katha Karnjia China clay	Katha Karnjia	2	2	5	Black topped	Black topped	Govt.	Katha Karnjia on NH-49
5	Karanjia	Jhardumuria China clay	Jhardumuria	1	1	3	Black topped	Black topped	Govt.	Katha Karnjia on NH220
6	Karanjia	Dumuria China clay	Dumuria	1	1	5	Black topped	Black topped	Govt.	Dumuria NH-49
7	Jashipur	Kumbharpandugadia China clay	Kumbharpandugadia	1	1	6	Black topped	Black topped	Govt.	Joshipur -Rairangpur Road NH-220
8	Jashipur	Joshipur China clay	Joshipur	4	4	1	Black topped	Black topped	Govt.	Dhobadiha-Joshipur NH-49
9	Jashipur	Kadodiha, Rugudi, Khandabandha, Kudarbisida China clay	Kadodiha, Rugudi, Khandabandha, Kudarbisida	2	2	15	Black topped	Black topped	Govt.	Kadodiha Dhobadiha-Joshipur NH-49

10	Jashipur	Jamda China clay	Jamda	1	1	18	Unpaved	Black topped	Govt.	Jamda Dhobadiha-Joshipur NH-49
11	Jashipur	Godapalsa -A China clay	Godapalsa -A	1	1	7	Unpaved	Black topped	Govt.	Joshipur -Raruan Road
12	Jashipur	Godapalsa -B China clay	Godapalsa -B	1	1	7	Unpaved	Black topped	Govt.	Joshipur -Raruan Road
13	Jashipur	Godapalsa -C China clay	Godapalsa -C	1	1	7	Unpaved	Black topped	Govt.	Joshipur -Raruan Road
14	Sukruli	Khaprasahi China clay	Khaprasahi	1	1	8	Unpaved	Black topped	Govt.	Sukruli -Singida NH-49
15	Bisoi	Hizli China clay	Hizli	1	1	1	Unpaved	Black topped	Govt.	Near NH-49 in between Baneikela

MINING LEASES (CHINA CLAY) MARKED ON TH



TRANSPORTING ROUTE



Signature Not Verified

Digitally Signed by : Shri G Rajesh IFS
Member Secretary, SEIAA

Date: 18/04/2025