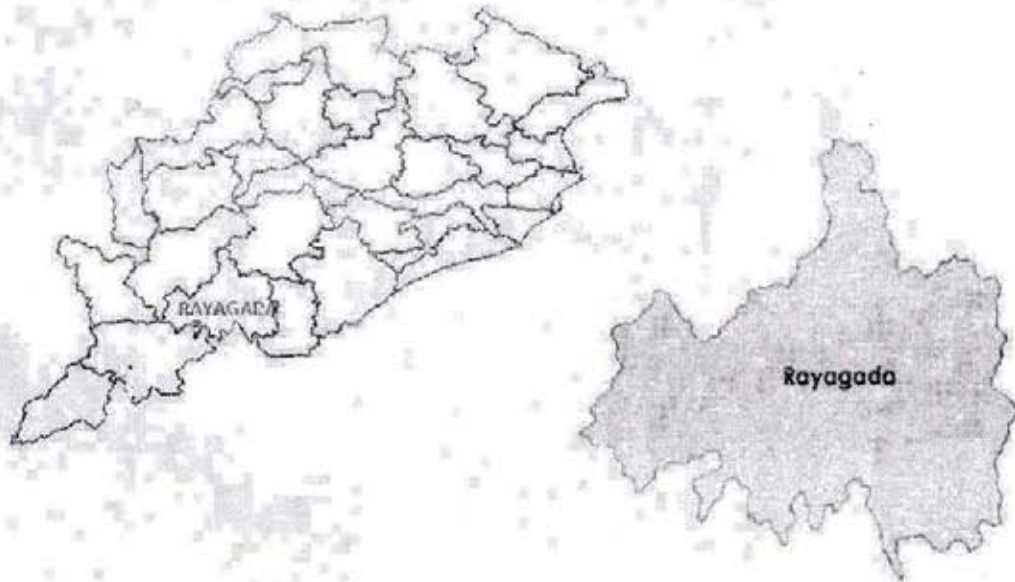




**DRAFT DISTRICT SURVEY REPORT (DSR)
OF
RAYAGADA DISTRICT, ODISHA
FOR
ROAD METAL / BUILDING STONE / BLACK STONE**

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

ODISHA



As per Notification No. S.O. 3611(E) New Delhi,
25th July, 2018

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(MoEF & CC)

COLLECTORATE, RAYAGADA

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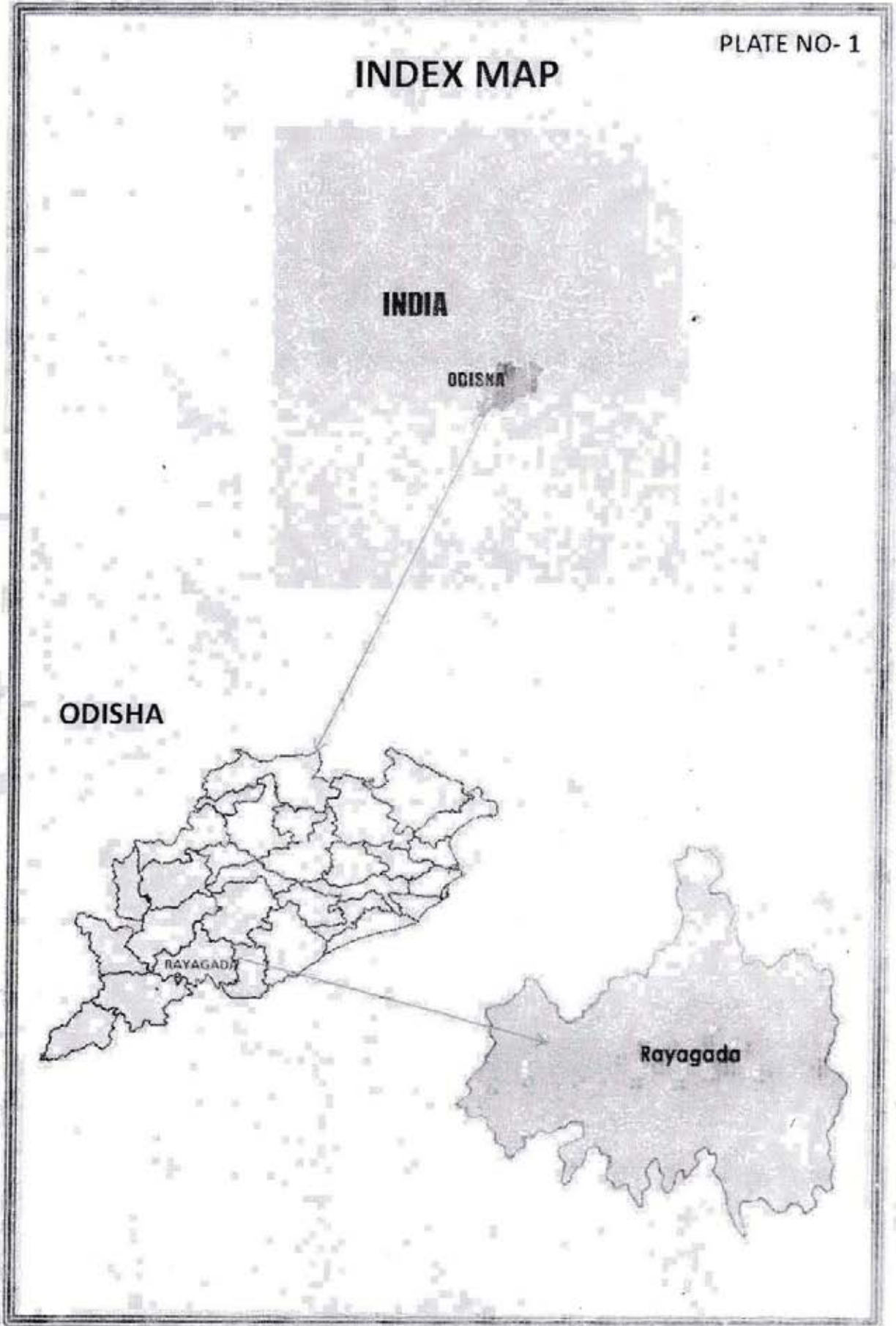
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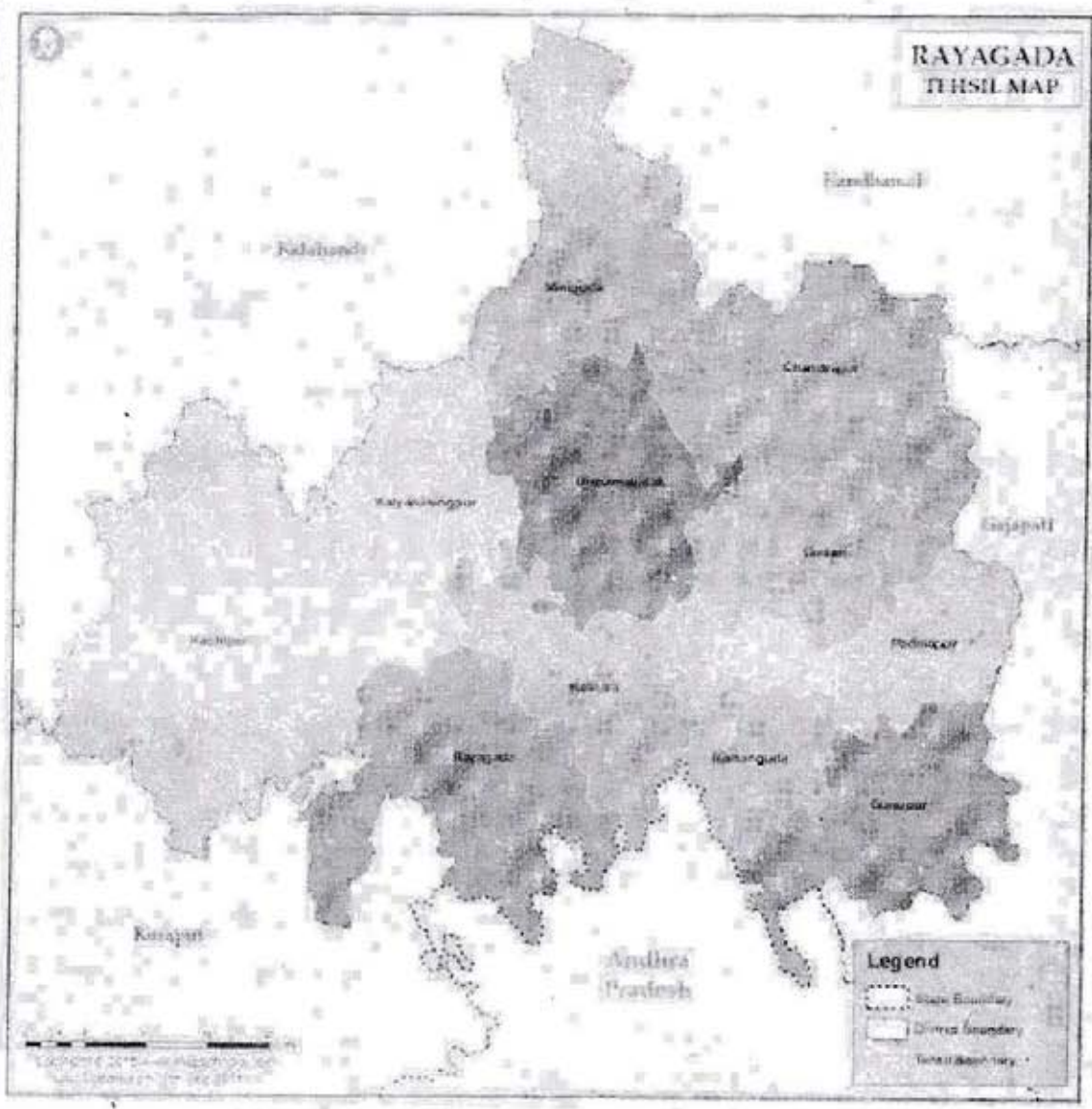
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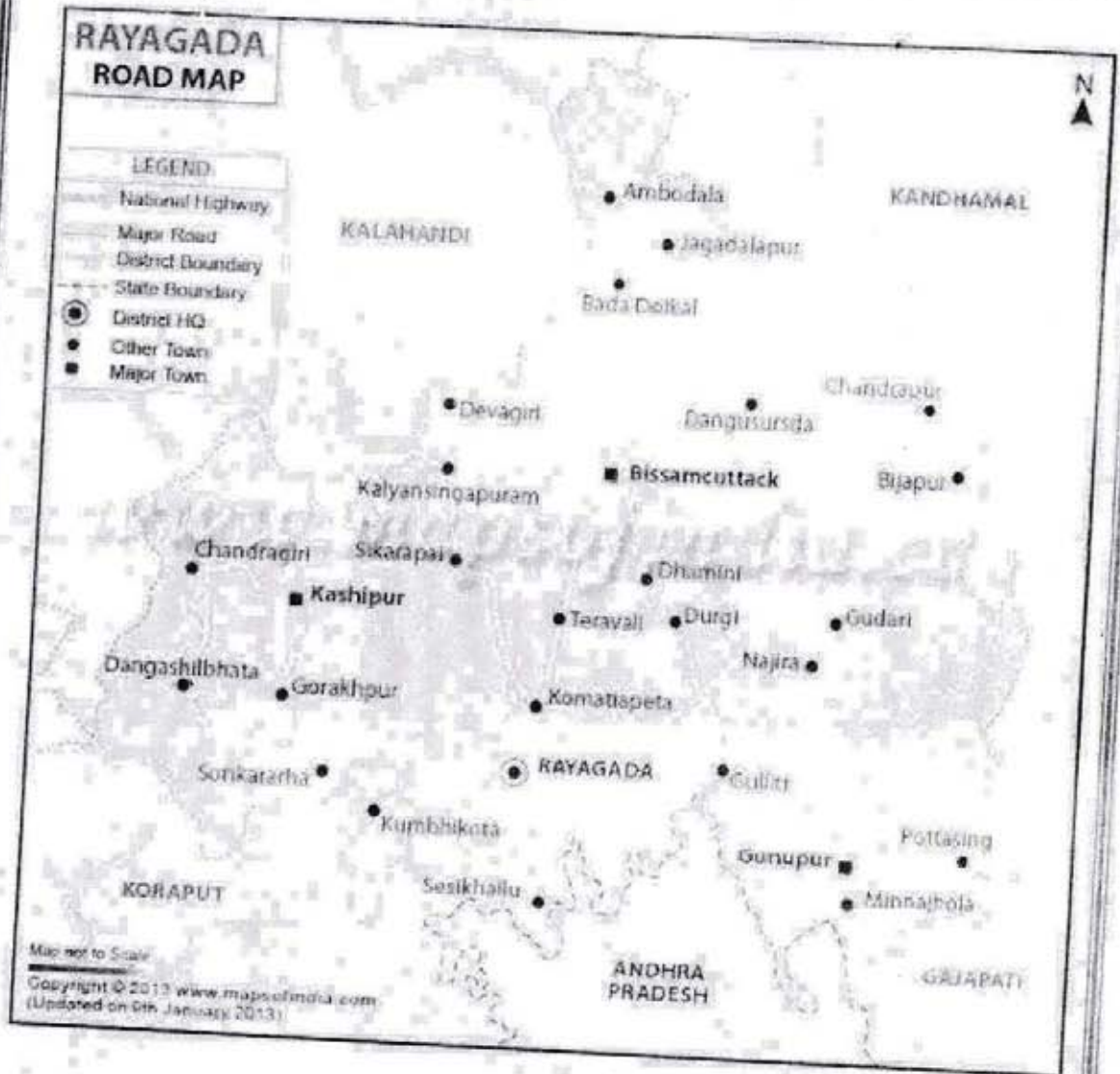
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MAP SHOWING THE TAHASILS OF RAYAGADA DISTRICT



MAP SHOWING THE MAJOR ROADS OF RAYAGADA 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 is 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. 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

Rayagada is a district in southern Odisha, a state in India, which became a separate district in October 1992. Its population consists mainly of tribes, primarily the Khonds and the Soras. In addition to Odia, Kui and Sora are spoken by the district's indigenous population.

Rayagada covers an area of 7,584.7 square kilometres (2,928.5 sq mi), and is divided into eleven blocks. Agriculture is the chief source of income and paddy, wheat, ragi, green and black gram, groundnut, sweet potato and maize being the district's major crops.

Rayagada district is known as the most famous region of the state because of its longest human history. It has long and glorious historical records evident by copper plates, rock inscriptions as well as different coins, which clearly indicate the region was the centre of attraction in all ages. In the third century B.C., during the reign of Ashoka the Great, it was covered under Kalinga empire.

The district is surrounded by Kandhmal district in the North, Gajapati district in the East, Koraput district and state of AP in the South and Kalahandi in the West.

2. OVERVIEW OF MINING ACTIVITIES IN THE DISTRICT.

Rayagada district has a potential reserve of graphite, manganese, bauxite, chinaclay, limestone, quartz, gemstones etc. The following paragraphs are a brief account of the minerals of the district.

Bauxite

The district has many high level bauxite occurrences. Important bauxite deposits of the district are Sijimali, Kutrumali, Baphilimali, Sashubhumali, Lakharasi. Kutrumali and Sijimali deposits extend into both Rayagada and Kalahandi districts.

Gibbsite is the main aluminous mineral. Al_2O_3 content ranges from 44 to 57.80%, SiO_2 content is between 0.40 to 8.74%, Fe_2O_3 content ranges between 16.2 to 27%. The resource of bauxite in the district is more than 600 Mt. However, this figure is likely to be much higher in view of numerous occurrences of smaller plateaux whose potentiality has not been quantified through detailed exploration. Almost all the plateaux rising more than 900 m above MSL contain bauxite which have been explored by Directorate of Geology and GSI.

Manganese

Manganese Ore deposits in the district are associated with khondalite suite of rocks belonging to Eastern Ghat Supergroup. Nishikhal manganese deposit is the most important, single largest deposit in the area with a reserve of nearly 10.2mt (Mn-28-38%). It is currently being mined by OMC and fed to Vishakapatnam Steel Plant. The other deposits in the area are Podakona-Taldhodshi(7mt), Kuttinga-Debjholla(1mt) etc. Manganese occurrences have been reported around Devajhola, Kutingpadar, Nisikhal, Rukunibadi, Paikaranipinda, Kandharanipinda, Taladoshi, Upardoshi, Podakona, Kinchikhal, Koka, Liliguma, Sirljodi, Balkapai, Bhitardulki, Sikapai, Pariguda, Katubadi, Sunakhunti, Anjorhi, Bada Siringul, Purunapani, Mandhara etc. Manganese content varies from 7% to 38%.

Graphite

Graphite occupies a very prominent position in the district with regard to its extension, reserve and number of deposits. There are quite a number of graphite deposits in the district occurring at the contact of the khondalite and the granite gneiss. The important occurrences which are under active mining are in the famous

Tumudibandh belt. Nearly 150 occurrences of graphite have been identified. The most important occurrences of the district are Bandhamandi, Solagudi, Birida, Naringponga, Jagdalpur, Dukkum, Pangadi, Hajaridangu, Sada, Minahala, Pichaliguda, Rauli, Bhitardulki, Jholaguda, Sikabarhi, Kaliapalli, Patrani, Gandrugam, Dallurgam, Malimunda, Disidaku, Deulbadi, Alanda, Budaguda, Murkakona, Ajaygarh, Pipliguda, Bhitarsaja, Kumbhikota, Boragaon, Dongipadar, Tutter etc. Graphite is mostly of crystalline & flaky variety. It occurs in form of disseminations, veins, pockets, lenses and also as bedded deposits. Mineralisation is controlled by lithology, stratigraphy and structure. Graphite is associated with khondalite, calc-granulite, and granite gneiss and also with pegmatites and quartz veins. The fixed carbon value in low grade and high grade graphite occurrences varies between 5 to 25 % and 30 to 80 % respectively.

Limestone

Limestone occurrences in the district has been reported from Talasaja, Salimi, Gummigurha, Sikarpai, Ranjabadi, Bhitarrhola, Bheja, Santinagar, Nilabadi, Karlakona etc. Limestone occurs as lenticular bands associated with calc-granulite. The average CaO content varies from 28 % to 52 %.

Chinaclay / Kaolin

Chinaclay / kaolin occurrences have been reported in the district from Ambadola, Bandhamandi, Pipliguda, Kanipai, Bondichuan, Ladiponga, Loharahira, Bantichura etc. These occurrences are associated with khondalite, granite gneiss as pockets & lenses. The occurrences are highly gritty.

Quartz

Quartz veins of different dimensions are reported in the district. Among them, the notable occurrences are found around Bainibasa, Jamraguda, Bhaliapadar, Dangipada, Torumohra, Gudikhal, Sikampadar, Machhkhunti, Srirampur, Purlikona, Chitikapangu, Kusumpadar, Kasli etc.

Quartzite

There are several quartzite bands analysing more than 97% SiO₂ content in the Eastern Ghats Super Group of rocks. Notable among them are the occurrences

around Kondakora, Karlakona, Sana Kuanga, Loharasahi, Malkajuba, Pordiguda, Bhitarijhol, Matiguda, Adabarhi, Guriaguda and Sikarpai etc.

Calc-Tuffa

Minor occurrences of calc-tuffa have been reported from Kiribiri, Durgi, Podabai, areas of Rayagada district. These occur as pockets in khondalites.

Red-Ochre

Red-ochre has been reported to occur at Marichakona with Fe_2O_3 content of 20.4 to 42.8% and Al_2O_3 content of 28.58 to 42.4 %. Red-ochre has also been found at Ganiabhadra with Fe_2O_3 of 36.16-36.69%, SiO_2 of 12.40-12.56% and also at Budharaja Parbat with Fe_2O_3 of 25.20-42.44%, Al_2O_3 -28.58-42.44% and SiO_2 of 0.03-0.85%

Gemstones

(i) Garnet: Hessonite garnets are reported around Bandhaguda, Hata dahikhal, Lataguda.

(ii) Chrysoberyl: Gem quality chrysoberyl occurrences are reported in the area around Dhakalguda, Berhu. Often, the chrysoberyl exhibits cat's eye effects.

(iii) Sillimanite Cat's eye: Fibrolite variety of this group with excellent cat's eye effect is reported from the areas around Hamsa, Anabadi, Bada irkubadi.

Dimension and decorative stones

The district has good potential as regards to the occurrences of dimension and decorative stones. The massive granite and charnockite serve as excellent construction material extensively used in foundation structures, roads and buildings. Of these, the pink granite of Gurumulu, porphyritic granites of Chatikona, granite gneiss of Bissamcuttack are important.

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:

SI No	Item	Unit	Magnitude
1	Location		
	Longitude	Degree	82°54' to 84°02' East
	Latitude	Degree	19° 00' to 19°58' North
2	Geographical area	Sq.Km.	7073
3	Sub-division	Numbers	2
4	Tahasils	Numbers	11
5	C D Blocks	Numbers	11
6	Municipalities	Numbers	2
7	NACs	Numbers	1
8	Police Stations	Numbers	17
9	Gram Panchayats	Numbers	182
10	Villages	Numbers	2665
	Inhabited	Numbers	2468
	Uninhabited	Numbers	197
11	Assembly constituencies	Numbers	3

b. Area and Population:

The district has an area of 7073 sq.kms and 9.68 lakhs of population as per 2011 census. The district accounts for 4.54 percent of the states territory and shares 2.31. percent of the state's population. The density of population of the district is 137 per sq. kms. As against 270 person per sq.km of the state. It has 2667 villages (including 200 un-inhabited villages) covering 11 blocks, 11 Tahasils and 2 Subdivisions. As per 2011 census the schedule caste population is 139514 (14.4 %) and schedule tribe population 541905(56.0%). The literacy percentage of the district covers 49.8 against 72.9 of the state.

c. Climate :

The climate condition of the district is generally hot with high humidity during May and June and cold during November and December. The monsoon

generally breaks during the month of June. Average annual rainfall of last four years was 1299.1 mm which is more than the normal rainfall (1285.9 m.m).

d. Economy:

The district is rich in bauxite deposit suitable for alumina plant for which mining of bauxite and alumina plant have become the second source of income of the district next to agriculture.

e. Industry:

No. of MSME units set up	Investment (In Rs. crores)	Employment Generated				Employment of women
		SC	ST	General	Total	
1721	9457.17	1030	1277	2237	4544	125

f. Agriculture:

During the year 2017-18 the net area sown was 174 thousand hectares against 5356 thousand hectares of the state. The production of was as below:

Name	Paddy	Wheat	Maize	Mung	Biri	Kulthi	TIL	Groundnut	Mustard	Potatoes	Jute	Sugarcane
Production in 000 MT	193.11	0.20	46.50	1.42	5.27	4.37	2.20	3.58	1.53	0.00	3.60	29.97

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	10204	3632	1532	15368	69.25

g. Transport & Communication:

Railway route length (14-15) km	176.69
No of Rly stations and PH(14-15)	27
Forest road (17-18) km	210.51
National Highway (16-17) km	122.70
State Highway (17-18) km	171.81
Major district road (17-18) km	97.30
Other dist road (17-18) km	274.95
Rural road(17-18) km	1670.32
Inter village road (16-17) km	3812.36
Intra village road (16-17) km	2537.12

h. Health:

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

Sub divisional hospitals including mobile	20 No
Beds facilities	291 No
Homoeopathic dispensaries	19 No
Ayurvedic dispensaries	14 No

i. Tourist places:

There are 7 nos. of tourist center such as Bissam-Cuttack, Chatikona, Devagiri, Hatipathar, Minajhola, Niyamgiri hill and Padmapur identified by department of Tourism and Culture, Odisha. During 2010-11, the numbers of Domestic tourists were 374095 and foreign tourists were 435 who visited the tourists spots of the district.

j. Forest areas:

Category of forest	Area in sq km
Reserve Forest	771.62
Unclassified Forest	0.96
Demarcated Protected Forest (DRF)	1147.19
Undemarcated Protected Forest	0
Other forest under Revenue Dept	892.56
Total	2812.33

k. Education:

Primary School (2017-18)	No. of Schools	1345
	Enrolment (No)	110686
	Pupil Teacher Ratio	22.14
Upper Primary School 2017-18	No. of Schools	573
	Enrolment (No)	51686
	Pupil Teacher Ratio	19.74
General College 2017-18	Junior	31
	Degree	11
Secondary School	No. of Schools	233
	Enrolment (No)	23074
	Pupil Teacher Ratio	31.70
Literacy Rate, 2011	Male	61.0
	Female	39.2
	Total	49.8

4. GEOLOGY

The rock types exposed in the district can broadly be grouped into Eastern Ghat Supergroup, granite gneiss and Quaternary formations. Eastern Ghat Supergroup are represented by quartz-garnet-sillimanite graphite schist, garnet sillimanite schist, quartzite, calc granulite etc. belonging to khondalite group and acid to intermediate charnockite with minor basic charnockites constitute the Charnockite Group. These are intimately associated with garnetiferous granite gneiss and leptynite. The Eastern extremity of the district is occupied by granite gneiss. The litho boundaries and structure show a general north-south strike with easterly dip. All the rock types have attained granulite facies of metamorphism. Except for the lateritic patches over the granulites, Quaternary formations are mostly confined to the Nagabaili and Banshadhara river basins and catchment area.

The geological succession in the district is as follows:

STRATIGRAPHY:

Age	Super Group	Group	Lithology
Late Holocene		Present day flood plain deposit	Soil/Alluvium
Cainozoic			Laterite/ Lateritic bauxite
Archaean	Eastern Ghat Super Group	Charnockite Group	Garnetiferous Granite gneiss Leptynite Acid/intermediate charnockite Basic charnockite
		Khondalite Group	Quartz-garnet-sillimanite schist/gneiss Quartzite Calc silicate

5. DRAINAGE AND IRRIGATION PATTERN.

There are four main river streams flows through this District. They are Sana Nala Tributary, Badanala Tributary, Sikarpai Tributary and Bhanginalla Tributary which are

the tributaries of the main River Nagavalli and River Bansadhara. The details are as under,

DRAINAGE SYSTEM WITH DESCRIPTION OF MAIN RIVER									
Sl. No	Name of the River	Place of origin	Attitude of origin	Total length in the district (in km)	Area drained (sq km)	% Area drained in the district	Process of deposition of sediments	Volume of sand deposited in last 3yrs(year wise)	Any important note
a	b	c	d	e	f	g	h	i	J
1	Sananalla (Tributary of Nagavali River)	Singari	560.00	6.00	61.00	100.00	Soil, sand & rocks are added to a land through the process of weathering and transportation of existing land mass by wind, water, gravity etc and deposition of the said transported material takes place due to loss of kinetic energy building up layers of sediments.	Nil	
2	Badanala (Tributary of Nagavali River)	Singari	550.00	8.00	180.00	100.00		Nil	
3	Sikarpai(Tributary of Nagavali River)	Kharjada	580.00	25.00	60.00	100.00		Nil	
4	Bhanginalla (Tributary of Bansadhara River)	Mundipadar	540.00	15.00	166.00	100.00		Nil	

Rayagada district is rich in water resources. A series of check dams have been constructed across various distinct nallahs for in-stream storage, ground water recharge, incidental irrigation during late Khariff and Rabi by storing water at the end of monsoon mainly through lifting devices as well as canal flow, irrigation use of water flowing down drainage channels, and other uses like bathing, washing, recreation etc. By the end of July 2019, 861 nos. of Check Dams have been accorded administrative approval. Out of these, 789 nos. of check dams have been completed achieving an ayacut of 4973 Ha., 52 nos of Check Dams are in progress and 20 nos of Check Dams are dropped due to various reasons.

6. LANDUSE PATTERN

Sl No	Landuse	Area in '000Ha
1	Forest Area	281
2	Misc. trees & Grooves	18
3	Permanent Pasture	26
4	Culturable Waste	22
5	Land put to Non Agril Use	124
6	Barren & Unculturable Land	38
7	Current Fallow	19
8	Other Fallow	5
9	Net Area Sown	174
10	Mining	
	Geographical Area	707

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	2.15	0.80	1.1	1.65
Maximum	12.6	10.40	9.4	11.0

8. RAINFALL & CLIMATIC CONDITION

The climate of the district is typically tropical to sub tropical with three distinct seasons e.g. Summer, Winter and Monsoon. December is the coldest month with mean daily average temperature of 20 degree celcius which reaches 42 degree celcius in May. The rain fall in the area is mostly from the South west monsoon lats from middle of June to October. The average annual rainfall varies from 1031.21 mm to 1569.50 mm.

MONTH WISE RAINFALL (mm) DATE OF THE DISTRICT (LAST 3 YEARS) (DISTRICT OFFICE)													
F. year /month	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR CH	TOTAL
2015-16	114.2	63.2	257.2	152.4	244.9	266.2	25.4	13.6	8.5	8.0	5.9	37.6	1196.9
2016-17	25.9	78.7	188.0	267.8	239.2	199.3	87.7	0.8	0.0	3.9	0.0	46.3	1137.6
2017-18	5.1	70.4	221.2	363.6	281.7	184.7	178.7	26.1	0.0	0.0	0.0	0.5	1331.9
2018-19	111.2	80.4	136.1	457.9	392.4	153.5	120.0	0.9	61.7	1.2	3.4	11.4	1530.0
AVG	27.8	20.1	34.0	114.5	98.1	38.4	30.0	0.2	15.4	0.3	0.8	2.9	1299.1

9. DETAILS OF MINING LEASES OF ROAD METAL

Attached vide Annexure I

10. DETAILS OF ROYALTY COLLECTED (Rs)

Sl.No	Name Of Tahasil	2015-16	2016-17	2017-18	2018-19
1	Kolnara	278460	1559870	3161524	2925000
2	Rayagada	1745450	2091680	4023728	4119826
3	Gunpur	1110798	1272270	1334676	1057839
4	Kalyansinghpur	0	0	380814	0
5	Muniguda	289578	530037	768370	7748595
6	Gudari	0	0	0	120285
7	Padmapur	563000	1868000	2010000	1381446
8	Kashipur	0	0	613936	0
9	Bissam Cuttack	0	484637	782335	782335
TOTAL		3987286	7806494	13075383	18135326

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	Kolnara	2142	11999	23452	25448
2	Rayagada	13367	15977	31524	30534
3	Gunpur	8594	8559	8560	3950
4	Kalyansinghpur	0	4085	4180	4275
5	Muniguda	7275	7725	8310	56038
6	Gudari	0	0	1800	1836
7	Padmapur	8475	10147	12285	5985
8	Kashipur	5500	5500	5500	5500
9	Bissam Cuttack	3483	5483	31343	31343
TOTAL		48836	69475	126954	164909

12. MINERAL MAP OF THE DISTRICT

Attached as Plate No 4.

13. LIST OF LOI HOLDERS ALONG WITH VALIDITY

List enclosed as Annexure II

14. TOTAL MINERAL RESERVE AVAILABLE IN THE DISTRICT

Total mineral reserve of road metal/buildingstone/blackstone/white stone is 17,22,14,175 cum which may increase after detail investigation.

Details of the potential areas submitted as Annexure III.

15. QUALITY/GRADE OF MINERAL

Road metal/building metals of the district are 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 metals of the district are 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 10 lakh cum of road metal and is mainly supplied from different tahasils of the district and adjoining districts of Koraput and Gajapati.

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

Not applicable.

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 NOx , 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 activities 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 its 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 etc are to be provided to mine workers as per Mines Rules. All operators and mechanics are to be trained to handle fire fighting equipments.

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

APPROVED BY DEIAA COMMITTEE, RAYAGADA


Sub-Collector,
Rayagada
-cum-
Member Secretary,
DEIAA
Rayagada

Sri A.K. Sharda,
President
Dandakaranya NGO,
-cum-
EXPERT Member,
DEIAA Rayagada


Divisional Forest Officer,
-cum-
Member, DEIAA,
Rayagada


COLLECTOR
-cum-
Chairperson,
DEIAA, Rayagada

SPECIFIED MINOR MINERAL FOR DECORATIVE STONE EXECUTED UNDER RAYAGADA DISTRICT.

Sl No.	Name of Tahsil	Name of Village	Name of Lessee	Address & contact No. of Lessee	Mining Lease Grant Order No. & Date	Period of lease		Date of commencement of mining operation	Status (Working / Temporary for despatch)	Cap or Non cap tive	Lt. No. & date of grant of EC	Location of Resource (GPS co-ordinates or Khasra & Plot No./sketch map to be attached)	Co-ordinates containing the boundary points		Method of mining	Area leased for mineral concession (in sq.m)	Minerals to be mined as per approved mining plan (in cum.)
						From	To						Latitude	Longitude			
MINING LEASE																	
1	Gannapur	Basing-Gorja	M/s Stone fields	B-231, 4th Cross, Saankpuri, Secunderabad (Telangana) (9437909273)	16000/06.11.20	20.12.2006	19.12.2026	25.12.2006	Working	Non cap tive	-	9/27P	19°06'39" to 19°06'45"	83°51'55" to 83°58'08"	Open cast	24280	1830009
2	Munriguda	Pukamachakola	M/s Hindustan Mineral Industries	Plot No.613/4132, Near Punama Gate, Old Town, Bhubaneswar, Dist-Khurda (9861058996)	ML	01.12.2017	30.11.2047	09.01.2018	Working	Non cap tive	3085/SE IAA dt.05.08.17	27/119/P	19°41'25" to 19°41'09"	83°34'57" to 83°35'09"	Open cast	63450	279708
3	B.Cutta	Furtigurth	M/s U. Ganape	Sri A.Ganesh Raj, Prasadronepa, Jeypoor, Dist-Koraput (9437435161)	6991/01.06.20	05.12.2001	04.12.2011	08.04.2002	Applied for NML	Non cap tive	-	20 & 23 101/P, 112/P & 100/P	19°25' to 19°20'	83°30' to 83°35'	Open cast	10930	Mining plan not submitted
4	B.Cutta	Tedeligid	M/s Rishabh Mining Pl Ltd.	IDCO Industrial Area, Bolangir Dist. Bolangir (8826162971)	2543/23.02.20	23.10.2002	22.10.2032	Surface Right not granted.	Right not granted.	Cap tive	4108/SE IAA dt.15.02.18	15/1/P	19°24'14" to 19°24'27"	83°32'36" to 83°32'54"	Open cast	11083	37199
PROSPECTING LICENSE																	
5	Rayagada	Hazarida	Sri Balakrishna Padhy	Sunari Street, Jeypoor, Dist-Koraput. (8327718893)	3994/23.03.20	11.05.2009	10.05.2011	26.09.2009	Prospectin g License & License applied for Mining Lease	Non cap tive	-	117/48/P	19°07'13" to 19°07'44"	83°23'29" to 83°23'39"	Open cast	87810	Prospecting Report not submitted

6	Gunnur	Arca	M/s Baba Gramites	Prop. Smt. Sujata Sahu, Kashinagar Road, Near Gumagada, PO-Ranipeta, PS-Parlakhemundi, Dist. Gajapati.	139/04.02.2009	04.07.2009	03.07.2011	10.08.2009	Prospectin g License executed & applied for Mining Lease	Non -	-	312/490/P, 312/491/P, 312/493/P & 312/494/P	19*11*01 to 19*11*24	83*51*54 to 83*52*25	Open cast	303510	1644572
7	B. Cutta	Chhikaram bhu & Tedelguda	M/s Aditi Resources	40-6/3-3. Ground Floor, Sri Nilayam Lane, Opposite to Siddartha public School, Vijaywada (A.P) (9849085477)	5339/04.06.2016	29.08.2016	28.08.2018	11.10.2016	Prospectin g License executed & applied for Mining Lease	Non -	-	Chhikarambhu No.63/16/95/4/P & 96/6/P Tedilguda No.64/19/169/P	19*24*00 .3 to 19*24*22 .4	83*32*28 .1 to 83*32*45.7	Open cast	137390	Prospectin g Report not submitted
8	B. Cutta	Chhikaram bhu	M/s Aditi Resources	-do-	5332/04.06.2016	29.08.2016	28.08.2018	11.10.2016	Prospectin g License executed & applied for Mining Lease	Non -	-	16/90/P & 92/P	19*24*20 .8 to 19*24*32 .5	83*32*39 .8 to 83*32*49.0	Open cast	48160	Prospectin g Report not submitted
9	Kaship	Tovaput	M/s Devl Mines and Mineral	IDCO Plot 7/7, Chandaka Industrial Estate, Chandrasekharpur, Patla, Bhudaneswar (0674-2745300)	13134/27.10.2006	10.07.2007	09.07.2009	19.09.2007	Prospectin g License executed & applied for Mining Lease	Non -	-	39/291/P	19*09*04 to 19*09*20	83*11*05 to 83*11*23	Open cast	52290	188588
10	Gunnur	Basinggorja	M/s Gramar Enterprises	New No.2, Old Street, 4th Main Road, Kottur Garden, Chennai(TN) (9952033399)	7882/29.08.2016	18.11.2016	17.11.2018	09.01.2017	Prospectin g License executed & applied for Mining Lease	Non -	-	9/33/P	19*05*51 .9 to 19*06*00 .5	83*32*12 .5 to 83*52*26 .1	Open cast	78240	188588
11	Gunnur	Basinggorja	M/s Gramar Enterprises	-do-	11365/30.12.2014	13.02.2015	12.02.2017	09.01.2017	Prospectin g License executed & applied for Mining Lease	Non -	-	9/30/P	19*05*51 .9 to 19*06*00 .5	83*52*12 .5 to 83*52*26 .1	Open cast	87090	339768
12	Rayagada	Punjapal	M/s U Gramapathi Exports (Gramite) (P) Ltd	Sri A.Ganesh Raj, Prasadnagar, Jeypore, Dist-Koraput (9437435161)	7296/10.06.2009	-	-	-	-	Non -	-	43/116/P & 117/P	19*07*29 .6 to 19*06*44 .6	83*14*18 .7 to 83*14*37 .7	Open cast	209060	Not executed
13	Rayagada	Punjapal	M/s U Gramapathi Exports (Granite) (P) Ltd	-do-	7291/10.06.2009	-	-	-	-	Non -	-	22/344-345, 347.3 & 48,349 & 358	19*06*42 .7 to 19*06*44 .6	83*13*34 .5 to 83*13*40 .2	Open cast	43620	Not executed

SPECIFIED MINOR MINERAL FOR DECORATIVE STONE (LOI ISSUED, BUT NOT GRANTED) UNDER RAYAGADA DISTRICT.

ANNEXURE-II

Sl No.	Name of Tahsil	Name of Village	Name of Lessee	Address & contact No. of lessee	Minimum Lease Grant Order No. & Date	Period of lease		Date of commencement of mining operation	Status (Working /Temp.w ork for despatch)	Captiv e or Non-captiv e	Lt. No. & date of grant of EC	Location of Resource (GPS co-ordinates or Khata & Plot No./Sketch map to be attached)	Co-ordinates containing the boundary points		Method of mining	Area leased for mineral concess on (in sq.m)	Mineable mineral potential as per approved mining plan (in cum.)
						From	To						Latitude	Longitude			
PROSPECTING LICENSE																	
1	Gunupur	Arci	Sant Y. Gangalaxmi	PLOT No.13, Govinda Nagar, Behind Abhudaya Degree College, Srikakulam (AP) (8464971507)						Non-captive	-	66/312/492	19°11'07" to 19°11'09"	83°51'07" to 83°51'09"	Open cast	60540	236203.3
2	Gunupur	Basing-gorja	M/s Gramar Enterprises	New No.2, Old No.6, Link Street, 4th Main Road, Kottur Garden, Chennai(TN) (9952033399)						Non-captive	-	9/29/P	19°06'17.5" to 19°06'24.20"	83°52'16.0" to 83°52'22.2"	Open cast	35770	172089.25
3	Muniguda	Bad-Agula	M/s Hindustan Mineral Indust.	No.613/4132, Near Punama Gate, Old Town, Bhubaneswar, Dist-Khurda (9861058996)						Non-captive	-	61/518/P & 578/P	19°38'43.8" to 19°39'8.60"	83°33'26.8" to 83°33'44.4"	Open cast	161310	679250
4	Muniguda	Kantarbali	M/s Hindustan Mineral Indust.	Plot No.613/4132, Near Punama Gate, Old Town, Bhubaneswar, Dist-Khurda (9861058996)						Non-captive	-	114/643/P	19°39'33.4" to 19°39'42"	83°32'54" to 83°33'1.50"	Open cast	30030	75632
5	Muniguda	Bad-Agula	M/s Hindustan Mineral Indust.	Plot No.613/4132, Near Punama Gate, Old Town, Bhubaneswar, Dist-Khurda (9861058996)						Non-captive	-	61/582/P	19°38'49.5" to 19°39'16.5"	83°33'45.7" to 83°33'54.40"	Open cast	120190	183684

SPECIFIED MINOR MINERAL FOR DECORATIVE STONE RAYAGADA DISTRICT.

ANNEXURE-III

Sl No.	Name of Tahsil	Name of Village	Status	Name of Specified Minor Mineral	Location of the Source (Total Hilllock) recommended for mineral concession (GPS co-ordinates or Khata & Plot No.)(Sketch map to be attached)	Latitude			Longitude			Area of the mineral potential (in sq.m)	Mineable mineral potential (in cum.)
						Degree	Minute	Second	Degree	Minute	Second		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
MINING LEASE													
1	Gunupur	Basing-Gorja	Working	Decorative Stone	9/ 2/P	19°06'39"	to	19°06'45"	83°51'55"	to	83°58'08"	24280	183009
2	Muniguda	Paikamadhakhola	Working	-do-	27/ 119/P	19°41'25"	to	19°41'09.6"	83°34'57"	to	83°35'09"	63430	279708
3	B.Cuttack	Furtigurha	Non-working due to want of order from Govt. in Deptt. of Steel & Mines, Odisha under Rule-8A of OMMC Rule, 2016.	-do-	20 & 23 101/P, 112/P & 100/P	19°25'	to	19°20'	83°30'	to	83°35'	10930	Mining Plan not submitted
4	B.Cuttack	Tedeliguda	Non-working due to want of permission for surface operation by the Collector.	-do-	15/ 1/P	19°24'14.2"	to	19°24'27.5"	83°32'36.2"	to	83°32'54.2"	110830	37199
PROSPECTING LICENSE													
5	Rayagada	Hazaridang	Applied for Mining Lease	-do-	117/ 48/P	19°07'13"	to	19°07'44"	83°23'29"	to	83°23'39"	87810	Prospecting Report not submitted
6	Gunupur	Arci	-do-	-do-	66/ 312/490/P, 312/491/P,312/493/P & 312/494/P	19°11'01"	to	19°11'24"	83°51'54"	to	83°52'25"	303510	1644672
7	B.Cuttack	Chilikarambhu & Tedeliguda	-do-	-do-	Chilikarambhu No.63 16/ 95/4/P & 96/6/P Techisanda No.64 15/ 165/P	19°24'00.3"	to	19°24'22.4"	83°32'28.1"	to	83°32'45.7"	137390	Prospecting Report not submitted
8	B.Cuttack	Chilikarambhu	-do-	-do-	16/ 90/P & 92/P	19°24'20.8"	to	19°24'32.5"	83°32'39.8"	to	83°32'49.0"	48160	Prospecting Report not submitted
9	Kashipur	Toyaput	-do-	-do-	39 241/P	19°09'04"	to	19°09'20"	83°11'05"	to	83°11'23"	52290	Prospecting Report not submitted

10	Gunupur	Basing-gorja	-do-	-do-	9/ 33/P	19°05.51.9" to 19°06.00.5"	83°32.12.5" to 83°52.26.1"	78240	188588
11	Gunupur	Basing-gorja	-do-	-do-	9/ 30/P	19°05.51.9" to 19°06.00.5"	83°52.12.5" to 83°52.26.1"	87090	339768
12	Rayagada	Punjapal	-do-	-do-	43/ 116/P & 117/P	19°07.29.6" to 19°06.44.6"	83°14.18.7" to 83°14.37.7"	209060	Not executed.
13	Rayagada	Punjapal	-do-	-do-	22,43,43,14,43,22/ 344,345,347,348,349 & 358	19°06.42.7" to 19°06.44.6"	83°13.34.5" to 83°13.40.2"	43620	Not executed.
14	Gunupur	Arel	LOI issued for grnt of Mining Lease	-do-	66/ 312/492	19°11.07" to 19°11.09"	83°51.07" to 83°51.09"	60540	236203.3
15	Gunupur	Basing-gorja	-do-	-do-	9/ 29/P	19°06.17.50" to 19°06.24.20"	83°52.16.08" to 83°52.22.20"	35770	172089.25
16	Muniguda	Bad-Agula	-do-	-do-	61/ 518/P & 578/P	19°38.43.80" to 19°39.8.60"	83°33.26.80" to 83°33.44.40"	161310	679250
17	Muniguda	Kentarbali	-do-	-do-	114/ 643/P	19°39.33.40" to 19°39.42"	83°32.54" to 83°33.1.50"	30030	75632
18	Muniguda	Bad-Agula	-do-	-do-	61/ 582/P	19°38.49.50" to 19°39.16.50"	83°33.45.70" to 83°33.54.40"	120190	183684

APPROVED BY DEIAA COMMITTEE, RAYAGADA

Ray. 6.2021
Sub-Collector, Rayagada
-cum-
Member Secretary, DEIAA
Rayagada

Sri A.K. Sharda, President
Dandakaranya NGO,
-cum-
EXPERT Member, DEIAA Rayagada

2/6/21
Divisional Forest Officer,
-cum-
Member, DEIAA, Rayagada

2021/6/21
COLLECTOR
-cum-
Chairperson, DEIAA,
Rayagada

ANNEXURE III

POTENTIAL ROAD METAL/ BLACKSTONE/WHITESTONE OF THE DISTRICT

Sl. No.	Name of Tahasil	Name of village	Status	Name of Minor Mineral	Location of the Source (Total Hillock)		Longitude			Latitude			Area of the mineral potential patch (in sq m)	Mineable mineral potential (in cum)
					recommended for mineral concession (GPS co-ordinates or Khata & Plot No) (Sketch map to be attached)	Khata	Plot	De	Min	Second	De	Min		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	Kolnara	Kailashpur	Running	Kailashpur SQ	22	83	32	37.74	19	12	54.56	20234.28	1062300	
2	Kolnara	Badapadu	Running	Badapadu SQ	30	83	21	44.2	19	20	44.1	12140.83	169971.6	
3	Kolnara	Bothodi	Running	Bothodi-II SQ	18	83	30	11.2	19	15	27.9	20234.72	283286.1	
4	Kolnara	Bothodi	Running	Bothodi-III SQ	18	83	30	16.6	19	15	22.2	20234.72	283286.1	
5	Kolnara	Deopur	Running	Deopur SQ	35	83	26	50.86	19	20	55.02	36260.62	507648.7	
6	Kolnara	Hazaridang	Running	Hazaridang IV SQ	6	83	30	10.5	19	12	51.15	12140.56	254951.8	
7	Kolnara	Hazaridang	Running	Hazaridang V SQ	6	83	30	07.92	19	15	12.34	12140.5	781848.2	
8	Kolnara	Hazaridang	Running	Hazaridang VI SQ	6	83	29	56.60	19	14	50.00	12140.5	790346.6	
9	Kolnara	Guakona	Running	Guakona III SQ	27	83	28	12.0	19	13	10.5	20234.28	1331416	
10	Kolnara	Champia	Running	Champia SQ	26	83	28	12.0	19	13	10.5	10117.1	672787.2	
11	Kolnara	Pipalguda	Running	Pipalguda SQ	20	83	29	46.08	19	13	59.04	40468.56	2719487	
12	Kolnara	Hazaridang	Running	Hazaridang SQ	6	83	29	46.66	19	15	1.66	12140.5	824340	
13	Kolnara	Pipalguda	Running	Pipalguda II SQ	20	83	29	44.82	19	13	55.20	8093.71	555228.5	
14	Kolnara	Hazaridang	Running	Hazaridang VII SQ	6	83	30	00.00	19	14	54.19	40468.56	2804471	
15	Kolnara	Bothodi	Running	Bothodi SQ	18	83	30	10.03	19	15	20.22	20234.28	1416400	
16	Kolnara	Jharadi	LOI	Jharadi SQ	47	83	36	54.23	19	12	26.93	12141	1189818	
17	Kolnara	Hajaridang	LOI	Hajaridang-II SQ	6	83	29	47.22	19	15	16.23	20234	1997096	
18	Kolnara	Hajaridang	LOI	Hajaridang-III SQ	6	83	29	47.22	19	15	16.23	20234	2011260	
19	Kolnara	Jammulelbadi	LOI	Jammulelbadi SQ	21	83	29	59.41	19	14	59.95	40469	4050947	

20	Kolnara	Guakona	LOI	Guakona IV SQ	27	191/1	83	27	57.27	19	13	8.33	12141	1223813
21	Kolnara	Hazaridang	Running	Hazaridang-VIII SQ	6	84	83	30	10.5	19	12	51.15	12140.5	169967
22	Rayagada	GOGONDA	Running	GOGONDA SQ	K-12,P-19		83	28	42.9	19	11	55.40	10117.15	240788.2
23	Rayagada	MANTRQJHOLLA-I	Running	MANTRQJHOLLA-I SQ	K-20,P-139		83	28	7	19	12	47.48	20234.3	1005645
24	Rayagada	KASILI-III	Running	KASILI-III SQ	K-30,P-188		83	27	32.06	19	12	16.16	12140.58	382428.3
25	Rayagada	MANTRQJHOLLA-II	Running	MANTRQJHOLLA-II SQ	K-20,P-40		83	28	1.98	19	12	51.26	10117.15	269116.2
26	Rayagada	MANTRQJHOLLA-IV	Running	MANTRQJHOLLA-IV SQ	K-20,P-116		83	27	58.92	19	12	55.29	12140.58	747859.7
27	Rayagada	KASILI-I	Running	KASILI-I Stone Quarry	K-30,P-122		83	27	33.14	19	12	19.39	12140.58	977316.7
28	Rayagada	GOGONDA-I	Running	GOGONDA-I SQ	K-12,P-19		83	28	25.47	19	11	43.51	8093.72	254952.2
29	Rayagada	MANTRQJHOLLA-VI	Running	MANTRQJHOLLA-VI SQ	K-20,P-112		83	26	56.10	19	13	4.37	20234.3	864004.6
30	Rayagada	BILLESU	Running	BILLESU SQ	K-70,P-40		83	23	34.02	19	00	26.83	12140.58	518402.8
31	Rayagada	MANTRQJHOLLA-V	Running	MANTRQJHOLLA-V SQ	K-20,P-122		83	27	54.1	19	12	50.9	12140.58	900831
32	Rayagada	MANTRQJHOLLA	Running	MANTRQJHOLLA SQ	K-20,P-118		83	28	02.62	19	12	39.55	20234.3	1487221
33	Rayagada	MANTRQJHOLLA-III	Running	MANTRQJHOLLA-III SQ	K-30,P-119		83	27	56.32	19	12	40.41	12140.58	407923.5
34	Rayagada	KASILI-II	Running	KASILI-II SQ	K-30,P-188		83	27	29.16	19	12	3.65	12140.58	739361.3
35	Rayagada	GOGONDA-III	Running	GOGONDA-III SQ	K-12,P-118		83	28	29.86	19	11	38.55	24281.16	509904.4
36	Rayagada	KULI	Running	KULI Stone Quarry	K-58,P-18		83	28	6.51	19	12	42.40	16187.44	691203.7
37	Rayagada	MANTRQJHOLLA-VII	Running	Mantrojholla-VII SQ	K-20,P-102		83	28	.70	19	12	47.48	20234.3	637380.5
38	Rayagada	DUMAGUDA	Running	DUMAGUDA SQ	K-27,P-20		83	26	5.11	19	120	29.55	20234.3	1133121
39	Rayagada	KASILI-IV	Running	KASILI-IV SQ	K-30,P-231		83	27	83.94	19	12	29.037	12140.58	552396.4
40	Rayagada	GOGONDA-II	Running	GOGONDA-II SQ	K-12,P-119		83	28	39.79	19	11	42.260	16187.44	509904.4
41	Rayagada	KASILI	Running	KASILI Stone Quarry	K-30,P-188		83	27	83.94	19	12	29.037	8093.72	169968.1
42	Rayagada	KULI-I	Running	KULI-I Stone Quarry	K-58,P-18		83	27	58.8	19	12	30.6	80937.2	2549522
43	Rayagada	KASILI	LOI	KASILI Stone Quarry	K-30,P-188		83	27	83.94	19	12	29.037	8093.7	169967.7
44	Rayagada	GUMMA	LOI	GUMMA-II SQ	K-18,P-107		83	17	30.0	19	11	55.7	20234.3	849840.6
45	Rayagada	Bhalumati	Running	Bhalumati SQ	K-17,P-01		83	27	27.52	19	05	59.44	45855	641970
46	Gunpur	Srirampur	Running	Srirampur SQ	K-28,P-282,		83	27	58.8	19	12	30.6	21245.99	178466.3
47	Gunpur	Regeda	Running	Regeda SQ	Khata no.130, plotno.798,		83	25	34.52	19	04	23.47	16187.40	169967.7
48	Gunpur	Sourapradhaniguda	Running	Sourapradhaniguda SQ	K No..35, p no.40,		83	25	34.52	19	04	23.47	13192.73	73879.29
49	Gunpur	Jaltar	Running	Jaltar SQ	K no.771, pno.435,		83	27	03.12	19	00	48.72	36421.65	458912.8
50	Gunpur	Gunpur-I	Running	Gunpur-I SQ	K-330,Pno-1522		83	49	58.7	19	05	19.05	44515.46	623216.4


51	Gunpur	Gunpur-II	Running	Gunpur-II SQ	K-330,plotno-1522,	83	48	47.8 E	19	05	54.9	40873.24	5722225.4
52	Gunpur	Chakrabhata	Running	Chakrabhata SQ	Khata-07,plotno-33	83	46	16.1	19	05	50.01	40468.6	566560.4
53	Ksinghpur	Belakana	Running	Belakana S Q	K. NO 30 P NO393	83	21	51	19	22	57	97003.148	3395110
54	Ksinghpur	Kalyansinghpur	Running	K. Singhpur S Q	K No -109 P No -2,5 ,61,2/800,2/801,2/ 802,1/804,362/821	83	17	31.29	19	31	28.99	121000	7623000
55	Ksinghpur	Kanipai	Running	K. Singhpur S Q	K-31 P-40	83	18	14.52	19	22	12.08	18000	252000
56	Ksinghpur	Kangaseri	Running	Kangaseri SQ	K No.15,P No.05	83	16	31	19	33	36	8093.71	17010
57	Kashipur	Maikanch	Running	Maikanch Sq	KNo.198 P No. 201	83	2	43.1	19	20	5.5	4050	17010
58	Kashipur	Naua gaon	Running	Naua gaon SQ	K No. 72 P No.427	83	02	43.9	19	20	04.7	4050	2551500
59	Kashipur	Renga	Running	Renga stone quarry	K No. 72 P No.826	19	18	37.2	83	7	18.5	607500	22541.48
60	Kashipur	Kaliapada	Running	Kaliapada SQ	5.75 AC	83	07	43.6	19	10	11.8	22541.48	110453.3
61	Kashipur	Sargiguda	Running	Sargiguda SQ	K No.71 P No.126, 199,205,206 & 207	83	07	26.7	19	11	09.7	11299	47455.8
62	muniguda	Kantrabali	Running	Kantrabali II SQ	K. N-114, P No 790	83	33	58.4	19	39	39.4	80000	168000
63	muniguda	Bada Manjurukupa	Running	Bada Manjurukupa SQ	K. No-17, P1 No. 54	83	27	12.70	19	45	58.80	18840	26376
64	muniguda	Ambadola	Running	Ambadola SQ	K No.186,P No. 668	83	28	59.40	19	49	29.20	110480	386680
65	muniguda	Banganagan	LOI	Banganagan SQ	Kno-25, P no-243	83	32	55.44	19	44	15.07	127200	445200
66	muniguda	sanamudra	Running	Sanamudra SQ	k no 9 plot no 1	83	30	09.89	19	34	36.25	168000	823200
67	muniguda	Anojodi	Running	Anogodi SQ	K no 11 p no 13, 92	83	28	33.3	19	48	14	45600	63840
68	muniguda	Deragama	Running	Deragama SQ	K no 14 p no 138	83	25	50.9	19	52	25.5	20000	14000
69	muniguda	Litiguda	Running	Litiguda Stonequarry	K no 67 p no 374	83	31	6.8	19	37	55.2	1320	924
70	muniguda	Bainbasa	Running	Bainbasa stone quarry	K no 17 p no 60	83	29	20.7	19	38	19.4	23500	131600
71	muniguda	Kaliaripeta	Running	Kaliaripeta SQ	KNo 16 P No 51	83	29	44.9	19	52	10	148320	2076480
72	muniguda	Turrukupa	Running	Turrukupa SQ	Kno 11 p no 79	83	32	43	19	46	29	6070	84980
73	muniguda	Deokupuli	Running	Deokupuli SQ	K no 69 p no 172	83	33	48.6	19	38	37.04	136584	1912176
74	muniguda	Kantrabali	LOI	Kantrabali-I SQ	K no 114 p no 631	83	32	29.9	19	39	32	46201	32340.7
75	muniguda	Kaliaripeta	New	Kaliaripeta SQ	K No.16,P No.51	83	29	46.8	19	52	11.7	0.02023	75636
76	muniguda	Torabadi	New	Torabadi SQ	K No.13,P No.78	83	61	0.71	19	66	64.7	0.014164	35000
77	muniguda	Sorisapadar	New	Sorisapadar SQ	K No.7,P No.38	83	52	21.53	19	79	51.21	0.010317	25000
78	Rammaguda	Tumbakona	Running	Tumbakona SQ	K No 21 P No 13	83	.40	29.17	19	10	49	8000	168000
79	Padmapur	Khilamunda	Running	Khilamunda-II SQ	K No.-16, p no-9	83	49	43	19	15	30.2	35410	173509
80	Padmapur	Akhusing	Running	Akhusing SQ	K No.-114,p no-467	83	49	58.55	19	15	57.51	34399	36118.95
81	Padmapur	Khilamunda	Running	Khilamunda-I SQ	K No.-16, p no-114	83	49	58	19	15	49.2	20234.72	56657.22
82	Padmapur	Arei	LOI	Arei S Q	K-66,p-312/989	83	49	26.47	19	16	09.27	4000	47600
83	Gudari	Balipanga	Running	Karasing SQ	K. No.-14, P No. 53	83	49	44.86	19	20	3.23 N	18200	165620
84	B Cuttack	Lellingpadar	Running	Lellingpadar SQ	K-23,pno-178,	83	34	44.8	19	30	17.5	40468.6	5099004.4
85	B Cuttack	Telengasarthelli	Running	Telengasarthelli SQ	K-03,p no-33,	83	28	35.3	19	32	03.9	20234.3	113312.1


86	B Cuttrack	Baradaguda	Running	Baradaguda SQ	K-5, p no-60,	83	33	59.3	19	22	26.1	48562.3	67987.22
87	BCuttrack	Drubaguda	Running	Drubaguda SQ	K no.26, p no.77,	83	35	18.39	19	22	19.32	40468.6	339936.2
88	BCuttrack	Dhuanbadi	New	Dhuanbadi SQ	K No.13, P No.01	83	35	53	19	21	12.5	18615.5	104246.8
89	Chandrapur	Dangasorada	New	Dangasorada SQ	K No.51, P No.253/1	83	39	23.21	19	35	51.69	35200	
90	Chandrapur	Dilagudi	New	Dilagudi SQ	K No.14, P No.210	83	69	15.83	19	61	31.01	40000	
91	Rayagada	Limbesu	Running	Limbesu MQ	K No.-10, p no-60	83	27	36.23	19	02	09.59	16180	155556
92	Rayagada	Gumma	Running	Gumma MQ	K No.-18, p no-106	83	17	15.14	19	11	47.42	20230	153916
93	Rayagada	Tamparabuduni	Running	Tamparabuduni MQ	K No.-21, p no-53	83	26	9.26	19	17	28.79	16180	141336
94	Rayagada	Kuli	Running	Kuli MQ	K No.-58, p no-43	83	27	02.81	19	12	09.79	20230	208444
95	Rayagada	Kasili	Running	Kasili MQ	K No.-30, p no-227	83	26	59.92	19	12	14.47	20230	104796
96	Kolnara	Badakhilapadar	Running	Badakhilapadar MQ	K No.-40, p no-724	83	31	47.47	19	17	58.31	8093.71	49530
97	Kolnara	Kandha Champia	Running	Kandha Champia MQ	K No.-15, p no-41	83	36	01.11	19	15	0.53	8093.71	65845
98	Kolnara	Bhujabal	Running	Bhujabal MQ	K No.-44, p no-355	83	27	23.55	19	14	26.13	12140.56	79856
99	Kolnara	Kumbheiguda	Running	Kumbheiguda MQ	K No.-14, p no-20	83	30	18.67	19	16	50.48	8093.71	53746
100	Kolnara	Keutaguda	Running	Keutaguda MQ	K No.-18, p no-7	83	22	19.40	19	18	36.13	8093.71	55575
101	Kolnara	Hazaridang	Running	Hazaridang-VIII SQ	K No.-06, p no-84	83	30	01.49	19	15	00.93	12140.56	88717
102	Kolnara	Guakona	Running	Guakona-V SQ	K No.-27, Pno-190/1	83	27	30	19	12	30	8093.71	567292
103	Kashipur	Adatakiri	Running	Adatakiri MQ	K No.-55, Pno-50	83	03	33.12	19	29	31.76	12140	76938
104	Kashipur	Kashipur	Running	Kashipur MQ	K No.-1446, Pno-664	83	05	54.70	19	20	40.03	24280	169936
105	Kashipur	Panabandha	New	Panabandha MQ	K No.99, P No.469	83	7	9.78	19	10	12	10000	36000
106	Gudari	Silmi	Running	Silmi MQ	K No-20, Pno-01	83	47	58.81	19	22	50.77	32375	152272
107	Chandrapur	Dimiriguda	New	Dimiriguda MQ	K No.3, P No.23	83	40	20.43	19	35	40.86	30400	
108	KSinghpur	Badanaikguda	New	Badanaikguda MQ	K No.36, P No.476/1	83	31	18.55	19	41	50.88	17600	
109	KSinghpur	Murkakona	New	Murkakona MQ	K No.15, Plot No.52	83	25	88.04	19	45	22.59	20000	

3rd REVISED DSR FOR ROAD METAL/ BLACKSTONE/WHITESTONE APPROVED BY DEIAA COMMITTEE, RAYAGADA IN
ITS MEETING HELD ON 03.01.2023


Sub-Collector, Rayagada
-cum-
Member Secretary, DEIAA
Rayagada

Sri A.K. Sharda, President
Dandakaranya NGO,
-cum-
EXPERT Member, DEIAA Rayagada


Divisional Forest Officer,
-cum-
Member, DEIAA, Rayagada


COLLECTOR
-cum-
Chairperson, DEIAA,
Rayagada