DRAFT DISTRICT SURVEY REPORT (DSR)

OF BARGARH DISTRICT, ODISHA

FOR ROAD METAL (STONE)

(For Planning & Exploitation of Minor Mineral Resources)

COLLECTORATE, BARGARH

(Prepared in accordance with Para 7(iii) (a) of S.O.141(E) Dated 15th January, 2016, as Amended on S.O.3611(E). Dated 25th July 2018 of Ministry of Environment, Forest and Climate Change Notification)

MAY 2025

CONTENTS

PREAMBLE:-

Odishais renownedforits rich mineral resources, with adiverse array ofboth majorandminormineralsfoundthroughoutthestate.Amongitsdistinctiveregions, the Bargarh district stands out, located in the Western most part of Odisha. This district boasts a unique geological profile and is abundant in various mineral resources, contributing significantly to the state's overall mineral wealth.

InpursuanceoftheorderofHon'bleSupremeCourtPetition(C)No.19628- 19629of2009, dated27thFeb.2012in thematterof Deepak KumarVs State of Haryana and others etc., prior Environmental Clearance has now become mandatoryforminingofMinorMineralirrespectiveofthe areaofMiningLease.And also,inviewoftheHon'bleNationalGreenTribunal,orderdatedthe13th Jan 2015 the matter regarding Sand, Brick Earth & Burrowed Earth cutting for Road Construction has to take prior E.C. for Mining Lease area more or less than 5 hectaresalsosuggestedmakingapolicyon ECforMinorMineralleaseincluster.

Further,aspernotificationissuedbytheMinistryofEnvironment&Forestand ClimateChange(MoEF& CC);Notification no.S.O.3611 (E)NewDelhidated25-07- 2018, the District Survey Report (DSR) for Minor minerals of Bargarh District on Stone and Specified minor minerals sources has been prepared in accordance with Clause II of Appendix- X of the notification and the procedure and annexure as per MoEF& CC Enforcement and monitoring guidelines of January, 2020.

District Survey Reports (DSR) pertains to the district's demographic profile, mineral wealth, geology, forest, climate, rainfall data, health, agriculture and irrigation pattern in the Bargarh. This Report act as a compendium of available adequate mineral resources,geologicalsetup,environmentalprotection,ecological set up, community engagement and regulatory compliance of the district. Various data available from the state government departments like Revenue, Agriculture andHorticulture,Forest,Geology andMining,WaterResource,Health,R&B,RWSS and NHAI in the district, as well as statistical data has been incorporated within the DSR. The main purpose for the preparation of DSR (as per the Sustainable Mining Guidelines) is to identify the mineral resources and develop the mining activitiesinthedistrictastoformthebasisforthe **Environmental Clearance (EC)** along with other relevant data.District Survey Reports are to be reviewed once in every five years as per statue. The Main objective of the preparation of District Survey Report is to ensure the Mineral Resources in the district having the potentiality where mining can be allowed and find out the areas where mining

should be prohibited.Endeavour has made to cover potential area for Stone and Specified minor mineralsinthedistricttoincludeintheDSR,overviewthe stoneminingactivitiesin the district measures has been taken to ease the gap between the demand and supply of the raw material, including the planning, monitoring of mined material and its transport and to curb illegal mining& sales of material. Keeping in view of the orders of Hon'ble Supreme Court, Hon'ble NGT and directions of SEIAA, Bhubaneswar a fresh DSR has been prepared, adhering to all necessaryformalities. This updated DSR is set to be finalized in May 2025

Chapter-1

INTRODUCTION:-

The MOEF &CC came out with Environmental Impact Assessment Notification S.O 3611(E),dated the 25th July, 2018 issued vide number S.O.-1533(E)dated 14th Sept, 2006. It has been made mandatory to obtain environmental clearance for different kinds of development projects as listed in Scheduled-I of notification. In pursuance 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.

Under 7(iii) (a) it was also suggested to prepare the district survey report for sand mining or river bedmining and mining of other mineral as prescribed in Appendix X. This has been modified vide S.O. No. - 3611(E) dated 25th July, 2018.

MOEF&CC in consultation with State Government has prepared Guidelines on Sustainable Sand & other Minor minerals mining detailing the provisions on Environmental Clearance for cluster.

SEAC will scrutinize and recommend the prior environmental clearance of Mining of Minor Mineral on basis of District Survey report. This will be a model and guiding document which is a compendium of available mineral resources, geographical setup, environmental and ecological set up of the district and replenishment of minerals and is based on data of various departments, published reports, Journal and websites. The District Survey report will form the basis for application for environmental clearance, preparation of reports and appraisal of projects. District Survey Reports are to be reviewed once in every five years as per statue, however the data bank of DSR can be updated, if required.

The Main objective of the preparation of District Survey Report is to ensure the following:-

1. Identification of river sand mining areas with geo references.
2. Identification of potential area of river silt with geo reference, which is being used for filling purposes.
3. Identification of other minor minerals with geo reference.
4. Identification of other mineral resources if available.
5. Identification of areas of proximity to infrastructural structures and installations where mining should be prohibited.

Chapter-2

2.1 Overview of the district:-

Bargarh is a district on the Western border of Orissa. Prior to 1992, it was a subdivision of Sambalpur district. Bargarh District formed on the 1st April 1993 being devided from Sambalpur District. It is one of the illustrious District of Odisha. Bargarh has been named after the headquarters town Bargarh situated on the left bank of the Jirariver. The town is on the National Highway No.6 and located at 59 km to the west of Sambalpur district. It is also served by the D.B.K railway running from Jharsuguda to Titlagarh. The railway station is about 3 kms off the town. A meter gauge railway line connects Bargarh with the lime stone quarry at Dunguri. The main Hirakud canal passes through the town and is known as the Bargarh canal.Bargarh District lies on the western most corner of Odisha between 20 degree 43' to 21 degree 41' north latitude and 82 degree 39' to 83 degree 58' east longitude. The District is surrounded by Chhatisgarh state on the north, Sambalpur District on the east, Balangir and Subarnapur on the south and Nuapada District on the west.

2.2 History of the district:-

The original name of the place was Baghar Kota as known from the inscription of the 11th century AD. It was called Bargarh probably from the time of BalaramDev the first Chouhan Raja of Sambalpur who made it his head quarters for some time and constructed a big fort for it's protection. Narayan Singh the last Chouhan Raja granted this place in Mauzi (free hold) to two Brahmin brothers Krushna Das and Narayan Das, sons of Baluki Das who was killed in action by the Gond rebels led by Bandhy Ray and Mahapatra Ray. The grant is popularly known as Sira-kata(head-cutting) grant.To know the history of the newly formed Bargarh district one cannot ignore the history of undivided Sambalpur district, because Bargarh was one of the subdivisions of old Sambalpur district. This district lies at the close proximity of Sambalpur subdivision separated by the Mahanadi River. The Chouhans,were the most powerful and ruled over a cluster of 18 states in western Orissa and eastern part of Madhya Pradesh. The Chauhan states which crumbled by the British Imperialism, lapsed to the East India Company in 1849 when the last Raja Narayan Singh died without any issue. The Principal Assistant of the British Agent for the south east frontier having his headquarters at Ranchi took over the rein of administration of these states. Prior to 1905, Sambalpur and Bargarh sub- divisions were part of present Chhatisgarh state (erstwhile Central province). In 1936, separate province of Orissa was formed. In the year 1948, the ex-state areas of Bamra and Rairakhol were added to the district of Sambalpur. In the year 1969 a new sub-division, Padmapur was created constituting the areas of Bijepur,Gaisilet, Jagadalpur, Melchhamunda, Padmapur, Paikamal and Sohela Police Stations

of old Bargarh sub-division.Keeping the smooth administration and effective implementation of developmental programmes in view, 13 districts of Orissa were divided into 30 districts in the years 1992,1993 and 1994. By this process, the erstwhile Sambalpur district was divided into four districts namely Sambalpur,Jharsuguda, Bargarh and Debagarh. Bargarh district was carved out taking the areas of two sub-divisions, namely, Bargarh and Padmapur from the erstwhile district of Sambalpur as per the Government of Orissa Notification No.14218/R. dated 27.03.1993. The area of Sambalpur district was 17516.00 sq.km as per the 1991 Census and that of Bargarh was 5831.57 sq.km. As such, Bargarh district holds 33.29 percent of the total area of undivided Sambalpur district.

2.3 Origin of the Name:-

The original name of the Bargarh District was "Baghar Kota" as known from an inscription of the 11th Century A.D. It was called "Bargarh" probably from the time of BalaramDev, the Chauhan Raja of Sambalpur, who made it his headquarters and constructed a big fort for its protection.

2.4 Location and General Boundaries:-

Bargarh district lies in the western part of Odisha bordering Chhattisgarh. It borders Mahasamund and Raigarh districts of Chhattisgarh on the northwest, Jharsuguda district to the north, Sambalpur district to the east, Subarnapur and Balangir districts to the south and Nuapada district to the west.It is positioned at 21.33°N 83.62°E with an average elevation of 171 meter (561 feet). The Bargarh district lies in the Plain with Eastern Ghats running close to the town. As per the earthquake zoning of India, Bargarh falls in the zone 2 category, the least earthquake prone zone.

2.5 Administrative Setup:-

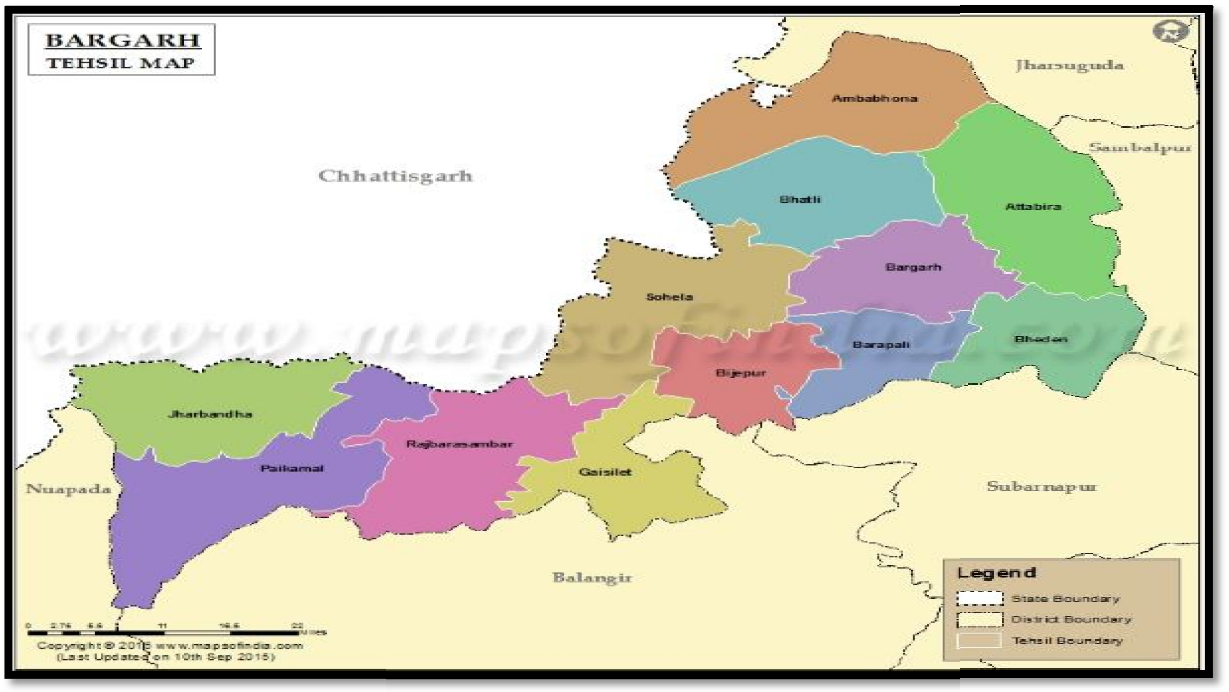
Bargarh district is situated on the western part of Orissa. It is linked with the state headquarters, Bhubaneswar which is 370 Kms by road and rail.
In conformity with the uniform pattern of district administration, the Collector and the district Magistrate for the district is treated as the pivot of the set up with vast and varied power. As the district Magistrate, he is the highest authority in the district for maintenance of law and order. Although the officials of other departments in the district are under the immediate charge of their respective Heads of departments, the district Collector exercises general supervision over them.The district has been divided into two subdivisions, namely, Bargarh and Padmapur and each sub-division is in charge of a Sub-Collector who looks after the general administration, maintenance of law and order and implementation of developmental

programmes. For revenue administration, the district has been divided into 12 Tahasils, namely – Paikamal, Padmapur, Sohela, Barapali, Bheden, Bargarh, Bhatli, Attabira, Gaisilet, Bijepur, Ambhabona&Jharbandh and each Tahasil is kept in the charge of a Tahsildar. For the maintenance of law and order, the district has been divided into fifteen Police Stations, namely:- Paikamal,Jharbandha, Padmapur, Burden, Gaisilet, Melchhamunda, Sohela, Bijepur,Barapali, Bheden, Bargarh, BargarhSadar, Bhatli, Ambabhona and Attabira. There are 12 CD Blocks in the Bargarh District viz. Ambabhona, Attabira, Bargarh, Barpali, Bhatli, Bheden, Bijepur, Gaisilet, Jharbandh, Padampur, Paikmal and Sohella. Bargarh Municipality is the one Municipality in the District and 4 N.A.Cs are Barpali, Padampur, Bijepur and Attabira. There are total 253 Gram Panchayats and 1208 Revenue villages in the District.The Bargarh District experiences extreme type of climate with hot and dry summer followed by humid monsoon and chilling winter. The temperature varies between 10 degree Celsius to 46 degree Celsius. The winter season lasts between November to February. The hot season follows thereafter and continues till the second week of June. The south-west monsoon season is from mid June to the end of September. The average annual rainfall in the District is 1527 mm.Agriculture acts as the backbone of the economy of the Bargarh District. Most of the indigenous inhabitants in Bargarh District mainly practice crop cultivation. Because of the presence of natural drainage facilities, the District plain supports the growth of large agricultural products and is free from insects and pests.
As we go through the educational scenario of the District, Bargarh District has got many educational institutes like Pharmacy College Barpali, Vikash Junior College, Sri SriNrusinghanathAyurvedic College Paikmal, Panchayat College Bargarh, Larambha College, Bargarh Law college, Anchal College Padampur, Attabira College, PadmashreeKrutartha Acharya College of Engineering Bargarh.Bargarh district celebrates many festivals round the year. Common festivals like Nuakhai, Dhanuyatra, MahaShivratri of Kedarnath, NrusinghaChaturdarshi, Sitalasasthi, Viswakarma Puja, Bali yatra of Khuntapali, BaisakhMela of Nrusinghanath, FalgunaMela of Bhatli.Many prominent personalities born in this district like ParbatiGiri, PadmashreeKrutartha Acharya, PadmashreeKunjabihariMeher, SurendraMeher, ManabodhRana.

Table No-1

No. of Subdivisions	2 (1. Bargarh, 2. Padampur)
No. of Tahasil-	12 (1.Attabira, 2.Bargarh, 3.Barpali, 4.Bhatli, 5.Bheden, 6.Padampur, 7.Paikmal, 8.Sohela, 9.Bijepur, 10.Gaisilet, 11.Ambabhona, 12.Jharbandh)
No. Of R.I Circle	105
No. of Blocks	12 (1.Attabira, 2.Bargarh, 3.Barpali, 4.Bhatli, 5.Bheden, 6.Padampur, 7.Paikmal, 8.Sohela, 9.Bijepur, 10.Gaisilet, 11.Ambabhona, 12.Jharbandh)
No.of police Station	16 (Ambabhona, Attabira, Bargarh Sadar, Barpali, Bijepur, Bhatli, Bheden, Gaisilet, Jharbandh, Melchhamunda, Padampur, Bargarh Town, Paikmal, Sohela, Jagadalpur)
No. of Gram Panchayat	253
No.of Villages	1204
No. of Fire Station	11
No. of Assembly Constituency	05

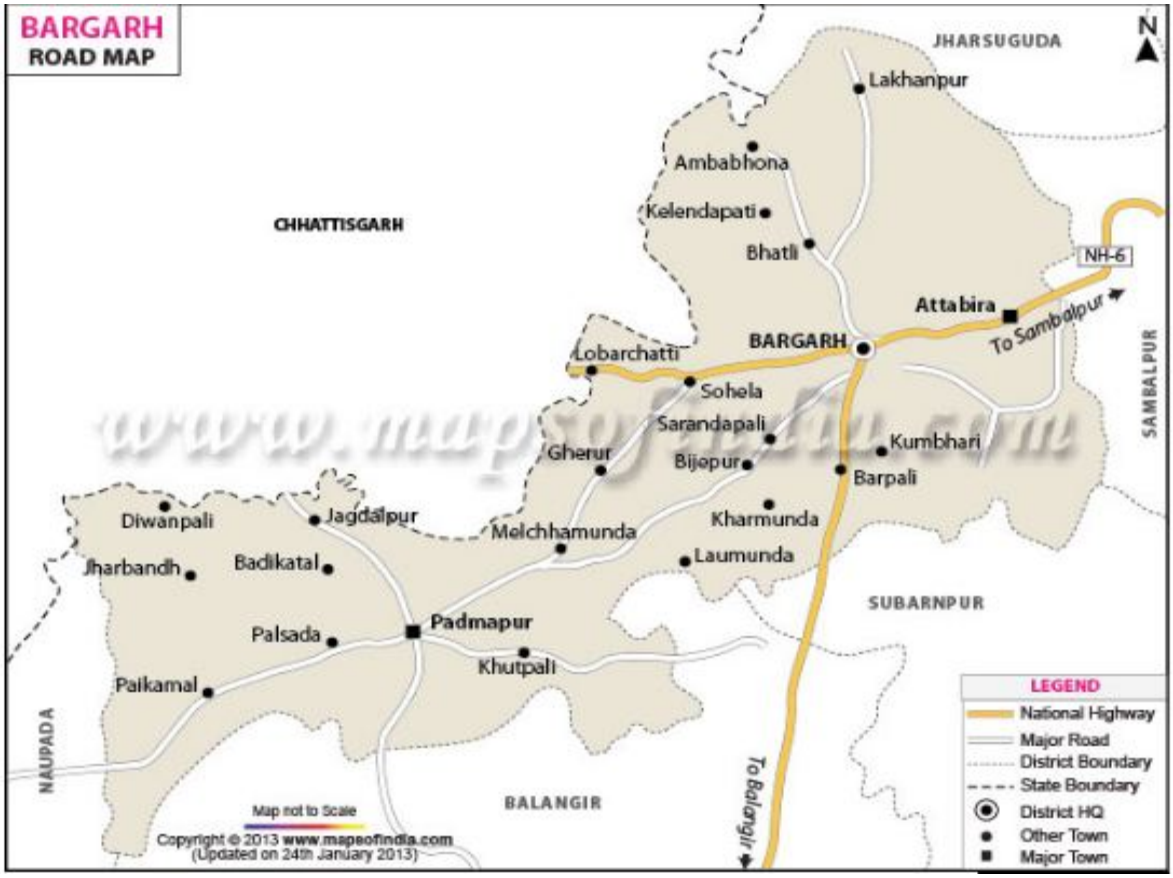
Tahasil Map:-



(Fig-1- Tahasil Map of the Bargarh District)

2.6 Transport & Communication:-

Bargarh is very well placed in terms of location. Four state capitalsRaipur (222 km), Bhubaneswar (350 km), Ranchi (600 km approximately), and Kolkata (600 km approximately) are well connected by rail and road. It is located on the National Highway 6 (India) (old numbering), between two important cities of Sambalpur and Raipur. Bargarh Road railway station is located in the Jharsuguda–Vizianagaram line which serves Bargarh district and comes under Sambalpur railway division of East Coast Railway. It is directly connected to Bhubaneswar, Sambalpur, Raipur,Visakhapatnam,Hyderabad, Chennai, Bangalore, Kochi, Ranchi, Asansol, Kolkata, Varanasi, Ahmedabad, Surat, and Mumbai. All places in Odisha are connected by either rail or road. National Highway 26 (India) originates from here, which connects it with almost all districts of southern Odisha.



(Fig-1- Road Map of the Bargarh District)

Chapter-3

3.0 Overview of the Mining Activity of the district:-

There is a good potential of ordinary stone & Sand in the district, also there is noticeable quantity of dolomite & lime stone deposit found within the district, a few decorative stone & quartzite deposits also reported within the district.

3.1 General Profile of the District:-

Bargarh district lies in the western part of Odisha bordering Chhattisgarh. It borders Mahasamund and Raigarh districts of Chhattisgarh on the northwest, Jharsuguda district to the north, Sambalpur district to the east, Subarnapur and Balangir districts to the south and Nuapada district to the west.The district of Bargarh was created on 1st April 1993 by dividing the erstwhile Sambalpur district into four districts viz. Sambalpur, Deogarh, Jharsuguda and Bargarh. Geography of a region shapes the history of the people living therein. The geographic position of South Koshala therefore naturally impacted upon the life of the people of the region from time to time. The present district of Bargarh was carved out of the ancient South Koshala region. The history of the present district of Bargarh formed a part of the history of erstwhile Sambalpur region with changing administrative boundaries under different historical and administrative contexts. The present identity of Bargarh district is constructed in terms of its historical geography, architectural remains, pre-historic finds, historical data found in sites, primary data analysis, available records etc. relating to the present boundaries of the districts.

3.2 Demography:

As per the census of 2011, the total number of households of the district is 370308 among them 336130 HHs are living in Rural areas & 34178 HHs are living at urban areas. Out of total HHs 76327 HHs is belongs to SC & 69925 HHs belongs to ST Households. As of the 2011 Census of India, Bargarh had a population of 83,651. Males constitute 52% of the population and females 48%. Bargarh has an average literacy rate of

76%, higher than the national average of 59.5%; with 57% of the males and 43% of females literate. 11% of the population is under 6 years of age.

The details were summarised in the Table below:-

Table No-3

Name	**Value**	**Percentage**
Geographical Area	5,837.00 sq.km	
Area under Forest	269.33 sq.m	4.61%
Total Population(2011 Census)	1,481,255	
Male	749,161	50.58
Female	732,094	49.42
Rural	1,331,145	89.87
Urban	150,110	10.13
Schedule Caste	298,780	20.17
SC Male:-	150,420	50.34
SC Female	148,360	49.66
Schedule Tribe	281,135	18.98
ST Male	140,542	49.99
ST Female	140,593	50.01
Total Literacy	983.783	66.42
Literate Male	557,217	56.64
Literate Female	426,566	43.36
Population Density	254(Per Sq.Km)	

3.3Topography & Hill System:

Natural Divisions and Land Formation:

The Bargarh district can be divided into 3 natural divisions, (1) Bargarh Plain (2) Borasambar (3) Ambabhona&Lakhanpur. The greater portion is an open plain of considerable fertility drained by the Danta and the Jira, the two tributaries of Mahanadi. To the north of this plain runs the Barapahar range of hills and to the south-west lies the valley of river Ong (Ang). The Bargarh plain is not a flat alluvial tract but an expanse of undulating country sloping down from the Barapahar hills in the north, to the Mahanadi valley in the east. It contains a good portion of the cultivated land of the district and its undulating character affords excellent scope for irrigation reservoirs. The soil is a mixture of sand and gravel as well as of clay. Its a good rice soil and unlike the more fertile black cotton soil it grows few seeds and does not harbour dangerous insect pests. This tract is nowhere bare of vegetation and the villages are found embowered with mango groves.

1-The Plains of Bargarh:-It is formed by the rivers Jeera, Danta and Jhaun- the three tributaries of Mahanadi. The plain spreads from Godbhaga in the east toSohela in the west and Bhatli in the north to Bheden- Turum in the south. It is an expanse of undulating land slopping down from the Barapahar range in the north to the Mahanadi valley in the south having a soil suitable for rice production. The soil is a mixture of clay, sand and gravel.

2-Raj Borasambar-

The Borasambar (Padampur) tract lies to the south-west of the Bargarh plain. It is bounded by the high hills on the north and south and the intervening plain is drained by river Ong (Ang), the valley of which particularly in the eastern portion is best suited to agriculture. Its soil contains some river slit and enriched by hill drainage.

a) *Gandhamardana mountain and forest range*- It is formed by three sub-ranges. The first sub-range being the Gandhamardana Mountain itself separates Bargarh from Bargarh district. It is 2000 to 3000 feet high. Nrusinghanath is the highest peak of this area with a height of 3234 feet i.e. 985.72 metres. The mountain contains many natural streams and waterfalls like Kapildhar, Chaldhar and Bhimdhar. It is a treasure-house of many kinds of medicinal plants of which some are very rare in the world. The people of the region are attached religiously to these streams. People of Chhatisgarh refer these streams as holy as the river Ganga. The second sub-range situated to the west of Nrusinghanath runs first north-south and then north-east at Jagdalpur where the river Ong breaks it. The third sub- range runs eastward to village Tal and then runs

the north-east separating the district of Bargarh from Chhatisgarh region. It joins the western end of Barapahar range and is linked to the tail of the Vindhya mountain range of central India.

b) ***Ong River Valley-*** The Ong river valley is situated in between the hill ranges lying to the north and south of RajBorasambar division. The whole valley, particularly the eastern portion is best suited to agriculture due to river silt and hill drainage.

The river has its origin in the Nuapara district and enters Raj Borasambar at its extreme south-west corner. It flows in a wide semi-circular way from west to east. It leaves Bargarh district a few miles east of Gaisilet to enter Subarnapur where it joins the Mahanadi.

2- The Barapahar and Ambabhona Range:-The Ambabhona and Lakhanpur area is cut off from the rest of Bargarh plain by a long spur of the Barapahar hills running south-west for a distance of nearly 48 Km. This hill forms a barrier to communication with the rest of the district. Ambabhona is a fairly level tract sloping down from the hills to the river Mahanadi and is under close cultivation. Lakhanpur is a wide valley surrounded by forest clad hills and is also closely cultivated.

Hill System:-The Barapahar (literaly, 12 hills) are the main hill range in the Bargarh district covering an area over 777 Sq.Km. and attaining a height of 2,267 feet (691.1 m.) at the peak of Debrigarh. Debrigarh is one of the few hills of the range offering level ground and good water supply near the summit. It is one of the best hill sites in the district suitable for health resort. The river Mahanadi formed a lake in geological times to the north of the range till in burst and the lake emptied. The Hirakud Dam (in Sambalpur district) has reconstructed the barrier and repeated the ancient lake.Lakhanpur- Barapahar is a cluster of small hills situated to the North-east of the district. It is called Barapahar because according to the tradition of the region, it is supposed to consist of twelve hills. It has an area of 776 Sq. Km. and its highest peak Debrigarh is 2267 ft. in height. It provides an all-weather stream near the summit in the name of Barabakhara where a flanked stone roof is present. It is believed that it has a capacity of giving shelter to 500 persons at a time. It was an important place of shelter for the revolutionaries during the Ulgulan of SurendraSai.The Ambabhona-Lakhanpur plain is cut off from the Bargarh plain by a long spur of the Barapahar hill running south west nearly 48 Kms. The region is dominated by the Mali caste people who called Mangoand mangroves as „Ama‟‟and „Bhona‟‟ respectively for which the place was called "Ambabhona".The whole Barapahar range is divided into the following reserve forest areas viz-(1) Sareidamu-Budharaja (7683.040 Hectare), (2) Dechuan-Lakhanpur (6997.000 hectare), (3) Phulsuri-Dungri Reserve Forest to the side of

Mahanadi (880.964 hectare), (4) Lohra reserve forest near Kamgaon (346.091 hectare) and (5) Debrigarh Reserve forest (2409 hectare). The area slopes down from the Barapahar to the River Mahanadi on the north-east. The Lakhanpur tract suitable for good cultivation is surrounded by forest-clad hills.

3.4River System:

The rivers of this district are primarily peninsular rivers and most of them have originatedfrom the plateau of Chhattisgarh and Eastern Ghats Mountain range of Odisha. River Mahanadi, (Total length of 852.8 km) is the main river, which has its source in the Amarkantak plateau of Madhya Pradesh. It enters Odisha nearChikhili village of this district. On this river Hirakud Dam, the longest dam of the country has been built and an artificial lake has been created which stretches upstream for about 52.8 km from Hirakud town. Its net irrigable area is 35,486 hectares and ultimate installed capacity is 4, 75,000 KW of hydel power. The downstream of River Mahanadi uptoSonepur is almost north south and in this section a number of tributaries meet Mahanadi on its right bank. The most important rivers are river Jira and Jhaun, which drain the Bargarh plains. The Jira has its main tributary, the Danta which joins it a few kilometres north of its confluence with the Mahanadi near the village Gandturum in Bheden block. Another river thatflows through the district is the Ong that originates in Nuapada district and enters Borasambar (Padampur) at its extreme south-west corner. It flows in a wide-semi-circle from west to east and leaves the district a few miles to the east of Gaisilet eventually joining the Mahanadi in Subarnapur district.

3.5 Climate:

The climate of this district is characterised by a very hot dry summer and well distributed rains in the south-west monsoon season. The cold season commences from November and lasts till the end of February. The hot season follows thereafter and continues till about the second week of June. the south-west monsoon season is from mid June to the end of September.

1. The climate of this district is characterised by a **very hot dry summer** and well distributed rains in the south-west monsoon season. The cold season commences from November and lasts till the end of February. The hot season follows thereafter and continues till about the second week of June. the south-west monsoon season is from mid June to the end of September. The temperature shoots up to 46º C in May. The humidity is very low in April and May. On an average, rainfall received in March and April is less than 50 mm.

2. **Hot and Humid Wet Season** Monsoon breaks in the first fortnight of June and lasts up to September. Maximum rainfall is received in July and August. On an average 300-400 mm rainfall is received in these months. The relative humidity is also high in this season, and the sky is heavily clouded. The average maximum temperature in July is about 34º C and in August is 33º C.

3. **Post Monsoon season**:- In this season there are occasional showers. The humidity is high. There is moderatelythin cloud in this season and the temperature starts falling down.

4. **Winter season**:- This extends from December to last part of January or first fortnight of February. The humidly also decrease in December and January. There is almost no rainfall in December, January and February.

3.6Humidity:

It is generally medium to high in this Division. Maximum humidity is seen in the month of August and minimum in April and May. It reaches 80 % in July, August and September. The average humidity in this district varies from 40% in May to 95% in August.

3.7 Rainfall:

This district falls under tropical monsoon climate. Here the weather is commonly warm and receives rainfall mostly from southwest monsoon and rarely from northeast retreating monsoons. The rainy season starts from first part of the second week of June and continues till September. The average annual rainfall in this district is about 1331.39mm. The daily rainfall data received from the 12 rain recording stations situated in each Block Head quarters have been compiled and recorded. The daily reports on rainfall are sent to proper quarters regularly. The recorded rainfall is compared with the record maintained in the Office of the Special Relief Commissioner's office, Bhubaneswar every year as per the programme given by the S.R.C, Odisha. The rainfall figures of the district for the last three years are given below.

3.8 Surface and Ground water Scenario:

Presently there are 7 natural and perennial springs found in the Gandhamardan hills. The waterfalls are called GupatMahadev (rising from Gupta Ganga), Kapildhar, Akali, Bhojpurgarh, Gupteswar, Khandijharan and Manbhang, which are considered to be very sacred and are perennial. In the Barapahar hills there are several springs, notably, Gangei-nala, Kanhei-nala, Kusmada-nala, Sukha-nala, Badmal-nala and Ghugar. There are

many water reservoirs in the district, some of them serving the purpose of irrigation.They are Manbhang dam project at Manbhang, Salepali dam reservoir at Salepali, Sarkarikata at Paikmal, Bhoisagar near Rasmunda and Malda village, Victoria Sagar near Ghess, Sarkarikata at Buromuda (Gaisilet), Yogimunda in Barpali, Ranisagar in Bijepur and KumoDam project at Kumo in Ambabhona block. Ground water occurs in phreatic condition in shallow aquifers and is utilized by means of dug wells or shallow tube wells.

3.9 Economy:

Bargarh District has two distinctly different kinds of scenario in the field of economic development. The area under the Command Area of Hirakud Dam Project has a fairly developed agricultural sector, which contributes for the development of other sectors also. The rainfed area like Padampur Sub-Division and Bhatli&Ambabhona Blocks of Bargarh Sub-Division are backward with traditional agriculture and lack of development of other sectors as well.

3.10 Education:

Education is the prime agency which builds the capacity of a community to withstand in any type ofdisaster. In Bargarh, 1330Villages/ Habitations are having 1330 nos. of primary School within the village itself whereas 1330 Villages/ Habitations having ME and High Schools within 5 KMs. Total children 115180 nos. of children are enrolled from 6-14 years and 249 nos. of children are dropout during the year of 2021-22. The district had 726, 572 & 156 Primary, ME and High schools respectively. Total Number of teachers is 6820. During last year, number of students enrolled at the age group of 6 to 14 years was 221288.

3.11Health:

The district health vulnerability snapshot shows Tuberculosis is one the major diseases in the district followed by Malaria, Pneumonia, Diarrhea, TB and Jaundice. Villages frequently affected by such diseases and cases of reported deaths. The district had 212 sub centres, 49 PHCs, 16 CHCs, 1 Ayurvedic Hospital, 1 SDHs,21 private Hospitals, 24 MHUs, 16 Ambulance, and 4 blood banks across the district. To run such medical establishments, 153 doctors, 542 paramedical staff, 327 ANMs and 1519 ASHA are extending their services in the district. In health indicator dimensions, the district has ensured Institutional delivery by 99.55%, immunization by 82.30%. & 537child death case reported in 2021-22 and Maternal Mortality of 44 during 2021-22.

3.12 Culture and Heritage:

Bargarh is known for the annual festival, DhanuJatra which attracts a lot of tourists worldwide. DhanuJatra or Dhanuyatra celebrated every winter, is an open stage dramatisation of Krishna Leela with virtually the whole town as a stage. Spanning over a period of 11 days and a radius of 8 km, with the universal theme of 'Triumph of Good over Evil'. It depicts the mythological story of Krishna starting from the marriage of his parents (Devaki and Basudev) till the death of Kansha, the evil king. The "Nuakhai" is a social festival of unity. This festival is observed among kith and kins during the month of Bhadraba. The appropriate date of the Nuakhai is just the day after the Ganesh Puja. It is a festival of harvest of crops. On this occasion, the new grain after harvesting is first offered to the local deity and during this festival, the people get themselves lost in merrymakings. Wearing new clothes, preparing delicious foods the people of this area celebrate this festival with enthusiasm. It is mostly an agricultural festival of Western Odisha. The BasantMahotsav is celebrated in Beherapali, a village near Sohela, Bargarh every year. The major attraction along with the worship of Saraswati Devi is the 3-day-long open-air drama performed by artists. [2] Based on the historical storyline of Gupta dynasty, the actors enact the King Vikramaditya, Kalidas and attacker Paschim Satrap and the villagers play the role of a resident of Ujjain. Kali-Puja is one of the big festivals celebrated at Kali Mandir Road, Bargarh when Goddess MaaShyama Kali is worshiped on the occasion of Dipawali. Yagyans and hymn are organised for this festival. The big statue of Goddess Shyama Kali is made up of alloy including 8 kinds of metals. NrusinghanathJatra is another major festival of the district, celebrated in the religious site of Nrusinghanath where Lord Vishnu is worshipped in the form of Marjarakesari. he Cart Festival of Bhatli celebrated at Dadhibaman Temple of Bhatli on the DwitiyaTithi of Asadha. On this day Lord Dadhibaman rides on the chariot and sets out on a journey to MausimaMandir. The Lord stays in MausimaMandir for 9 days and again on the Dasami of Asadha the return Cart Festival is celebrated. Beside this other festivals like JagarJatra of Kuchipalli, Bali Yatra of Khuntpalli, SialSasthi of Barpalli were celebrated every year.

3.13 Tourist Places:-

Nrusinghnath:-Nrusinghnath is situated at a distance of 112 km from Bargarh. Being a pilgrim spot, it has been appealing to the minds of lakhs of people, with magical glitters, for the last so many centuries. This is the Dawning – place of the mentioned Lord Nrushinghnath, the presiding Deity of the sacred mount Gandhamardhan– an endearing multitude of memories, surprisingly amalgamating the legends of the Ramayan, the

Mahabharat, the Buddhist Era; even reminiscent of Bhoj Raj, Kabir and TantracharyaNagarjuna (the preserver of all scripture). Nrusinghnath is a form of the Hindu Lord Vishnu.

Gandhamardan:-In the Treta Yuga (the Silver Age), Jambavan (the unerring counselor of Rama) had suggested Hanuman to bring Bisalyakarani ere dawn, so that Lakshmana would rise back to life. It was in the middle of the war between Lord Rama and Ravana. Hanuman failed to identify the particular herb and carried on his shoulders a huge Himalayan mass. While flying above and proceeding toward Lanka (the kingdom of Ravana), a portion dropped down. Gandhamardan is synonymous with that portion only.

Wild life Sanctuary Debrigarh:-A peak in the Barapahar hills in Bargarh sub-division having a height of 2,267 ft (691 m). It was a noted rebel stronghold during the revolt of BalabhadraDeo, the GondZamindar of Lakhanpur, who was killed here. Mahapatra Ray and Baldia Ray also sought shelter here during 1840 AD after murdering Baluki Dash, the Maufidar of Bargarh. Veer SurendraSai the freedom fighter was captured here in 1864 by British soldiers. There is a wildlife sanctuary here. Except for elephants, wild buffaloes, and blank Bucks, most of the other important animals in the State of Odisha are more or less represented here.

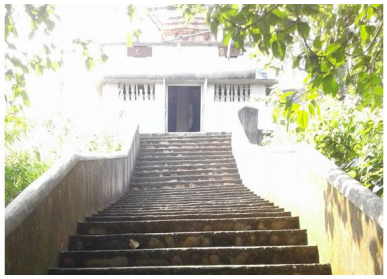
Asta-Sambhu:-In the district of Bargarh, a large number of Siva temples were built during the Chauhan rule of the undivided Sambalpur. The most important among them were those of the Asta-Sambhu or 8 Siva Temples such as (1) Bimaleswar Temple at Huma (Sambalpur), (2) Kedarnath Temple at Ambabhona (Bargarh), (3) Baidyanath Temple at Deogaon (Bargarh), (4) Balunkeswar Temple at Gaisama (Bargarh), (5) Mandhata Baba Temple at Maneswar (Sambalpur), (6) Swapneswar Temple at Sorna (Bargarh), (7) Visweswar Temple at Soranda (Bargarh) and (8) Nilakantheswar Temple at Nilji (Bhatli). The Bimaleswar Temple at Huma on the Mahanadi was built by Maharaja Baliar Singh and the rest were built during the reign of Ajit Singh and his son Abhaya Singh.

Papaharini:-The main perennial flow of Gandhamardan is Papaharini, literally meaning, destroyer of sins. It is symbolic of Sanatan-the continuum of past, present, and future. Flowing out of the confluence of seven fountains, called Saptadhar– it has an average width of 12 ft. No man-made tributary can flow into it.

Debrigarh WLS

Astasambhu

Nrusinghanath Temple



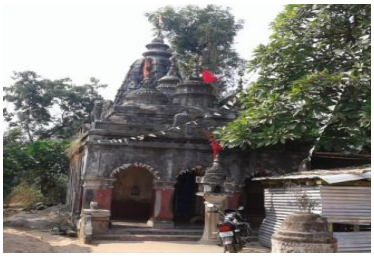
GiriGobardhan of Dekulba

Papanga Mountain of Buddharaja

BoudhBihar,Ganiapali

Astasambhu

Bindhyabasini Temple, Sankirda



BasikelaGada

3.14 Vegetation:-

The Reserved Forest blocks Sareidamak-Budharaja, Papanga, Jhanjpahar, Borasambar, Adwal, and Gandhamardhan are allotted to this Working Circle. Salia Bamboo is present in number of blocks allotted to this Working Circle.The vegetation consists of mainly Sal and associated species like Piasal, Asan, Dhaura, Kurum, Kasi etc.Regeneration of Sal, other principal and secondary species is adequate. Climbers like Atundi (Combretumdecandrum) and weeds like Eupatorium and Lantana at places are creating problems by suppressing the regeneration of principal species. The forests allotted to this Working Circle are subjected to various biotic pressures like grazing, fire and illicit felling. Steps need to be taken during the implementation of this Plan to ensure that these pressures are minimized in these blocks. In general, the problem of fire especially during the NTFP collection season is prevalent in the entire area, resulting in changes in soil composition and crop condition.

3.15 Flora and Fauna:-

Flora is the plant life occurring in a particular region or time, generally the naturally occurred or indigenous. Plants are grouped into different types of flora based on region, period, specific environment, or climate. Regions may have geographically distinct habitats like mountain or flatland. Flora can mean plant life of a historic era as in fossil flora. Lastly, flora may be subdivided by specific environments.

3.16 Weaving and Handicraft:-

Handloom weaving is the outstanding, wide – spread small Industry, providing employment to largest number of people in the District.The growth of weaving activity in the District is ascribed to the advent of the "BhuliaMeher" community in around 1765 AD from Sonepur. BhuliaMehers are said to have been original inhabitants of Rajasthan and Delhi from where they moved to Dhamantari and Dhansa villages of Raipur District of Chhattisgarh. Later on, they were brought to Patnagarh of Bolangir District after the first Chauhan King Ramai Deb ascended the throne of BolangirPatnagarh. It is presumed that the original BhuliaMeher community, after setting down in the region, intermingled with the other castes too and soon the kostaMehers (who are usually tussar weavers) and KuliMehers (who are the least skilled labour class) came into existence. The District predominantly consists of the Bhulia and KostaMeher and the Ganda weavers. Kosta and Bhulia castes figure around 30% and 50% respectively each, whereas Harijan/Kuli castes account for 20% only of the total population of weavers in the District.Tusser silk weaving was for many years a principal industry of the Sambalpur District of which Bargarh was a part. Dr. Short who visited Sambalpur in 1855 found that tusser silk was manufactured to a great extent, the fabrics being used locally and also exported. Five large villages or towns were occupied in weaving tusser, and in each, at the very lowest computation, 1,000 tans or pieces were produced annually. The culture of the tusser silkworm was carried on in almost every jungle village and at least 7.5million cocoons were produced. Only one-third of the cloth remained in the District the rest being exported to Cuttack and Berhampur , and also to Raipur and Bilaspur; and it is clear that the industry was then in a flourishing condition. The District is famous throughout India and even abroad for handloom fabrics. It is an indigenous industry manned mostly by Kostha and Bhulia weavers. Besides their adroit workmanship, the speciality of their products is reckoned more for the choice of colour and the design. This has earned them world-wide fame.

Chapter-4

4.1 Geology:-

The Geology of this district is constituted by the Central India Craton (CIC) and the Eastern Ghat Mobile Belt (EGMB) belonging to the Archean to Proterozoic age. The younger intrusive alkaline rocks are found at the conjunction of the above two. The ChhattisgarhGroup of rocks belongs to the Vindhyans which lies over the CIC basement. The hard rock's consist of granite and its variants, khondalites, charnockites and also fractured quartzites, shales and sandstones of Purana Group. Like in other districts the khondalities and charnockites generally forms forested hills and mounds. The shale and sandstone of Purana Group occurs in the north eastern part covering Ambhabona-Lakhanpur area.

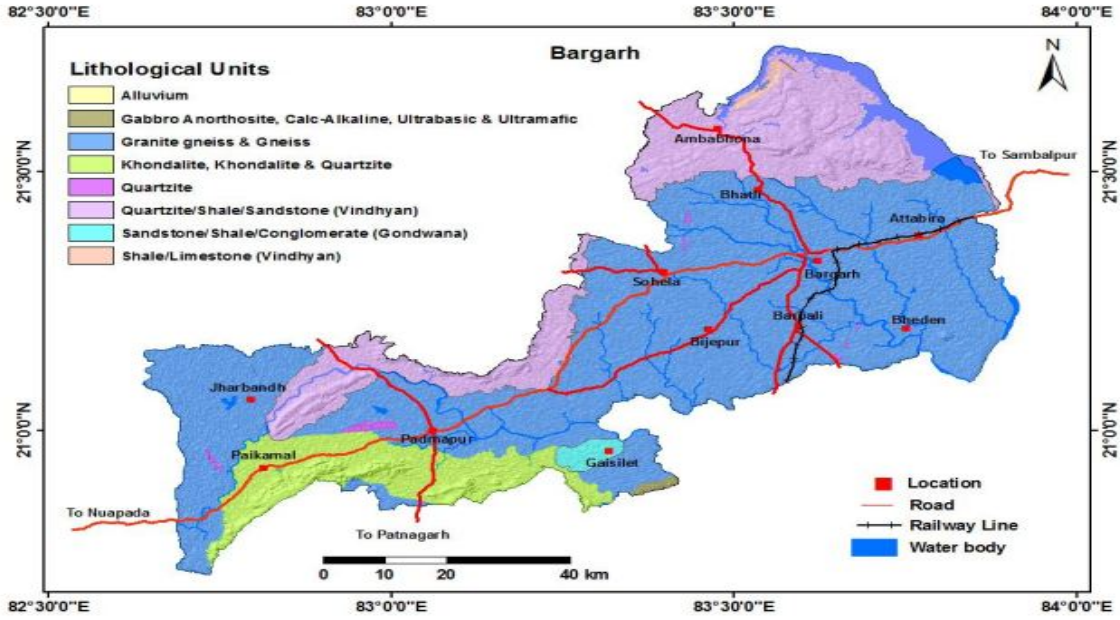
Archeans:-The Archaeans consist of principally of Khondalite suite of rocks & unclassified granite and granite gneisses. The Khondalite group from a significant plateau topography at Gandhamardan associated with rich deposits of bauixite. The rocks also carry economic deposits of Graphite (Sargipalli). A variety of Granite gneisses which are potential source of base metals and gemstones respectively.

Proterozoic (Vindhyans) :- Proterozoic meta sedimentary rocks are exposed along the area bordering Chhattisgarh. They form the eastern margin of Chhattisgarh basin. The rock types include grit, quartzite, shale, sandstone and slate. Theses contain important beds of limestone. This has also been targeted for locating primary source for diamond due to long & intermittent history of alluvial diamond recovery.

Gondwana:- The lower Godwana formations rest uncomfortably over pre- cambrian basement along the Ong River alignment. The rock types include shale, sandstone, gritty and conglomeratic sandstone with occasional grey shales. Coal seam belonging to Karharbari/ Basal barakar formations are encountered which also carry fireclay.

4.2 Stratigraphy:-

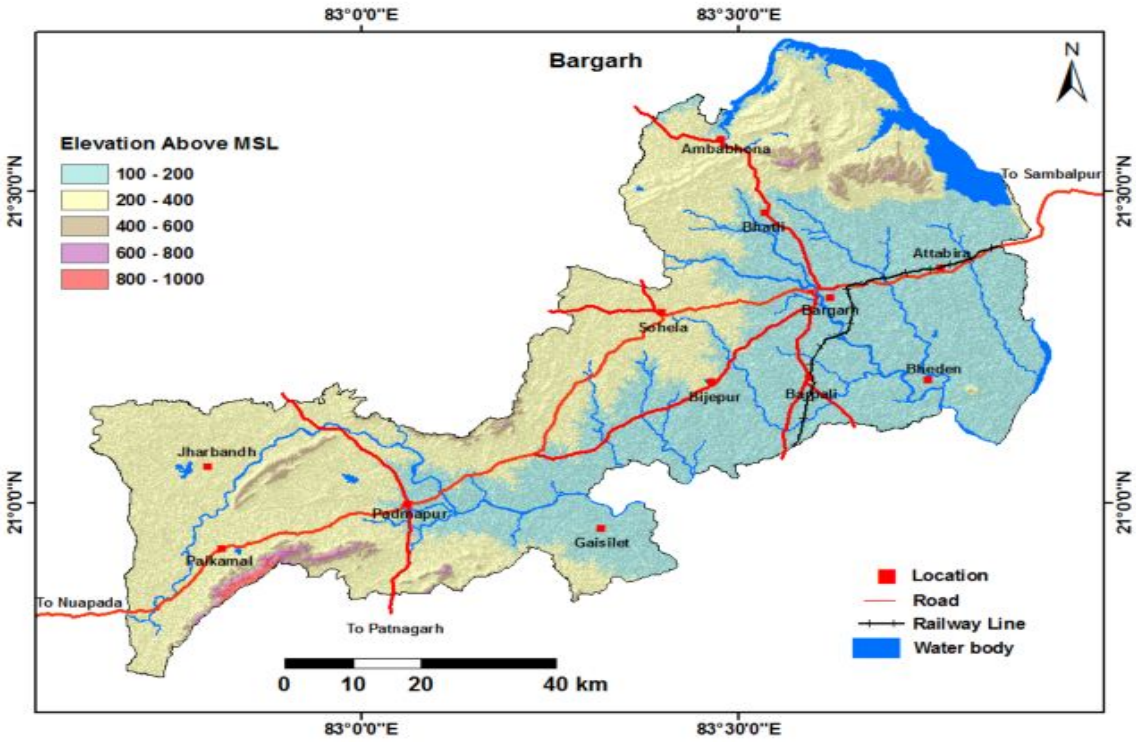
Age	Formation/Group	Lithology
Quaternary		Soil/Alluvium,Laterite, Sand,Silt
	~~Unconformity~~~~~	
Permocarboniferrous	GondwanaSupergroup	Feldspathicmicaceous sandstone, Shale, Pebble Bed
	~~Unconformity~~~~~	
Cambrian	Raipur Group	Shale and Calcarious Shale,(Purple Color),Quartzite, Limestone & Dolomite
Precambrian	Chandrapur Group	Coarse Quartzite,Sandstones,Shale, Phyllite,Feldspathic Grit, Conglomerate
	~~Unconformity~~~~~	
Archeans-	Intrusives	Dolerite dyke quartz react vein,Pegmatite
Eastern GhatSupergroup		
	Iron Ore Group	Amphibolite
	Sambalpur Group	Medium grainedbiotite and gneiss,Migmatitic gneiss
	Charnockite Group	UndifferenitiatedCHarnockite
	Khondalite Group	Garnet,Silimaniteschist and gneiss,quartzite, unclassified gneiss



(Fig-1 Geological Map of Bargarh District)

4.3 Physiography and Geomorphology:-

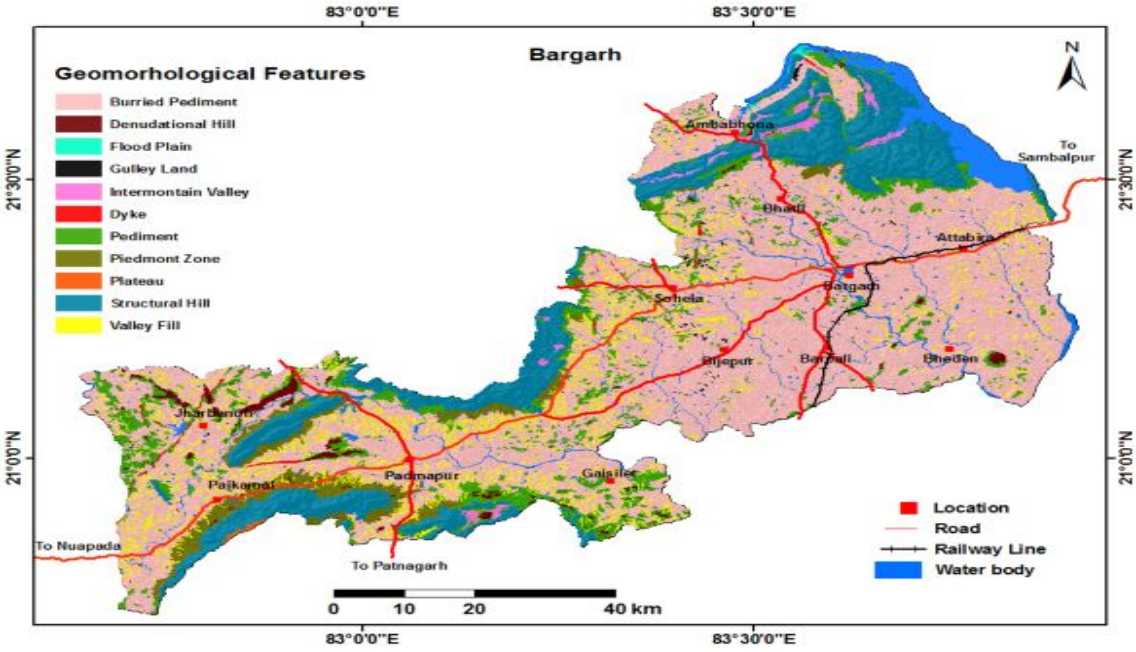
Physiographically the district can be broadly divided into two distinct geomorphic units - Gently undulating terrain in the south and south west and Undulating plains with isolated hills and mound in northern and western part of the district. The major parts of the district are characterised by a flat gently undulating terrain with a vast stretch of cultivable land. The general elevation of land surface ranges from 285 m to 120m above mean sea level. The important hills are GandhaMardan (980m), Burhadongar (801 m), Ashawaldongar (618m), Jhanjhipahar (681m), Gosaiparbat (356m.), Kala pahar (640m), Chhuriadongri (637 m). The various hydrogeomorphological units are Flood Plains, Deep Buried Pediplain, moderately Deep Buried Pediplain, Shallow Buried Pediplain, Pediment Inselberg Complex, Pediment, Intermontane Valleys, Linear Ridges, Residual Hills, Denudational Hills and Structural Hills. Fig. 2. shows the Elevation map of Bargarh District.



(Fig. 2 Elevation map of Bargarh District.)

Geomorphology:-

The Bargarh district covers a huge pedeplainareas , Structural hill, Plain Areas, Valley areas and also Folld Plains. Fig3 shows the Geomorphology of Bargarh District. The various hydrogeomorphological units are described below :

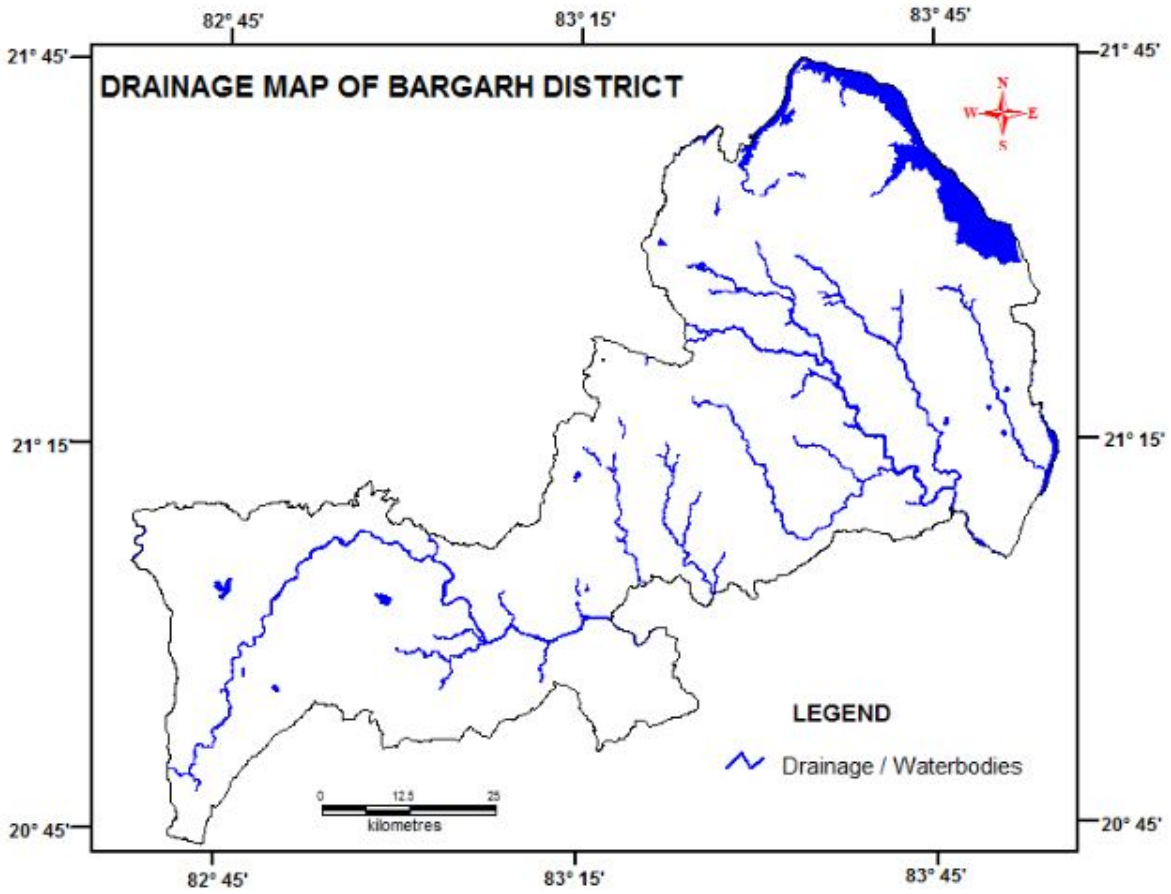


(Fig.3 Geomorphology of Bargarh Distric

Chapter-5

5.1Drainage and Irrigation Pattern:

The drainage of the area is controlled by the tributaries of Mahanadi river, like Ong river,Danta River and Jira River.These tributaries are ephimeral in natute and generally follow the master slope of the area. In the western part of the District the river Ong flows roughly towards east whereas in the north- western part the river Danta and Jira flows roughly towards southeast direction. The drainage is effluent in nature. Fig. 4: shows the drainage of Bargarh District.



(Fig. 4: Drainage map of Bargarh District)

Irrigation:-During 2021-22, Total 510790 hectares area, out of which 348747 hectares are cultivable area, net sown areas are 348747 and total irrigated areas are 43183 hectares and in Irrigation potential district having Ayacut area of 25711 hect. With the help 1029 nos. of lift irrigation points (River) & 47310 hect nos. with the help of 23655 of lift irrigation points (Deep Bore wells) are created in the district for irrigation purpose. Total 61.94% of cultivated area of district is irrigated.

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Sl.No	Name of the River	Place of Origin	Altitude of Origin (in m)	Total Length in District(Km)	Area Drained (sq.Km)	% area drained in the district
1	Danta River	BanjipaliVillage,Bhatli Block	184.00	54.00	--	100.00
2	Jeera River	Ramgiri hills of Eastern Ghat	--	83.50	--	70.00
3	Ong River	Beherapani Village	457.00	59.00	5128.00	100.00
4	Jonk River	KhariarHills,Kalahandi Dist	762.00	--	3484.00	--
5	GirsulNala	Relendapallivillage,Bhatli Block	195.00	22.50	--	95.00
6	JhaunJhor	Guthipali Village, Attabira Block	162.00	35.85	--	100.00
7	KuliaryJore	Jaipur Village Bhatli Block	242.00	20.75	--	100.00
8	DevMohiniNala	Badmal Village, Rajborasambar Block	200.00	8.00	--	100.00
9	KumriNala	Fraserpur Village Rajborasambar Block	260.00	32.00	--	100.00

Chapter-6

6.1Land Utilisation Pattern of the District:

Land is the first and foremost factor of production in any economic activity. So, land is a vital resource. Underdeveloped land is a drag on the cultivator and needs to be bought into cultivable status. In order to ensure better yields from high land and low rainfall areas, dry land farming technology is being implemented on a priority basis. In the event of drought, dry land farming and watershed development programme become crucial.

Chapter-7

7.1Details of the Mining Lease of the District:

Bargarh district is endowed with natural resources. The soil of this region is enriched with exquisite minerals. The Borasamber region &Barapahar region are vastly augmented with mineral resources. The Gandhamardan Hill is the treasure of Bauxite &Barapahar is the source of lime stone. The extraction of limestone from Dungri Mines is supplied to M/s ACC cement, Bargarh which provides employment & infrastructure to the area. Other minerals found in the district are China Clay, Dolomite & Graphite. Besides the district is rich in minor minerals like River Sand, Road Metal (Stone), Morrum, Laterite Stone etc. The total area considered for mining activity for all minerals shall be the mining area within the district. Details of minerals are described as:-

1. List of Operation Sources :Annexure-I(A)
2. List of Non-Operation Sources :Annexure-I(B)
3. List of New Sources :Annexure-I(C)

8. Details of Royalty Collected in last three Years (in Rs.)-

The details of Royalty Collected during last three years are described below:-

Tahasil wise Royalty Collection	2022-2023	2023-24	2024-25
Ambabhona	2,65,000.00	51,000.00	--
Attabira	1,74,000.00	--	--
Bargarh	78,52,528.00	--	--
Barpali	3790.00	--	--
Bijepur	38,02,124.00	2,19,364.00	--
Bhatli	--	--	--
Bheden	--	--	--
Jharbandh	16,81,971.00	4,22,330.00	--
Sohela	3,15,053.00	--	--

Gaisilet	6,04,888.00	--	--
Padampur	48,76,616.00	--	--
Paikmal	25,91,313.00	--	--

9. Details of Production in last Five Years (in Cu.m)-

Tahasil wise Production of Minor Minerals	2022-2023	2023-24	2024-25
Ambabhona	2539 Cu.m	--	--
Attabira	1400 Cu.m	--	--
Bargarh	47698 Cu.m	--	--
Barpali	--	--	--
Bijepur	31418.1 Cu.m	--	--
Bhatli	--	--	--
Bheden	--	--	--
Jharbandh	--	--	--
Sohela	3713 Cu.m	--	--
Gaisilet	4245 Cu.m	--	--
Padampur	6239.8 Cu.m	--	--
Paikmal	4103 Cu.m	--	--

10. Mineral Map of the Bargarh District:-

The details mineral resources and their occurrence in Bargarh District is attached as Annexure-2.

11. List of Letter of Intent (LOI) Holders in the District along with its validity:-

Nil

12. Total Mineral Reserve Available in the District:-

Total mineral reserve of Stone was access after detail study or grant of potential area, which may investigate as per details below.

i) Blockswere identifiedbasedongeological studiesthroughfieldobservation.

ii) Mineableresourcewascalculatedby consideringdetail 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.

SummaryofIdentifiedMineralPotential:Annexure-3

13. Quality/Grade of Mineral available in the District:-

Stone and specified minor minerals of the district is very much suitable for making of various construction purposes. In-situ bodies of granite are suitable for road and construction purpose.

14. Use of Mineral:-

Stone and specified minor minerals of the districtplay a vital role invarious construction activities. They are primarily utilized for road construction, where their durability and strength ensure safe and reliable infrastructure. Additionally, these materials are essential for producing dimension and decorative stone, contributing to aesthetic and functional aspects of buildings and public spaces.

15. Demand and Supply (in Last three years):-

As such there are huge infrastructural activities such as road, building, railways are comingupbyGovt.ofIndia&PSUsunder“MakeinIndia”programme.Itisproposedtostart the stone productionfor fulfil the Requirement ofthe Districtwhich will enhance therevenueof the district and also support the livelihood of the local people.

16. Map of Existing Mining Lease:-

Attached as Plate-I

17. Details Of The Area Of Where There Is A Cluster Of Mining Leaseviz. Number of Mining Leases, Location (Latitude And Longitude):-

Attached as Annexure-3

18. Details of Extended Eco-Sensitive Zone, if any in the District:-

Nil

19. Current per capita Power Consumption per Month/Annum:-

Nil

20.Impact of Mining Environment:-

Generally,theimpactofmining activities onenvironmentcanbecategorizedas either primaryorsecondary.PrimaryImpactsarethose,whicharecauseddirectlyduringoperationofvariousexistingprojects.Secondaryimpactsareinducedbyexpansionofprojectarea enhancement in production or additionofancillaryunits by theproject proponents themselves or dependent secondary and tertiary units.

Impact on Ambient Air Quality: Miningoperationinthedistrictiscarriedoutmostly by opencast semi-mechanized /mechanized methods and rarely by manual methods generating huge volume of dust particles. Such generation is the result of various activities like blasting, excavation and loading by heavy machineries (power shovels, surface miners, haul packs etc.), processing off minerals in crushers, coal handling plants and transportation by large dumpers and trucks. The air quality in the mining areas depends upon the natureand concentration of emissions and meteorological conditions. The major air pollutants due to mining activities include: -

- Suspended Particulate matter (dust) of various sizes.
- Gases,suchasSulphurdioxide,oxidesofnitrogen,carbonmonoxideetc.emitted from heavy mining machineries.
- Wasteand mineral transporting vehicles.

Transpiration sources of air pollutants include heavy vehicles used in excavation operations, cars that transport personnel at the mining site, and trucks that transport mining materials. The level of polluting emissions from these sources depends on the fuel and conditions of the equipment. Even though individual emissions can be relatively small, collectively these emissions can be of real concern. In addition, mobile sources are a major source of particulate matter, carbon monoxide, and volatile organic compounds that contribute significantly totheformationof ground-level ozone. The main gaseous emissions are from combustion of fuels in power generation installations, and drying, roasting, and smelting operations. Many producers of precious metals smelt metal on-site, prior to shipping to off-site refineries. Typically, gold and silver are produced in melting/fluxing furnaces that may produce elevated levels of airborne mercury, arsenic, sulfur dioxide, and other metals. Common sources of fugitive emissions include: storage and handling of materials; mine processing; fugitive dust, blasting, construction activities, and roadways associated with mining activities; leach pads, and tailing piles and ponds; and waste rock piles. Sources and characteristics of fugitive emissions dust in mining operations vary in each case, as do their

impacts. Impacts are difficult to predict and calculate but should be considered since they could be a significant source of hazardous air pollutants.

Impact on Water Quality:Sometimes, mining particularly in underground operations leadtointerceptionwiththewater tablecausingloweringof groundwatertablemayleadsto Groundwater Contamination: Mining activities (Mine tailings and waste rock, Processing plant effluent, Leaks from mines and pipelines, Abandoned mines) compromise aquifer quality. Due to the interference with surface water sources like river, nallah etc. and the entire drainage system downstream of the area is adversely affected. Leaching and Sedimentation leads to mining waste and runoff harms to aquatic habitats. Oil, grease and other lubricants are also carried by surface run off to natural water courses polluting water quality. Acid mine drainage is considered one of mining most serious threats to water resources. A mine with acid mine drainage has the potential for long-term devastating impacts on rivers, streams and aquatic life. If mine waste is acid generating, the impacts to fish, animals andplants can besevere. Many streams impacted byacidminedrainagehavea pH value of 4 or lower – similar to battery acid. Plants, animals, and fish are unlikely to survive in streams.

Impact on Noise Level: Noise pollution is mainly caused due to Blast vibrations, operation of heavy machineries (drilling, excavation, and haulage), Crushing-processing plant noise and plying of Transport and logistics noise. Noise may impact on quality of Life, human health and wildlife candisrupts their communication, migration, and habitats. Vibrations are associated with many types of equipment used in mining operations, but blasting is consideredthemajorsource. Vibrationhasaffectedthestabilityofinfrastructures, buildings, and homes of people living near large-scale open-pit mining operations. According to astudy commissioned by the European Union in 2000: “Shocks and vibrations as a result of blasting in connection with mining can lead to noise, dust and collapse of structures in surrounding inhabited areas. The animal life, on which the local population may depend, might also be disturbed.”

Land degradation: Since winning of minerals involves huge volume of excavation of earth’s surface, land degradation cannot be dispensed with. Similarly, dumping of solid waste also creates problem. But lots of remedial measures are in the statute to prevent such degradation.

Impact on Flora & Fauna: Impact on biodiversity is difficult to quantify because of its diverse and dynamiccharacteristics. Miningactivitiesinforest areaalso cause deforestation, land degradation, water, air and noise pollution which directly or indirectly affect the fauna and flora status of the project area and its ambience.

21. 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:

- Water spraying on haul roads, service roads and overburden dumps.
- Properandregular maintenanceofminingequipments.
- Transportsofmaterials intrucks aretobecoveredwithtarpaulin.
- The minepit water,ifany can beutilizedfordust suppressionin and aroundminesarea.
- Information on wind direction and meteorological factors are to be considered during planning, so that pollutants, which cannot be fully suppressed by engineering techniques, can be prevented from reaching the nearby human habitat.
- Comprehensive greenbelt around overburden dumps and periphery of the mining projects/clusters has to be developed and monitored to reduce to fugitive dust transmission from the project.
- Compaction ofterraces, coirmat, and geo textiling along dumps lopes followed by plantation.

Water:

- Construction of garland drains and settling tanks to divert surface run-off of the mining areato the natural drainage.
- Construction of checks dams/ gully plugs at strategic places to arrest silt wash off frombroken up area, if required.
- Retaining walls with weep hole areto beconstructed around the mine boundaries toarrest silt wash off in case of big quarries.
- The mined-out pits can be converted in to the water reservoir after reaching ultimate pit limit. This will help in recharging ground water table by acting as a water harvesting structure with Mine design and planning.
- Water treatment and monitoring in Periodic basis of mine pit water and ground water quality in nearby villages are to be undertaken.
- Domesticsewagefromsiteoffice&urinals/latrines, if anyprovidedwithin ML/QLareasisto be discharged in septic tank followed by soak pits.
- RegularEnvironmentalimpactassessments.
- Rehabilitationand reclamation areboth processesthat can beused torestoreminedland.
- ProperRegulation andenforcementofmines.

Noise:-

- Machinery maintenance and upgrade; Periodic maintenance of machineries, equipment shall

be ensured to keep the noise generated within acceptable limit also maintaining Blast optimization and scheduling.

- Noise monitoring and modelling; Development ofthick green belt around mining/cluster area, avenue plantation along haul roads to reduce the noise.
- Conductingperiodicalmedical check-upofall workersfor anynoiserelated healthproblems.
- Proper training topersonnel tocreateawarenessabout adversenoiserelated effects.
- Sound barriers and enclosures; Periodic noise monitoring at locations within the mining area and nearby habitations are to be undertaken for big QL areas to assess efficacy of adopted control measures.
- Communityengagement andnoisemanagement plansto been trained.

Biological Environment:-

- Developmentofgreenbelt/gapfillingsaplingsinthesafetybarrierleftaroundthequarry area/ cluster area, if the safety zone areas are barren.
- Carrying out thick greenbelt with local flora species predominantly with long canopy laves on the inactive mined out upper benches.
- Development ofdense polycultureplantationusing localfloral species inthe miningareas at conceptual stage if the mine is not continued much below the general ground level.
- Adoptionof suitableairpollution control measuresassuggested above.
- Transportofmaterialsintruckscoveredwithtarpaulin.

22. Reclamation of Mined out Area:-

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 three possible means depicted below;

- If, substantial quantity 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.
- Ifthe generationofwaste ismuchless as in thecase of minor mineralmining, the exhausted quarries can be reclaimed by
- Plantation on the broken-up surface if the depth of quarry is not much below the surrounding surface level.
- Conversion 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 fromthese areas. The exhausted minor mineral quarries of the district have been converted to water reservoirs.

23. Risk Assessment & Disaster Management Plan:-

The risk relatingto mining of minor mineralexcept 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 respectivedepartment fromtime to time.

24. General Responsibility of Employees during 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 assemble at a specified point and wait for instructions. He should not resort to spread panic. On the other hand, he must assist emergency personnel for the objectives of DMP.

The mine manager who is responsible for emergency will always keep a vehicle 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 manager 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 Occupational Health Issue in the District:-

As per the guidelines of the Mines Rules 1955, occupational health safety has been stipulated by the ILO/WHO. The proponents 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. Directorate

General Mines Safety (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 mines shall be well equipped with personal protective equipment (PPE). Further, all the necessary ported equipments such as helmet, safety goggles, earplugs, earmuffs etc. are to be provided to mine workers as per mines Rules. All operators' and mechanics are to be trained to handle firefighting equipments.

26. Greenbelt Development along the lease granted areas:-

As most of the minor mineral mines/quarries of the district are yet to be exhausted of their mineral content, reclamation measures have to be undertaken gap plantation of local species in the peripheral safety zones of the quarries/ clusters and in some of the haul roads.

27. CONCLUSION:-

The District Survey Report for Stone (Road Metal) and Specified Minor Minerals in respect of Bargarh District prepared in accordance with Appendix(X), Para-7(iii)(a) of S.O. 3611(E) dt. 25.07.2018 of Ministry of Environment, Forest and 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 connection with C.A Nos. 3661/3662 of 2020. This report provides information on the development and planning of the district gathered from various government departments, i.e., Irrigation department, Forest department, Public works department, Revenue department, Water Resource department, ORSAC, and Mining department.

Bargarh district in last few years has been a hotspot for overall developmental work to improve quality of living of western Odisha people. Looking into the booming developmental works in Bargarh and nearby districts, and to bridge the gap of demand and supply of minor minerals, for such developmental projects, utmost care has been taken up to prepared a compressive District Survey report for Stone(Road Metal) andSpecifiedMinor Minerals which will valid for next five years. The report endures an overview of the district's sufficient mineral resources, geological structure, environmental protection, ecological setup, community involvement, and regulatory compliance. Other measures include planning, monitoring of mined material and its transportation, and putting a stop to illegal mining and material sales. DSR will aid for revenue collection of the district as well as the state by means of carving out potential auctionable minor mineral sources in the district.

SUMMARY OF STONE SOURCES OF BARGARH DISTRICT					
DISTRICT	NAME OF THE TAHASIL	NUMBER OF OPERATIONAL SOURCES	NUMBER OF NON-OPERATIONAL SOURCES	NO. OF NEW SOURCES	TAHASIL-WISE TOTAL SOURCES
BARGARH	BARGARH	4	0	0	4
	BHATLI	1	0	0	1
	BHEDEN	2	1	2	5
	GAISILET	0	0	0	0
	JHARBANDH	0	2	3	5
	PADAMPUR	4	0	2	6
	PAIKAMAL	2	0	1	3
	BARPALI	1	0	1	2
	BIJEPUR	5	0	4	9
	AMBABHONA	4	0	0	4
	ATTABIRA	0	0	0	0
	SOHELA	5	0	2	7
TOTAL		28	3	15	46

LIST OF OPERATIONAL SOURCES(ROAD METAL/ STONE) OF BARGARH DISTRICT

Sl. No.	Name of the Source	Mouza	Khata No	Plot No	Kissam	Area of Mining Lease (in Acres)	Area of Mining Lease(in Ha)	Mining Lease Grant Order No. & Date	Name and address with Contact No. of Lessee	Period of Mining Lease	Date of Commencement of Mining Operation	Status(Working/Temp. Working for dispatch etc.	Captive/Non-Captive	Obtained Environmental Clearance(Yes/ No),If Yes, Letter No. with Date of grant of EC	Location of the Mining Lease(Latitude/Longitude)	Method of Mining (Opencast/Underground	Mineral Reserve (in cubic meter)	Length and Width of the Lease Area (in m)	Remarks +
AMBABHONA TAHASIL																			
1	**KUMBHO STONE QUARRY-A**	Kumbho	173(AAA)	829(P)	Dungu ri	5.00	2.023	Tahasildar Letter No-745of Dated-08.05.2020	Rohit Kumar Patel, S/o-Asharam Patel At-Chicholi,Po-Bhukta,Ps-Ambhabona, Dist-Bargarh	11.10.2021-10.10.2026	CTO-4736/III-CON(Operate)/83/2021-22 0f Dated-20.09.2021 CTE-1874/III CON(NOC) 123/2020-	Working	Non-Captive	SEIAA-502/09-2020 Of Dated 25.11 2020	Latitudes-21°30'10.07"N to 21°30'15.33" N and Longitudes 83°21'4.88"E to 83°21'13.65".E	Semi-mechanised	GR-195085.4 m^3,MR-61068.9 m^3	NA	NA

										21 of dated - 22.03 .2021								
2	**KUMBHO STONE QUARRY-B**	Kumbho	173(AAA)	829(P)	Dungu ri	5.00	2.023	Tahasildar Letter No-745 of Dated-08.05.2020	Sri Sanjog Seth,m/s. Rajalaxmi Construction Dist-Sambalpur	03.10.2021 To 02.10.2026	CTO-565/III-CON(Operate)/60/2020-21 0f Dated - 03.02 .2021 CTE-409/III CON(NOC) 192/2020-21 of dated - 25.01 .2020	Working	Non-Captive	SEIAA-501/09-2020 of Dated 25.11 .2020	Latitudes-21°30'08.02"N to 21°30'12.48" N and Longitudes 83°21'5.75"E to 83°21'13.76"E	Semi-mechanised	GR-202756.6 m^3,MR-75627.6 m^3	NA	**NA**

3	**KUTHARPALI STONE QUARRY**	Kumbho	66(AAA)	231(P)	Dunguri	7.00	2.832	Tahasildar Letter No-49 of Dated-02.01.2020	Sri Pramod Kumar Bhoi At-Rengalpali Sarsara, Dist-Bargarh Pin-768028	16.11.2021-15.11.2026	CTO-5562/III-CON(Operate)/100/2021-220f Dated-01.11.2021 CTE-4742/III CON(NOC) 89/2021-22 of dated-20.09.2021	Working	Non-Captive	File No-SEIAA-881/11-2020 Of Dated 12.03.2021	Latitudes-21°33'20.16"N to 21°33'27.14" N and Longitudes 83°27'09.92"E to 83°27'19.76"E	Semi-mechanised	GR-334075.5 m^3, MR-164673m ^{3}	NA	**NA**
4	**SAMBALPURI STONE QUARRY**	Sambalpuri	58	335(P)	Dunguri	7.00	2.832	Mining Officer Letter No-959, Dated-30.11.2024	M/s.Shyamdhan Traders Pvt.Ltd At-9th Floor Unit No-914,Merlin Infinite DN 51 Salt Lake,Kolkata State- West Bengal.	30.11.2024 To 29.11.2029	30.11.2024		Non-Captive		Latitudes-21°33'37.968" N to 21°33'45.329" N and Longitudes 83°27'26.771" E to 83°27'35.578" E	Semi-mecanised	**GR**-295789.32m^3**MR**-236074.5m^3	NA	To Be Operationalised

BARGARH TAHASIL																	
5	**KHUNTPALI PUDIA TIKRA-E**	Khuntpali	976	5384 &5554	Pathar Chatan	5.33	2.157	Tahasildar Letter No-869 of Dated-11.02.2021	Mukunda Ratha S/o- Late Dolamani Ratha, At/Po-WordNo-9,VSS Nagar, Dist-Bargarh Pin-768028	09.02.2021. to08.02.2026	CTO-480/III-CON(Operate)/191/2016-170f Dated-28.01.2021 CTE-/III CON(NOC) 192/2020-21 of dated-25.01.2020	Working	Non-Captive	9382/SEIAA of Date27.10.2020	Latitudes-21°17'09.27"N to 21°17'14.33" N and Longitudes 83°36'56.51"E to 83°37'06.28"E	Semi-mechanised	GR-374909.9,MR-130085.4	NA	**NA**
6	**KHUNTPALI GANJIA TIKRA STONE QUARRY**	Khuntpali	976	4500	Pathar Chatan	3.37	1.364	Tahasildar Letter No-820, of Dated-17.02.2020	M/s. Shyam Trading Co., Chiranjibi Guru, Partner	23.03.2021-22.03.2026	CTO-1691/III-CON(Operate)/82/2020-21 0f Dated-16.03.2021 CTE-	Working	Non-Captive	File No – SEIAA-306/07-2020 Of Date-27.10.2020	Latitudes-21°16'48.72"N to 21°16'52.62" N and Longitudes 83°36'07.14"E to	Semi-mechanised	GR-252641.1,MR-88184.7	NA	**NA**

										624/III CON(NOC) 135/2016-17 of dated - 09.02.2017				83°36'13.86"E				
7	**DHANGER STONE QUARRY-A**	Dhanger	1105	8461 & 8471	Dungri, Pathar Chatan	8.54	3.456	Tahasildar Letter No-1886, of Dated-20.07.2020	Sri Rahul Kumar Agrawal,At-Ward-19, Railway Station, Po/Dist-Bargarh	03.03.2021 To 02.03.2026	CTO-921/III-CON(Operate)/76/2020-21 0f Dated - 23.02.2021 CTE-399/III CON(NOC) 13/2018-19 of dated - 22.01.2021	Working	Non-Captive	SEIAA-307/07-2020 Of Dated 27.10.2020	Latitudes-21°16'35.25"N to 21°16'42.83" N and Longitudes 83°38'05.20"E to 83°38'17.41"E	Semi-mechanised	GR-642063.2 m^3, MR-344946.9 m^3	NA	**NA**

8	**DHANGER STONE QUARRY(RAYATI LAND)**	Dhanger	1101/109	7167/9074 & 7169/9075	Aa.Sa.	1.74	0.704	Tahasildar Letter No-76of Dated-15.01.2021	Sri Dhirendra kumar panda,at/p.o-srinagar,Dist-Bargarh	11.01.2022-10.01.2027	CTO-6519/III-CON(Operate)/189/2021-220f Dated-16.12.2021 CTE-	working	Non-Captive	SEIAA-1597/03-2021 Of Dated 18.09.2021	Latitudes-21°17'53.42"N to 21°17'56.10" N and Longitudes 83°37'55.44"E to 83°37'49.95"E	Semi-mechanised	GR-72015.3, m^3MR-22459.5 m^3	NA	**NA**
BHATLI TAHASIL																		
9	**KENDUGUDIA STONE QUARRY**	Kendugudia	110&111	1140&1063	Patita, Pathar Chatan	6.85	2.772	Tahasildar Letter No-1884, of Dated-03.11.2020	Sri Debasis Majhi, S/o-Bhakta Bandhu Majhi, At-Ichapur, p.o-Kundpula,Ambabhona	16.11.2021 To 15.11.2026	CTO-5642/III-CON(Operate)/99/2021-22 0f Dated-03.11.2021 CTE-4761/III CON(NOC) 88/2021-22 of dated-	Working	Non-Captive	SEIAA-1287/01-2021 of Dated 30.06.2021	Latitudes-21°28'00.71"N to 21°28'11.65" N and Longitudes 83°27'30.85"E to 83°27'38.42"E	Semi-mechanised	GR-163315.6 m^3 MR-7920.5 m^3	NA	**NA**

											21.09.2021							
PADAMPUR TAHASIL																		
10	**FULMATIPUR STONE QUARRY-C**	Fulmatipur	97	584(P)	Pathar Chatan	12.00	4.856	Tahasildar Letter No-335 of Dated-31.07.2020	Sri Iswaradatta Meher,s/o-Skadev Meher, At/po/Ps--Padampur,Dist-Bargarh	19.07.2021 To 18.07.2026	CTO-3451/III-CON(Operate)/28/2020-21 0f Dated-05.07.2021 CTE-1878/III CON(NOC) 139/2020-21 of dated-22.03.2021	Working	Non-Captive	SEIAA-453/08-2020 Of Dated 04.11.2020	Latitudes-20°52'47.97"N to 20°52'55.04" N and Longitudes 83°01'59.24"E to 83°02'13.75"E	Semi-mechanised	GR-389925 m³, MR-203374.8 m³	NA	**NA**
11	**RAIBAHADURPUR STONE QUARRY**	Raibahadurpur	75	270	Dungri	3.10	1.255	Tahasildar Letter No -2956 of Dated-08.102021	Sri Mohammed Jawed,At-Padampur W.No-3 p.o-Rajborasambar Padampur,Dist-Bargarh	01.08.2022 To 31.07.2027	CTO-2936/III-CON(Operate)/262/2021-220f Dated-	Working	Non-Captive	SEIAA446/08-2020 Of Dated 04.11.2020	Latitudes-20°54'09.77"N to 20°54'17.11" N and Longitudes 83°01'1	Semi-mechanised	GR-194073.6 m³, MR-31663.5 m³	NA	**NA**

											08.07.2022 CTE-2890/ III CON(NOC) 317/2021-22 of dated - 05.07.2022				7.79"E to 83°01'30.84"E				
12	**GARVANAKHOL STONE QUARRY**	Garvanakhol	9	51	Pathara Chatan	4.81	1.946	Tahasildar Letter No-335 of dated 21.01.2020	Sri KasiramAgarwall, S/o-JayaNarayan Agarwal, At/p.o/p.s-Padampur, Dist- Bargarh, Odisha	25.08.2021 To 24.08.2026	CTO-3633/ III-CON(Operate)29/ 2020-21 0f Dated - 16.07.2021 CTE-1872/ III CON(NOC) 140/2020-21 of dated - 22.03.2021	Working	Non-Captive	Yes, EC Letter No.9583/SEIAA, (File No-SEIAA-450/08-2020) Of dated 04.11.2020	Latitudes-20°55'17.95"N to 20°55'21.15" N and Longitudes 83°07'51.60"E to 83°08'05.94"E	Open cast Semi-mechanised	GR-148348.8 m^3, MR-63831.6 m^3	NA	**NA**

13	**BISHIP ALI STONE QUARRY-B**	Bishipali,	167	688, 713	Pathar Chatan	2.57	1.04	Tahasildar Letter No-2683 Of dated-31.07.2020	Mohammd Jawed, S/o-Haji gulam Kader, At/p.o/p.s--padampur, dist-Bargarh, Odisha,	05.07.2021 To 04.07.2026	CTO-1868/III-CON(Operate)86/2020-21 0f Dated-22.03.2021 CTE-855/III CON(NOC) 133/2020-21 of dated-22.02.2021	Working	Non-Captive	Yes, EC Letter No.9586/SEIAA, (File No-SEIAA-452/08-2020) Of dated 04.11.2020	Latitudes-21°01'59.86"N to 21°02'03.36" N and Longitudes 83°10'48.88"E to 83°10'56.76"E	Open cast Semi-mechanised	GR-117007.2 m³, MR-16027.2 m³	NA	**NA**
PAIKMAL TAHASIL																		
14	**MAKHANAMUNDA STONE QUARRY-I**	Makhanamunda	114	1196	Pathar Chatan	12.25	4.957	Tahasildar Letter No-1388 of dated 31.07.2020	Sri Satrughan Sahu, S/o-Madhusudan Sahu,At/P.O-Jamseth, Dist-Bargarh Odisha	22.01.2021 To 21.01.2026	CTO-681/III-CON(Operate) 63/2020-21 0f Dated-09.02.2021 CTE-	Working	Non-Captive	Yes, EC Letter No.9699/SEIAA, (File No-SEIAA-524/09-2020) Of	Latitudes-20°46'43.09"N to 20°46'54.03" N and Longitudes 82°41'53.31"E to 82°42'0	Open cast Semi mechanised	GR-481171.5 m³, MR-116750.7 m³	NA	**NA**

											118/III CON(NOC) 97/2020-21 of dated - 11.01.2021			dated 25.11.2020	5.97"E			
15	**MAKHANAMUNDA STONE QUARRY-II**	Makhanamunda	104/102	844, 821/1554 & 821	Ma.Sa. Aa.Sa Aa.Sa	5.755	2.326	Tahasildar Letter No-129 of dated 18.01.2020	Sri Ratnakar Sahu, S/o-Upendra Narayan Sahu,At-Arunadaya Nagar,P.S-Badambadi, Dist-Cuttack	22.01.2021 To 21.01.2026	CTO-683/III-CON(Operate) 64/2020-210f Dated - 09.02.2021 CTE-120/III CON(NOC) 98/2020-21 of dated - 11.01.2021	Working	Non-Captive	Yes, EC Letter No.9705/SEIAA, (File No-SEIAA-523/09-2020) Of dated 25.11.2020	Latitudes-20°46'24.00"N to 20°46'29.86" N and Longitudes 82°41'29.26"E to 82°41'35.53"E	Open cast Semi mechanised	GR-253644.3 m³, MR-103899.6 m³	NA	**NA**

SOHELA TAHASIL																		
16	**BIRJUPALI-2 STONE QUARRY**	Birjupali	66	13	Pathar Chatan	1.34	0.542	Tahasildar Letter No-154 of dated 25.01.2022	Sri Rakesh Agarwal,AT-Kachana, Mowa, Swarnabhoomi-492001	03.09.2022-02.09.2027	CTO-1782/III-CON(Operate) 06/2024-250f Dated-18.05.2024, CTE-1297/III CON(NOC) 78/2023-24 of dated-19.04.2024	Working	Non-Captive	Yes, EC Identification No.EC22B001OR110137 Date-22.08.2022	Latitudes-21°18'11.08"N to 21°18'13.68" N and Longitudes 83°19'57.98"E to 83°20'01.77"E	Open cast Semi mechanised	GR-59076.8 m³, MR-19988.8 m³	NA	**NA**

17	**LAMBRUPALI STONE QUARRY**	Lamburpali	112	144	Pathar Chatan	0.60	0.243	Tahasildar Letter No-154 of dated 25.01.2022	Sri Kanhaya Agrawal, Padampur Road,Sohela Bargarh Odisha, Pin-768033	26.09.2022-25.09.2027	CTO-513/III-CON(Operate) 41/2023-240f Dated-15.02.2024, CTE-179/III CON(NOC) 58/2023-24 of dated-11.01.2024	Working	Non-Captive	Yes, Transfer EC Letter No-SEIAA/OR/MIN/283478/2022,dated-22.08.2022	Latitudes-21°17'12.81"N to 21°17'15.26" N and Longitudes 83°22'01.00"E to 83°22'01.83"E	Open cast Semi mechanised	GR-35721.0 m³, MR-6246.0m³	NA	**NA**
18	**LAMBRUPALI STONE QUARRY (New)**	Lambrupali	104/65, 104/90	135/1460,136/1461, 146/1462,146/1480	Aa.Sa Aa.Sa Aa.Sa Aa.Sa	2.07	0.837	Tahasildar Letter No-3454 of dated 5.10.2018	Sri Rahul kumar Agrawal, S/o-Shyam sunder Agrawal Ganapati Villa-G3,Jumu Dist-Bargarh, Odisha, Pin-768028	17.11.2022-1611.2027	CTO-3325/III-CON(Operate) 46/2022-230f Dated-19.08.2022, CTE-	Working	Non-Captive	EC LETTER No-SEIAA/OR/MIN/275715/2022 of Dated 04.06 2022	Latitudes-21°17'09.23"N to 21°17'19.47" N and Longitudes 83°21'59.11"E to 83°22'07.13"E	Open cast Semi mechanised	GR-133948.8 m³, MR-41823.9 m³	NA	**NA**

										3201/ III CON(NOC) 47/20 22-23 of dated - 03.08 .2022								
19	**GHESS STONE QUARR Y-2**	Ghe ss	286	1821	Ma.Sa	4.46	1.80 4	Tahasil dar Letter No-836 of dated 24.06.2 021	Sri Saroj Seth, S/o- Sri Tapodhan Seth, At:- Jhankarpali, P.O:- Ghess, P.S- Melchamunda, Dist-Bargarh	03.11.2 022- 02.11.2 027	CTO- 3323/ III- CON(Opera te) 50/20 22-23 0f Dated - 19.08 .2022 , CTE- 3121/ III CON(NOC) 43/20 22-23 of dated - 27.07 .2022	worki ng	Non - Cap tive	Yes, EC - (File No- SIA/ OR/ MIN/ 2753 64/20 22) Of dated 04.06 .2022 .	Latitud es- 21°11'3 7.67"N to 21°11'4 1.46" N and Longitu des 83°18'4 1.37"E to 83°18'4 9.34"E	Open cast Semi mech anise d	GR- 164275.3 m^3, MR- 3553.2m^3	NA	**NA**

20	**MAGALPALI STONE QUARRY-3**	Mangalpali	112	251/1163	Ma.Sa	0.71	0.287	Tahasildar Letter No-1366 of dated 20.08.2020	Sri Manoj Kumar Agrawal, S/o-Nurkaran garwal,At/P.O/P.S-Sohela, Dist-Bargarh	08.11.2022-07.11.2027	CTO-3321/III-CON(Operate) 47/2022-230f Dated-19.08.2022, CTE-3199/III CON(NOC) 46/2022-23 of dated-03.08.2022	working	Non-Captive	Yes, EC-4744/SEIAA(File No-SIA/OR/MIN/275721/2022) Of dated 04.06.2022.	Latitudes-21°19'58.30"N to 21°20'00.20" N and Longitudes 83°19'38.43"E to 83°19'40.57"E	Opencast Semimechanised	GR-23189.6m³, MR-5544.0m³	NA	**NA**
BIJEPUR TAHASIL																		
21	**KHAPREL NUAPALI STONE QUARRY**	Khaprel Nuapali	108	186	Pathar Chatan	11.38	4.605	Tahasildar Letter No-3118 of dated 09.12.2020	Sri Dusmanta Kumar Patra, At/P.o-Birjam, Dist-Bargarh	17.11.2022-1611.2027	CTO-2420/III-CON(Operate) 99/2020-210f Dated-07.04.2021	working	Non-Captive	Yes, EC-993/SEIAA(File No-SEIAA-1112/12-2020) Of dated	Latitudes-21°09'36.42"N to 21°09'41.85" N and Longitudes 83°19'40.68"E to	Opencast Semimechanised	GR-354168m³, MR-115245m³	NA	**NA**

											, CTE-2396/III CON(NOC) 194/2020-21 of dated - 06.04.2021			26.03.2021	83°19'51.16"E				
22	**KARLE STONE QUARRY**	Karle	58	335(p)	Pathar Bani	2.88	1.165	Tahasildar Letter No-256 of dated 19.01.2023	Sri Sesadev Meher,S/o-Parsuram Meher, At-Bhoipali, Po-Pada,P.S-Bijepur, Dist-Bargarh	19.02.2021-18.02.2026	CTO-482/III-CON(Operate) 58/2020-210f Dated - 28.01.2021 , CTE-269/III CON(NOC) 95/2020-21 of dated - 18.01.2021	working	Non-Captive	Yes, EC - 10218/SEIAA(File No-SEIAA-769/10-2020) Of dated 17.12.2020	Latitudes-21°09'12.88"N to 21°09'19.44" N and Longitudes 83°27'14.36"E to 83°27'18.89"E	Open cast Semi mechanised	GR-33105m³, MR-23051m³	NA	**NA**

23	**PADA STONE QUARRY-II**	Pada	249	2163	Pathar chatan	3.84	1.554	Tahasildar Letter No-3646 of dated 26.10.2021	Sri Kunu Meher, S/o-Nabika Meher, At/P.O/P.S-Bijepur, Dist-Bargarh	29.10.2021-28.10.2026	CTO-3250/III-CON(Operate) 294/2021-22 0f Dated-05.08.2022, CTE-814/III CON(NOC) 208/2021-22 of dated-17.02.2022	working	Non-Captive	Yes, EC -3313/SEIAA(File No-SEIAA-1218/01-2021) Of dated 08.10.2021	Latitudes-21°10'18.45"N to 21°10'27.85" N and Longitudes 83°26'29.28"E to 83°26'32.99"E	Open cast Semi mechanised	GR-100874m³, MR-49502m³	NA	**NA**
24	**KURLA MUNDA STONE QUARRY**	Kurlamunda	58	327(p)	Chatan	2.50	1.011	Tahasildar Letter No-3628 of dated 24.06.2022	Sri Dillip Kumar Nanda, M/s. Nanda Infrastructure Pvt.Ltd. Talcher, Dist-Angul-759116	23.02.2023-22.02.2028	CTO-2336/III-CON(Operate) 98/2022-230f Dated-06.07.2023, CTE-	working	Non-Captive	SIA/OR/MIN/411645/2022 of dated 21.02.2023	Latitudes-21°07'48.03"N to 21°07'53.5" N and Longitudes 83°26'23.80"E to 83°26'26.9"E	Open cast Semi mechanised	GR-160650m³, MR-118305m³	NA	**NA**

											2255/III CON(NOC) 106/2022-23 of dated - 03.07.2023								
25	**AIMAL STONE QUARRY**	Aimal	113	25(P)	Chatan	1.15	0.465	Tahasildar Letter No-2078 of dated 19.08.2021	Sri Saroj Kumar Sahu,S/o-Mayadhar Sahu, At/P.O-Tengra, Saipali, Bargarh	12.08.2022-11.08.2027	CTO-3244/III-CON(Operate) 41/2022-230f Dated - 05.08.2022, CTE-3248/III CON(NOC) 49/2022-23 of dated - 05.08.2022	working	Non-Captive	SIA/OR/MIN/243136/2021 of dated 07.05.2022	Latitudes-21°06'52.98"N to 21°06'54.29" N and Longitudes 83°28'55.15"E to 83°28'59.65"E	Open cast Semi mechanised	GR-20365m³, MR-8008m³	NA	**NA**

BHEDEN TAHASIL																		
26	**JHARA PALI STONE QUARRY**	Jharapali	595	911	Pathar Chatan	12.00	4.856	Mining Officer Letter No-957of dated 30.11.2024	M/s.Shyamdhan Traders Pvt.Ltd At-9th Floor Unit No-914,Merlin Infinite DN 51 Salt Lake,Kolkata State- West Bengal.		30.11.2024	ToBe Oparationalised	Non-Captive		Latitudes-21°16'42.55"N to 21°16'55.56" N and Longitudes 83°48'52.20"E to 83°48'59.46"E	Opencast Semimechanised	GR-474225.49m³, MR-329718.4m³	NA	**NA**
27	**BHALU PALI STONE QUARRY**	BHALUPALI	226	877	Pathar Chatan	5.82	2.355	Tahasildar Letter No-1590 of dated 13.07.2021	Sri Basudev Dash,S/o- Sri Laxminarayan Dash, At/P.O:-Kalapani,P.S-Bargarh, Dist-Bargarh	04.12.2023-03.12.2028	CTO-799/III-CON(Operate) 38/2023-240f Dated-13.03.2024, CTE-181/III CON(NOC) 62/2023-24 of	Working	Non-Captive	Yes, Transfer EC -(File No-SIA/OR/MIN/297980/2023 Of dated 17.11.2023. EC granted vide Letter no. EC22	Latitudes-21°09'01.12"N to 21°09'07.51" N and Longitudes 83°50'52.54"E to 83°51'01.49"E	Opencast Semimechanised	GR-263563.2m³, MR-23925.6m³	NA	**NA**

											dated - 11.01 .2024			B001 OR15 2634 of dated 05.11 .2022					
BARPALI TAHASIL																			
28	**CHIKINIPALI STONE QUARRY**	Chikinipali	148	478	Chatan	2.62	1.060	Mining Officer Letter No-958 of dated 30.11.2024	M/s. G D Mining Pvt.Ltd. At-347, Santosh Ray Road, Kolkata State- West Bengal	30.11.2024	30.11 .2024		Non - Captive		Latitudes- 21°13'44.60"N to 21°13'48.59" N and Longitudes 83°32'48.94"E to 83°32'53.83"E	Open cast Semi mechanised	GR-111943.233m³, MR-50350.572m³	NA	To Be Oparational ised

LIST OF NON-OPERATIONAL & NEW SOURCES FOR STONE/ROAD METAL OF BARGARH DISTRICT

Sl. No.	Name of the Source	Mouza	Khata No	Plot No	Kissam	Area of Mining Lease(in Acres)	Area of Mining Lease(in Ha)	Mining Lease Grant Order No. & Date	Name and address with Contact No. of Lessee	Period of Mining Lease	Date of Commencement of Mining Operation	Status(Working/Temp. Working for dispatch etc.	Captive/Non-Captive	Obtained Environmental Clearance(Yes/No),If Yes, Letter No. with Date of grant of EC	Location of the Mining Lease(Latitude/ Longitude)	Method of Mining (Opencast/Underground	Mineral Reserve	Length and Width of the Leass e Area (in m)	Remarks
BIJEPUR TAHASIL																			
1	**CHARPALI -B STONE QUARRY**	Charpali	219/305	600 601 604 605 606 607 608 609 611 613 614 617 608/2312, 608/2313	A.S M.S A.S A.S A.S	5.56	2.250	NA	NA	NA	NA	Not Working	Non-Captive	Nil	Latitudes - 21°08”44.36"N Longitudes 83°27'15.15"E	Opencast Semimechanised	NA	NA	**NEW**

2	**CHARPALI -C STONE QUARRY**	Charpali	235	576	Chatan	3.05	1.234	NA	NA	NA	NA	Not Working	Non-Captive	Nil	Latitudes21°09’01.91"N Longitudes 83°27'25.61"E	NA	NA	**NA**	**NEW**

3	**DHUMAPALI STONE QUARRY**	Dhumapali	105/45	515/1108, 515/1109, 688/1110, 688/1111	A.S A.S A.S A.S	5.56	2.250	Tahasildar Letter No-4885 of Dated 07.11.2023	Sri Hemsagar Sahu, S/o-Kalia Sahu At/po-Bandhpali Ps/Tah-Barpali Dist-Bargarh	NA	NA	Not Working	Non-Captive	Nil	Latitudes-21°07”51.72"N Longitudes 83°27'48.18"E	Opencast Semimechanised	NA	**NA**	**NEW**
4	**KANDHADIHI STONE QUARRY**	Kandhadihi	31	209 210 213(P)	A.S A.S Ma.Khari	2.03	0.821	NA	NA	NA	Nil	Not Working	Non-Captive	Nil	Latitudes-21°08”6.33"N Longitudes 83°27'54.89"E	Opencast Semimechanised	NA	**NA**	**NEW**
BARPALI TAHASIL																			

5	**TINIKANI STONE QUARRY**	Tinikani	267	799794(P) 847848	Gharabari	5.4	2.185	NA	NA	NA	Nil	Not Working	Non-Captive	Nil	Latitudes - 21°04’22.97"N Longitudes 83°32'27.88"E	Opencast Semimechanise	NA	NA	NEW
BHEDEN TAHASIL																			
6	**KESHARIPALI STONE QUARRY**	Keshariapali	92	255	Pathar Chatan	5.36	2.169	Tahasildar Letter No-233 of dated 20.01.2023	Smt. Sudiptarani Dhar, W/o-Sri Pradeep ku Dhar, At/p.o-Gondturum, P.s/Tah-Bheden,Dist-Bargarh	5years	Nil	Not Working	Non-Captive	Yes, EC Letter no-SEIAA/OR/MIN/436668/2023 of dated 20.03.2024	Latitudes - 21°06'59.65"N to 21°07'09.33" N and Longitudes 83°50'09.98"E to 83°50'16.15"E	Opencast Semimechanised	GR-153266.4 m³, MR-98456.4m³	NA	To be Operated

7	**GANDTURUM STONE QUARRY**	Gandturum	204(Rakshit)	43(P)	Gochar	0.75	0.303	Tahasildar Letter No-13of dated 28.01.2025	NA	NA	Nil	Not Working	Non-Captive	Nil	--	--	--	NA	NEW
8	**TIHIKIPALI STONE QUARRY**	Tihikipali	209(Rakshit)	357(P)	Gochar	0.75	0.303	Tahasildar Letter No-13of dated 28.01.2025	NA	NA	Nil	Not Working	Non-Captive	Nil	--	--	--	NA	**NEW**
JHARBANDH TAHASIL																			
9	**LAUDIDHARA STONE QUARRY**	Laudidhara	145	1131/2558	Pathar Chatan	2.50	1.011	Tahasildar Letter No-1531 of dated 01.08.2022	Sri Nitish Ku Gupta At-Paikmal Dist-Bargarh	5 years	Nil	Not Working	Non-Captive	Nil	Latitudes-21°08'22.82"N to 21°08'26.94" N, Longitudes 82°50'15.76"E to 82°50'18.94"E	Opencast Semimechanised	GR-107607, MR-40999	NA	**To be Operated**
10	**CHUHAPALI-II STONE QUARRY**	Chuhapali	87	265	Pathar Chatan	5.05	2.043	Mining Officer Letter No-285 of dated 19.03.2024	Sri Sumit Kumar Agrawal,At/p.o-Paikmal,Dist-Bargarh,Pin-768039	5 years	NA	NA	Non-Captive	Applied at SEIAA	Latitudes-20°59'13.2"N to 20°59'21.4" N and Longitudes 82°48'38.9"E to 82°48'44.2"E	Opencast Semimechanised	GR-78432 m^3, MR-54495m^3	NA	**To be Operated**

11	**PUTKA -(A)STONE QUARRY**	Putka	199	688/1556	Pathar Chatan	8.00	3.237	Nil	Nil	NA	NA	NA	Non - Captive	--	Latitudes - 21°10’38.40"N Longitudes 82°59'10.89"E	Opencast Semimechanise	--	NA	NEW
12	**PUTKA -(B)STONE QUARRY**	Putka	195/112	1044	Pathar Chatan	3.17	1.282	Nil	Nil	NA	NA	NA	Non - Captive	--	Latitudes - 21°09'31.59"N to 21°09'35.48" N and Longitudes 82°58'26.65"E to 82°58'34.59"E	Opencast Semimechanise	--	NA	NEW
13	**TUMRIPANI STONE QUARRY**	Tumripani	126/33	20/1375	A.S	2.00	0.809	Nil	Nil	NA	NA	NA	Non - Captive	--	NA	--	--	N A	NEW
PAIKMAL TAHASIL																			
14	**CHUHAPALI STONE QUARRY-III**	**Chuhapali**	**76/238, 76/239**	**867/1272, 867, 867/1270**	**Pathar Chatan**	**2.80**	**1.133**	**Nil**	**Nil**	**NA**	**Nil**	**Not Working**	Non - Captive	**Nil**	**NA**	**--**	**--**	**NA**	**NEW**
SOHELA TAHASIL																			

15	**KALANGAPALI STONE QUARRY**	Kalangapali	153 (Rakshit)	900	Gochar	0.50	0.202	Tahasildar Letter No-3415 of dated 12.12.2024	Nil	NA	Nil	Not Working	Non-Captive	**Nil**	**NA**	--	--	**NA**	**NEW**
16	**NUAPALI STONE QUARRY**	Nuapali	52 (Rakshit)	284	Gochar	1.00	0.404	Tahasildar Letter No-3415 of dated 12.12.2024	Nil	NA	Nil	Not Working	Non-Captive	**Nil**	**NA**	--	--	**NA**	**NEW**
PADAMPUR TAHASIL																			
17	**SILETPALI - A STONE QUARRY**	Siletpali	67	85	Patharchatan	28.52(p)12.00	4.856	Tahasildar Letter No-7775 of dated 24.12.2024	Nil	NA	Nil	Not Working	Non-Captive	Nil	**NA**	--	--	**NA**	**NEW**
18	**SILETPALI - B STONE QUARRY**	Siletpali	67	95, 98	Patharchatan	7.45	3.014	Tahasildar Letter No-7775 of dated 24.12.2024	Nil	NA	Nil	Not Working	Non-Captive	Nil	**NA**	--	--	**NA**	**NEW**

Mining Officer, Bargarh

Mining Officer
Bargarh,Dist-Bargarh

Geologist O/o Joint Director
Geology,Sambalpur

Superintending Engineer,
Minor Irrigation Division,
Bargarh

Superintending Engineer
Bargarh Irrigation Division
Bargarh

Superintending Engineer,
Minor Irrigation Division,
Padampur

Superintending Engineer
M.I. Division,Padampur

Assistant Conservator of Forest O/o DFO,
Bargarh Division

Asst. Conservator of Forest
Bargarh Forest Division
Bargarh

Assistant Conservator of Forest O/o DFO,
Padampur Division

Asst. Conservator of Forest
Bargarh Forest Division
Bargarh

Regional Officer, SPCB, Sambalpur

Regional Officer
State Pollution Control Board
Regional Office, Sambalpur

Deputy Director of Mines (I/c),
Sambalpur

Sub-Collector Cum -Chairman of Sub-
Divisional Committee, Bargarh

Sub-Collector Cum -Chairman of Sub-
Divisional Committee, Padampur

COLLECTOR
BARGARH