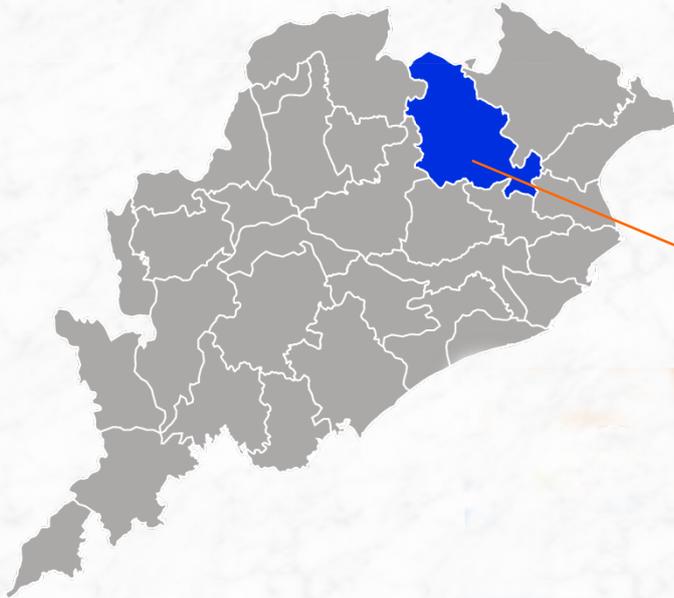




DRAFT DISTRICT SURVEY REPORT (DSR)
OF
KEONJHAR DISTRICT, ODISHA
FOR
ROAD METAL / BUILDING STONE / BLACK STONE

**(FOR PLANNING & EXPLOITING OF MINOR
MINERAL RESOURCES)**

ODISHA



KEONJHAR



As per Notification No. S.O. 3611(E) New Delhi,
25th July, 2018
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(MoEF & CC)

COLLECTORATE, KEONJHAR



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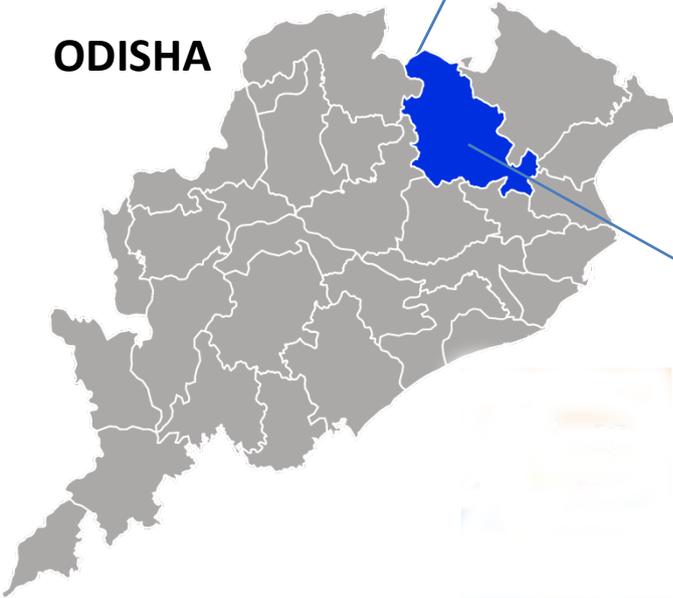
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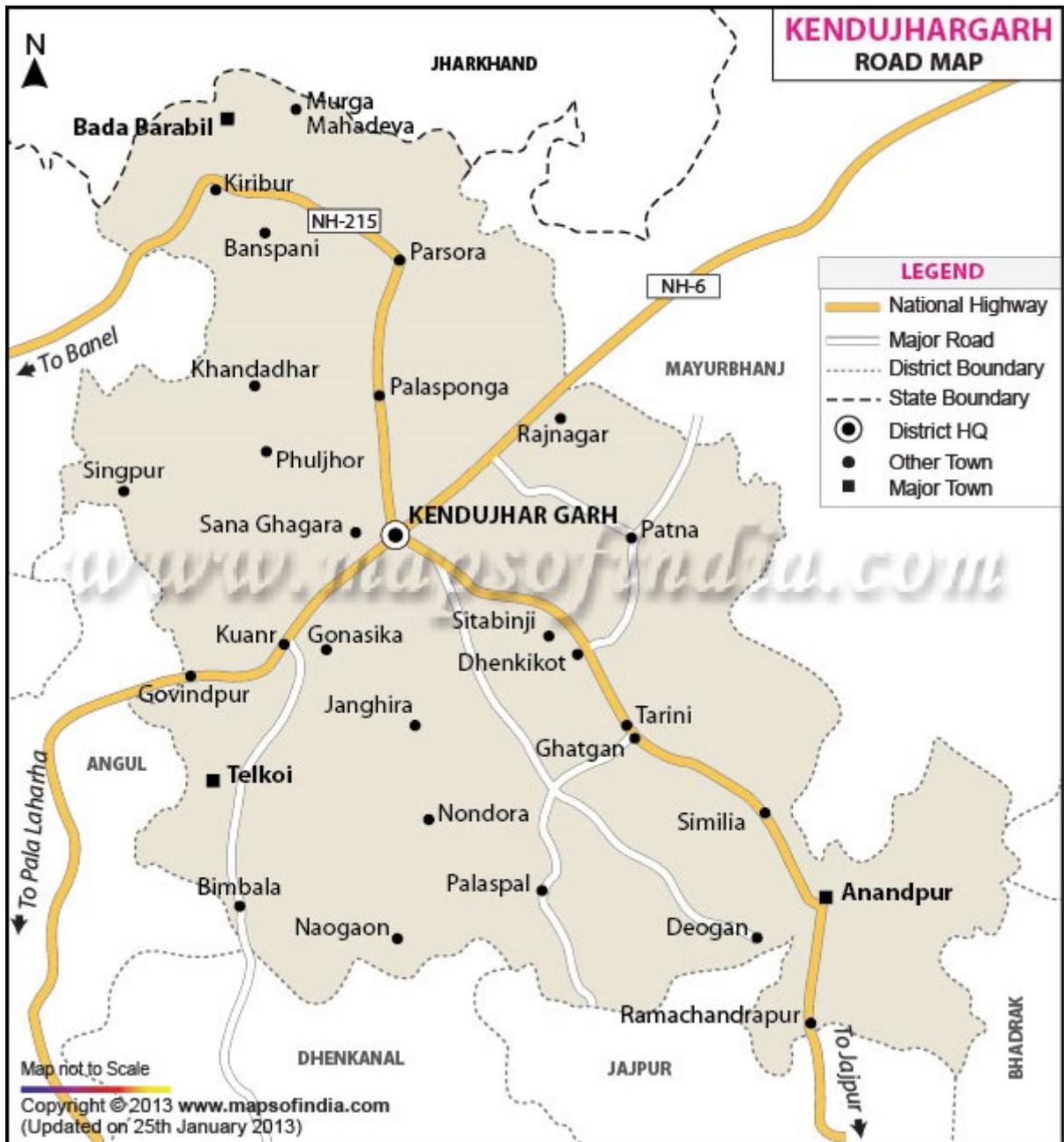
KEONJHAR



MAP SHOWING THE TAHASILS OF KEONJHAR DISTRICT



MAP SHOWING THE MAJOR ROADS OF KEONJHAR DISTRICT



PREFACE

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 road metal/building stone mining has been prepared in accordance with Clause II of Appendix X of the notification. Every effort has been made to cover road metal/building stone mining locations, future potential areas and overview of road metal mining activities in the district with all its relevant features pertaining to geology and mineral wealth. 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. The main purpose of preparation of District Survey Report is to identify the mineral resources and developing the mining activities along with other relevant data of the District.

1. INTRODUCTION

The Keonjhar district emerged as one of the districts of Odisha on 1st January, 1948. The district is bounded by Mayurbhanj district and Bhadrak district to the east, Jajpur district to the south, dhenkanal district and Sundargarh district to the west and West Singhbhum district of Jharkhand State to the north. Covering a geographical area of 8303 sq km, the Keonjhar district lies between 21° 1' N to 22° 10' N latitude and 85° 11' E to 86° 22' E longitude.

The whole District of Keonjhar was a princely state before its merger with Odisha. From the history it reveals that a part of the old Khijjinga territory with headquarters at Khijjinga Kota, identified with modern Khiching. It became a separate state with Jyoti Bhanja as its ruling chief sometime during the first half of the 12th century A.D.

The then State of Keonjhar comprised only the northern half of the modern district for a long time prior to the incarnation of Jyoti Bhanja as King. During the latter part of the 15th century the southern half of the district was occupied by King Govinda Bhanja under whose rule Keonjhar was extended

from Singbhum in the north to Sukinda in the South and from Mayurbhanj in the East to the borders of the States of Bonai, Pallahara and Anugul in the West.

During the rule of Pratap Balabhadra Bhanja (1764–1792 A.D.) two small areas of Tillo and Jujhpada were purchased from the Zamindar of Kantajhari and were added to the district. These were recognised as parts of Keonjhar in the Sanad granted by the East India Company to Raja Janardan Bhanja in 1804. Since then there had been no territorial changes of the district till its merger with the Province of Odisha. But after merger largely for the reasons of administrative expediency the areas of Tillo (7.51 sq.km) and Jujhpada (9.06sq.km.) were transferred to the districts of Balasore and Cuttack respectively, while a number of villages called Ambo group (14.84 sq.km.) of Balasore district were added to Keonjhar District.

Keonjhar is one of the major mineral producing districts of Odisha. Iron ore, Manganese ore, Chromite, Quartzite, Bauxite, Gold and Pyrophyllite are the major minerals found in this district.

2. OVERVIEW OF MINING ACTIVITIES IN THE DISTRICT.

Minerals:

IRON ORE:

The main iron ore deposits are found along the classic Bonai-Keonjhar Horse Shoe shaped synclinerium which spared over an area of about 60KmX25Km.

Hematite is the chief mineral resource of this district. Important deposits were found in Thakurani, Bolani, Joda east, Khandbhandra, Sidhmata, Belkundi, Kasia-Barapada, Bolani, Kiribura, Gurudia, Jharibahal, Dubuna, Bamebari, Murga, Palsa, Jajang, Malangtoli, Chamakpura, Gandhamardhan, Daitari, Tomka, Inganijaran, Horomoto Guali and Uliburu. Iron ore bands occur in layered BIF bands along with volcano-sedimentary rock piles known as Iron Ore Super Group. Usually four types of ore are seen i.e. hard massive, laminated, lateritic and blue dust.

A total of 3142.70 million tonnes of iron ore resource of all categories have been assessed with 64-68% Fe in massive, 62-65% Fe in laminated, 65-68% Fe in powdery blue dust type of ore.

Besides, investigation of iron ore by the Directorate in Horomoto-Guali area has established a possible reserve of 46.75 million tonnes of iron ore of grade varying from 51.20% to 65.24% Fe.

MANGANESE: The Keonjhar manganese belt is a part and parcel of Singhbhum Bonai belt and one of the most important manganese ore producing regions of India. This is confined to shale formation of Pre-Cambrian Iron Ore Super Group as stratiform, stratabound and lateritoid types.

Important deposits in the Keonjhar district are located in the areas of Roida-Bhadrasahi, Silijhora-Kalimati, Guruda, Chormalda, Sarkunda, Dubna Kolarudkela, Podadihi-Langini-Jharan, Lasarda, Pacheri, Balani, Baneikala, Kendudihi-Purulipada, Horomoto-Jajang, Katasahi, Joribahal, Joda west and Belkundi etc.

The reserve of manganese ore is estimated as 127.27 million tonnes.

The grade of the ore is variable from deposit to deposit as also from body to body within the same deposit. Out of the total production, about 10% to 15% forms the High Grade (more than 46% Mn), 25% to 30% Medium Grade (36-45% Mn) and the rest Low (less than 30-35% Mn) and still lower (less than 30% on Mn)

CHROMITE: The chromite deposits of the district are associated with the ultramafic rocks of Nuasahi, Boula and Phuijhorhuli area. The body extends for about 3Kms in an N-S direction. It is a dyke like body dipping steeply to the east and is widest in the centre and gradually tapering towards north and south. The ultrabasic occurs as intrusive in Precambrian metamorphites as well as differentiated layered igneous complex. It has a peridotite core with subordinate amount of chromite, peripheral pyroxenite and enstatite. The ultramafites include enstatite, bonzite, pyroxenite, serpentinitised dunites, talc schist, silicified dunites and chromitites with chromite loads. The chrome ore available are mostly of lumpy type.

The estimated reserve is 11.43 million tonnes with Cr₂O₃ content varies from 40% to 45%.

BAUXITE: Industrial and chemical grade Bauxite occurs on Dholkata pahar area of the district. The area is represented by metavolcanites characterized by

metatholeiitic basalt. The different flows are separated by tuffaceous shale. Outcrops of metagabbro have been noticed to the east and south east of Dholkata pahar. Apart from these minor occurrences of bauxite in pockety or poddy nature has been reported along Keonjhar-Banai belt. The occurrences has been located around Kodalía, Khajurdi Pahar, east of Kasiara and Jaladihi area.

The Dholkata Bauxite is of high alumina, high iron, low silica and low titanium grade having 60 to 70% tri-hydrated as gibbsite and rest bohemite. the predominant iron minerals are goethite and hematite occurring as colloidal bands.

A total of 5.986 million tonnes of bauxite reserve has been estimated around Dholkata pahar area of the district.

VANADIFEROUS MANGANESE: Deposits of vanadiferous magnetite occur in association with gabbro-anorthosite suite of rocks in the Precambrian metamorphic. A deposit of vanadiferous magnetite is seen near Phulinjhorhuli in Anandapur subdivision. The mineral occurs in a band of ultrabasic rocks about 4Km long.

GOLD: The occurrence of gold is reported in Telkoi and Banspal block of Keonjhar district. Several old workings of the gold in the shape of elongated trenches, deep circular pits, wells and tunnels have been recognised around Saleikena, Sirisbahal, Dublapal, Bangadiha, Odal, Gopur, Gajipur and Kusuguda etc. The area covering the gold deposits constitute the rock units belonging to Iron Ore Super Group comprising of basic lava, tuffites, basic intrusive, metagabbro, metadiorite, amphibolites, quartzite and chlorite schist. The granitic suites of rocks are intrusive into the above rock types and are represented by micro granites, fracture, shear zone and faults might have acted both as channel ways and receptacles for gold deposition in the vein quartz bodies.

Few important fire assay result done by Hutti Gold Mines shows gold values ranging from 1.8gm/tonne to 18.68gm/tonne in Gopur, traces to 5.3gm/tonne in Odal, traces to 2gm/tonne in Gajipur.

PYROPHYLLITE: The occurrences of pyrophyllite are stretched over a 90Km long belt extending from Rebna-Palásbahal in the south to Dhobakuchuda-Balabhadrapurr in the north. These are associated with the border area of Singhbhum Granite and quartzite hills such as Madrangajori, Macchakandana, Jodiaghat and south of Uchakabeda, eastern slope of Chantrabhangapahar, Dalimpur and Sidhamath area. The Pyrophyllite occurrences mentioned above are in the form of very fine

flakes, typically soapy feel and associated with pyrophyllite quartz schist, quartz tourmaline pyrophyllite rocks and quartz tourmaline pyrophyllite schist as irregular patches.

A total reserve of 12.28 million tonnes have been assessed in Keonjhar district. The average percentage of Al_2O_3 is 20-23%, SiO_2 -65-75%, Fe_2O_3 - 0.77% and LOI-3-4%.

QUARTZITE: High grade quartzite mining activities are continuing near Barapada, Barang, Paharpur, Parsala area of the district. Besides, cherty and massive quartzite with 99% SiO_2 are marked intermittently in the iron ore series near Rebna-Palaspal, Magarmuhan, Jaypur, Dalmaposi, Chauthia and Nawabeda area.

A total reserve of 45.68 million tonnes of quartzite has been estimated in the district. the average SiO_2 content varies from 95 to 99.66%.

CHINA CLAY: Pockets of china clay are encountered near Judiapahar, Tarreni pokhari, Aupura, Fakirpur, Padmakesharpur, Jaypur, Kankadajodi, Adakata, Govindpur area of the district. The clay is yellowish white, gritty and occurs as pocket type.

The reserve of china clay has been estimated as 1.41 million tonnes in the area. The Al_2O_3 content varies from 18.25% to 22.77%.

DIMENSION STONE: Singhbhum granite, dolerite dykes and ultrabasic rocks of the district are suitable for dimension stone/ decorative stones. The 150Km long Palaspanga dyke from Keonjhar to Chainbasa, the longest dyke in Asia is being used for the above purpose in view of its colour, texture, composition and hardness. These are quarried at number of places around Dhurpada and Keonjhar. A part of dyke to the east of Kaliaprasad village has been estimated to contain 500Cu.m. of dimension stone of block size 0.5mx0.5mx0.5m. Lower shale formations found near village Lunagothani was found to be suitable for decorative purpose. However 1606900Cu.m. of black granite, 18044200Cu.m. of Grey granite and 8379000Cu.m. of Green granite has been reported in the district.

TALC-SOAPSTONE: This is reported from the northern slope of hill ranges immediately south and west of Kendujhargarh and Dalimpur. The talc-schist occurs as gently undulating slabby layers underlying the Kolhan sandstone. The highly foliated talc-schist are traversed by veins of quartz as impurities. Besides these, soapstone occurrence is encountered near Dholkata, Dalangpur, NE of Sayedmulia,

Suramundi, Kuladhamkuni, Sapghosara, Pithagola, Alanga area. These are locally utilized for preparation of stone ware and statues. The MgO content varies from 11.397 to 22%.

PYRITE: Pyrite crystals have been recorded in dark grey shaly formation underlying the Kolhan sandstone west of Balibandha on the Keonjhar-Chainbasa road. The occurrence is of no economic importance.

GLASS SAND: Some of the Kolhan sandstones in the northern portion of the district(near Barangam) is suitable for glass industry.

BUILDING STONE & ROAD MATERIAL: Granite gneisses, aplites, dolerites and quartzite are being used as road metal and in concrete mixtures. Lateritite blocks are extensively used as a very common building material. All these materials are found in plenty.

OTHER MINERALS: A few occurrences of asbestos are encountered near Gopalpur and Ranki. Thin bands of slip fibres were marked in the peridotite body, but the economic aspect of this occurrence appears not to be viable. A patch of travertine limestone is also encountered near Asurkhol area.

The district is the major producer of iron and manganese ore of the state. Other than the above mentioned minerals, minor minerals such as river sand, laterite slabs, building stone/black stone/road metals, morrum, brick earth etc. are also available in the district.

3. GENERAL PROFILE

a. Administrative set up:

Sl No	Item	Unit	Magnitude
1	Location		
	Longitude	Degree	85° 11' E to 86° 22' E
	Latitude	Degree	21° 1' N to 22° 10' N I
2	Geographical area	Sq.Km.	8303
3	Sub-division	Numbers	3
4	Tahasils	Numbers	13
5	C D Blocks	Numbers	13
6	Municipalities	Numbers	4

7	NACs	Numbers	1
8	Police Stations	Numbers	25
9	Gram Panchayats	Numbers	297
10	Villages	Numbers	2123
	Inhabited	Numbers	2064
	Uninhabited	Numbers	59
11	Assembly constituencies	Numbers	6

b. Area and Population:

The district has an area of 8303 sq. km and 18.02 lakh of population as per 2011 census. The district accounts for 4.09 percent of the states territory and shares 3.03 percent of the states population. The density population of the district is 217. per sq. kms. as against 270 person per sq. km. of the state.

c. Climate :

The climate condition of the district is generally hot and high humidity during April to May and cold during November to December. The monsoon generally breaks during the month of July, Average annual rainfall of the district was 1228.4 mm during 2017, which is lower than the normal rainfall 1487.7 mm.

d. Agriculture:

During the year 2017-18 the net area sown was 288 thousand hectares against 5356 thousand hectares of the state. The production of was as below:

Name	Pad dy	Whe at	Maiz e	Mun g	Biri	Kulth i	TILL	Grou ndnu t	Musta rd	Potato es	Jute	Suga rcan e
Producti on in 000 MT	598.55	0.58	69.40	7.72	9.90	7.79	2.72	15.23	3.33	23.82	16.78	13.22

During 2017-18, the total fertilizers used in the district was about

Type of fertiliser	Nitrogenous	Phosphatic	Pottasic	Total	Consumption per Ha
Quantity in MT	9185	3701	1725	14611	38.73

e. Power:

Consumption of electricity in Angul district during the year 2013-14 covers 136.03 million units and villages so far electrified as on 30.09.2019, 2067 revenue villages which constitutes 97.4% to the total revenue villages of the district.

f. Transport & Communication:

Railway route length (14-15) km	158.06
No of Rly stations and PH(14-15)	16
Forest road (17-18) km	249.98
National Highway (16-17) km	341.30
State Highway (17-18) km	52.74
Major district road (17-18) km	34.29
Other dist road (17-18) km	885.98
Rural road(17-18) km	1945.90
Inter village road (16-17) km	3912.49
Intra village road (16-17) km	3143.74

g. Health:

The medical facilities are provided by different agencies like Govt., Private individuals and voluntary organizations in the district.

Sub divisional hospitals including mobile	8 No
Beds facilities	593 No
Homoeopathic dispensaries	48 No
Ayurvedic dispensaries	34 No

h. Tourist places:

Kushaleswar Temple, Kanjipani Ghati, Keshari Kunda, Murga Mahadev Temple, Gonasika Temple, Hadagada Reservoir, Handibhanaga, Ghagra & Gundichaghagi waterfalls are the tourist spots of the district.

i. Forest areas:

Category of forest	Area in sq km
Reserve Forest	1834.09
Unclassified Forest	0.26
Demarcated Protected Forest (DRF)	273.64
Undemarcated Protected Forest	220.79
Other forest under Revenue Dept	768.40
Total	3097.18

j. Education:

Primary School (2017-18)	No. of Schools	1779
	Enrolment (No)	187984
	Pupil Teacher Ratio	24.37
Upper Primary School 2017-18	No. of Schools	1040
	Enrolment (No)	100645
	Pupil Teacher Ratio	21.01
General College 2017-18	Junior	54
	Degree	34
Secondary School	No. of Schools	520
	Enrolment (No)	53393
	Pupil Teacher Ratio	20.93
Literacy Rate, 2011	Male	78.1
	Female	58.3
	Total	68.2

k. Culture & Heritage:

Keonjhar district is very much rich in its fairs and festivals like Sarhul, Sohrai, Karmapuja, Bodam, Chaitra parab or Uda parab, Makara sankranti, Nuakhai, Raja parab, Baruni jatra, Ratha jatra, Sivaratri etc. Famous folk dances are CHANGU, CHHAU, JUANG, HO etc.

4. GEOLOGY

The district can be broadly divided into seven geological units viz.: (i) The patchy occurrences of metamorphites belonging to older metamorphics of Archaean age (ii) Huge batholiths of Singhbhum Granite with swarms of newer dolerites dykes in the eastern part of the district, (iii) Metasedimentaries belonging to Gorumahisani Group of rocks of Archean age in the southwestern part of the district (iv) Volcano-sedimentary sequence intruded by Bonai granite belonging to Lower Bonai group of age ranging between Archean and Paleo Proterozoic in the southwest and on the north-west (v) Intrusives like chromiferous ultramafics, gabbro-anorthosite, dolerite and quartz veins of Archaean to Proterozoic age (vi) Sedimentaries and metasedimentaries belonging to Kolhan Group ranging in age from lower to middle Proterozoic (vii) Laterites of Cenozoic age and (viii) Quaternaries represented by Kaimundi formation and unclassified alluvium.

The Singhbhum granite shows wide variation from highly foliated biotite-epidote granodiorite to grayish white medium grained weakly foliated to nearly massive muscovite-biotite granodiorite. It contains enclaves of older metamorphics represented by hornblende schist, chlorite schist and meta gabbros. Gorumahisani Group consists of sheared pebbly quartzite, hornblende schist and BHQ. The Volcano-sedimentary rocks of lower Bonai Group comprises Basic Volcanic, BHQ, BHJ, ferruginous shale, quartzite, iron ore bodies and tuff with or without manganese. The chromiferous ultra-basics of Nuasahi and the mafic-ultramafic complex of Baula are rich in Cr-Fe-Ni and is probable locale for PGE. This is followed by late magmatic gabbro-anorthosite suite of rocks. The dolerite and gabbro occur as the younger intrusive. The Kolhan Group of rocks comprises conglomerate, sandstone, shale and quartzite. The insitu laterites are wide spread in the area. the Quaternaries are represented by Kaimundi formation consisting of sandy sticky clay impregnated with caliche and unclassified

Quaternaries represented by black to brown clay and coarse to fine sand.

STRATIGRAPHY:

The geological succession in the district is as follows:

Age	Formation/Group	Lithology
Holocene		Alluvium
Late Pleistocene to Early Holocene	Kaimundi Formation	Clay with Calcareous concentration
Cainozoic		Laterite and lateritic bauxite (Lbx)
Palaeo to Meso Proterozoic	Kolhan Group	Conglomerate, sandstone and shale
Palaeo Proterozoic		Dangoaposi lava
Proterozoic (Undifferentiated)		Granophyre/ gabbro/anorthosite
Archaean to Proterozoic		Newer Ddolerite
		Ultramafic rocks+Chromite
Archaean to Palaeo Proterozoic	Lower Bonai Group	Basalt, tuff, meta gabbro
		Granite
		Shale, tuff and manganese
		BHQ, BHJ, ferruginous shale and quartzite
		Gritty sandstone, orthoquartzite, conglomerate
Archaean	Gorumahishani Group	Hornblende schist, chlorite schist, amphibolite and meta-gabbro
		Quartzite, quartz sericite schist, cherty quartzite, fuchsite quartzite and black chert
		Quartzite, chert
		BHQ, BMQ, BCQ, BJQ
		Ferruginous shale, carbonaceous shale phyllite and mica schist

		Pebbly quartzite, gritty quartzite and quartzite
	Older Metamorphic Group	Singhbhum granite/ Hornblende Granite
		Pellitic schist, quartzite and amphibolite

5. DRAINAGE AND IRRIGATION PATTERN.

The drainage of the district is mainly controlled by rivers like Baitarani, Kangira, Ardei, Khairibandhan, Kanjhari, Sita, Kusei, Salandi etc. Detail of the river system is narrated below.

Sl. No.	Name of the River	Place of Origin	Altitude at Origin	Total length in the district (in Km) (Total length)
1	2	3	4	5
1	Baitarani	Gonasika	Longitude- 21 ⁰ -31'-00" N Longitude- 85 ⁰ -33'-00"E	240Km upto Anandapur
2	Kangira	Haladi Pokhari		40Km
3	Ardei	Sidha Matha	Longitude- 22 ⁰ -009'-00" N Longitude- 85 ⁰ -68'-00"E	72.40Km
4	Khairibandhan	Smimlipal R.F.	Longitude- 21 ⁰ -924'-00" N Longitude- 85 ⁰ -794'-00"E	152Km
5	Deo	Sidha Matha	Longitude- 21 ⁰ -804'-00" N Longitude- 85 ⁰ -826'-00"E	80Km
6	Kanjhari	Kanjharibani Pira	Longitude- 21 ⁰ -685'-00" N Longitude- 85 ⁰ -851'-00"E	60Km
7	Sita	Barabanki Hill	Longitude- 21 ⁰ -497'-00" N Longitude- 86 ⁰ -017'-00"E	26Km
8	Musal	Rebana R.F.	Longitude- 21 ⁰ -32'-00" N Longitude- 86 ⁰ -066'-00"E	60Km
9	Kusei	R. Bera R.F.	Longitude- 21 ⁰ -139'-00" N Longitude- 86 ⁰ -178'-00"E	80Km
10	Salandi	Banjhi Kusaghat R.F.	Longitude- 20 ⁰ -79'-00" N Longitude- 86 ⁰ -678'-00"E	144Km

11	Bhirol		Longitude- 21 ⁰ -606'-00" N Longitude- 85 ⁰ -945'-00"E	
12	Mermenda		Longitude- 21 ⁰ -958'-00" N Longitude- 85 ⁰ -775'-00"E	

6. LANDUSE PATTERN

SI No	Landuse	Area in '000Ha
1	Forest Area	310
2	Misc. trees & Grooves	6
3	Permanent Pasture	20
4	Culturable Waste	26
5	Land put to Non Agril Use	70
6	Barren & Unculturable Land	93
7	Current Fallow	10
8	Other Fallow	0
9	Net Area Sown	288
10	Mining	7
	Geographical Area	830

7. SURFACE WATER & GROUND WATER SCENARIO

The drainage systems i.e. rivers of the district gets filled with water during the monsoon and the gradually it decreases from the month of January to June of each year. In the summer season all rivers become almost dry excepting narrow flow of water within the basin.

The variation of ground water table in the district is as follows:

Depth of water level (mbgl)/ Period	April	August	November	January
Minimum	4.0	0.60	1.48	0.3
Maximum	10.4	5.09	7.01	13.1

8. RAINFALL & CLIMATIC CONDITION

The district is generally hot with high humidity during April and May and cold during December and January. The monsoon generally breaks during the month of July and continues till end of October. The temperature goes as high as up to 45°C in the summer and up to 7^o-8^o C during peak winter.

The rainfall statistics of the district for last four years is given below:

YEAR /MONTH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	TOTAL
2015	64.40	52.92	197.56	319.21	167.32	114.26	27.14	0.16	22.71	20.72	14.58	8.52	1009.5
2016	2.34	137.14	145.02	270.37	348.52	166.20	58.26	4.03	0.00	1.69	53.95	23.71	1211.23
2017	15.13	117.45	162.00	320.52	230.52	161.25	160.06	24.98	0.09	0.92	0.0	35.42	1228.34
2018	133.26	95.75	185.79	360.55	375.08	351.53	113.38	0.25	49.55	0.0	0.0	0.83	1665.97
2019	59.64	116.61	143.27	232.23	327.32	353.60	161.64	-	-	-	55.20	40.18	1489.69

9. DETAILS OF MINING LEASES OF ROAD METAL

Attached as Annexure I

10. DETAILS OF ROYALTY COLLECTED

Year-wise Calculation of Royalty (Rs)

Sl.No	Name Of Tahasil	2015-16	2016-17	2017-18	2018-19
1	Barbil	0	0	0	2281500
2	Patna	245007	838993	3008839	2573148
3	Saharapada				
4	Anandpur	0	0	241010	245240
5	Banspal	0	4704695	8973341	10726299
6	Champua	529688	2796331	3122652	3203236
7	Ghasipura	0	13246702	26117462	12953570
8	Ghatagaon	0	241000	627000	3310000
9	Harichandanpur	87870	117000	1174335	1401270
10	Hatadihi	155105	155704	154794	168753
11	Jhumpura	0	1096000	1096000	1096000
12	Keonjhar	805000	3335000	3842000	3980000
13	Telkoi	0	23200	232000	232000
	TOTAL	1822670	26554625	48589433	42171016

11. DETAILS OF PRODUCTION OF MINOR MINERAL

Yearwise Production of Road metal in cum

Sl.No	Name of Tahasil	2015-16	2016-17	2017-18	2018-19
1	Barbil	17550	17550	17550	17550
2	Patna	7124.9	21494.9	23612.7	25019.2
3	Saharapada	0	0	0	0
4	Anandpur	0	0	923.4	939.6
5	Banspal	16214	183931	232947	233316
6	Champua	13099.5	20317	21165.2	21675
7	Ghasipura	0	130852	152195	43675
8	Ghatagaon	93377	93597	59913	41400
9	Harichandanpur	870	8716	9791	10779
10	Hatadihi	960	920	920	960
11	Jhumpura	3600	3600	3600	3600
12	Keonjhar	17970	22346	23347	25679
13	Telkoi	0	1542	1542	1542
TOTAL		170765.4	504865.9	547506.3	426134.8

12. MINERAL MAP OF THE DISTRICT

Attached as Plate No 4.

13. LIST OF LOI HOLDERS ALONG WITH VALIDITY

Attached as Annexure II

14. TOTAL MINERAL RESERVE AVAILABLE IN THE DISTRICT

Total mineral reserve of road metal/buildingstone/blackstone/white stone is 4,10,032 cum which may increase after detail investigation.

Details of the potential areas submitted as Annexure III.

15. QUALITY/GRADE OF MINERAL

Road metal/building metal of the district is very much suitable for various construction purposes after its crushing and screening. The in-situ rocks are fractured making these unsuitable for decorative purpose.

16. USE OF MINERAL

Road metal/building metal of the district is used mainly for various construction purposes like road making, concrete making, dams etc.

17. DEMAND & SUPPLY OF THE MINERAL

The tentative annual demand is to the tune of 1,00,000 cum of road metal and is mainly supplied from different tahasils of the district and adjoining districts of Mayurbhanj and Dhenkhal.

18. MINING LEASES MARKED ON THE MAP OF THE DISTRICT.

Attached as Plate No 5.

19. DETAILS OF AREAS WHERE THERE IS A CLUSTER OF MINING LEASES

Not applicable

20. DETAILS OF ECO-SENSITIVE AREA

Eco-sensitive Zone has been identified around Hadagarh Wildlife Sanctuary and submitted to the Ministry of Environment & Forests and Climate Change, Govt. of India, New Delhi through Govt. of Odisha, Forest & Environment Department for final Notification which is being awaited. In absence of Notification of Eco-sensitive Zone as per Hon'ble Supreme Court of India direction the 10 km. radius from boundary of Hadagarh Wildlife Sanctuary is being treated as Eco-sensitive Zone.

Further, as per direction of the Hon'ble Supreme Court of India, no mining and quarry activities will be allowed within 1 km. radius of Hadagarh Wildlife Sanctuary.

21.IMPACT ON THE ENVIRONMENT (AIR, WATER, NOISE, SOIL FLORA & FAUNAL , LAND USE , AGRICULTURE, FOREST ETC.) DUE TO MINING

Activities attributed to Mining:-

Generally, the environment impact can be categorized as either primary or secondary. Primary Impacts are those, which are attributed directly by the project. Secondary impacts are those which are indirectly induced and typically include the associated investment and changed pattern of social and economic activities by the proposed action.

The impact has been ascertained for the project assuming that the pollution due to mining activity has been completely spelled out under the base line environmental status for the entire ROM which is proposed to be exploited from the mines.

Impact on Ambient Air

Mining operation are carried out by opencast manual, semi mechanized/mechanized methods generating dust particles due to various activities likes, excavation, loading, handling of mineral and transportation. The air quality in the

mining areas depends upon the nature and concentration of emissions and meteorological conditions.

The major air pollutants due to mining activities include:-

- Particulate matter (dust) of various sizes.
- Gases, such as sulphur dioxide, oxides of nitrogen, carbon monoxide etc from machine & vehicular exhaust.

Dust is the single air pollutant observed in the open cast mines. Diesel operating drilling machines, blasting and movement of machineries/ vehicles produce NO_x, SO₂ and CO emissions, usually at low levels. Dust can be of significant nuance surrounding land user and potential health risk in some circumstances.

Water Impact

Sometimes the mining operation leads to intersect the water table causing ground water depletion. Due to the interference with surface water sources like river, nallah etc drainage pattern of the area is altered.

Noise Impact

Noise pollution mainly due to operation of machineries and occasional plying of machineries. These actives will create noise pollution in the surrounding area.

Impact on Land environment

The topography of the area will change certain changes due to mining activity which may cause some alteration to the entire eco system.

Impact on Flora & Fauna

The impact on biodiversity is difficult to quantify because of it's diverse and dynamic characteristics.

Mining activities generally result in the deforestation, land degradation, water, air and noise pollution which directly or indirectly affect the faunal and flora status of the project area.

However, occurrence and magnitude of these impacts are entirely dependent upon the project location, mode of operation and technology involved.

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

Air

Mitigation measures suggested for air pollution controls are to be based on the baseline ambient air quality of the project/cluster area and would include measures such as:

- Dust generation shall be reduced by using sharp teeth of shovels.
- Wet drilling shall be carried out to contain the dust particles.
- Controlled blasting techniques shall be adopted.
- Water spraying on haul roads, service roads and overburden dumps will help in reducing considerable dust pollution.
- Proper and regular maintenance of mining equipment's have to be undertaken.
- Transport of materials in trucks are to be covered with tarpaulin.
- The mine pit water can be utilized for dust suppression in and around mine area.
- Information on wind diction and meteorology are to be considered during planning, so that pollutants, which cannot be fully suppressed by engineering techniques, will be prevented from reaching the nearby agricultural land, if any.
- Comprehensive greenbelt around overburden dumps and periphery of the mining projects/clusters has to be carried out to reduce to fugitive dust transmission from the project area in order to create clean & healthy environment.

Water

- Construction of garland drains and settling tanks to divert surface run –off of the mining area to the natural drainage.
- Construction of checks dams/ gully plugs at strategic places to arrest silt wash off from broken up area.
- Retaining walls with weep hole are to be constructed around the mine boundaries to arrest silt wash off.

- The mined out pits shall be converted in to the water reservoir at the end of mine life. This will help in recharging ground water table by acting as a water harvesting structure.
- Periodic analysis of mine pit water and ground water quality in nearby villages are to be undertaken.
- Domestic sewage from site office & urinals/latrines provided within ML/QL areas is to be discharged in septic tank followed by soak pits.

NOISE

- Periodic maintenance of machineries, equipments shall be ensured to keep the noise generated within acceptable limit.
- Development of thick green belt around mining/cluster area, haul roads to reduce the noise.
- Provision of earplugs to workers exposed to high noise generating activities like blasting, excavation site etc. Worker and operators at work sites will be provided with earmuffs.
- Conducting periodical medical checkup of all workers for any noise related health problems.
- Proper training to personnel to create awareness about adverse noise related effects.
- Periodic noise monitoring at locations within the mining area and nearby habitations to assess efficacy of adopted control measures.
- During blasting optimum spacing, burden and charging of holes will be made under the supervision of competent qualified mines foreman, mate etc.

Biological Environment

- Development of green belt/gap filling saplings in the safety barrier left around the quarry area/ cluster area.
- Carrying out thick greenbelt with local flora species predominantly with long canopy laves on the inactive mined out upper benches.
- Development of dense poly culture plantation using local floral species in the mining areas at conceptual stage if the mine is not continued much below the general ground level.
- Adoption of suitable air pollution control measures as suggested above.
- Transport of materials in trucks covered with tarpaulin.

23. RECLAMATION OF MINED OUT AREA (BEST PRACTICE ALREADY IMPLEMENTED IN THE DISTRICT, REQUIREMENT AS PER RULES AND REGULATION, PROPOSED RECLAMATION PLAN) :-

As per statute all mines/quarries are to be properly reclaimed before final closure of the mine. Reclamation of exhausted mines are planned to be undertaken in below three possible means:

1. If, substantial amount of waste is there, the exhausted quarry can be fully or partly backfilled using the stored waste. The backfilled areas are to be brought under plantation of local species.
2. If the generation of waste is much less as in the case of minor mineral mining, the exhausted quarries can be reclaimed by
 - a. Plantation on the broken up surface if the depth of quarry is not much below the surrounding surface level.
 - b. Converted to water reservoir after stabilization of the slopes if the exhausted quarry continues much below the surrounding surface level. It is preferred to cordon the water reservoir either through wire fencing or retaining wall with plantation from the safety point of view.

Most of the quarry/mining lease areas are yet to be exhausted from ore point of view. Hence, reclamation would be taken up only after exhaustion of the ore/mineral content from these areas. The exhausted minor mineral quarries of the district have been converted to water reservoirs.

24. RISK ASSESSMENT & DISASTER MANAGEMENT PLAN

The only risk involved related to mining of minor mineral excepting natural calamities is slope failure and probable accidents due to high and ill maintained bench walls. This can only be addressed through making of regular benches and undertaking mining in benching pattern.

The disaster management plan (DMP) is supposed be a dynamic, changing, document focusing on continual improvement of emergency response planning and arrangements.

The disaster management plan is to be aimed to ensure safety of life, protection of environment, protection of installation, restoration of production

and savage operations in this same order of priorities. For effective implementation of the disaster management plan, it should be widely circulated through rehearsal/induction conducted by the respective department from time to time .

General responsibilities of employees' during an emergency:

During an emergency, it becomes more enhanced and pronounced when an emergency warning is raised, the worker in charge, should adopt safe and emergency shut down and attend to any prescribed duty. If no such responsibility is assigned, the workers should adopt a safe course to assembly point and wait instructions. He should not resort to spread panic. On the other hand, he must assist emergency personnel towards objectives of DMP.

Co-ordination with local authorities:

The Mine Manger who is responsible for emergency will always keep a jeep ready at site. In case of any eventuality, the victim will be taken to the nearby hospitals after carrying out the first aid at the site. The Manger should collect and have adequate information of the nearby hospitals, fire station, police station, village panchayat heads, taxi stands, medical shops, district revenue authorities etc. and use them efficiently during the case of emergency.

25. DETAILS OF THE OCCUPATION HEALTH ISSUES IN THE DISTRICT. (LAST FIVE- YEAR DATA OF NUMBER OF PATIENTS OF SILICOSIS & TUBERCULOSIS IS ALSO NEEDS TO BE SUBMITTED):-

As per the guidelines of the Mine Rules 1995, occupational health safety has been stipulated by the ILO/WHO. The proponent's will take necessary precautions to fulfill the stipulations. Normal sanitary facilities have to be provided within the lease area. The management will carry out periodic health checkup of workers.

Occupational hazards involved in mines are related to dust pollution, noise pollution, blasting and injuries from moving machineries & equipment and fall from high places. DGMS has given necessary guidelines for safety against these occupational hazards. The management has to strictly follow these guidelines.

All necessary first aid and medical facilities are to be provided to the workers. The mine shall be well equipped with personal protective equipment (PPE). Further, all the necessary ported equipments such as helmet, safety goggles, earplugs, earmuffs ets are to be provided to mine workers as per Mines Rules. All operators and mechanics are to be trained to handle fire fighting equipments.

Details of occupational health issues in the district since last 5 years.

Incidence of Patients of Tuberculosis.

Year	Total TB Cases Notified
2015	2764
2016	3038
2017	2765
2018	2701
April 2019 to September,2019	1609

There is no case of Silicosis found in the district within the time frame mentioned above.

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

As most of the minor mineral mines/quarries of the district are yet to be exhausted of their mineral content no sort of reclamation measures including plantation has been undertaken excluding gap plantation of local species in the peripheral safety zones of the quarries/ clusters and in some of the haul roads.

27. ANY OTHER INFORMATION

Nil

1	B a r b i l	Ka n d a r a - l s t o n e q u a r r y	Ka n d a r a	Se n i o r M a n a g e r (C i v i l) , O C C L i m i t e d, Ka n p u r S p i l l W a y P r o j e c t, , B a s u d e v p u r	At/ Po- Bas ud ev pur , Ps- Jod a, Dist - Ke onj har , Pin- d, 758 041 Mo b. 933 707 065 4.	553 6/D ate d 30. 07. 201 8	201 5- 16	201 9- 20	30. 07. 201 8	Wo rkin g	Ca ptiv e	1803 /Rev /02.0 4.201 8	N22°4 0'35.6 5" to N22° 02' 38.11" & E85°2 9' 25.64" to E85° 29'31. 64" K. No. 1/1, P. No. 127 & 128 Area Ac.1.9 20 Kisam- Taila-II	2 2 4 0 3 5 2 2 0 2 3 8	OC	6400	13,500	2 7 0 0 0	2 7 0 0 0	2 7 0 0 0	2 7 0 0 0	N i l	N i l	N i l	2 7 0 0 0	N i l	N i l	N i l	3 .5 1 0
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2	B a r b i l	Ka n d a r a - I l l s t o n e q u a r r y	Ka n d a r a	Pr o j e c t M a n a g e r, M /S- M o n i t o r i n g O f f i c e B i l e i p a d a	At/ Po- Bilei pa da, Ps- Jod a, Dist - Ke onj har , Pin- 775 803 8, Mo b. 635 321 375 7..	441 3/D ate d 26. 09. 201 8	201 5- 16	201 9- 20	01. 10. 201 8	Wo rkin g (T.P)	Ca ptiv e	1805 /Rev /02.0 4.201 8	N 22°02' 42.74" to N 22° 02' 46.21" & E 85°29' 32.34" to E 85° 29' 37.19" Khata No. 1/1, Plot No. 134 & 135 Area Ac. 3.38 ,Kisam - Taila- II Kisam- Taila-II	2 2 0 2 4 2 2 0 4 2 6	OC	7200	74,250	1 4 , 8 5 0	1 4 , 8 5 0	1 4 , 8 5 0	1 4 , 8 5 0	N i l	N i l	N i l	1 4 , 8 5 0	N i l	N i l	N i l	1 9 .3 0 5	
3	P a t n a	Sto ne	Vill :Te nt ulik h u n t i /3	Sa n k a r K u m a r (3	At/ PO- Bar bil Dist :Ke onj	Or der No: 223 0 dat ed:	201 5- 16	201 9- 20	30. 07. 201 6	Wo rkin g	No- n- ca ptiv e	Yes Lette r No:3 379 date d:20.	Latitu de:21° 47'01. 4"N to 21°47' 14.9"N Longit	2 1 4 7 0 1 .4	8 5 4 4 0 2	OC	40460	1,06,760 Cum	1 4 5 1 C u m	1 6 9 2 7 0 C u m	1 9 2 7 4 C u m	2 1 1 7 4 C u m	n i l	1 6 9 2 7 0 C u m	1 9 2 7 4 C u m	2 1 1 7 4 C u m	n i l	7 4 4 8 5 0	3 4 4 7 5 0	3 3 4 4 9 6

29	G h a s i p u r a	Bh o l a n u a g a o n	Sri b a s J e n a	ST M i n e r a l P v t L t d, 4 0 3 ,B l o c k A G o k u l P l a z a ,C t c R o a d ,B B S R 9 4 3 7 0 2 1 1 3 6	05. 04. 201 7	201 5- 16	201 9- 20	05. 04. 201 7	wor kin g	No n c a p t i v e	2673 /10.0 3.201 7 S E I A A	BOLA N U A G A O N K-145 P-3	2 1 3 9 6 4 2 2 2 2 E	1 3 4 2 N	8 6 4 2 2 E	OC	Ac. 14.00	-----	-	-	4 2 4 7 0 4	4 2 7 4 4	-	-	4 2 4 7 0 4	4 2 7 4 4	-	-	1 2 7 4 1 0 0 0	1 2 8 2 3 2 0 0			
30	G h a s i p u r a	N a r a n g a p u r	C h i n m a y K h u n t i a	At/ P.O .- K e s h a d u r a p a l D i s t - K e o n j h a r 9 4 3 7 0 7 9 8 5 5	27. 06. 201 6	201 5- 16	201 9- 20	27. 06. 201 6	wor kin g	No n c a p t i v e	3375 /20.0 5.201 6 D E I A A	NARA N G A P U R K-560 P- 89,93, 231,26 3	2 1 1 0 8 5 5	1 1 1 5 9 7	0 1 0 1 N	8 5 5	OC	Ac. 3.23	-----	-	5 1 8	5 1 5	5 1 1	-	5 1 8	5 1 5	5 1 1	-	6 2 8 0	6 9 9 3 5 0	6 6 9 9 0		
31	G h	B i r a g	B i r a g	C h i	At/ P.O	27. 06.	201 5-	201 9-	27. 06.	wor kin g	No n c	3357 /20.0	BIRAG O B I N	2 1 5	1 7	3 7	8 6	5 1	OC	Ac.2.38	-----	-	3 9	4 1	4 2	-	3 9	4 1	4 2	-	6 0	6 1	6 3

ANNEXURE II

ROAD METAL/ BLACK STONE/ WHITE STONE SOURCES ALREADY AUCTIONED BUT NOT EXECUTED (LOI ISSUED) IN THE DISTRICT

Sl. No.	Name of Tahasil	Name of village	Name of Minor Mineral	Name of the Successful auction holder	Address & Contact No of Letter of Intent Holder	Letter of Intent Grant Order No. & date	Validity of Lol	Use Captive/Non-Captive)	Location of the Source recommended for mineral concession GPS co-ordinates or Khata & Plot No) (Sketch map to be attached)	Latitude			Longitude			Area of the mineral potential patch (in sq m)	Average height of potential patch (in m)	Mineable mineral potential (in cum)
										D e g r e e	M i n u t e	S e c o n d	D e g r e e	M i n u t e	S e c o n d			
1	2	3	4	5	6	7	8	9	10	1 1	1 2	1 3	1 4	1 5	1 6	17	18	19
1	Barbil	Bhagalpur	Bhagalpur Stone quarry 0.3642	Gobinda Chandra Bhera S/o-Pankaj Charan Behera	At/po-Barbil, Dist-Keonjhar, Pin-758035 Mob.9777926496	1907 / Dated 12.04.2	31, March 2021	Non Captive	22°03' 45.8" N to 22° 03' 47.08" N & 85°27' 42.5" E to 85° 27' 46" E K. No.78, P.No. 754, Area Ac.0.90, SK- Jungle	2 2	0 3	4 5	8 8	2 7	4 5	4000	Nil	11,840
2	Patna	Godipokhari	Stone	Sankar Kumar (selected bidder)	At/PO-Barbil Dist:Keonjhar Mob:7008080991	Letter No.000/24.03.2017(EC not	No	Non-captive	Latitude:21°42'37.4"N to 21°42'50.8" N Longitude: 85°44'29.7" E to 85°44'22.9"	2 1	4 2	3 7	8 5	4 4	2 9	10117	2	6393.6 cum

						gran ted)			E Khata No:177 Plot No:2585 & 2629 Kissam:Pat harabani									
3	Patna	Tang arpad a(KH A)	Stone	Girija Ranja n Mishr a(sel ecte d bidd er)	At/PO - Swam birjaya govin dpur Dist:Ke onjhar Mob:9 43709 3750	1912 /08. 05.2 017 (EC not gran ted)	No	Non- captiv e	Latitude:2 1°39'13.8"N to 21°38'59.5" N Longitude: 85°51'47.4 4"E to 85°51'38.9" E Khata No:242 Plot No:2949 Kissam:Hu di	2 1	3 9	1 3 · 8	8 5 · 4 4	5 1 · 4 4	4 7 · 4 4	4000	2	4746 cum
4	Patna	Tang arpad a(KA)	Stone	Girija Ranja n Mishr a(sel ecte d bidd er)	At/PO - Swam birjaya govin dpur Dist:Ke onjhar Mob:9 43709 3750	1914 /08. 05.2 017 (pre -80 Sabi k kisa m JUN GLE)	No	Non- captiv e	Latitude:2 1°38'41"N to 21°38'35"N Longitude: 85°51'32"E to 85°51'30"E Khata No:242 Plot No:2741 Kissam:Hu di	2 1	3 8	4 1	8 5	5 1 · 3 2	3 2	12100		nil
5	Patna	Ankur a	Stone	Rajen dra Panig rahi(s elect ed bidd er)	At/PO - Mining New Colon y Dist:Ke onjhar Mob:N A	3525 /23. 11.2 016 (pre -80 Sabi k kisa m	No	Non- captiv e	Latitude:2 1°39'50"N to 21°39'55"N Longitude: 85°51'05"E to 85°51'07"E Khata No:214	2 1	3 9	5 0	8 5	5 1	5 5	15200		nil

						JUN GLE)			Plot No:1692 Kissam:Par bat-III									
6	Patna	Erend ei	Stone	Rajen dra Panig rahi(s elect ed bidd er)	At/PO - Mining New Colon y Dist:Ke onjhar Mob:N A	2365 /03. 09.2 015 (pre -80 Sabi k kisa m JUN GLE)	No	Non- captiv e	Latitude:2 1°36'49.1"N to 21°36'58.1" N Longitude: 85°55'00"E to 85°55'9.3"E Khata No:356 Plot No:5 Kissam:Hu di	2 1	3 6	4 9 1	8 5 5	0	40670	3	74034 cum	
7	Patna	Bauns uli	Stone	M. Prasa d Gupt a(sel ecte d bidd er)	At/PO -Barbil Dist:Ke onjhar Mob:9 43036 9472	2786 /16. 09.2 016 (pre -80 Sabi k kisa m JUN GLE)	No	Non- captiv e	Latitude:2 1°44'6.3"N to 21°44'15.5" N Longitude: 85°42'9.2"E to 85°42'15.2" E Khata No:317 Plot No:3270 Kissam:Pat harabani	2 1	4 4	6 3	8 5 2	4 9 2	30270	5	12486 6 cum	
8	Patna	Daba rchua	Stone	M. Prasa d Gupt a(sel ecte d bidd er)	At/PO -Barbil Dist:Ke onjhar Mob:9 43036 9472	2780 /16. 09.2 016 (sab ik kissa m III- JAL A)	No	Non- captiv e	Latitude:2 1°43'2"N to 21°43'10"N Longitude: 85°42'29"E to 85°42'31"E Khata No:129 Plot No:351 Kissam: Patharaba	2 1	4 3	2	8 5	4 2 9	6470		nil	

9	Patna	Denuan	Stone	Sankar Kumar (selected bidder)	At/PO -Barbil Dist:Kerajhar Mob:7008080991	Letter No. 2827 dtd. 02.05.2017 (sabit kisham JAL A-III)	No	Non-captive	ni Latitude:21°41'24.80"N to 21°41'24.85"N Longitude:85°46'57.86"E to 85°46'57.93"E Khata No:171 Plot No:1446 Kissam: Patharabani	21	41	24	85	46	57	4650	nil
10	Patna	Raikala (KA)	Stone	M. Prasad Gupta (selected bidder)	At/PO -Barbil Dist:Kerajhar Mob:9430369472	Letter No. 2715/07.09.2016 (Plot No.285 sabikisham JUN GLE)	No	Non-captive	Plot:258 Latitude:21°46'2"N to 21°46'3"N Longitude:85°47'24"E to 85°47'25"E Plot:256: Latitude:21°46'1"N to 21°46'2"N Longitude:85°47'23"E to 85°47'24"E Plot:1265: Latitude:21°44'48"N to 21°44'50"N Longitude:85°48'23"E to 85°47'24"E (Khata No:176 Plot No:258 Kissam:Pat	21	46	24	85	47	24	22338	nil

									harabani) Hect: 2.23 (Khata No:176 Plot No:256 & 1265 Kissam: Patharaba ni)									
11	Patna	Rudhi apada	Stone	Bibek ananda Dash(selec ted bidd er)	At- Shibna rayan pur PO:Sw ampa tna Dist: Keonj har Mob:9 43700 3732	Not Issue d (pre -80 not avai labl e)	No	Non- captiv e	Latitude:2 1°32'10"N to 21°32'12"N Longitude: 85°54'59"E to 85°54'58"E Khata No:171 Plot No:1059 Kissam: Patharaba ni	2 1	3 2	1 0	8 5	5 4	5 9	7360		nil
12	Patna	Saras posi	Stone	M. Prasa d Gupt a(sel ecte d bidd er)	At/PO -Barbil Dist:Ke onjhar Mob:9 43036 9472	Let ter No.2 784 dtd. 26.0 7.20 16(p re- 80 not avai labl e)	No	Non- captiv e	Latitude:2 1°47'9.3"N to 21°47'19.8" N Longitude: 85°46'35.4" E to 85°46'44.5" E Khata No:67 Plot No:287 Kissam: Patharaba ni	2 1	4 7	9 3	8 5	4 6	3 5 4	14080	4	37096. 8 cum
13	Patna	Khireit angiri	Stone	None	NA	Not auct ione d so far (pre	No	Non- captiv e	Latitude:2 1°42'56"N to 21°42'57"N Longitude: 85°42'32"E	2 1	4 2	5 6	8 5	4 2	3 2	14080		

						-80 Sabi k kisa m JUN GLE)			to 85°42'35"E Khata No: 338 Plot No: 1600 & 1606 Kissam: Patharaba ni									
14	Patna	Baliap osi (KA)	Stone	None	NA	Not auct ione d so far (pre -80 not avai labl e)	No	Non- captiv e	Latitude:2 1°45'36"N to 21°45'27"N Longitude: 85°44'50"E to 85°44'47"E Khata No: 128 Plot No: 1810 Kissam: Patharaba ni	2 1	4 5	3 6	8 5	4 4	5 0	18210		nil
15	Patna	Baliap osi (KHA)	Stone	None	NA	Not auct ione d so far (pre -80 not avai labl e)	No	Non- captiv e	Latitude:2 1°45'48"N to 21°45'45"N Longitude: 85°45'07"E to 85°45'07"E Khata No: 128 Plot No: 1771 Kissam: Patharaba ni	2 1	4 5	4 8	8 5	4 5	0 7	4930		nil
16	Anan dpur	Sundu ria	Stone/ 5.078 Ha.	Pabitr a moh an Peda	S/O- Parsur am Peda, At/Po- Bango re, PS- Soso, Dist-	Let ter No- 3666 dat ed 11.0 7.20 16	Yes	Non- captiv e	Latitude- 21.16'03.97 " to 21.16'12.96 "N Longitude- 86.09'05.27 "- 86.09'09.64	2 1	1 6	0 3 9	8 6	0 9	0 5 2	33993. 59	20	46540 8

					Keonjhar, Mob. No-9337331085				"E Khata No-91 Plot No-1648 Area-Ac.12.55 Kissam-Parbata-II										
17	Anandpur	Kantipal	Stone/5.261 Ha.	Mr. N.Ravi(Director) Maccons Infratech Pvt. Ltd.	Plot No-1116, 2nd floor, 23rd Cross, 23 Sector, II-HSR Layout, Bangalore-560102, Contact No-9845888599	Letter No.-5382 dtd. 22.12.2015	Yes	Non-captive	Latitude-21.15'40.00" to 21.15'52.00"N Longitude-86.12'36.30"-86.12'43.60"E Khata No-863 Plot No-2004 Area-Ac.13.00 Kissam-Patharabani	21	15	40	86	12	36	52609.1	22	813450	
18	Champurua	Laxmiposhi	Laxmiposhi Stone quarry-2 & 4.852	Swagatika Rout	At/PO - Baneikala, PS-Joda, Dist-Keonjhar mob-7978342499	4531/03.11.2017	31-Mar-22	Non-captive	21°57'06" N to 21°57'18" N and 85°41'36"E to 85°41'48"E Khata-108 & plot no. 426 Area Ac 12.00, Kisam-Patharabani	21	57	06	85	41	36	48562.2771	Nil	310965.3	
19	Champurua	Mukundapur	Mukundapur stone	Promad Kum	At-Murusuan,	3842/dt. 26.0	31-Mar-21	Non-captive	22°02'32.7" N to 22°02'45.8	22	02	32	22	02	45	25697.5383	Nil	54270	

			quarry-1 & 2.56	ar Mah anta	P.O- Cham akpur ,PS- Cham pua, Dist- Keonj har mob- 94384 92609	8.20 16			to " N and 85°33'36.3 "E to 85°33'43.6 "E Khata- 123 & plot no. 771 & 793 , Area 2.32 & Ac. 4.03, Total Area Ac 6.35, Kisam- Patharban i			7		8			
20	Ghat agao n	Balab hadra pur	Road Metal	Dillip Kum ar Dwib edy	At- Swam patna P.O.- Patna Dist.- Keonj har	2786 / 01.0 9.20 16		Non- captiv e	Khata-155 Plot-670						5260.9 1		
21	Ghat agao n	Kand asar	Road Metal	Prav at Chan dra Das	At/P.O .- Keonj hargar h, Dist- Keonj har	2786 / 01.0 9.20 16		Non- captiv e	Khata-102 Plot-2272						6879.6 6		
22	Ghat agao n	Jharb eda	Road Metal	Sank arsan Behar a	At- Pipilia Dist.- Keonj har	2786 / 01.0 9.20 16		Non- captiv e	N21°55865 1 E85°72005 1 Khata-280 Plot-122						12140. 6		
23	Ghat agao n	Pichh ula	Road Metal	Subra t Kum ar Dash	At- Swam patna P.O.- Patna Dist.- Keonj har	2786 / 01.0 9.20 16		Non- captiv e	N21°52275 8 E85°68906 2 Khata-218 Plot-349						19991. 47		

24	Ghat agao n	Pichh ula	Road Metal	Shiba Prasad Sahoo	At-Dimbo , Dist.- Keonj har	2786 / 01.09.2016		Non-captive	N21°522758 E85°689062 Khata-218 Plot-349/1							19991.47		
25	Ghat agao n	Upard iha	Road Metal	Dusmanta Kumar Palei	At-Uperdi ha, P.O.- Kusun upur, P.S.- Ghata gaon, District - Keonj har	2807 / 12.09.2017		Non-captive	Khata-158Plot-46/1849							8093.71		
26	Haric hand anpur	Braja mohap pur	Stone 1.238 ha	Sam bit nandan Mohanty	At/Po harich andan pur Mob-9437003716	2234 /Dt. 08.09.16		NC	Khata No : 33 Plot No : 737							1.283 ha		
27	Haric hand anpur	Saga dapa ta l	Stone 1.740 ha	No Bidde r				NC	Khata No : 247 Plot No : 38, 431, 555, 586							1.740 ha		
28	Haric hand anpur	Bhag amun da	Stone	No Bidde r				NC	Khata No : 348 Plot No : 4354							1.5985 ha		
29	Haric hand anpur	Kusu mjodi	Stone	No Bidde r				NC	Khata No : 23 Plot No : 257							0.7931		
30	Hata dihi	Dhen ka	Dhenka Lt. Stone Quarry Hc. 1.49	Baidh ar Pahi	At/Po-Hatadi hi	3225 , Dt. 27.9.16	2015-16 to 2019-20	N.C.	Khata No-484, Plot No 389, 390, 391,392	N - 210	13'	12 - 860	E - 17'	08 - 90"		11200	NA	33600
31	Jhum pura	Gund unia	Gunduni a Stone	Sanja y	At/PO -	1818 , dt.		N.C.	Khata No-276 Plot-							37231.1	10	27731.25

			Quarry (3.72 Ha)	Kumar Apat	Kamara joda, PS- Joda, Dist- Keonj har	28.8. 2016			701 Area- 9.20								
32	Keonj har	Murus uan	Road Metal Area- Ha 3.52	Pram od Kumar Sahoo	S/O- Brund aban Sahoo At- Palasp anga, Via- Jhum pura, Keonj har Mob- 99376 07295	7481 /21. 12.1 8	-	Non captiv e	Khata No. 146 ,Plot No. 971 (P), Area- Hc 3.52	2 1	4 6	4 1 · 2 1	8 5	3 3	4 2 · 9 8		59467. 50
33	Keonj har	Katha baun uli	Road Metal Area- Ha 2.557	Chitt aranj an Parida	S/O- Suren dra Parida , Kainshi , Keonj har Mob- 87635 27820	2374 / 1.06. 19	-	Non captiv e	Khata No. 204-AAA, Plot No. 345 (P), Area- Hc 2.5587	2 1	4 8	2 8	8 5	3 9	5 · 1		10320. 00

ANNEXURE III

POTENTIAL OF ROAD METAL IN THE DISTRICT

Sl. No	Name of Tahasil	Name of village	Status	Name of Minor Mineral	Location of the Source (Total Hillock) recommended for mineral concession (GPS co-ordinates or Khata & Plot No) (Sketch map to be attached)	Longitude			Latitude			Area of the mineral patch (in sq m)	Average height of potential patch (in m)	Mineable mineral potential (in cum)	
						D e g r e e	M i n u t e	S e c o n d	D e g r e e	M i n u t e	S e c o n d				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1	Barbil	Bhagalpur	New	Bhagalpur Stone quarry 0.3642	22°03' 45.8" N to 22° 03' 47.08" N & 85°27' 42.5" E to 85° 27' 46" E K. No.78, P.No. 754, Area Ac.0.90, SK- Jungle	22	03	45	8	22	03	42	4000	Nil	-
2	Barbil	Kandara	Running	Kandara-I stone quarry 0.777	N22°40'35.65" to N22° 02' 38.11" & E85°29' 25.64" to E85° 29'31.64" Khata No. 1/1, Plot No. 127 &	22	40	35	65	22	02	38	6400	Nil	-

					128 Kisam- Taila-II												
3	Barbil	Kandara	Running	Kandara-II stone quarry 1.367	N 22°02' 42.74" to N 22° 02' 46.21" & E 85°29' 32.34" to E 85° 29' 37.19" Khata No. 1/1, Plot No. 134 & 135 Area Ac. 3.38 ,Kisam- Taila-II	2 2	0 2	4 2	8 5	2 9	3 2 3 4	7200	Nil	-			
4	Barbil	Bhagalpur	LOI Issued	Bhagalpur Stone quarry 0.3642	22°03' 45.8" N to 22° 03' 47.08" N & 85°27' 42.5" E to 85° 27' 46" E K. No.78, P.No. 754, Area Ac.0.90, SK- Jungle	2 2	0 3	4 5	8 5	2 7	4 2 . 5	4000	Nil	11,840			
5	Patna	Tentulikhunti	Running	Stone 4.046	Latitude:21°47'0 1.4"N to 21°47'14.9"N Longitude:85°44' 40.2"E to 85°44'53.5"E Khata No: 44 Plot No:92 Kissam: Patharabani	2 1	4 7	0 1 . 4	8 5	4 4	4 0 . 2	40460	3	106760 cum			
6	Patna	Jamunaposi	Running	Stone 1.012	Latitude:21°42'3 9.3"N to 21°42'46.3"N Longitude:85°45' 56.7"E to 85°46'01.5"E Khata No: 211 Plot No:2658 Kissam: Patharabani	2 1	4 2	3 9 . 3	8 5	4 5	5 6 . 7	10120	3	5033.7 cum			
7	Patna	Padmapur	Running	Stone 3.545	Latitude:21°43'2.	2	4	2	8	4	4	35450	3	169568 cum			

					8"N to 21°43'19.7"N Longitude:85°46' 44.1"E to 85°46'58.5"E Khata No: 40 Plot No:186 & 190 Kissam:Parbat-I	1	3	.	5	6	4			
8	Patna	Raikala (KHA)	Running	Stone 6.034	Block-I Plot No:1222 Latitude:21°44'4 2.8"N to 21°44'51.5"N Block-II Plot No:140 Latitude:21°45'1 3.8"N to 21°45'29.2"N Block-III Plot No:142 Latitude:21°45'3 4"N to 21°45'45.3"N Block-I Plot No:122 Longitude:85°45' 7.1"E to 85°45'12.1"E Block-II Plot No:140 Longitude:85°45' 8.8"E to 85°45'15.4"E Block-III Plot No:142 Longitude:85°48' 17.9"E to 85°48'25.8"E Khata No: 176 Plot No:140 & 1222 Khata No: 177 Plot No:142 Kissam:Patharab ani	2 1	4 4	4 2 .	8 5	4 5	7 .	60340	3	163786.2 cum

9	Patna	Murusuan	Running	Stone 5.171	Latitude:21°43'3 8.2"N to 21°43'59.2"N Longitude:85°48' 8.5"E to 85°48'17.7"E Khata No:233 Plot No:1663 Kissam:Patharab ani	2 1	4 3	3 8 2	8 5	4 8	8 5	51710	5	167481 cum
10	Patna	Dumuria	Running	Stone 4.289	Latitude:21°34'1 6.8"N to 21°34'34.2"N Longitude:85°58' 5"E to 85°58'12.2"E Khata No: 215 Plot No:471 Kissam: Patharabani	2 1	3 4	1 6 8	8 5	5 8	5	42890	5	513540 cum
11	Patna	Kumudabahali	Running	Stone 0.870	Latitude:21°33'2 1.8"N to 21°33'29.6"N Longitude:85°55' 4.6"E to 85°55'6.5"E Khata No:123 Plot No:1279 Kissam: Patharabani	2 1	3 3	2 1 8	8 5	5 5	4 6	8700	5	24342.5 cum
12	Patna	Kantiapada	Running	Stone 0.307	Latitude:21°42'3 0.0"N to 21°42'37.6"N Longitude:85°44' 27.8"E to 85°44'29.7"E Khata No:215 Plot No:01 Kissam:Patharab ani	2 1	4 2	3 0 0	8 5	4 4	2 7 8	3070	2	2086 cum
13	Patna	Nuakhaman	Running	Stone 3.400	Latitude:21°44'5 4"N to 21°45'12"N Longitude:85°47' 59"E to	2 1	4 4	5 4	8 5	4 7	5 9	34000	3	146911.2 cum

					85°48'8.3"E Khata No: 149 Plot No: 329 Kissam:Patharab ani													
14	Patna	Ankura	New	Stone 4.338	Latitude:21°40'1 3"N to 21°40'15"N Longitude:85°51' 08"E to 85°51'16"E Khata No. 214 Plot No.339 Kissam: Pathar Chatan	2 1	4 0	1 3	8 5	5 1	0 8	43380	NA	NA				
15	Patna	Godipokhari	LOI Issued	Stone	Latitude:21°42'3 7.4"N to 21°42'50.8"N Longitude:85°44' 29.7"E to 85°44'22.9"E Khata No:177 Plot No:2585 & 2629 Kissam:Patharab ani	2 1	4 2	3 7 .	8 5 4	4 4 .	2 9 7	10117	2	6393.6 cum				
16	Patna	Tangarpada(K HA)	LOI Issued	Stone	Latitude:21°39'1 3.8"N to 21°38'59.5"N Longitude:85°51' 47.44"E to 85°51'38.9"E Khata No:242 Plot No:2949 Kissam:Hudi	2 1	3 9	1 3 .	8 5 8	5 1 .	4 7 4	4000	2	4746 cum				
17	Patna	Tangarpada(K A)	LOI Issued	Stone	Latitude:21°38'4 1"N to 21°38'35"N Longitude:85°51' 32"E to 85°51'30"E Khata No:242 Plot No:2741 Kissam:Hudi	2 1	3 8	4 1	8 5	5 1	3 2	12100		nil				

18	Patna	Ankura	LOI Issued	Stone	Latitude:21°39'50"N to 21°39'55"N Longitude:85°51'05"E to 85°51'07"E Khata No:214 Plot No:1692 Kissam:Parbat-III	2 1	3 9	5 0	8 5	5 1	5	15200		nil
19	Patna	Erendei	LOI Issued	Stone	Latitude:21°36'49.1"N to 21°36'58.1"N Longitude:85°55'00"E to 85°55'9.3"E Khata No:356 Plot No:5 Kissam:Hudi	2 1	3 6	4 9 .	8 5 1	5 5	0	40670	3	74034 cum
20	Patna	Baunsuli	LOI Issued	Stone	Latitude:21°44'6.3"N to 21°44'15.5"N Longitude:85°42'9.2"E to 85°42'15.2"E Khata No:317 Plot No:3270 Kissam:Patharabani	2 1	4 4	6 .	8 5 3	4 2 .	9 2	30270	5	124866 cum
21	Patna	Dabarchua	LOI Issued	Stone	Latitude:21°43'2"N to 21°43'10"N Longitude:85°42'29"E to 85°42'31"E Khata No:129 Plot No:351 Kissam:Patharabani	2 1	4 3	2	8 5	4 2	2 9	6470		nil
22	Patna	Denuan	LOI Issued	Stone	Latitude:21°41'24.80"N to 21°41'24.85"N Longitude:85°46'57.86"E to 85°46'57.93"E Khata No:171 Plot No:1446	2 1	4 1	2 .	8 5 8	4 6 .	5 7 8 6	4650		nil

					Kissam: Patharabani									
23	Patna	Raikala (KA)	LOI Issued	Stone	Plot:258Latitude: 21°46'2"N to 21°46'3"N Longitude:85°47' 24"E to 85°47'25"E Plot:256:Latitude :21°46'1"N to 21°46'2"N Longitude:85°47' 23"E to 85°47'24"E Plot:1265:Latitud e:21°44'48"N to 21°44'50"N Longitude:85°48' 23"E to 85°47'24"E (Khata No:176 Plot No:258 Kissam:Patharab ani) Hect: 2.23 (Khata No:176 Plot No:256 & 1265 Kissam: Patharabani)	2 1	4 6	2	8 5	4 7	2 4	22338		nil
24	Patna	Rudhiapada	LOI Issued	Stone	Latitude:21°32'1 0"N to 21°32'12"N Longitude:85°54' 59"E to 85°54'58"E Khata No:171 Plot No:1059 Kissam: Patharabani	2 1	3 2	1 0	8 5	5 4	5 9	7360		nil
25	Patna	Sarasposi	LOI Issued	Stone	Latitude:21°47'9. 3"N to 21°47'19.8"N Longitude:85°46' 35.4"E to 85°46'44.5"E Khata No:67 Plot	2 1	4 7	9 3	8 5	4 6	3 5 4	14080	4	37096.8 cum

					No:287 Kissam: Patharabani												
26	Patna	Khireitangiri	LOI Issued	Stone	Latitude:21°42'56"N to 21°42'57"N Longitude:85°42'32"E to 85°42'35"E Khata No: 338 Plot No: 1600 & 1606 Kissam: Patharabani	2 1	4 2	5 6	8 5	4 2	3 2	14080					
27	Patna	Baliaposi (KA)	LOI Issued	Stone	Latitude:21°45'36"N to 21°45'27"N Longitude:85°44'50"E to 85°44'47"E Khata No: 128 Plot No: 1810 Kissam: Patharabani	2 1	4 5	3 6	8 5	4 4	5 0	18210					nil
28	Patna	Baliaposi (KHA)	LOI Issued	Stone	Latitude:21°45'48"N to 21°45'45"N Longitude:85°45'07"E to 85°45'07"E Khata No: 128 Plot No: 1771 Kissam: Patharabani	2 1	4 5	4 8	8 5	4 5	0 7	4930					nil
29	Anandpur	Kanto	New	Stone/ 1.031 Ha.	Khata No- 183 Plot No- 110/1008 Area- Ac.2.55 Kissam- Parbata-II							10379					
30	Anandpur	Kolimati	New	Stone/ 0.35 Ha.	Khata No- 267 Plot No- 403 Area- Ac0.87 Kissam- Patharabani							3521					
31	Anandpur	Sundurua	LOI Issued	Stone/	Latitude-	2	1	0	8	0	0	33993.59	20				465408

				5.078 Ha.	21.16'03.97" to 21.16'12.96"N Longitude- 86.09'05.27"- 86.09'09.64"E Khata No- 91 Plot No- 1648 Area- Ac.12.55 Kissam- Parbata-II	1	6	3	6	9	5			
32	Anandpur	Kantipal	LOI Issued	Stone/ 5.261 Ha.	Latitude- 21.15'40.00" to 21.15'52.00"N Longitude- 86.12'36.30"- 86.12'43.60"E Khata No- 863 Plot No- 2004 Area- Ac.13.00 Kissam- Patharabani	2 1	1 5	4 0	8 6	1 2	3 6	52609.1	22	813450
33	Banspal	Ambadahara	Running	Amabadahara Stone Quarry/ Ha 6.00	21° 37' 53.8"N to 21° 38' 3.8"N & 85° 32' 5.9"E to 85° 32' 13.0"E	2 1	3 7	5 3	8 5	3 2	5 9	44514	--	-
34	Banspal	Ichinda	Running	Ichinda Stone Quarry Ha 6.80	21° 39' 01.7"N to 21° 39' 11.9" N & 85° 31' 25.8" to 87° 31' 40.3"	2 1	3 9	0 1	8 5	3 1	2 5	48582	--	---
35	Banspal	Baitarani Bhuyan	Running	Baitarani Bhuyan Stone Quarry Ha 4.6358	21° 32' 28.6" N to 21° 32' 38" N & 85° 27' 58.4" E to 85° 28' 02.3" E	2 1	3 2	2 8	8 5	2 7	5 8	50000	-	-
36	Banspal	Karangadihi	Running	Karangadihi Stone Quarry Ha 4.800	21° 33' 320" N to 21° 33' 39.4" N & 85° 27' 31.5" E to 85° 27' 40.3" E	2 1	3 3	3 2	8 5	2 7	3 1	3200	-	-
37	Banspal	Benidihi	Running	Benidihi West Stone Quarry Ha 3.440	21° 28' 10.6"N to 21° 28' 19.6" N & 85° 21' 30.8"E to 85° 21' 36.1" E	2 1	2 8	1 0	8 5	2 1	3 0	4000	-	-
38	Banspal	Benidihi	Running	Benidihi East Stone Quarry Ha 4.00	21° 28' 10.6"N to 21° 28' 19.6" N & 85° 21' 30.8"E to	2 1	2 8	1 0	8 5	2 1	3 0	4000	-	-

					85°21'36.1" E			6			8		
39	Champua	Laxmiposhi	New	Laxmiposhi Stone quarry -1	Khata-108, plot no. 425 Area Ac 12.00, Kisam-Patharbani							48562.2771	
40	Champua	Karanjia	New	Karanjia Stone quarry & 5.099	Khata-324, plot no. 1537 Area Ac 12.60, Kisam-Patharbani							50990.3909	
41	Champua	Karanjia	New	Mackmillanpur stone quarry & 0.627	Khata-37, plot no. 178 /1 & 182/1 , Area 1.00 & Area 0.55 Total Area 1.55 Kisam-Patharbani							4046.85642	
42	Champua	Karanjia	New	Chandrasekharpur Stone quarry & 1.060	Khata-119, plot no. 509 Area Ac 2.62, Kisam-Patharbani							10602.7638	
43	Champua	Mukundapur	New	Mukundapur stone quarry-2 & 1.404	Khata-123, plot no. 59 & 732 , Area 0.47 & 3.00 , Total Area Ac 3.47, Kisam-Patharbani							14042.5918	
44	Champua	Kadagadia	New	Kadagadia stone quarry & 0.623	Khata-276, plot no. 237, 741 & 799 , Area 1.54, 2.35 & 1.13 , Total Area Ac 5.02, Kisam-Patharbani							20315.2192	
45	Champua	basudevpur	New	Basudevpur stone quarry & 0.505	Khata-48, plot no. 739/1 Area Ac 0.48, Kisam-Patharbani							Total area of the lease has been acquired by NHAI for expanding of N.H	
46	Champua	Bhanda	New	Ghuntagadia stone quarry & 1.841	Khata-97, plot no. 245 & 1177, Area Ac 2.00 & 2.55, Total Area							8093.71284	

					4.55 , Kisam-Patharbani												
47	Champua	Sasanga	New	Sasanga stone quarry & 0.651	Khata-147 plot no. 4 Area Ac 1.44, Kisam-Patharbani										5827.47325		
48	Champua	Sirapur	New	Sirapur Stone quarry & 1.205	Khata-51 plot no. 336 Area Ac 2.98, Kisam-Patharbani										12059.6321		
49	Champua	Fulkanlei	New	Fulkanlei stone quarry & 0.202	Khata-207 plot no. 645/1 Area Ac 0.50, Kisam-Patharbani										2023.42821		
50	Champua	Fulkanlei	New	Kusumgoda Stone quarry & 0.133	Khata-207, plot no. 4 Area Ac 0.33, Kisam-Patharbani										1335.46262		
51	Champua	Laxmiposhi	LOI Issued	Laxmiposhi Stone quarry-2 & 4.852	21°57'06" N to 21°57'18" N and 85°41'36"E to 85°41'48"E Khata-108 & plot no. 426 Area Ac 12.00, Kisam-Patharbani	2 1	5 7	0 6	8 5	4 1	3 6	48562.2771	Nil	310965.3			
52	Champua	Mukundapur	LOI Issued	Mukundapur stone quarry-1 & 2.56	22°02'32.7" N to 22°02'45.8 to " N and 85°33'36.3"E to 85°33'43.6"E Khata-123 & plot no. 771 & 793 , Area 2.32 & Ac. 4.03, Total Area Ac 6.35, Kisam-Patharbani	2 2	0 2	3 2	8 2	4 2	4 5	25697.5383	Nil	54270			
53	Ghasipura	Bholanugaon	Running	Bholanugaon Stone Quarry	BOLANUAGAO N K-145 P-3	2 1	1 3	3 9	8 6	4 2	2 2	Ac.14.00	----	---			
54	Ghasipura	Narangapur	Running	Narangapur	NARANGAPUR	2	1	0	8	5	5	Ac.3.23	----	---			

				Stone quarry	K-560 P-89,93,231,263	1	1	1	5	9	7			
								0			9			
								1						
								N						
55	Ghasipura	Biragobindapur	Running	Biragobindapur stone quarry	BIRAGOBINDAPUR K-209 P-724	21	15	37	86	5	19	Ac.2.38	----	---
								N			9			
											9			
											E			
56	Ghasipura	Ostapura	Running	Ostapura stone quarry	Ostapura k-169 P-905/1	21	13	34	86	4	93	Ac.13.00	----	---
								N			E			
57	Ghatagaon	Khajirijani	Running	Road Metal	N21°30'03.6" - N21°31'10.5" E85°48'46.3" - E85°48'54.1" Khata-60, Plot-739							57,500		245859.1
58	Ghatagaon	Khajirijani	Running	Road Metal	N21°31'18.70" - N21°31'30.30" E85°48'9.50" - E85°48'15.50" Khata-60, Plot-519							16,800		48256
59	Ghatagaon	Mellan	Running	Road Metal	N21°21'55.5" - N21°22'01.7"E 85°59'11.4" - E85°59'15"Khata -142,Plot-2602							4,800		55890
60	Ghatagaon	Rutisila	Running	Road Metal	N21°30'11.10" - N21°31'19.50" E85°43'09.20" - E85°43'18.40" Khata-190, Plot-951							63,000		913507
61	Ghatagaon	Basantpur	Running	Road Metal	N21°32'15.04" -							10,400		99560

					N21°32'18.02" E85°39'0.8" - E85°39'25.06" Khata-300, Plot-3439, 3441												
62	Ghatagaon	Khantaghar	New	Road Metal	N21°31'84" - N21°31'16" E85°48'58" - E85°49'3.3" Khata-120, Plot-765									19424			67599
63	Ghatagaon	Balabhadrapur	LOI Issued	Road Metal	Khata-155 Plot-670									5260.91			
64	Ghatagaon	Kandasar	LOI Issued	Road Metal	Khata-102 Plot-2272									6879.66			
65	Ghatagaon	Jharbeda	LOI Issued	Road Metal	N21°558651 E85°720051 Khata-280 Plot-122									12140.6			
66	Ghatagaon	Pichhula	LOI Issued	Road Metal	N21°522758 E85°689062 Khata-218 Plot-349									19991.47			
67	Ghatagaon	Pichhula	LOI Issued	Road Metal	N21°522758 E85°689062 Khata-218 Plot-349/1									19991.47			
68	Ghatagaon	Upardiha	LOI Issued	Road Metal	Khata-158Plot- 46/1849									8093.71			
69	Harichandanpur	Hunda	Running	Stone	Khata No : 875 Plot No : 5857/1	2 0	2 3	1	8 5	3 7	5 5	1.214 ha					
70	Harichandanpur	Salabeda	Running	stone	Khata No : 145 Plot No : 263	2 1	2 7	4 7	8 5	4 1	2 5 1	4.9879 ha					
71	Harichandan	Sagadapata	Running	Stone	Khata No : 246	2	1	5	8	5	4	2.428 ha					

	pur				Plot No : 1275/1	1	5		5	4	9			
72	Harichandanpur	Raghunathpur	Running	Stone	Khata No : 49 Plot No : 223	2	2	1	8	4	3	0.2509ha		
73	Harichandanpur	Brajamohanpur	LOI Issued	Stone	1.238 ha Khata No : 33 Plot No : 737							1.283 ha		
74	Harichandanpur	Sagadapata I	LOI Issued	Stone	1.740 ha Khata No : 247 Plot No : 38, 431, 555, 586							1.740 ha		
75	Harichandanpur	Bhagamunda	LOI Issued	Stone	Khata No : 348 Plot No : 4354							1.5985 ha		
76	Harichandanpur	Kusumjodi	LOI Issued	Stone	Khata No : 23 Plot No : 257							0.7931		
77	Hatadihi	Baniapanka	Running	Baniapanka Stone Quarry	Khata No 267, plot No. 939	N - 2 1 0	1 5 '	4 3 - 0 3 "	E - 8 6 0	2 1 '	3 8 - 2 9 "	8	1	4720
78	Hatadihi	Dhenka	LOI Issued	Dhenka Lt. Stone Quarry Hc. 1.49	Khata No- 484, Plot No 389, 390, 391,392	N - 2 1 0	1 3 '	1 2 - 4 0 "	E - 8 6 0	1 7 '	0 8 - 9 0 "	11200	NA	33600
79	Jhumpura	Gundunia	LOI Issued	Gundunia Stone Quarry (3.72 Ha)	Khata No- 276 Plot- 701 Area- 9.20							37231.1	10	27731.25
80	Jhumpura	Naradpur	New	Naradpur Stone Quarry-II (4.61 Ha)	Khata- 134 Plot- 762- 1.25 Plot- 787- 1.38 Total - 2.63							10643.23	12	
81	Jhumpura	Durgapur	New	Durgapur Stone Quarry (1.78 Ha)	Khata- 106 Plot-1020- 1.05 Plot- 1126- 3.35 Total- 4.40							17806.2	15	
82	Jhumpura	Gandabarei	New	Gandabarei Stone Quarry (0.32 Ha)	Khata- 221 Plot- 619- 0.80							3237.49	17	
83	Jhumpura	Tukudiha	New	Tukudida Stone Quarry-I (1.76	Khata - 303 Plot - 61- 4.35							17603.83	12	

				Ha)														
84	Jhumpura	Tukudiha	New	Tukudida Stone Quarry-II (0.06 Ha)	Khata - 303 Plot -3287- 0.15											607.02	10	
85	Jhumpura	Asanpat	New	Asanpat Stone Quarry (1.21 Ha)	Khata - 316 Plot - 1772- 3.00											12140.6	17	
86	Jhumpura	Arshala	New	Arshala Stone Quarry (2.32 Ha)	Khata - 401 Plot -3819 - 5.74											23228.96	19	
87	Keonjhar	Raghunathpur (Quarry No-I)	Running	Road Metal Hc1.2145	Khata No.75.Plot No.287/01, Area-Hc1.2145	2 1	3 3	3 7	8 5	4 2	3 2							
88	Keonjhar	Raghunathpur (Quarry No.- II)	Running	Road Metal Hc1.2145	Khata No.75.Plot No.287/02, Area-Hc1.2145	2 1	3 6	3 5	8 5	4 2	3 0							
89	Keonjhar	Nischintapur (Quarry-1)	Running	Road Metal Hc 0.8623	Khata No.36.Plot No.97 , Area- Hc 0.8623	2 1	3 4	2 6	8 5	4 2	0 1							
90	Keonjhar	Gopalpur (quarry-1)	Running	Road Metal Hc 0.9716	Khata No. 83 ,Plot No. 145 , Area- Hc 0.9716	2 1	3 3	5 3	8 5	4 2	3 3							
91	Keonjhar	Badaposi Quarry-III	Running	Road Metal Hc.0.7894	Khata No. 68 ,Plot No. 624/1126 , Area- Hc 0.7894	2 1	3 8	3 5	8 5	3 5	0 1							
92	Keonjhar	Gopinathpur Nuagaon Stone Quarry	Running	Road Metal (Hc 2.0242	Khata No. 99 ,Plot No. 229/02 , Area- Hc 2.0242	2 1	3 4	5 6	8 5	4 0	4 9							
93	Keonjhar	Tikarapada Stone quarry-I	Running	Road Metal Area Hc4.85	Khata No. 273 ,Plot No. 61/01 , Area- Hc 4.85	2 1	4 1	3 8	8 5	3 3	3 7							
94	Keonjhar	Murusuan Stone Quarry-I	Running	Road Metal Area Hc.1.0562	Khata No. 146 ,Plot No. 1229/ 1359 ,	2 1	4 6	3 8	8 5	3 3	4 0							

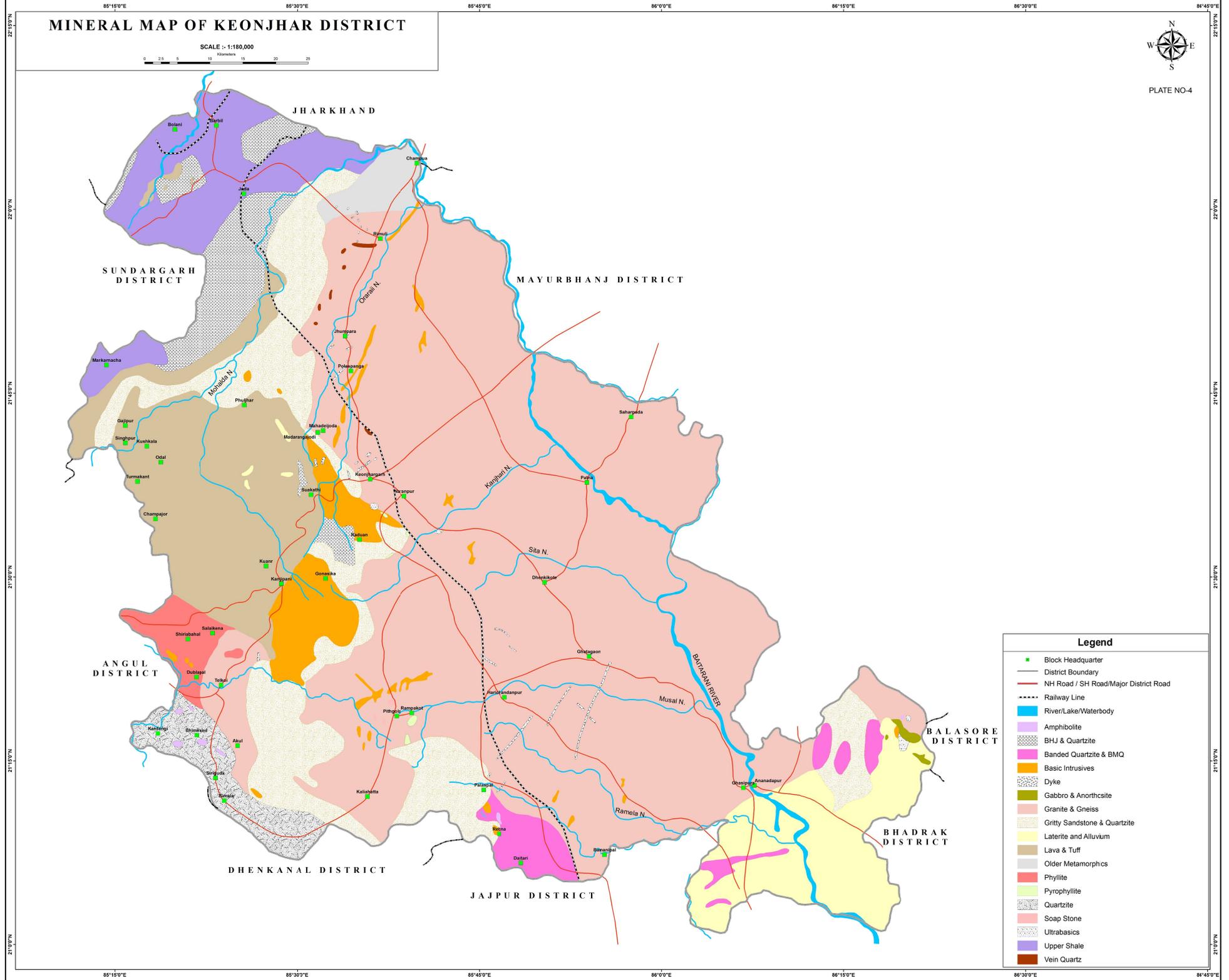
					Area- Hc 1.0562			6			0			
											6			
95	Keonjhar	Murusuan Stone Quarry-II	Running	Road Metal Area Hc.4.75	Khata No. 146 ,Plot No. 1226, 1235 , Area- Hc4.75	2 1	4 6	2 0 5	8 5 3	3 3 7	2 2 0 7			
96	Keonjhar	Kathabaunsuli Stone Quarry-II	Running	Road Metal Area Hc. 1.3765	Khata No. 204 ,Plot No. 06, , Area- Hc 1.3765	2 1	4 8	4 5 5	8 5 8	3 8 5	5 5 5			
97	Keonjhar	Tangarani Stone Quarry	Running	Road Metal Area-1.7327	Khata No. 203 ,Plot No. 1499 , Area- Hc 1.7327	2 1	4 8	9 7	8 5 4	3 4 6	4 0 6			
98	Keonjhar	Murusuan	LOI Issued	Road Metal Area- Ha 3.52	Khata No. 146 ,Plot No. 971(P), Area- Hc 3.52	2 1	4 6	4 2 1	8 5 3	3 3 8	4 2 9 8			59467.50
99	Keonjhar	Kathabaunsuli	LOI Issued	Road Metal Area- Ha 2.557	Khata No. 204-AAA, Plot No. 345 (P), Area- Hc 2.5587	2 1	4 8	2 8	8 5	3 9	5 1			10320.00
100	Telkoi	PITANLI	New	STONE	2.860 Ha, Vill- Pitanali, Khata No.14, Plot-63/1, Kisam-Parbata							12.00		

MINERAL MAP OF KEONJHAR DISTRICT

SCALE :- 1:1,80,000



PLATE NO-4



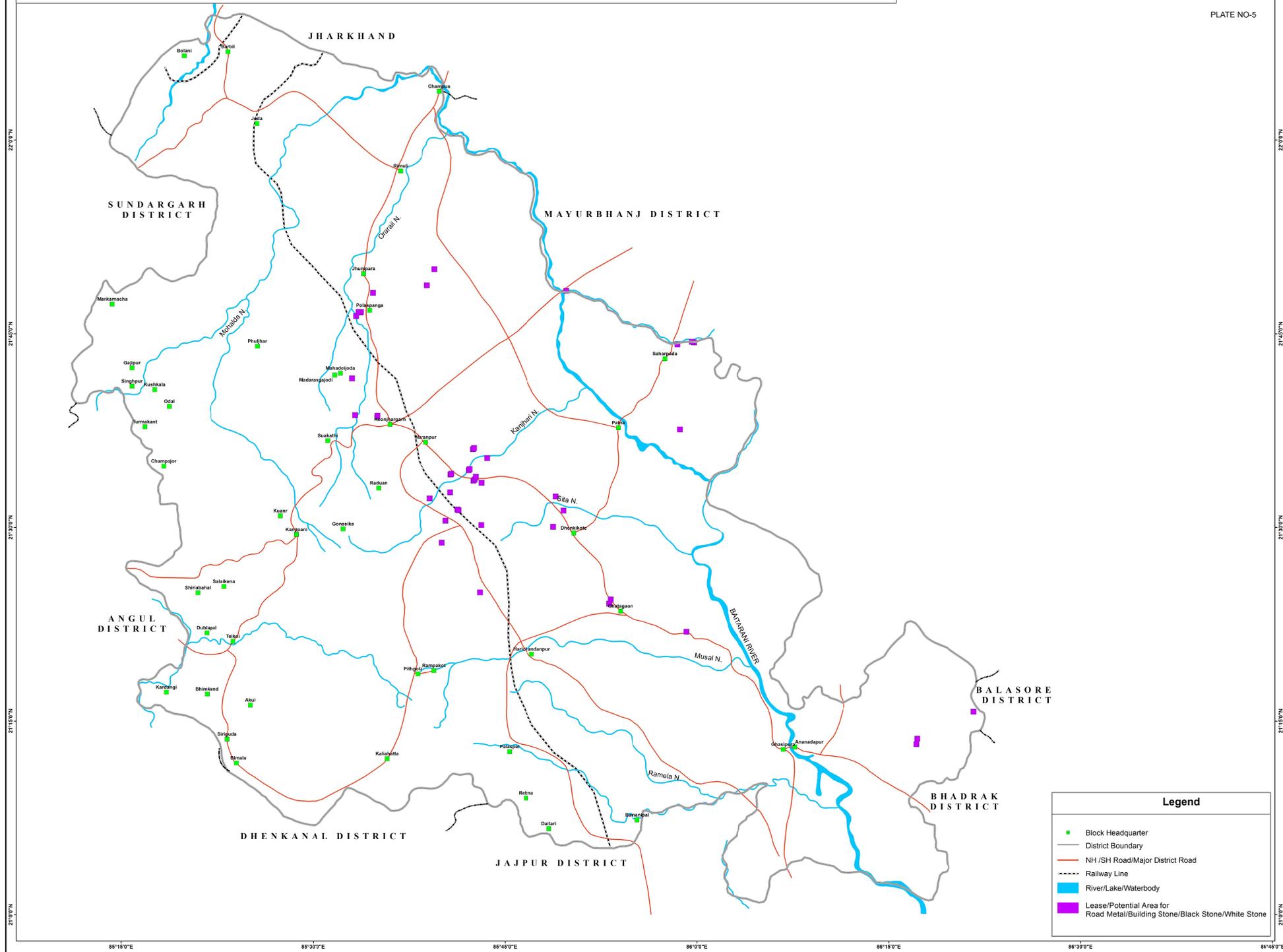
Legend	
	Block Headquarter
	District Boundary
	NH Road / SH Road/Major District Road
	Railway Line
	River/Lake/Waterbody
	Amphibolite
	BHJ & Quartzite
	Banded Quartzite & BMQ
	Basic Intrusives
	Dyke
	Gabbro & Anorthosite
	Granite & Gneiss
	Gritty Sandstone & Quartzite
	Laterite and Alluvium
	Lava & Tuff
	Older Metamorphics
	Phyllite
	Pyrophyllite
	Quartzite
	Soap Stone
	Ultrabasics
	Upper Shale
	Vein Quartz

LEASE/POTENTIAL MAP OF ROAD METAL/BUILDING STONE/BLACK STONE/WHITE STONE IN KEONJHAR DISTRICT

SCALE: 1:1,00,000



PLATE NO-5



Legend	
	Block Headquarter
	District Boundary
	NH/SH Road/Major District Road
	Railway Line
	River/Lake/Waterbody
	Lease/Potential Area for Road Metal/Building Stone/Black Stone/White Stone