

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

WESTERN ZONE BENCH, PUNE.

O.A. NO. 162/2024

Pramod Dhanraj Khursange

...Applicant

V.

District Collector, Nagpur & Ors.

...Respondents

ADDITIONAL REPORT ON BEHALF OF RESPONDENT NO.13 SEIAA

This additional report is being filed based upon the Hon'ble Tribunal's directions dated 10-01-2025 and 24-02-2015.

1. SEIAA has already filed a report dated 07-01-2025 in the present case which may kindly be considered.
2. On 10-01-2025 the Hon'ble Tribunal directed SEIAA to place on record copy of the final DSR and minutes of meeting in which the said DSR was considered and decision was taken in respect to grant of 18 ECs.
3. It is submitted that copy of the Minutes of Meeting were placed by SEIAA by way of a compilation dated 23-02-2025 and which was considered by the Hon'ble Tribunal 24-02-2025. However copy of the final DSR could not be placed on record that time, which is being placed herewith as **Annexure 1**. Copy of English translation of the Revised Sand Policy of 28-01-2022 is also annexed herewith as **Annexure 2**. Original Marathi version of the said policy was placed in the compilation dated 23-02-2025.

4. As per the order dated 24-02-2025, the Hon'ble Tribunal sought the following information –

7. We also would like to know from Respondent No.1- District Collector, Nagpur as well as Respondent No.13- SEIAA that the EC, which is being issued in the name of Mining Officer, who thereafter issued Tenders in the name of Private Respondents for conducting mining activities. So in case, any violation of the terms & conditions of the mining activity is done whether that individual contractor would be responsible or the Mining Officer would be responsible? Regarding this, position be made clear before us by them by filing an affidavit by the next date positively.

5. In response to the above query it is submitted that as per the Comprehensive Policy of the Government in connection with excavation / mining of sand, its storage and sales through online process issued by the Revenue and Forest Department, Government of Maharashtra dated 16-02-2024, responsibility to comply with the terms and conditions of mining activity as per the EC is upon the individual bidder / contractor.

6. SEIAA reserves the right to file a reply to the present original application, if needed in addition to this report. This Respondent will abide by any directions and orders of this Hon'ble Tribunal.

Mumbai

Date : 03-04-2025



Dattatray Suryakant Bhalerao

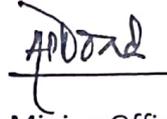
Scientist I & Deputy Secretary,

Environment and Climate Change Department, Government of Maharashtra

Date:05.12.2023

Subject : Regarding Final Publication of amended " Final District Survey Report".

To whom so ever it may concern, this is to inform that amendment in " District Survey Report" in with inclusion of data was published as " Draft" on district website of Nagpur, Maharashtra on for suggestions, comments, objections etc. from public at large with wide publicity in Daily Lokmat Daily 02.11.2023 & 03.11.2023 for 30 days as per Enforcement and Monitoring Guidelines 2020 issued by Ministry of Environment, Forest and Climate Change, Government of India, New Delhi. As no suggestions, comments, objections are received within the stipulated period of Draft Publication. Draft District Survey Report is considered as amended "Final District Survey Report" and subsequently published on district website.



District Mining Officer, Nagpur

Copy of "Final District Survey Report" to:

D.I.O. Nagpur for Publication on district website as amended "Final District Survey Report"

DRAFT DISTRICT SURVERY REPORT

Riverbed Sand Mining and other Minor Minerals



(As per Ministry of Environment, Forest and Climate Change, G.O.I. New Delhi; Notification No. S.O. 3611 (E) 25th July, 2018 and As per Enforcement and Monitoring Guidelines for Sand Mining, 2020, MoEF & CC-New Delhi)

**District Collector,
Nagpur
2023-2024**

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CERTIFICATE

This is to certify that the District Survey Report is prepared in compliance to the notification issued by the Ministry of Environment and Forest and Climate Change, dated 25/07/2018 and Enforcement and Monitoring Guidelines for Sand Mining, 2020.

Every effort have been made to incorporate all accepts of the notifications. The sand mining location and other mining activity areas and overview of mining activity in the district with all its relevant features to geology and mineral wealth in replenishable and non-replenishable areas of rivers, stream and other sand sources.

This report will be a model and guiding document which is a compendium of available mineral resources, geographical set up, environmental and ecological set up of the district and is based on data of various departments, published report and e-source. The District Survey Report will form the basis for application for environmental clearance, preparation of reports and appraisal of projects.

Date- 05/12/2023



District Collector

Nagpur

Chapter 1

INTRODUCTION

1.1 District Nagpur

Nagpur District is a District in the Vidarbha region of Maharashtra state in central India. The city of Nagpur is the district headquarters. The district is part of Nagpur Division. In 1853, after the death of Raghoji III, the princely state of Nagpur was annexed by the British and the territory occupied by the present district became part of Nagpur Province. In 1861, it was merged with the Central Provinces and Nagpur district became a part of one of its divisions, Nagpur division. In 1903, it became part of the Central Provinces and Berar. In 1950, Nagpur district became part of the newly formed Madhya Pradesh state and Nagpur became its capital. In 1956, after the reorganisation of states, Nagpur district was incorporated in Bombay state. On 1 May 1960, it became a district of Maharashtra state. Nagpur district is bounded by Bhandara District on the east, Chandrapur District on the southeast, Wardha District on the southwest, Amravati District on the northwest and Chhindwara District of Madhya Pradesh state on the north. Nagpur city is the winter capital of the state of Maharashtra, with a population of 2,405,421. It has also recently been ranked as the cleanest city and the second greenest city of India. In addition to being the seat of annual winter session of Maharashtra state assembly "Vidhan Sabha", Nagpur is also a major commercial and political centre of the Vidarbha region of Maharashtra.

1.2 History

The city was founded by the Gonds but later became part of the Maratha Empire under the Bhonsles. The British East India Company took over Nagpur in the 19th century and made it the capital of the Central Provinces and Berar. After the first reorganization of states, the city lost its capital status but according to the "Nagpur Pact" between political leaders it was made the second capital of Maharashtra.



Figure 1. The Zero Mile Stone, landmark denoting geographical centre of India

Nagpur is also called "Tiger Capital of India" as it connects many Tiger Reserves in India to the world. It is among the important cities for IT sector in Maharashtra after Pune, Nagpur lies precisely at the center of the country with the Zero Mile Marker indicating the geographical center of India.

2960

Princely states are shown in yellow. The Nag River, a tributary of the Kanhan River, flows in a serpentine path and is therefore named "Nag", the Marathi word for snake. And hence, the river and city is named as Nagpur, While others says that the river flows through the old city of Nagpur and hence the city is named after this river. "Pur" is a common suffix given to cities, villages and towns across India, and is often simply translated "city" The seal of Nagpur Municipal Corporation depicts a cobra in the water of a river.

Human existence around present day Nagpur city can be traced back 3000 years to 8th century BC. Mehir burial sites at Drugdhamna (near Mhada colony) indicate megalithic culture existed around Nagpur and is still followed in present times. The first reference to the name Nagpur is found in a 10th century copper-plate inscription discovered at Devali in the neighbouring Wardha district. The inscription is a record of grant of a village situated in the visaya (district) of Nagpura - Nandivardhana during time of Rastrakuta king Krsna III in the Saka year 862 (940 CE). Towards the end of third century King Vakataka dynasty. Vindhyasakti is known to have ruled the Nagpur region. In the 4th century Vakataka Dynasty ruled over the Nagpur region and surrounding areas and had good relations with the Gupta Empire. The Vakataka king Prithvisena I moved his capital to Nagardhan (ancient name Nandivardhana), located at 28 kilometres (17 mi) from Nagpur. After the Vakatakas, the region came under the rule of the Hindu kingdoms of the Badami Chalukyas, the Rashtrakutas, and finally the Yadavas. In AD 1296 Allauddin Khilji invaded the Yadava Kingdom after capturing Deogiri, after which the Tughlaq Dynasty came to power in 1317.

In the 17th century, the Mughal Empire conquered the region. However, regional administration was carried out by the Gond kingdom of Deogarh- Nagpur in the Chhindwara district of the modern-day state of Madhya Pradesh.

Recent history ascribes the founding of Nagpur to Bakht Buland, a prince of the kingdom of Deogarh-Nagpur. The next Rajs of Deogarh was Chand Sultan, who resided principally in the country below the hills, fixing his capital at Nagpur which he made a walled town. On Chand Sultan's death in 1739, Wali Shah, an illegitimate son of Bakht Buland, usurped the throne and Chand Sultan's widow invoked the aid of the Maratha leader Raghuji Bhonsle of Berar in the interest of her sons Akbar Shah and Burhan Shah The usurper was put to death and the rightful heirs placed on the throne. After 1743, a series of Maratha ralers came to power, starting with Raghoji Bhonsle, who conquered the territories of Deogarh, Chanda and Chhattisgarh by 1751.

In 1803 Raghoji II joined the Peshwa against the British in the Second Anglo-Maratha War, but the British prevailed. After Raghoji II's death in 1816, his son Parsaji was deposed

and murdered by Mudhoji II. Despite the fact that he had entered into a treaty with the British in the same year, Mudhoji joined the Peshwa in the Third Anglo-Maratha War in 1817 against the British, but suffered a defeat at Sitabuldi in present-day Nagpur city. The fierce battle was a turning point as it laid the foundations of the downfall of the Bhonsles and paved the way for the British acquisition of Nagpur city. Mudhoji was deposed after a temporary restoration to the throne, after which the British placed Raghoji III the grandchild of Raghoji II, on the throne. During the rule of Raghoji III (which lasted till 1840), the region was administered by a British resident. In 1853, the British took control of Nagpur after Raghoji III died without leaving an heir.

From 1853 to 1861, the Nagpur Province (which consisted of the present Nagpur region, Chhindwara, and Chhatisgarh) became part of the Central Provinces and Berar and came under the administration of a commissioner under the British central government, with Nagpur as its capital. Berar was added in 1903. Tata group started the country's first textile mill at Nagpur, formally known as Central India Spinning and Weaving Company Ltd. The company was popularly known as "Empress Mills" as it was inaugurated on 1 January 1877, the day queen Victoria was proclaimed Empress of India.

The Non-cooperation movement was launched in the Nagpur session of 1920. After Indian Independence in 1947, Central Provinces and Berar became a province of India, and in 1950 became the Indian state of Madhya Pradesh, again with Nagpur as its capital. However, when the Indian states were reorganised along the linguistic lines in 1956, Nagpur and Berar regions were transferred to Bombay state, which in 1960 was split between the states of Maharashtra and Gujarat.

At a formal public ceremony on 14 October 1956 in Nagpur B. R. Ambedkar along with his supporters converted to Buddhism starting Dalit Buddhist movement which is still active. Nagpur is a city with great capabilities to grow and prosper in the coming days. It is very important for State and Central Governments to contribute to the growth, development, prosperity of Nagpur. Nagpur completed 300 years of establishment in the year 2002. A big celebration was organized to mark the event.

1.3 Location and Geographical data:

Nagpur is located in central India in the eastern part of Maharashtra state between 20°35" north to 21 44" north latitudes and 78 15 east to 79°40 east longitudes. Nagpur is bordered by Amravati and Wardha in the west, Bhandara in the east and Chandrapur in the south. In the north, it shares its boundary with the state of Madhya Pradesh.

It falls in parts of the Survey of India Toposheet Nos. 55 K/7, 55 K/8, 55 K/11, 55 K/12, 55 K/15, 55 K/16, 55 L/13, 55 O/2, 55 O/3, 55 O/4, 55 O/6, 55 O/7, 55 O/8, 55 O/10, 55 O/11, 55 O/12, 55 P/1, 55 P/2, 55 P/5, 55 P/6, 55 P/9. The general elevation of the District ranges between 150 to 600 m AMSL. The terraced landscape of the Deccan lava on the west appear as several flat topped hills well furrowed by streams.

The upland ridges in the north are an extension of the ranges of the Satpura hills and the eastern and south eastern part exhibit an apparently featureless tract with scattered isolated hillocks

1.4 Administrative set up

The Nagpur District is divided into 7 sub divisions, i.e Nagpur (City) Nagpur (Rural), Umred, Ramtek, Mouda, Saoner, and Katol, which are further divided into 14 Tehsils, given in Table 1.1 and tehsil map is illustrated in Fig 1.3. The Nagpur is the district's headquarter.

Sr No.	Subdivision	Tehsil
1	Nagpur(City)	Nagpur City
2	Nagpur(Rural)	Nagpur (Rural),Hingna
3	Umred	Umred,Bhiwapur,Kuhi
4	Ramtek	Ramtek,Parseoni
5	Mouda	Mouda, Kamptee
6	Saoner	Saoner, Kalmeshwar,
7	Katol	Katol, Narkhed

Table- 1.1 Administrative Units of the Dsistrict



Fig 1.3 Tehsil Map of the District

1.5 Demography:

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171. and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23,911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932.. Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76% and female literacy was 85.07%. 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68.30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census

1.6 Basin/ Sub Basin:

The district falls in the Godavari Basin which is further divided into Kanhan sub basin. and Pench Sub basin which is drained in the south. Important Rivers of the district are Kanhan, Pench, Nag, Kolar, Pur, Wainganga and Wardha.

CHAPTER 2

OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

Nagpur district is moderately rich in minerals. Deposits of Coal, Manganese Ore, Dolomite, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore and Quartz etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan, Kamptee apart from the high grade coal found in Umred tahsil.

Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saoner tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district. The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.

Sr.No	Mineral	No of Mines
1	Manganese Ore	41
2	Coal	13
3	Dolomite	15
6	Sand (Stowing)	02
7	Stone Quarry	87

Table 2: Mineral production in Nagpur district

The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned. As such the demand of minor mineral in the District started an increasing trend. The increase could be gauged from the fact that during year 16-17 the royalty receipt on minor mineral was merely Rs. 5.15 crores which has increased to Rs. 10.72 crores (Approx.) in the year 17-18. The details of royalty collected from minor mineral from 2015-2016 to 2020-21 are given in the Chapter 5. The quantity of minor mineral consumption is a thermometer to assess the quantity of developmental activities being undertaken in a particular area. In order to meet the requirement of raw material for construction, the extraction of sand, stone and bajri is being carried out exclusively from the river beds and stone quarries respectively. The demand of sand is mainly met through by river borne sand whereas the demand of bajri/grit is either met through river borne collection

or through manufactured grit by stone crushers. The demand of dressed or undressed stone is met through the broken rock material from the hill slope. The 8 local residents used to lift gravel etc. from the river beds to meet out their bonafide requirement. However after coming into being the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) and Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, and Revised sand Mining Policy dated 03/09/2019 for sand mining projects as the mining was allowed in accordance to the rules.

Main Objectives of Sustainable Sand Mining:

- To ensure that sand and gravel mining is done in environmentally sustainable and socially responsible manner.
- To ensure availability of adequate quantity of aggregate in sustainable manner.
- To improve the effectiveness of monitoring of mining and transportation of mined out material.
- Ensure conservation of the river equilibrium and its natural environment by protection and restoration of the ecological system.
- Avoid aggradations at the downstream reach especially those with hydraulic structures such as jetties, water intakes etc.
- Ensure that the rivers are protected from bank and bed erosion beyond its stable profile.
- No obstruction to the river flow, water transport and restoring the riparian rights and in stream habitats.
- Avoid pollution of river water leading to water quality deterioration.
- To prevent depletion of ground water reserves due to excessive draining out of groundwater.

CHAPTER 3
THE LIST OF SAND MINING LEASES IN THE DISTRICT
WITH LOCATION, AREA AND PERIOD OF VALIDITY

Details of the Sand mining leases in the district are as follows.

Table No.1 List of Sand Ghats Proposed / auctioned in the year 2016-2017

Sand Ghat Name	Taluka	Survey No.	Area in Hec	Available Brass	Upset Price
Waregaon 2	Kamptee	204 ,3 part	3.00 hec	10601	5820000
Khairi Panjab Nalla 2	Mauda	1 adjoining and 4 part	2.25 hec	3975	1590000
Saholi B	Parseoni	136/2,141/2,1116/2,115/2,113/2,112/2,110/2	4.16 hec	14700	13304000
Walni	Saoner	8 part,9,10 Adjoining	3.60 hec	6360	8733000
Kodamendi	Mauda	115,116 Adjoining	0.30 hec	530	262000
Khedikhurd	Narkhed	15,16,18,19,20/1,20/2,3,4,5/1,5/2,6/1,6/2,7,8 part	2.00 hec	7067	2827000
Bawangaon D	Saoner	208,204 Adjacent 203 some part	3.60 hec	12721	7544000
Palora A	Parseoni	150part	2.47 hec	4373	2440134
Mahalgaon	Mauda	260part	4.50 hec	7950	4389000
Naygaon Thakre	Narkhed	103part	1.87hec	3313	1326000
Thadipauni	Narkhed	80	0.80 hec	2845	1138000
Moregaon	Mauda	22,23adjoining	1.82 hec.	3216	1293000
Saholi A	Parseoni	15,16,17,18,19,20,21	4.80 hec.	8481	8828721
Wagoda	Saoner	127/1 Adjoining Some Part	4.68 hec	24837	11996271
Pardi	Parseoni	135,138 part	4.00 hec	7067	7258000
Ramdondri A	Saoner	144, 143 part	5.00 hec	8834	12130000
Umri Ja Nalla	Saoner	89,91,94part	3.71 hec	6555	2622000
Karajghat	Saoner	15 Adjacent	4.00 hec	14134	8382000
Wadna	Mauda	53,54part 55 part 52	3.02 hec	10689	4319000
Sihora	Parseoni	169, 142 part	2hec	3534	2736000
Bhamewada B	Kamptee	old 115 new 124Adjacent	1.35 hec	2385	

Indora A	Mauda	159 and 165/2 Adjacent	0.39 hec	689	277000
Bawangaon A	Saoner	254,253,251, 252	3.5 hec	12367	5500500
Wakodi B	Mauda	44 part	2 hec	7067	9703000
Mohadi	Mauda	89,90part	0.36 hec	636	257000
Gowari	Mauda	63/2, 69 and 79 some part	0.36 hec	636	257000
Nandapur	Saoner	220,221,237, 238	3.85 hec	13604	8067172
Itgaon	Parseoni	420 some part 421 and 422	2.24 hec	3958	4674398
Khairi Panjab Nalla 1	Saoner	5,6,14 part	0.75 hec	1325	530000
Chichghat	Kuhi	46 Adjoining	3 hec	5300	2120000
Sirsoli	Mauda	10,11part	2.34 hec	4134	1435532

Table No.2 List of sand ghat proposed in 2017-2018

Sr. No.	Name of Sand Ghat	Tehsil	Name of River / Nalas	Gut number on the river bank near the sand Ghat	Area (Hector)	Available Sand (Brass)	Upset price
1	2	3	4	5	6	7	8
1	Rohna	Saoner	Kanhan River	168	2.8 0	4947	7267150
2	Dahegaon R A	Saoner	Kolar River	243	1.2 5	2208	3243560
3	Esapur -A	Saoner	Kanhan River	92, 91,93,94,115 adjacent part	3.6 0	12720	18685680
4	Randongri-A	Saoner	Kanhan River	30,31,32,and 33 Excluding the adjacent part	3.1 5	11130	23539950
5	Kairi Panjab Nalah -A	Saoner	Kairi Panjab Nalah	17,18 adjacent part	0.4 0	706	955800
6	Khapapeth	Saoner	Kanhan River	The northern part of 284 up to 500 meters	4.0	14134	10982120
7	Gosevadi-A	Saoner	Kanhan River	2572,85,286	4.8 0	8480	12457120
8	Kochhi	Saoner	Kanhan River	2632,64,267	4.5 0	7950	4603050
9	Vaki-A	Saoner	Kanhan River	180,181,182Part	4.0 5	7155	9823820
10	Temburdoh-A	Saoner	Kanhan River	260,274,279 adjacent part	3.2 0	11308	6705650
11	Temburdoh-B	Saoner	Kanhan River	2502,40,239	3.2 0	11308	6705650

12	Pardi-B	Parshivani	Kanhan River	144,142 / 5 to 142/9 (excluding 100 meters on both sides of the bridge)	2.50	4417	5167890
13	Pardi-C	Parshivani	Kanhan River	146, 148, 153, 157 (excluding 100 meters on both sides of the bridge)	2.50	4417	5167890
14	Pipla	Parshivani	Pench River	353/1,353/2,354	1.89	3339	1863170
15	Bakhari	Parshivani	Pench River	188,189,190 (excluding 100 meters distance of municipal supply well and bridge)	1.93	3418	1907250
16	Palora-B	Parshivani	Pench River	43/1,43/2,45/1	1.75	3092	1725340
17	Sonegaon (Raja)-No.2B	Kamptee	Kanhan River	341 Part,342,345	3.75	13250	13223500
18	Neri Ghat No.2A	Kamptee	Kanhan River	217,219,220,221,223and 224 Part	5	8833	8815340
19	Neri Ghat No.2B	Kamptee	Kanhan River	224 Part 230,227,229	5	8833	8815340
20	Ungaon Ghat No.2A	Kamptee	Kanhan River	206, 208, 211, 212 Part	4.5	7950	7934100
21	Ungaon Ghat No.2B	Kamptee	Kanhan River	212 Part, 217,218,219	4.5	7950	7934100
						157545	167523470

- In the year 2018-2019 auctions of sand ghat were not carried out due to PIL67/2017 in High Court, Nagpur

Table No.3 List of Sand ghat proposed for the year 2018-2019

Sr No	Name of Sand Ghat	Tahsil	Name of River/Nallas	Nearest Sr No.	Depth	Length in Meter	Width in Meter	Area in Hectore	Quantity in Brass
1	Temburdoh-A	Saoner	Kanhan	260,274,279Adjoining	0.5	400	80	3.2	5654
2	Temburdoh-B	Saoner	Kanhan	239Part,240,250Part	1	400	80	3.2	11307
3	Walni	Saoner	Kanhan	9,8,10Part and 276 survey no. of river	0.3	400	80	3.2	3392
4	Ramdengri A	Saoner	Kanhan	31,32,30	0.9	450	70	3.15	10018
5	Ramdengri B	Saoner	Kanhan	143,144 part	0.5	400	100	4	7076
6	Ramdengri k	Saoner	Kanhan	140,135 part	0.5	400	70	2.8	4947
7	Badegaon	Saoner	Kanhan	431,433,435,436,437 Adjoining	0.75	500	90	4.5	11926
8	Khapa	Saoner	Kanhan	The northern part of	0.60	500	80	4.00	8481

	peth			284 adjoins up to 500 m					
9	Khairi Panjab	Saoner	Khairi Panjab	18 Some part of 19 adjacent	0.40	200	20	0.40	565
10	Wakodi	Saoner	Kanhan	44 Adjoining	0.40	500	90	4.50	6360
11	Gosewadi A	Saoner	Kanhan	285,286,287 Adjoining	0.60	480	100	4.80	10177
12	Gosewadi B	Saoner	Kanhan	254,253 Adjoining	0.50	320	75	2.40	4240
13	Nandapur	Saoner	Kanhan	220 Adjoining	0.40	475	80	3.80	5371
14	Esapur A	Saoner	Kanhan	91 some part 93,94,115 in adjacent river basin Survey.No.92	0.40	450	80	3.60	5088
15	Esapur B	Saoner	Kanhan	85,87 in the adjacent river basin, Survey.No.92	0.85	300	80	2.40	7208
16	Rohana	Saoner	Kanhan	129,132 degrees in the adjacent river basin, Surevy no.168	0.75	350	80	2.10	7420
17	Dahegaon Rangari B	Saoner	Kanhan	211,212,214 Nearby and river basin Surevy.No.244	0.40	300	40	1.20	1696
18	Waki A	Saoner	Kanhan	180,181,182 Adjoining	0.40	450	90	4.05	5724
19	Waki B	Saoner	Kanhan	189, 190, 191 Adjoining	0.50	350	80	2.80	4947
20	Raiwadi	Saoner	Kanhan	185,183,180,179 व 188 Adjoining (Survey no..171 and 190 Excluding)	0.60	450	75	3.37	7155
21	Ungao n	Kamptee	Kanhan	222,219,218,217,212 ,211 Adjoining	0.40	650	74	4.81	6799
22	Waregaon A	Kamptee	Kolar	204 and 3 Adjacent	1.00	350	50	1.75	6184
23	Waregaon B	Kamptee	Kolar	10/1, 10/2, 13/1, 13/2, Adjoining	0.60	550	58	3.19	6763
24	Bina	Kamptee	Kanhan	56,57,53/3/1 ,58 Adjoining	0.40	830	60	4.98	7039
25	Sonegaon Raja	Kamptee	Kanhan	338,339, 337Adjoining	1.00	752	65	4.88	17272
26	Chikna	Kamptee	Kanhan	7 some part 8, 9, 10, 11 and 12 some part	1.00	450	40	1.8	6360
27	Neri	Kamptee	Kanhan	217 some part 219, 220, 221, 223 and 224/1 some part	1.00	565	86	4.85	17170
28	Bhamewada	Kamptee	Kanhan	128 some part, 144 some part,135/2,136/2,129 Adjacent	0.80	600	30	1.8	5088
29	Nayakund	Parseoni	Pench River	33 and 26 Adjoining	0.40	200	100	2.00	2827
30	Pardi K	Parseoni	Kanhan	153 Adjoining	0.50	250	100	2.50	4417

31	Wagoda	Parseoni	Pench River	127/1 Adjoining	0.50	334	120	4.00	7081
32	Ghatrohana	Parseoni	Pench River	54 Some part 148 Adjoining	0.40	300	100	3.00	4240
33	Yesamba	Parseoni	Pench River	207 Adjoining	0.80	304.5	36	1.09	3099
34	Sihora	Parseoni	Kanhan	170/1,170/2 Some part 170/3,170/4 Adjacent	0.50	200	90	1.80	3180
35	Palora A	Parseoni	Pench River	150 Adjoining	0.40	200	50	1.00	1413
36	Pimpla	Parseoni	Pench River	353 Adjacent 354 Adjoining	0.50	215	90	1.93	3419
37	Chichghat	Kuhi	Kanhan	45 Adjoining	0.80	200	100	2.00	5654
38	Khedikhurd A	Narkhed	Wardha	3,4,5,6,7,8,15,16 Adjacent	0.40	750	25	1.87	2650
39	Khedikhurd B	Narkhed	Wardha	155,157,168,169 Adjoining	0.40	1150	25	2.87	4064
40	चिकना घाट	Mauda	Kanhan	532 some part 541,542 Adjacent	0.50	550	90	4.95	8746
41	Mohkhedi A	Mauda	Kanhan	117,118 Adjoining	0.90	490	100	4.9	15583
42	Mohkhedi B	Mauda	Kanhan	132,133,135,136 Adjoining	0.50	490	100	4.9	8657
43	Mahalgaoon A	Mauda	Sur	Some parts of Survey No. 6 & 260 and Survey No. 23,24,25,26,261 in front of Mauja Pipalgaon	0.50	380	60	2.28	4028
44	Mahalgaoon B	Mauda	Sur	385,386,387,389 Adjoining	0.50	275	70	1.92	3401
45	Sirsoli	Mauda	Sur	188 Adjoining	0.40	170	75	1.27	1802
46	Kirnapur	Mauda	Kanhan	109, 110, 111, 107, 105, 104,103 Adjacent	1.00	620	80	4.96	17527
47	Wakeshwar	Mauda	Sur	16 Adjacent 17 Adjacent	0.40	150	30	0.45	636
48	Belda	Ramket	Kundiya Nalla	180 Adjoining	0.40	300	25	2.27	1060

- In the year 2019-2020 Sand ghats were not auctioned because of PIL 11/208

Table No.4 List of Sand ghat proposed for the year 2020-2021

List of in the district 26 Sand Ghats were finalized for the auction in 2020-2021. The details of there are as follows:

SR No.	Name of Sand Ghat	Taluka	Name of River	Adjacent Survey number to Sand ghat	Length (Meter)	Width (Meter)	Area (Hector)	Extractable depth (Meter)	Available Quantity (Brass)
1.	Raiwadi-A	Savner	Kanhan	179, 180, 183, 184, 186	450	75	3.37	0.40	4770
2.	Temburdoh	Savner	Kanhan	1(Part), 279, near gavthan	425	75	3.18	0.80	9011
3.	Wakodi	Savner	Kanhan	44 (Part)	500	70	3.35	0.80	9894
4.	Ramdongari -B	Savner	Kanhan	143 (Part),144 (Part)	400	100	4.00	0.30	4240
5.	Khapapeth	Savner	Kanhan	284 North part 500 m	500	75	3.75	0.40	5300
6.	Karajghat	Savner	Kanhan	15 (Part)	470	75	3.52	0.80	9965
7.	Isapur-A	Savner	Kanhan	90 (Part)93,94, 115, 116	475	80	3.80	0.60	8057
8.	Rohana	Savner	Kanhan	168, 3 (Part)7 B(Part)	350	60	2.10	0.60	4452
9.	Bawangaon-A	Savner	Kanhan	252, 253	243	80	1.94	0.50	3435
10.	Ghatrohana	Parshivani	Pench	53 (Part), 52, 46, 45 (Part)	500	60	3.00	0.80	8481
11.	Paradi	Parshivani	Kanhan	153, 157	740	90	6.66	0.50	11767
12.	Sinagdeep	Parshivani	Kanhan	80, 81, 82	550	80	4.40	0.50	7774
13.	Palora	Parshivani	Pench	43 (Part)	250	80	2.00	0.50	3534
14.	Pipla	Parshivani	Pench	354 (Part), 353 (Part)	215	90	1.93	0.50	3419
15.	Sihora	Parshivani	Kanhan	170/1,170/2 (Part)	500	90	4.50	0.50	7951
16.	Waghoda	Parshivani	Pench	127/1 (Part)	334	120	4.00	1.00	14163

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17.	Yesamba	Parshivan i	Pench	207 (Part)	210	75	1.57	2.00	11131
18.	Garanda	Parshivan i	Pench	104 (Part)	400	80	3.20	1.50	16961
19.	Bina	Kamptee	Kanhan	57/1, 57/2, 56,53/A1	500	100	5.00	0.50	8834
20.	Sonegaon Raja	Kamptee	Kanhan	338, 339, 337(Part)	752	65	4.88	0.50	8636
21.	Ungaon	Kamptee	Kanhan	212, 217, 218, 219, 222, 211 (Part)	650	74	4.81	0.50	8498
22.	Chikna-A	Kamptee	Kanhan	8, 9/1, 9/2, 10/1, 10/2, 11, 12 (Part)	450	50	2.25	1.00	7951
23.	Chichghat	Kuhi	Kanhan	45 part	450	90	4.05	0.80	11449
24.	Chiknaghat	Mouda	Kanhan	543/1,542,5 41,543/2	540	90	4.86	1.50	25760
25.	Mohkhedi	Mouda	Kanhan	117, 118, 119	750	100	7.5	1.00	26502
26.	Kirnapur	Mouda	Kanhan	109,110,1 11 ,107,106,1 0 5,113,115, 1 16,118,11 9, 4,5	850	80	6.8	0.8	19223

Table No.5 List of Sand Ghats proposed for the year 2021-2022

Sr No.	Name of Sand Ghat	Taluka	Name Of River	Adjacent Survey Number of Sand Ghat	Length (Meter)	Width (Meter)	Area (Hector)	Depth	Brass
1	Gosewadi A	Saoner	Kanhan	285,286,287 part	420	100	4.20	0.50	7420
2	Bawangao n B	Saoner	Kanhan	203,204,208	450	60	2.70	0.60	5724
3	JuniKampt ee(Gadega on)	Parseoni	Kanhan	241/2,230	200	100	2.00	0.80	5653
4	Pardi k	Parseoni	Kanhan	153	450	100	4.50	0.80	12720
5	Saholi A	Parseoni	Kanhan	15,16,17,18,19	500	50	2.50	0.80	7067
6	Saholi B	Parseoni	Kanhan	115/2,112/2, 136/2,141/2	600	60	3.60	1.00	12720
7	Kirnapur	Mauda	Kanhan	103,104,105,107,109,110,111,113,115,116,117,118,119,4,5	620	80	4.95	0.80	14021
8	Mohkhedi	Mauda	Kanhan	117,118,119	490	100	4.9	0.70	12120
9	Neeri Ghat	Kampthe	Kanhan	217/2/3,219,220,221/1/2,223,224/1 Part	565	86	4.85	1.50	25754
10	Chichghat	Kuhi	Kanhan	43 area2.08 ha	300	100	3.00	0.50	5300
11	Wakodi	Saoner	Kanhan	44part	500	70	3.50	0.40	4946
12	Raywadi A	Saoner	Kanhan	179,180,183,184,186,185 &188 part	450	75	3.37	0.40	4770
13	Rohana	Saoner	Kanhan	168,3part 7B part	350	60	2.10	0.50	3710
14	Esapur A	Saoner	Kanhan	90part, 93,94,115,116	475	80	3.8	0.45	6042
15	Karajgha t	Saoner	Kanhan	15part	470	75	3.52	0.40	4982
16	Bawangao n A	Saoner	Kanhan	252,253	243	80	1.94	0.40	2747
17	Ramagon gri B	Saoner	Kanhan	144part, 143 Part	400	100	4.0	0.30	4240
18	Ghatroha na	Parseoni	Pench	Part53,52,46,45 Part	500	60	3.00	0.40	4240
19	Sihora	Parseoni	Kanhan	170/1,170/2 part	500	90	4.50	0.30	4770
20	Old	Parseoni	Pench	127/1 part	334	120	4.0	0.90	12746

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	Waghoda								
21	Yesamba	Parseoni	Pench	207 part	210	75	1.57	0.90	5008
22	Garanda	Parseoni	Pench	104 part	400	80	3.20	0.70	7915
23	Pipla	Parseoni	Pench	354 part,353 part	215	90	1.93	0.40	2734
24	Palora B	Parseoni	Pench	43 part	250	80	2.00.	0.40	2826
25	Singardip	Parseoni	Kanhan	80,81,82	550	80	4.40	0.30	4664
26	Chiknagh at	Mauda	Kanhan	543/1,542,541,543/2	540	90	4.86	0.60	10303
27	Chikna A	Kampthe	Kanhan	8,9/1,9/2,10/1,10/2,11,12 part	450	50	2.25	0.50	3975
28	Ungaon	Kampthe	Kanhan	212,217,218,219,222,211 part	650	74	4.81	0.30	5098

Table No.6 List of Sand Ghats proposed for the year 2022-2023

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)			Area (Ha)	Mineable Depth (m)	Brass
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 543/1, 542, 541 and 543/2 adjacent part	540	x	65	3.51	0.90	11162
2	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	x	80	4.95	0.80	14021
3	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, adjacent part	490	x	100	4.90	0.80	13851
4	Mouda	Mahalgaon-A	Sur	S.No. 261 Pimpalgaon S.No. 23part, 24, 25, 26 adjacent part	380	x	60	2.28	0.50	4028
5	Mouda	Mahalgaon-B	Sur	S.No. 373, 368, 387 adjacent part	275	x	70	1.92	0.50	3401
6	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	250	x	45	1.125	0.50	1987
7	Mouda	Vadhna	Kanhan	S.No. 52 part, 54, 55 adjacent part	300	x	80	2.40	0.60	5088
8	Mouda	Dahadi	Kanhan	107 part, 108, 120, 110, 111	350	x	30	1.05	0.50	1855
9	Parseoni	Garanda	Pench	S.No. 104 Part	345	X	45	1.55	0.80	4388
10	Parseoni	Yesamba	Pench	S.No. 207 part	302	X	35	1.05	0.90	3361
11	Parseoni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230 part, 241/1 part	400	X	50	2.00	0.80	5653
12	Parseoni	Ghat Rohana	Pench	S.No. 46 part	500	X	60	2.78	0.70	7420
13	Parseoni	Palora	Pench	S.No. 103 Part, 99	200	X	60	1.20	1.0	4240

				Part, 43 Part						
14	Parseoni	Singardip	Kanhan	S.No. 80, 81, 82	330	X	75	2.47	1.0	8745
15	Parseoni	Pipla	Pench	S.No. 353 Part, 354 Part	215	X	90	1.93	0.90	6153
16	Parseoni	Waghoda	Pench	S.No. 127 part	410	X	120	4.92	1.0	17385
17	Parseoni	Saholi-B	Kanhan	S.No. 108/2, 109/2, 110/2, 112/3, 113/2, 115/2, 116/2 Part	360	X	30	1.10	0.60	2289
18	Parseoni	Nayakund	Pench	33 Part, 34 Part	360	X	45	1.62	0.60	3434
19	Parseoni	Pardi K	Kanhan	153, 146 part	450	X	100	4.50	0.90	14310
20	Parseoni	Saholi-A	Kanhan	S.No. 15, 16, 17, 18	400	x	40	1.60	0.50	2826
21	Kamptee	Bina	Kanhan	53 part, 56, 57/1, 57/2 part	490	x	100	4.90	1.0	17314
22	Kamptee	Ungaon	Kanhan	S.No. 211part, 212, 217, 218, 219, 222	650	x	74	4.81	1.0	16996
23	Kamptee	Neri	Kanhan	S.No. 217, 219, 220, 221, 223, 224 Part	565	x	86	4.85	1.0	17169
24	Kamptee	Chikna-A	Kanhan	S.No. 9, 10, 11, 12	500	x	50	2.50	0.80	7067
25	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	x	50	2.00	1.20	8480

26	Kamptee	Bhamewada	Kanhan	S.No. 128 part, 129, 135/2, 136, 144 Part	600	x	30	1.80	0.50	3180
27	Saoner	Gosewadi -A	Kanhan	S.No. 285, 286, 287	480	x	100	4.80	0.80	13568
28	Saoner	Wakodi	Kanhan	S.No. 44 part	500	x	70	3.50	0.80	9894
29	Saoner	Isapur-A	Kanhan	S.No. 94 part, 115, 116, 117, 118, 119, 120, 126 part	450	x	80	3.60	0.80	10176
30	Saoner	Rohana	Kanhan	3 part 7 part	350	x	60	2.10	1.0	7420
31	Saoner	Ramdongri-A	Kanhan	30 part, 31, 32	450	x	70	3.15	0.80	8904
32	Saoner	Ramdongri-B	Kanhan	143 part, 144 part	400	x	100	4.00	0.80	11307
33	Saoner	Karajghat	Kanhan	S.No. 15, part	470	x	75	3.52	0.60	7473
34	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	x	75	3.75	0.60	7950
35	Saoner	Kocchi	Kanhan	S.No. 264, 267 Part, 263 Part	450	x	80	3.60	0.50	6360
36	Saoner	Raiwadi	Kanhan	S.No. 190	300	x	75	2.25	0.80	6360
37	Saoner	Tembhurdoh	Kanhan	S.No. 279, 274 and Old Gaonthan part	300	x	60	1.80	0.80	5088
38	Saoner	Kawadas	Kolar	S.No. 219, 220, 244	450	x	35	1.57	0.50	2782
39	Saoner	Bawangaon-B	Kanhan	203, 204, 208	450	x	60	2.70	0.60	5724
40	Kuhi	Chichghat	Kanhan	43 part	300	x	100	3.00	0.50	5300
Total										314109

Table No.7 List of Sand Ghats proposed for the year 2023-2024

SI No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)			Area (Ha)
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 543/1, 542, 541 and 543/2 adjacent part	540	x	65	3.51
2	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	x	80	4.95
3	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, 119 adjacent part	490	x	100	4.90
4	Mouda	Vadhna	Kanhan	S.No. 52, 53, 54, 55 adjacent part	300	x	80	2.40
5	Mouda	Panmara	Kanhan	S.No. 230 adjacent part	650	x	75	4.87
6	Mouda	Dahadi	Kanhan	S.No. 110, 111 adjacent part	125	x	35	0.38
7	Mouda	Morgaon	Kanhan	S.No. 22, 23 adjacent part	250	x	60	1.50
8	Mouda	Mahalgaon-A	Sur	S.No. 6, 260 Pimpalgaon S.No. 23/2, 24, 25, 26 adjacent part	380	x	60	2.28
9	Mouda	Mahalgaon-B	Sur	S.No. 373, 368, 387 adjacent part	275	x	70	1.92
10	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	170	x	75	1.27
11	Mouda	Wakeshwar	Sur	S.No. 15, 16/1, 17/1 adjacent part	130	x	20	0.26
12	Mouda	Govri	Sand River	S.No. 62, 63/1, 63/2, 67, 73	90	x	30	0.27
13	Ramtek	Loda	Bawanthadi	S.No. 102	68	x	43	0.29

				adjacent part				
14	Ramtek	Belda	Tundiya Nalla	S.No. 180 adjacent part	97	x	33	0.32
15	Narkhed	Saiwada	Wardha	S.No. 13, 14/1, 14/2, 16/1, 16/12, 17	900	x	40	3.60
16	Narkhed	Junona (Gharad)	Madar	S.No. 6, 7, 8, 16, 17, 18, 19	500	x	40	2.00
17	Narkhed	Bopapur	Madar	S.No. 102/1, 102/2, 124, 125/1, 126, 127, 129/1A, 128/1B, 128/2	450	x	30	1.35
18	Narkhed	Narsingi	Madar	S.No. 162, 159, 158/A, 158/B, 157, 156, 155, 154, 153, 151	600	x	20	1.20
19	Narkhed	Naigaon (Thakre)	Jamb River	S.No. 103, 104	750	x	40	3.0
20	Narkhed	Kharbadi	Wardha	S.No. 2, 3, 4, 5/1, 5/2, 6/1, 6/2, 7, 169, 185	1000	x	40	4.0
21	Parseoni	Garanda	Pench	S.No. 104/1/A/1, 104/1/A/2, 104/1/B/1, 104/1/B/2, 104/2/A, 104/2/B/2	345	X	45	1.55
22	Parseoni	Yesamba	Pench	S.No. 207 part	302	X	35	1.05
23	Parseoni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230/1 part	400	X	50	2.00
24	Parseoni	Ghat Rohana	Pench	S.No. 52, 53, 45, 46	500	X	60	2.78
25	Parseoni	Palora	Pench	S.No. 43/1, 43/2, 43/3, 102/1, 102/2, 102/4, 105/5	200	X	60	1.20
26	Parseoni	Singardip	Kanhan	S.No. 80, 81/1, 81/2, 82	330	X	75	2.47

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27	Parseoni	Sihora	Kanhan	S.No. 169/2, 169/3, 169/4, 169/5, 170/1, 170/2	500	x	90	4.50
28	Parseoni	Pipla	Pench	S.No. 353/1, 353/2, 354	215	X	90	1.93
29	Parseoni	Waghoda	Pench	S.No. 127/1	410	X	120	4.92
30	Parseoni	Saholi-A	Kanhan	S.No. 15, 16, 17, 18, 19, 20	600	x	50	3.00
31	Parseoni	Saholi-B	Kanhan	S.No. 108/2, 109/2, 110/2, 112/2, 113/2, 115/2, 116/2	360	X	30	1.10
32	Parseoni	Nayakund	Pench	33, 26	360	X	45	1.62
33	Parseoni	Pardi K	Kanhan	153	450	X	100	4.5
34	Kamptee	Bina	Kanhan	S.No. 57/1, 57/2, 56, 53/3	500	x	100	5.00
35	Kamptee	Waregaon	Kolar	10/1, 10/2, 13/2	390	x	60	2.34
36	Kamptee	Sonegaon Raje	Kanhan	S.No. 337 part, 338, 339	752	x	65	4.88
37	Kamptee	Ungaon	Kanhan	S.No. 211, 212, 217, 218, 219, 222	650	x	74	4.81
38	Kamptee	Neri	Kanhan	S.No. 217/2/3, 219, 220, 221/1/2, 223, 224	565	x	86	4.85
39	Kamptee	Chikna-A	Kanhan	S.No. 9/1, 9/2, 10/1, 10/2, 11, 12	500	x	50	2.50
40	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	x	50	2.00
41	Kamptee	Bhamewada	Kanhan	S.No. 136/2, 135/2, 129, 144 part	600	x	30	1.80
42	Saoner	Waki-A	Kanhan	S.No. 180, 181, 182	450	x	90	4.05
43	Saoner	Waki-B	Kanhan	S.No. 189, 190, 191	350	x	80	2.80
44	Saoner	Gosewadi -A	Kanhan	S.No. 285, 286, 287	480	x	100	4.80

45	Saoner	Gosewadi -B	Kanhan	S.No. 253, 254	320	x	75	2.40
46	Saoner	Wakodi	Kanhan	S.No. 44	500	x	70	3.50
47	Saoner	Dohanghat	Kanhan	S.No. 2, 3, 36	300	x	70	2.10
48	Saoner	Walni	Kanhan	S.No. 276, 7, 8/1, 8/2, 9	480	x	80	3.84
49	Saoner	Isapur-A	Kanhan	S.No. 92, 64, 115, 116, 117, 118, 119, 120, 126	450	x	80	3.60
50	Saoner	Isapur-B	Kanhan	S.No. 92, 85/1, 85/2, 87, 87/3, 87/1	380	x	80	3.04
51	Saoner	Rohana	Kanhan	168, 3 part 7 B part	350	x	60	2.10
52	Saoner	Ramdongri-A	Kanhan	30, 31, 32	450	x	70	3.15
53	Saoner	Ramdongri-B	Kanhan	143 part,144 part	400	x	100	4.00
54	Saoner	Ramdongri-K	Kanhan	140, 135	400	x	70	2.80
55	Saoner	Bawangaon- A	Kanhan	252, 253	170	x	80	1.36
56	Saoner	Bawangaon- B	Kanhan	203, 204, 208	450	x	60	2.70
57	Saoner	Karajghat	Kanhan	S.No. 15, part 5	470	x	75	3.52
58	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	x	75	3.75
59	Saoner	Kocchi	Kanhan	S.No. 264, 267, 263	450	x	80	3.60
60	Saoner	Raiwadi	Kanhan	S.No. 190, 191 Adjoining	300	x	75	2.25
61	Saoner	Tembhurdoh	Kanhan	S.No. 279, 274 Adjoining	300	x	60	1.80
62	Saoner	Nandapur	Kanhan	S.No. 220A, 221	475	x	80	3.80
63	Saoner	Bhanegaon-A	Kanhan	S.No. Old 58,	200	x	80	1.60
	Saoner	Bhanegaon-B	Kanhan	227, 240, 241, 242/1, 242/2, 243/1, 243/2	180	x	100	1.80
64	Saoner	Patansaongi	Kolar	S.No. 337,443, 441/1, 446	80	x	30	0.24
65	Saoner	Kawadas	Kolar	S.No. 218, 219, 220, 244, 243	450	x	35	1.57
66	Saoner	Dahegaon Rangari-A	Kolar	S.No. 243 ँ 165, 167, 168,	250	x	50	1.25

2982

				169				
67	Saoner	Dahegaon Rangari-B	Kolar	S.No. 244, 211, 212, 213, 214/1, 214/2, 215, 242, 245	300	x	40	1.20
68	Saoner	Chicholi	Kolar	Old S.No. 89 New S.No. 59 लगत	150	x	50	0.75
69	Saoner	Khairi (Panjab)	Khairi (Panjab) Nallah	S.No. 18, 19 adjacent part	200	x	20	0.40
70	Saoner	Umri (ja)	Umri Ja	S.No. 94, 91, 149, 152, 138	300	x	30	0.90

Table No.8 List of Pre Monsoon Surveyed Sand Ghats for the year 2023-2024

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)			Area (Ha)	Excavated/ Non excavated
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 543/1, 542, 541 and 543/2 adjacent part	540	x	65	3.51	Excavated
2	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	x	80	4.95	Non Excavated
3	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, adjacent part	490	x	100	4.90	Excavated
4	Mouda	Mahalgaon-A	Sur	S.No. 261 Pimpalgaon S.No. 23part, 24, 25, 26 adjacent part	380	x	60	2.28	Excavated
5	Mouda	Mahalgaon-B	Sur	S.No. 373, 368, 387 adjacent part	275	x	70	1.92	Excavated
6	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	250	x	45	1.125	Non Excavated
7	Mouda	Vadhna	Kanhan	S.No. 52 part, 54, 55 adjacent part	300	x	80	2.40	Non Excavated
8	Mouda	Dahadi	Kanhan	107 part, 108, 120, 110, 111	350	x	30	1.05	Excavated
9	Parseoni	Garanda	Pench	S.No. 104 Part	345	X	45	1.55	Non Excavated
10	Parseoni	Yesamba	Pench	S.No. 207 part	302	X	35	1.05	Excavated
11	Parseoni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230 part, 241/1 part	400	X	50	2.00	Excavated
12	Parseoni	Ghat Rohana	Pench	S.No. 46 part	500	X	60	2.78	Non Excavated
13	Parseoni	Palora	Pench	S.No. 103 Part, 99	200	X	60	1.20	Excavated

				Part, 43 Part					
14	Parseoni	Singardip	Kanhan	S.No. 80, 81, 82	330	X	75	2.47	Excavated
15	Parseoni	Pipla	Pench	S.No. 353 Part, 354 Part	215	X	90	1.93	Excavated
16	Parseoni	Waghoda	Pench	S.No. 127 part	410	X	120	4.92	Excavated
17	Parseoni	Saholi-B	Kanhan	S.No. 108/2, 109/2, 110/2, 112/3, 113/2, 115/2, 116/2 Part	360	X	30	1.10	Excavated
18	Parseoni	Nayakund	Pench	33 Part, 34 Part	360	X	45	1.62	Excavated
19	Parseoni	Pardi K	Kanhan	153, 146 part	450	X	100	4.50	Excavated
20	Parseoni	Saholi-A	Kanhan	S.No. 15, 16, 17, 18	400	x	40	1.60	Excavated
21	Kamptee	Bina	Kanhan	53 part, 56, 57/1, 57/2 part	490	x	100	4.90	Excavated
22	Kamptee	Ungaon	Kanhan	S.No. 211part, 212, 217, 218, 219, 222	650	x	74	4.81	Non Excavated
23	Kamptee	Neri	Kanhan	S.No. 217, 219, 220, 221, 223, 224 Part	565	x	86	4.85	Excavated
24	Kamptee	Chikna-A	Kanhan	S.No. 9, 10, 11, 12	500	x	50	2.50	Excavated
25	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	x	50	2.00	Non Excavated

26	Kamptee	Bhamewada	Kanhan	S.No. 128 part, 129, 135/2, 136, 144 Part	600	x	30	1.80	Non Excavated
27	Saoner	Gosewadi -A	Kanhan	S.No. 285, 286, 287	480	x	100	4.80	Excavated
28	Saoner	Wakodi	Kanhan	S.No. 44 part	500	x	70	3.50	Non Excavated
29	Saoner	Isapur-A	Kanhan	S.No. 94 part, 115, 116, 117, 118, 119, 120, 126 part	450	x	80	3.60	Non Excavated
30	Saoner	Rohana	Kanhan	3 part 7 part	350	x	60	2.10	Non Excavated
31	Saoner	Ramdongri-A	Kanhan	30 part, 31, 32	450	x	70	3.15	Non Excavated
32	Saoner	Ramdongri-B	Kanhan	143 part, 144 part	400	x	100	4.00	Non Excavated
33	Saoner	Karajghat	Kanhan	S.No. 15, part	470	x	75	3.52	Non Excavated
34	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	x	75	3.75	Excavated
35	Saoner	Kocchi	Kanhan	S.No. 264, 267Part, 263 Part	450	x	80	3.60	Non Excavated
36	Saoner	Raiwadi	Kanhan	S.No. 190	300	x	75	2.25	Excavated
37	Saoner	Tembhurdoh	Kanhan	S.No. 279, 274 and Old Gaonthan part	300	x	60	1.80	Excavated
38	Saoner	Kawadas	Kolar	S.No. 219, 220, 244	450	x	35	1.57	Non Excavated
39	Saoner	Bawangaon-B	Kanhan	203, 204, 208	450	x	60	2.70	Non Excavated
40	Kuhi	Chichghat	Kanhan	43 part	300	x	100	3.00	Non Excavated

Table No.9 List of Sand Ghats applied for revalidation of EC for the year 2023-2024

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)		Depth	Area	Brass
1	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	80	0.80	4.95	14021
2	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	250	45	0.50	1.125	1987
3	Mouda	Vadhna	Kanhan	S.No. 52 part, 54, 55 adjacent part	300	80	0.60	2.40	5088
4	Parseoni	Garanda	Pench	S.No. 104 Part	345	45	0.80	1.55	4388
5	Parseoni	Ghat Rohana	Pench	S.No. 46 part	500	60	0.80	2.78	5653
6	Kamptee	Ungaon	Kanhan	S.No. 211 part, 212, 217, 218, 219, 222	650	74	1.0	4.81	16996
7	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	50	1.20	2.00	8480
8	Kamptee	Bhamewada	Kanhan	S.No. 128 part, 129, 135/2, 136, 144 Part	600	30	0.50	1.80	3180
9	Saoner	Wakodi	Kanhan	S.No. 44 part	500	70	0.80	3.50	9894
10	Saoner	Isapur-A	Kanhan	S.No. 94 part, 115, 116, 117, 118, 119, 120, 126 part	450	80	0.80	3.60	10176
11	Saoner	Rohana	Kanhan	3 part 7 part	350	60	1.00	2.10	7420
12	Saoner	Ramdongri-A	Kanhan	30 part, 31, 32	450	70	0.80	3.15	8904
13	Saoner	Ramdongri-B	Kanhan	143 part, 144	400	100	0.80	4.00	11307

2987

				part					
14	Saoner	Karajghat	Kanhan	S.No. 15, part	470	75	0.60	3.52	7473
15	Saoner	Kocchi	Kanhan	S.No. 264, 267Part, 263 Part	450	80	0.50	3.60	6360
16	Saoner	Kawadas	Kolar	S.No. 219, 220, 244	450	35	0.50	1.57	2782
17	Saoner	Bawangaon- B	Kanhan	203, 204, 208	450	60	0.60	2.70	5724
18	Kuhi	Chichghat	Kanhan	43 part	300	100	0.50	3.00	5300
Total					7935	1194		52.155	135133

Table No.10 List of Excavated Sand Ghats applied for EC for the year 2023-2024

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Revised Proposed Length Width (m)		Depth	Area (Ha)	Brass
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 542, 541 and 543 adjacent part	590	65	0.90	3.83	12196
2	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, adjacent part	490	100	0.90	4.90	15583
3	Mouda	Mahalgaon -A	Sur	S.No. 261 Pimpalgaon S.No. 23part, 24, 25, 26 adjacent part	380	60	0.50	2.28	4028
4	Mouda	Mahalgaon -B	Sur	S.No. 373, 372, 387 adjacent part	275	70	0.50	1.92	3401
5	Mouda	Dahadi	Kanhan	107 part, 108, 120, 110, 111	350	30	0.50	1.05	1855
6	Parseo ni	Yesamba	Pench	S.No. 207 part	302	35	0.80	1.05	2987
7	Parseo ni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230 part, 241/1 part	400	90	0.90	3.60	11448
8	Parseo ni	Palora	Pench	S.No. 103 Part, 99 Part, 43 Part	400	60	1.30	2.40	11024
9	Parseo ni	Singardip	Kanhan	S.No. part 81, 82	460	75	0.90	3.45	10971
10	Parseo ni	Pipla	Pench	S.No. 353 Part, 354 Part	255	95	1.50	2.42	12840
11	Parseo ni	Waghoda	Pench	S.No. 127 part	410	120	1.50	4.92	26077
12	Parseo ni	Saholi-B	Kanhan	S.No. 104 part, 108/2, 109/2, 110/2, 112/3, 113/2, 115/2,	500	50	0.80	2.50	7067

2989

				116/2 Part					
1 3	Parseo ni	Nayakund	Pench	33, 34 Part	360	45	0.60	1.62	3434
1 4	Parseo ni	Pardi K	Kanhan	153, 146 part	450	100	0.80	4.50	12720
1 5	Parseo ni	Saholi-A	Kanhan	S.No. 15 part, 16, 17, 18	400	40	0.60	1.60	3392
1 6	Kampte e	Bina	Kanhan	53 part, 56, 57/1, 57/2 part	490	100	0.70	4.90	12120
1 7	Kampte e	Neri	Kanhan	S.No. 217, 219, 220, 221, 223, 224 Part	565	86	1	4.85	17169
1 8	Kampte e	Chikna-A	Kanhan	S.No. 9, 10, 11	500	64	0.90	3.20	10176
1 9	Saoner	Gosewadi - A	Kanhan	S.No. 285, 286, 287 part	480	100	0.50	4.80	8480
2 0	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	75	0.50	3.75	6625
2 1	Saoner	Raiwadi	Kanhan	S.No. 190	300	75	0.50	2.25	3975
2 2	Saoner	Tembhurdo h	Kanhan	S.No. 279, 274 and Old Gaonthan part	300	60	0.50	1.80	3180
					915 7	159 5		67.5 9	20074 8

2990

Table No.10 List of additional Sand Ghats applied for EC for the year 2023-2024

SI No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Revised Proposed Length Width (m)		Depth	Area (Ha)	Brass
1	Mouda	Kumbhapur	Kanhan	156/2, 133, 134/1, 135/1, 136/1, 137	500	50	0.60	2.50	5300
2	Kamptee	Sonegaon Raja	Kanhan	337 Part, 338, 339	752	65	0.60	4.88	10335
3	Parseoni	Dahegaon Joshi	Kanhan	726, 727, 733	450	100	0.80	4.50	7950
4	Saoner	Badegaon	Kanhan	618/2, 431, 433	300	50	0.50	1.50	2650
5	Saoner	Ramdongri K	Kanhan	140	210	50	0.50	1.05	1855
Total					2212	315		14.43	28090

CHAPTER 4

DETAILS OF ROYALTY & REVENUE RECEIVED

The details of Royalty collected from Minor mineral are as follows.

Sr. No.	Year	Target	Total Collection (Rs in Lakhs)
1	2023-2024	15583.00	5590.50 (Till July)
2	2022-2023	13913.00	15415.96
3	2021-2022	20978.00	15991.85
4	2020-2021	20700.00	18398.80
5	2019-2020	13800.00	13984.28
6	2018-2019	13500.00	15067.87
7	2017-2018	12000.00	13513.07

Table-4.1: Details of royalty collected

CHAPTER 5

DETAILS OF PRODUCTION OF SAND OR BAJRI OR MINOR MINERAL

In Nagpur district number of development project like Railway, Metro Rail, Ring Roads, Outer ring roads, Samruddhi Express Highway and so on are going on, which requires a large quantity of minor mineral - stone (metal), murrom, soil, sand; for construction purpose. This lead to increasing demand for the minor minerals which can be easily verified from the royalty collected from during last five years.

The details of production are as follows.

Sr No	Year	Production (Brass)	Dispatch Quantity
1	2022-2023	2752850.00	2477565.00
2	2021-2022	3051987.55	2749538.333
3	2020-2021	5105667.00	4599700.00
4	2019-2020	3880637.7	3496070.00
5	2018-2019	4181333.925	3766967.5
6	2017-2018	3749876.925	3378267.5

Table 5.1: Details of production of minor mineral

Sr no	Year	Auctioned Sand Ghats	Proposed Quantity	Dispatched Quantity	Remark
1	2022-2023	40	314109	57328.20	
2	2021-2022	1	7420	7420	
3	2020-2021	20	174673	172373	
4	2019-2020	0	0	0	Sand Ghat not auctioned due to PIL 67/2017
5	2018-2019	11	79742	79742	
6	2017-2018	0	0	0	Sang Ghat not auctioned due to PIL 67/2017
7	2016-2017	31	213883	213883	

Table 5.2 : Details of Production of Sand

i) Demand Supply Analysis:

In the year 2022-2023 total nearly 314109 brass of sand was proposed from 40 Sand Ghats for auction out of which only 22 sand ghat having 57328.20 brass quantity is excavated. Along with the several other uses of sand, continuous stream of developing infrastructure also triggers the rapid and generous demand of sand. To fulfill this ever-increasing demand and consumption needs to increase the quantity of extraction of sand. So, for the upcoming season proposed quantity of sand 363971 Brass.

Also, it will ensure that all the policies and rules regarding sustainable sand mining will be followed rigorously.

RBI Index based methodology for Demand:

(Source- Sand Mining Framework-2018)

Demand of sand in the District for has been estimated based on the following factor:

Conversion factor- Normative cement to sand mixture ratio of 1:2.5

In this method, per capita cement consumption is used to calculate demand of sand. Once cement consumption of the District is known, the same is multiplied by the factor of 2.5 to derive the sand consumption.

1. Per capita cement consumption of India 195 Kg (Source: BEE's website:<https://beeindia.gov.in/>)
2. Total Population of District* 195 = Total cement Consumption

$$46,53,570 * 195 = 90,74,46,150 \text{ kg}$$

$$= 907446.15 \text{ Metric Tonnes}$$

3. Sand Demand of the District: Total cement Consumption * 2.5 = 907446.15251
=22, 68,615 Metric tonnes of sand

From above calculation it seems that total demand of the district is very high as compared to supply or production of sand in Proposed Sand Ghat Mining 2023-2024, as total sand excavation will be 363971 brass (16,37,869.5 Metric tonnes) from 45 sand spots. This huge gap will be fulfilled by procuring of sand from other district or suppliers.

CHAPTER 6

PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

Deposition is the geological process in which sediments, soil and rocks are added to a landform or land mass. Wind, ice, and water, as well as sediment flowing via gravity, transport previously eroded sediment, which, at the loss of enough kinetic energy in the fluid, is deposited, building up layers of sediment.

Deposition occurs when the forces responsible for sediment transportation are no longer sufficient to overcome the forces of gravity and friction, creating a resistance to motion, this is known as the null-point hypothesis. Deposition can also refer to the buildup of sediment from organically derived matter or chemical processes. For example, chalk is made up partly of the microscopic calcium carbonate skeletons of marine plankton, the deposition of which has induced chemical processes (diagenesis) to deposit further calcium carbonate. Similarly, the formation of coal begins with deposition of organic material, mainly from plants, in anaerobic conditions.

Sediment in rivers gets deposited as the river slows down. Larger, heavier particles like pebbles and sand are deposited first, whilst the lighter silt and clay only settle if the water is almost still. The flow of water is strongest on the outside of river bends, eroding the bank, but is slowest on the inside of the bends, allowing deposition of sand and gravel. When a river “bursts its banks” after heavy rain, flood water spreads out across the floodplain and, because this water hardly moves, finer silt and clay are deposited – often making good farmland.

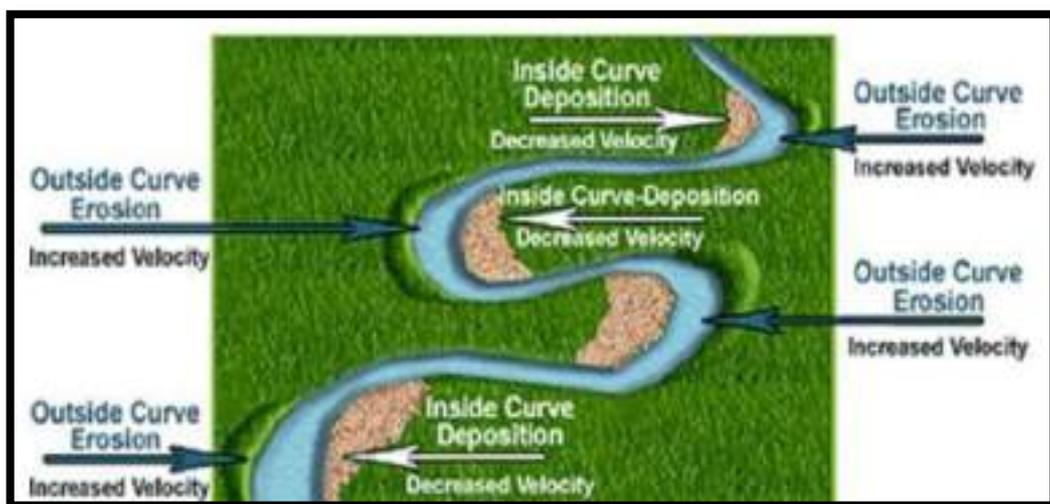


Fig 1: Erosional and Depositional Sites in River (Mandering)

The term load is technically defined as the total weight of solid detritus transported in unit time. The transporting capacity of a stream rises very rapidly as the discharge and the velocity increases. Experiments show that with debris of mixed shapes and sizes, the maximum load that can be carried is proportional to something between the third and fourth power of the velocity. But the fragments of a given shape, the largest size that can be moved (not the actual mass of mixed debris) is proportional to the sixth power of the velocity, provided of course that the depth of water is also adequate for the purpose. As the velocity of a river is checked, the bed load s first to come to rest with continued slackening of the flow, the larger ingredients of the suspended load are dropped, followed successively by finer and finer particles. When the stream begins to flow more vigourously, the finer materials are the first to move again. A river begins to sort out its load or burden as soon as it receives it. The proportion of fine to coarse amongst the deposited materials tend on average to increase downstream, but there may be interruptions of this tendency because of addition of coarse debris from tributaries or from landslides and steepening of thebanks.

Sediment Transportation

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

Bed load



Fig 2: Bed load particles travel with water flow by sliding or bouncing along the bottom.

Bed load is the portion of sediment transport that rolls, slides or bounces along the bottom of a waterways. This sediment is not truly suspended, as it sustains intermittent contact with the streambed, and the movement is neither uniform nor continuous. Bed load

occurs when the force of the water flow is strong enough to overcome the weight and cohesion of the sediment. While the particles are pushed along, they typically do not move as fast as the water around them, as the flow rate is not great enough to fully suspend them. Bed load transport can occur during low flows (smaller particles) or at high flows (for larger particles). Approximately 5-20% of total sediment transport is bed load. In situations where the flow rate is strong enough, some of the smaller bed load particles can be pushed up into the water column and become suspended.

Suspended Load

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

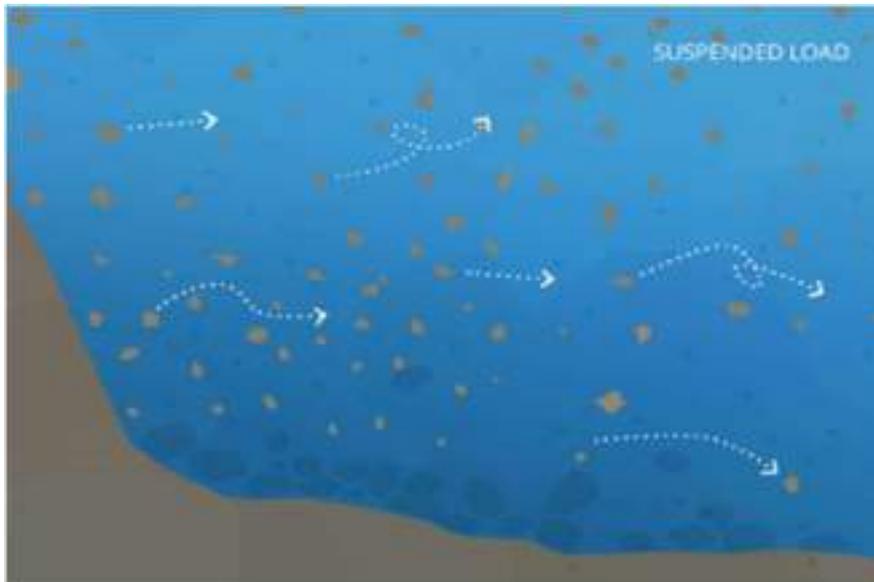


Fig 3: If the water flow is strong enough to pick up sediment particles, they will become part of the suspended load.

Wash Load



Fig 4: The wash load is the portion of sediment that will remain suspended even when there is no water flow.

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

What is Sediment Deposition?

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

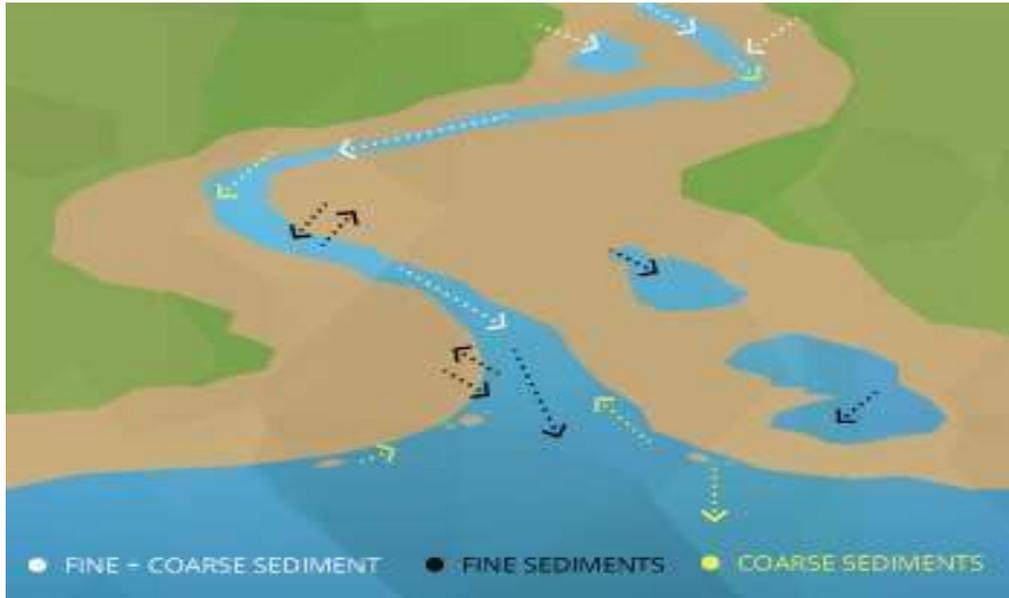


Fig 4: When the flow rate changes, some sediment can settle out of the water, adding to point bars, channel bars and beaches

Sediment transportation and Deposition is depending upon various factors like Slope of the Area, Annual Rainfall, Lithology, and flow intensity of River, Geomorphology, Soil, Geology and Land use.

CHAPTER- 7

GENERAL PROFILE OF THE DISTRICT

7.1 District at a glance:

Nagpur is the winter capital of the state of Maharashtra, a fast-growing metropolis and third largest city in Maharashtra after Mumbai and Pune. With a population of 46,53,570 (2011) Nagpur Metropolitan Area is the 13th largest urban conglomeration in India. It has also recently been ranked as the cleanest city and the second greenest city of India

Table 7.1: Brief Description of Nagpur District

Sr. No.	Item	Statistic
1	Area	9892 sq.km
2	Population	4653570
3	No. Taluka	14
4	No. of Sub Division	4
5	No. of Councils	14
6	No. of Nagar Panchayat	6

7.2 Climatic Condition:

The Nagpur lies on 150-600m above sea level. Nagpur has tropical savannah climate with dry conditions prevailing for most of the year. In winter, there is much less rainfall than in summer. The Köppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 F). The highest recorded temperature in the city was 47.9 °C on 29 May 2013, while the lowest was 3.5 °C on 29 December 2018.

7.3 Forest Details

Sr. No	Description	Area
1	District Geographical Area	9892(Sq.km)
2	Total Forest Area	2765(Sq.km)
3	Forest Deptt. Area	2180(Sq.km)
4	Revenue Deptt. Forest Area	191(Sq.km)
5	F.D.C.M Forest Area	394(Sq.km)
6	Forest Division	Nagpur
7	Protected Area (if any)	Pench NP, Bor WLS (part)

Source: <https://mahaforest.gov.in>

7.4 Demographic features of the district

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171 and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23,911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932 Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76 % and female literacy was 85.07% 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68.30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census whereas for rural area it is 942. (Source: <https://nagpur.gov.in/demography>)

7.5 Connectivity:

Nagpur is located at practically the geographical center of India; in fact, the Zero Milestone of India (a heritage monument) is in this city. (Nagpur is 837 km from Mumbai, 1094 km south of Delhi, 1092 km north of Chennai and 1140 km west of Kolkata). All major highways NH-7 (Varanasi - Kanyakumari) and NH-6 (Mumbai - Sambalpur - Kolkata) and major railway trunk routes (Mumbai, Chennai, Howrah and Delhi) pass through the city. An electrified broad-gauge railway track connects Nagpur to the four major metros. Destinations connected include Mumbai, Delhi, Calcutta, Chennai, Kolhapur, Pune, Ahmedabad, Hyderabad, Jammu, Amritsar, Lucknow, Varanasi, Bhubaneswar, Thiruvananthapuram, Cochin, Gorakhpur, Visakhapatnam, Bangalore, Mangalore, Patna and Indore.

The Sonegaon airport is 7.5 kilometres south of Nagpur city. It is connected to some important Indian and international cities including Mumbai, Calcutta, Delhi, Hyderabad, Raipur, Singapore, Saudi Arabia and Bangkok. Thus, distance and connectivity with all the important Indian cities gives Nagpur an inherent advantage. It can be seen as a transport hub, connecting the Indian cities to each other and international destinations as well. Various IT and ITES companies are also viewing this characteristic as a strong positive factor. The city provides access to its own skilled manpower and also to that of the entire region.

(Source: <https://www.nmcnagpur.gov.in/location-and-connectivity>)

CHAPTER 8

REPLENISHMENT STUDY OF SAND GHAT

The deposition in a river bed is more pronounced during rainy season although the quantum of deposition varies from stream to stream depending upon numbers of factors such as catchment, lithology, discharge, river profile and geomorphology of the river course where annual deposition is one meters, but it is noticed that during flood season whole of the pit so excavated is completely filled up and as such the excavated area is replenished with new harvest of minerals.

The data below represents thickness of sand in respective Sand Ghats which is allowed to be excavated after the Survey carried out by taluka level technical committee who estimated the depth and area of each Sand Ghat as per Sand Mining Policy existing during the surveys. This data shows the trend of replenishing sand each year in the respective Sand Ghats well as of the River in Nagpur district.

Methodology adopted for the sand replenishment study

- 1. Field data collection** followed by cross section survey over the sections of fixed intervals. Along the river showing river bed material (RBM) with present elevations.
- 2. Remote sensing-** used for identification of watershed area relevant to the mine lease. The data used from the latest satellite imagery.
- 3. Estimation of catchment yield and bed load transport.** The catchment yield has been computed using the Strange"s runoff method (Strange"s Monsoon runoff curves) for the runoff coefficient. The iso-pluvial maps of IMD have been used for estimation of catchment yield and peak flood discharge for the study area by various methods like Dickens, Jarvis, and Rational formula at 25, 50 and 100 years return period. The estimation of bed load transport comprises of use of analytical models namely the Einstein, Meyer Peter and Ackers & White's equation for calculation of bed load transport.

Study area:

Proposed leases are located all over the entire district. There are two major Rivers in the District namely Kanhan and Pench.

Kanhan River: Kanhan River: The Kanhan River is an important right bank tributary of the Wainganga River draining a large area lying south of Satpura range in central India. Along its 275 km run through the Indian States of Maharashtra & Madhya Pradesh.

Pench River: The Pench River is a left bank tributary of the Kanhan River. It originates in the Chhindwara district of Madhya Pradesh and Nagpur district of Maharashtra.

Rainfall Data for the study area:

The district falls in assured rainfall zone and receives 80% of the total rainfall during June to October. The average rainfall of the district is 1086.26 mm over rainy days.

Year	Rainfall	Year	Rainfall
1998	1154.3	2011	943.5
1999	1385	2012	1030.5
2000	1384.5	2013	1433.4
2001	1455.8	2014	797.3
2002	870.1	2015	1100.9
2003	1075.8	2016	823.6
2004	699.2	2017	821.5
2005	1333.5	2018	902.6
2006	1002	2019	1129.1
2007	1150.2	2020	1106.9
2008	849.6	2021	1410.2
2009	947.8	2022	1678.3
2010	1263		
Avarage Rainfall in mm			1109.94

Table: Rainfall of the District (Source: maharain.maharashtra.gov.in)

Strange's monsoon rainfall-runoff curves:

The dependability has been calculated on the basis of last 25 years rainfall, as indicated in Table-2 where water availability has been considered for arriving at 50% dependability (Table-3 and 4) respectively.

S. N.	Rainfall (Mm)	S. N.	Rainfall (Mm)
1	1455.8	12	1030.5
2	1433.4	13	1002.3

3003

3	1385.	14	947.8
4	1384.5	15	943.5
5	1333.5	16	902.6
6	1263	17	870.1
7	1154.3	18	849.6
8	1150.2	19	823.6
9	1129.1	20	821.5
10	1100.9	21	797.3
11	1075.8	22	699.2

Table: Rainfall data (arranged in descending order) of each year's rainfall as mentioned.

	Rainfall dependability percentage
	p= 50%
m=	$N * P/100$
	N=22, p=50
m=	11

Table: Calculation of order number (m)

Where, m-Order number

N- The available rainfall data of the past N years is first of all arranged in the descending order of magnitude

p=Dependability percentage

The rainfall value tabulated above in Table, the Order No. 11 has the values of 1075.8 mm

So, $P_{50\%} = 107.58$ cm

Average value of Strange's Run off percentage is calculated from Strange's monsoon rainfall runoff curves (Figure-7.1) considering the catchment area as good and the Runoff % for the area is

Runoff % at 50% dependability of rainfall = 40%

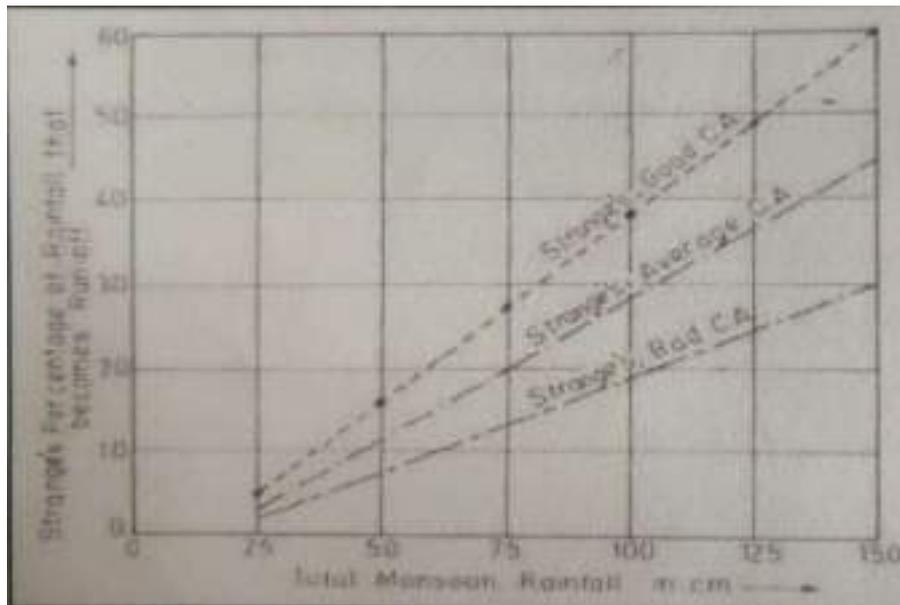


Figure- Strange's monsoon rainfall- runoff curves

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits lay down in different geographic and geomorphic environments.

There are nearly 40 locations of Proposed sand sand ghats over Kanhan and PENCH and Kolar river where sand deposition are allowed from replenishment and other safety point of view in the district.

The factor which affects the "Computation of Sediment" is:

- a) Geomorphology & Drainage Pattern : The following geomorphic units plays important role :
- Structural Plain
 - Structural Hill
 - Structural Ridge
 - Denudation Ridge & Valley
 - Plain & Plateau of Gangetic plain
 - Highly Dissected pediment

- Un dissected pediment
- b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)
- c) Drainage System/Pattern of the area (Drainage Density =Km/Sq. Km of River)
- d) Rainfall & Climate : Year wise Rainfall data for previous 10 years of Basin/River

There are many sediment transport equations which are suitable for use in the prediction of the replenishment rate of rivers/ watershed. Some of the famous sediment transport equations are:-

1. Dendy – Bolton Equation

2. Yang Equations

3. Engelund-Hansen Equation

4. Modified Universal Soil Loss Equation (MUSLE) developed by Williams and Berndt (1977) – it includes only one type of sediment yield (sheet and rill Erosion). Dendy - Bolton formula is often used to calculate the sedimentation yield. The formula uses catchment area and mean annual runoff as key determinants to give a yield value. It does not differentiate in basin wide smaller streams and their characteristics. Dendy and Bolton equation calculates all types of sediment yield i.e. sheet and rill Erosion, gully Erosion, channel Bed and bank erosion and mass movement etc.

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral (sand) naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin. The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance.

Rivers under Study

Kanhan River:-

The Kanhan River is an important right bank tributary of the Wainganga River draining a large area lying south of Satpura range in central India. Along its 275 km run through the Indian States of Maharashtra & Madhya Pradesh, it receives its largest tributary - Pench River, a major water source for the metropolis of Nagpur.

Kanhan was surprisingly not mentioned in the 2001 list of notified rivers in Maharashtra which has led to unrestricted exploitation in the form of sand mining along the river bed. This failure to recognise its presence has been viewed as a deliberate attempt at unregulated economic gains. The catchment area has also seen large scale coal mining in recent years. Efforts are currently underway to notify the river to prevent further environmental damage. This has been undermined by plans for construction of a barrage. The river was perennial until a few decades ago, but now goes dry by February every year.

The Kanhan rises on the slopes of the hills at the southern edge of the Satpura range to the north of Damua and west of Junnardeo, a town in Madhya Pradesh, India. The source lacks clear documentation and is not celebrated or considered holy, unlike most other rivers of a similar size.

The Kanhan is Wainganga's longest tributary, at 275 km. It rises in the southern spurs of the Satpura Range in the north-western region of Chhindwara District. Flowing south from its origin, Damua is the first town it encounters. Here it intersects the town and allows for its flow to be controlled by means of a dam. It then runs along a south & southeastern direction, meandering through the countryside of Chhindwara District where it has been productively harnessed for growing Tur dal and cotton. The river comes to lie about 5 km to the south of Deogarh fort where it humbly receives an insignificant tributary. Upon reaching the town of Ramakona it is crossed by a rail bridge as well as another road bridge which supports NH-26 B. Nearly at the end of its course in Madhya Pradesh at Razadi Bargaon, it is joined by Jam River, and for a short distance provides a natural boundary with adjoining state Maharashtra.

Within Maharashtra the river is at its widest at Kamptee where it receives the Pench River - a left bank tributary and its largest one. Another tributary connecting it at its right bank is Kolar River - the spill off from Kolar Dam. The river now comes to be at the northeast of Nagpur from which it receives the metropolitan city's effluent waste by way of the Nag

River. A little further from Kamptee, it flows along the town Kanhan - its etymology derived from the river. Situated alongside the town is a large coal mine, one of the many coal mines situated along its river basin. From here the river flows south-east and ends its course by joining the Wainganga at the village of Ambora in Nagpur District.

Along its 275 km run through the Indian States of Madhya Pradesh & Maharashtra, it receives its largest tributary - Pench River, a major water source for the metropolis of Nagpur. The catchment area of the sub-catchment is about 7968 km².



Fig: Kanhan River Path

Pench River:

The **Pench River** is an Indian tributary of the Kanhan River. It originates in the Chhindwara district of Madhya Pradesh and flows across Pench National Park, which is a reserve for the Tiger Project of India.

The two big dams of the Pench River supply water to the city of Nagpur and to the big thermal power plant located there.

The catchment area of the sub-catchment is about 4847 km². The climate of the sub-catchment area is usually pleasant most of the year, except in summer. The sub-catchment lies in the medium rainfall zone. Most of the rainfall is received during the South-West monsoon from June to October.



Fig: Pench River Stream order

Dendy Bolton Equation for Estimation of Sediment Yield

Dendy Bolton formula is often used to calculate the sedimentation yield. But use of these equations to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation's development. However, they may provide a quick, rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Computed sediment yields normally would be low for highly erosive areas and high for well stabilized drainage basins with high plant density because the equations are derived from average values.

The equations express the general relationships between sediment yield, runoff, and drainage area. Many variables influence sediment yield from a drainage basin. They include climate, drainage area, soils, geology, topography, vegetation and land use. The effect of any of these variables may vary greatly from one geographic location to another, and the relative importance of controlling factors often varies within a given land resource area. Studies revealed that sediment yield per unit area generally decreases as drainage area increases.

As drainage area increases, average land slopes usually decrease; and there is less probability of an intense rainstorm over the entire basin. Both phenomena tend to decrease sediment yield per unit area. In arid regions, sparse precipitation and low run-off are the limiting factors. As precipitation increases, density of vegetation also increases, resulting in less erosion. In areas with adequate and evenly distributed precipitation, vegetation thus becomes the limiting factor.

The accuracy of the sedimentation surveys varied, ranging from reconnaissance type measurements of sediment deposits to detailed surveys consisting of closely spaced cross-sections or contours. Runoff data are translated to inches per year per unit area and sediment deposition data to tons per year per square mile of net drainage area. Net drainage area is defined as the sediment-contributing area and normally excluded areas above upstream reservoirs or other structures that were effective sediment traps. Actual sediment yields undoubtedly were slightly higher because most reservoirs do not trap inflowing sediment.

As per **Dendy & Bolton study**, "Sediment Yield" can be related to

- i. Catchment Area and
- ii. Mean Annual Run-off

Sediment Yield versus Drainage Area:

Dendy and Bolton studied sedimentation data from about 1500 reservoirs, ponds, and sediment detention basins. In developing their formulas, they used data from about 800 of these reservoirs with drainage areas greater than or equal to 1 mi². The smaller watersheds-those of drainage area less than 1 mi², were excluded because of their large variability of sediments yield, reflecting the diverse effects of soils, local terrain, vegetation, land use, and agricultural practices.

For drainage areas between 1 and 30,000 mi², Dendy and Bolton found that the annual sediment Yield per unit area was inversely related to the 0.16 power of the drainage area:

In which S= sediment yield in tons per square mile per year;

SR = Reference sediment yield

Corresponding to a 1mi² drainage area, equal to 1645 tons per year;

A = drainage area in square miles; and

AR = reference drainage area (1 mi²)

Sediments Yield versus Mean Annual Runoff

Dendy and Bolton studied sedimentation data from 505 reservoirs having mean annual runoff data. Sediment yield increased sharply to about 1,860 tons per square mile per year as run-off increased from 0 to about 2 inches. As runoff increased from 2 to about 50 inches, sediment yield decreased exponentially. Because sediment yield must approach zero as runoff approaches zero, a curve through the plotted points must begin at the origin. The abrupt change in slope of a curve through the data points at Q equals 2 inches precluded the development of a continuous function that would adequately define this relationship. Thus, there are two equations derived for when Q was less than 2 inches and when Q was greater than 2 inches.

This led to the following equations.

For Q <2in.:

For Q >2in.:

In which QR = reference mean annual runoff QR = 2 in.

Combined Effect of Drainage area and Run off on Sediment Yield

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

For run off less than 2 inches:

$$(Q < 2 \text{ in}) S = 1280 * (Q)^{0.46} * [1.43 - 0.26 \text{ Log}(A)]$$

For run off more than 2 inches:

$$(Q > 2 \text{ in}): S = 1965 * (e^{-0.055Q}) * [1.43 - 0.26 \text{ Log}(A)]$$

Where: S = Sediment yield (tons/sq miles/yr)

Q = Mean Annual runoff (inches)

A = Net drainage area in sq mile

Calculation of Sediment Yield

- Average Annual Rainfall of Nagpur district (1998 to 2022) :

1109.94 mm (43.69 inch)

- Catchment area of Kanhan River:

7968 km² (i.e. 3076.44 mi²)

- Catchment area of Pench river :

4847 km². (i.e. 1871.42 mi²).

With above inputs, the calculation of the sediment yield by the Dendy -Bolton formula is illustrated below:

Sr. No.	Sediments Yield	
1	<p>Here: Q (In) = Mean Annual run off = 1109.94 mm (43.698 in) (= Run-off Coefficient * Average Annual Rainfall) = $0.27 * 43.96 = 11.86$ inches A (mi²) = Catchment area Kanhan River = 7968 km² (i.e., 3076.44 mi²) Pench River = 4847 km². (i.e., 1871.42 mi²).</p>	<p>For $Q < 2$ $S = 1280 Q^{0.46} [1.43 - 0.26 \log(A)]$ For $Q > 2$ $S = 1965 e^{-0.055Q} [1.43 - 0.26 \log(A)]$</p>
2	<p>Sediment Yield for Kanhan River = Sediments Yield $S = \text{Layer/Year}$ For $Q > 2$ $S = 1965 e^{-0.055Q} [1.43 - 0.26 \log(7968)]$ $S = 259456.03$ M. tons/yr or 32.56 M. tons/km²/yr</p>	<p>259456.03 M. tons/yr Sediments will be regenerated every year increasing the mineable reserves</p>
3	<p>Sediment Yield for Pench River = Sediments Yield $S = \text{Layer/Year}$ For $Q > 2$ $S = 1965 e^{-0.055Q} [1.43 - 0.26 \log(4847)]$ $S = 174765.43$ M. tons/yr or 36.06 M. tons/km²/yr</p>	<p>174765.43 M. tons/yr Sediments will be regenerated every year increasing the mineable reserves</p>

(Source: sediment yield by the Dendy-Bolton formula)

Conclusion:

From the above calculations, annual replenishment rate for Kanhan river is estimated at **259456.03 M. tons/yr** and that for Pench River is estimated at **174765.43 M. tons/yr** for the year **2023-2024**.

Dendy – Boltan formula also says that actual sediments yield from individual drainage basins may vary 10-fold or even 100-fold from computed yields. The equations express the general relationships between sediment yield runoff and drainage area. They may provide a quick rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Because Dendy & Bolton have derived the equation from

average values computed sediment yields normally would be low for highly erosive area and high for well stabilized drainage basins with high plant density.

Factors which have direct bearing on sediments yield & limitations of Dendy -Bolton equation: Sediment yield of a sediment basin has direct impact of local terrain, climate, vegetation, soils, agricultural practices & land use pattern of catchment area of the sediment basin aforesaid factors varies from basin to basin therefore, Dendy - Bolton has categorically stated that use of the equation to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation development. **Actual sediment yield form individual drainage basins may vary 10-fold or even 100-fold from computed yields.**

References:

1. Ponce, V. M., 1989. Engineering Hydrology, Principles and Practices, Prentice Hall, pages 547-548.
2. Online sediment yield by the Dendy-Bolton formula

Sl No	Name of Sand Ghat	2018/19		2019/20	2020/21		2021/2022		2022/23		2023/24	
		Excavate d Sand Thicknes s	Availabl e Sand Thicknes s	In this year 2019/20 Sand ghats were not auctioned because of PIL 11/208	Excavate d Sand Thicknes s	Availabl e Sand Thicknes s	Excavate d Sand Thicknes s	Availabl e Sand Thicknes s	Excavate d Sand Thicknes s	Availabl e Sand Thicknes s	Mireabl e Sand Thicknes s	Availabl e Sand Thicknes s
1	Mouda (Chikna Ghat)	0.5	2.5		1.5	3.0	0.60	2.0	0.90	2.5	0.80	3.80
2	Kirnapur	1.0	3.0		0.8	2.0	0.80	2.0	0.80	2.5	0.90	3.90
3	Mohkhedi	0.90	3.0		1	3.0	0.70	2.0	0.80	2.5	0.90	
4	Mahalgaon- A	0.50	2.50		#	#	#	#	0.50	2	0.50	3.90
5	Mahalgaon- B	0.50	2.50		#	#	#	#	0.50	2	0.50	3.50
6	Sirsoli	0.40	2		#	#	#	#	0.50	2	0.50	3.50
7	Vadna	#	#		#	#	#	#	0.60	2	0.60	3.60
8	Dahadi	#	#		#	#	#	#	0.50	1.5	0.80	3.80
9	Garanda	#	#		1.5	3.0	0.70	2.50	0.80	2.5	0.50	3.50
10	Yesamba	0.80	2.0		2	3.0	0.90	2.50	0.90	2.5	0.80	3.90
11	Juni Kamptee (Gadeghat)	#	#		#	#	0.80	2.50	0.80	2.5	0.90	3.90
12	Ghat Rohana	0.40	2.0		0.8	2.0	0.40	2.0	0.70	2.5	0.80	3.80

13	Palora	0.40	2.0			0.5	2.0	0.40	2.0	1.0	2.5	1.30	7.0
14	Singardip	#	#			0.5	2.0	0.30	2.0	1.0	2.5	0.90	3.90
15	Pipila	0.50	2.0			0.5	2.0	0.40	2.0	0.90	2.5	1.5	7
16	Waghoda	0.50	2.0			1	3.0	0.90	3.0	1.0	3	1.5	7
17	Saholi-B	#	#			#	#	1.0	3.0	0.60	2.5	0.80	3.80
18	Nayakund	0.40	2.0			#	#	#	#	0.60	2.5	0.60	3.60
19	Pardi K	0.50	2.0			0.5	2.0	0.80	2.0	0.90	2	0.80	3.80
20	Saholi A	#	#			#	#	0.80	2.50	0.50	2	0.60	3.60
21	Bina	0.40	2.0			0.5	2.0	#	#	1.0	2.5	0.70	3.70
22	Ungaon	0.40	2.0			0.5	2.0	0.30	2.0	1.0	2.0	1.0	4.0
23	Neri	1.0	3.0			#	#	1.50	3.0	1.0	3.0	1.0	4.0
24	Chikna-A	1.0	3.0			1	3.0	0.50	2.0	0.80	2.0	0.90	3.90
25	Chikna-B	#	#			#	#	#	#	1.20	2.0	1.20	4.20
26	Bhamewad ^a	0.80	2.50			#	#	#	#	0.50	2.0	0.50	3.50
27	Gosewadi - A	0.60	2.0			#	#	0.50	2.0	0.80	2.0	0.50	3.50
28	Wakodi	0.40	2.0			0.8	2.0	0.40	2.0	0.80	2.0	0.80	3.80
29	Isapur-A	0.40	2.0			0.6	2.0	0.45	2.0	0.80	2.0	0.80	3.80
30	Rohana	0.75	2.50			0.6	2.0	0.50	2.0	1.0	2.0	1.0	4.0
31	Ramdongri-A	0.90	2.50			#	#	#	#	0.80	2.5	0.80	3.80
32	Ramdongri-B	0.50	2.0			0.3	1.50	0.30	1.50	0.80	1.5	0.80	3.80
33	Karajghat	#	#			0.8	2.0	0.40	1.50	0.60	1.5	0.60	3.60
34	Khapapeth	0.60	2.0			0.6	2.0	0.60	2.0	0.60	2.0	0.50	3.50
35	Kocchi	#	#			#	#	#	#	0.50	2.0	0.50	3.50

36	Raiwadi	0.60	2.0				0.4	1.50	0.40	1.50	0.80	2.5	0.50	3.50
37	Tembhurdo h	0.90	2.50				0.8	2.0	#	#	0.80	2.0	0.50	3.50
38	Kawadas	#	#				#	#	#	#	0.50	1.5	0.50	3.50
39	Bawangaon -B	#	#				#	#	#	#	0.60	2.0	0.60	3.60
40	Chichghat	0.80	2.50				0.80	2.50	0.50	2.0	0.50	2.0	0.50	3.50
41	Ramdongri K	0.50	2.50				#	#	#	#	#	#	0.50	3.50
42	Badegaon	0.75	3.0				#	#	#	#	#	#	0.50	3.50
43	Sonegaon Raja	1.0	3.0				#	#	#	#	#	#	0.60	3.60
44	Kumbhapur	#	#				#	#	#	#	#	#	0.60	3.60
45	Dahegaon Joshi	#	#				#	#	#	#	#	#	0.80	3.80

Note- From the above table it is observed that the replenishment capacity of the river in the district is 90-95 % annually.

CHAPTER 9

LAND UTILIZATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURE, HORTICULTURE, MINING

Forest:

During the year 2011-2012 an estimated 2523 Sq. KMs. of area was under forest which is 25.51% of the total area. Most of the land under forest can be found on the banks of Pench River, at the foot hills of Satpuda in Ramtek tahsil forest has been divided in 3 categories namely reserved, protected and unclassified. Area under these categories is given below.

Sr.No	Category	Area in Sq.Kms.
1	Reserved Forest	1387
2	Protected Forest	832
3	Unclassified Forest	304
	Total	2523

Table –A: Forest Category in the District

Sr.No	Forest Produce	Production	Value for Sale in '000'
A) Major forest products:			
1	Timber wood (m3)	1.613	17820
2	Fuel wood (m3)	6.969	6774
B) Minor forest products:			
3	Bamboo (Nos.)	13702	127.85
4	Tendu Leave (S.B.)	38408	31405.74
5	Gum (Quintal)	12	65.70
6	Others	10	14.40

Table B: The Major and Minor forest products of the district

Agriculture:

Nagpur district has basically an agrarian economy and the rural economy is inextricably woven with the district economy. The district has total geographical area of 9892 Sq.Km. Out of these 644 th.hq. is cultivable area. The main crop of the district are Paddy, Jowar, Cotton, Tur and Soyabean. The area and production of principal crops are given in Table –C

Sr. No.	Crop	Area in '00'	Production in	Productivity in kg/ha.
		ha.	'00'tonnes	
		2009-2010	2011-2012	2008-2009
1	Paddy	646	1466	1419
2	Soyabean	2779	1411	823
3	Wheat	636	1073	1191
4	Ground Nut	43	23	670
5	Jowar	259	60	305
6	Cotton	7454	213	250
7	Tur	294	466	532
8	Gram	394	611	734

Horticulture:

As a cash crop, concept of growing different variety flowers in the district is on constant increase. Indication of society towards flower decoration on different occasion has enhanced. Total area under floriculture was 22742 hectares and the total production of Rose, Shewanti, Zendu, Nishigandha, Gladioli, Gaillardia, White Lilly, Goldenrod, Dezi, Mogra and Ostre are 1365.53 M.T. Camomile, Rose, Mogra, Lilly and Marigold can be developed in Nagpur dist. for the industrial use. It may used to manufacture perfumes, Rose water and Gulkand. The important cut flowers like Rose, Lilly, Chrysanthemum, Gladidus, Carnation, Tuberose and Orchids can be developed in Nagpur for Exports.

Land Use pattern:

The total area of the district is 986 thousand hectares of which forest cover 159 thousand hectares, 121 thousands hectares are not used for the Agriculture and area under cultivation is 644 thousands Hectares. The land utilization pattern of the district is given in Table -D

Sr.No	Classification	Area in '000' hectare
1	Total geographical area	986
2	Forest land	159
3	Barren land	128
4	Land to non-agriculture use	121
5	Cultivable area	644

Table D: Land Utilisation**Mineral Resources:**

Nagpur district is moderately rich in minerals. Deposits of coal, manganese Ore, Dolomite, Limestone, Iron Ore, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore and Quartz etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan (Kamptee apart from the high grade coal found in Umred tahsil. Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saoner tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district. The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.

Sr.No	Mineral	Production (MT)	Value (Rs. Lakh)	No of Mines
1	Manganese Ore	644590	28169.7616	37
2	Coal	16638820	17010814.54	15
3	Dolomite	43207	60.66	7
6	Sand (Stowing)	34562.814	518.422	04

Table –E: Mineral production in Nagpur district 2006-2007

Sr.No	Mineral	Deposits in Million Tonnes
1	Coal	1183.395
2	Lime stones	31.000
3	Manganese ore	9.389
4	Dolomite	28.740
5	Clay	3.555
6	Copper ore	1.300
7	Tungsten ore	19.980
8	Zinc ore	8.270
9	Chromites	0.056
10	Granite (Million Cubic mt.)	4.880

Table E: Mineral deposits in Nagpur

Fisheries:

Out of the total geographical area of the district an area of 15037 hectares can be used for fish farming apart from the 650 Kms long area under river water. During the 2010-2011 the fish production in the district was around 11200M.T. valued at approximately over Rs. 5600 lacs. Maharashtra Govt. has undertaken various developmental schemes/project for fish farming.

Sericulture:

Sericulture a bio-agro industry in India is practiced since time immemorial and our country stands in the third position in production of raw silk in the world. India has also the distribution of producing all the three commercially known varieties of silk viz. Mulberry, Tassar, Iri and Murga. Maharashtra state stands third in the country in Mulberry and Tassar cultivation according to latest estimates. The present area under Sericulture in Nagpur district is about 141.00 acres which is mostly concentrated in Nagpur, Kalmeshwar, Katol, Narkhed and Ramtek of Nagpur district.

CHAPTER 10

PHYSIOGRAPHY OF THE DISTRICT

Nagpur district is situated in the eastern part of Maharashtra and renowned for its citrus orchards and manganese deposited and manganese deposits. Nagpur District lies in the southern fringes of Satpura range. It is hilly in the northeast and west where the elevation varies from 350m to 583m msl. The Southern and eastern parts have vast pediplain with gentle slopes towards east. The average elevation of the pediplain surface is about 300m msl. Pench and Kanhan are the main tributaries of Wainganga River flowing from northwest to southeast in the northern part.

The western and south western parts of the district are drained by Wardha and its tributaries like Bor, Wenna Jam and Kar rivers. The Wainganga and its tributaries viz Kanhan, Kolar, Pench, Sur and Nag drain the eastern and east central parts of the district. The area contained within the district is underlain by the Archaean rocks to the north and east and younger sedimentaries like Lametas and Gondwanas, being embedded by flows (Deccan basalt) to the west and south. The district is well known for the minerals of economic importance like coal, manganese ore, dolomites, white clay, copper, tungsten ore etc. The principal soil of the district is known as morand' (light deep, black and grey in colour) covers about two-third of the cultivated area. Kali (medium- deep, black) is found in small pockets of Wardha and other river valleys. Khardi (shallow, grayish) is sandy soil. found in the eastern part and bardi (red gravelly, with boulders) is found in the trap hill region of the western part of the district.

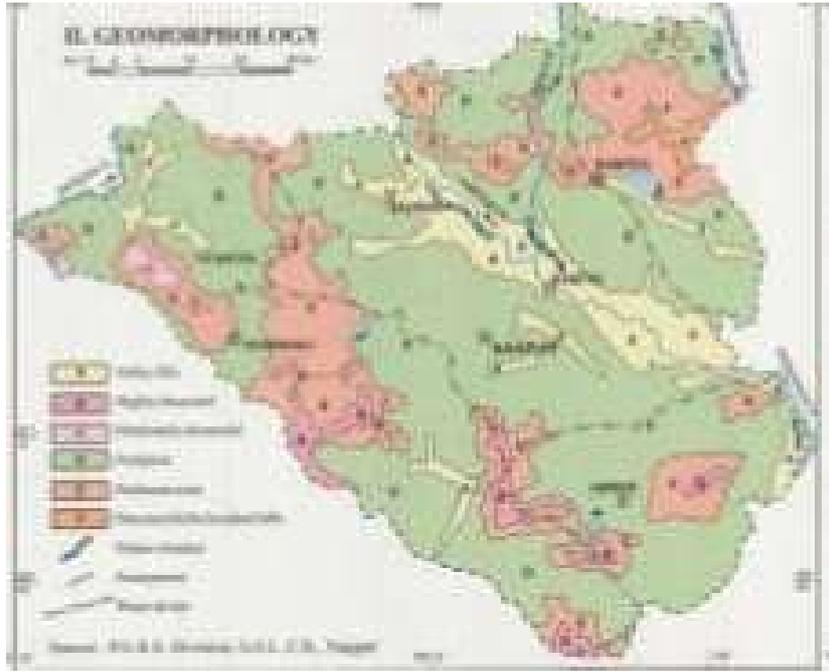


Fig: Image Showing Physiography of the district

CHAPTER 11

RAINFALL OF THE DISTRICT & CLIMATIC CONDITION

Climate and Rainfall: The climate of the district is characterized by a hot summer and general dryness throughout the year except during the south-west monsoon season, i.e. June to September. The mean minimum temperature is 12°C and mean maximum temperature is more than 45°C. The normal annual rainfall (1901-1992) over the district ranges from about 1000 mm to 1200 mm. It is the minimum in the Narkhed (869.9mm) and increases in the eastern direction and reaches a maximum around Umred (1164.9 mm). Rainfall data from 14 rain gauge stations for the periods 2010-2022 are given in Chapter 8. The average annual rainfall for the last 10 years ranges from 479.2 in Hingni to 1856.3 in Umred. It is also observed that all stations have recorded average annual rainfall within the range of district normal annual rainfall except at Hingni, Katol, Narkhed and Kamleshwar where it is less than normal. (Source: www.agri.mah.nic.in)

CHAPTER 12

GEOLOGY AND MINERAL WEALTH

Regional Geology of the area:

Deccan trap encompasses major parts of Maharashtra state. Deccan trap belongs to Upper Cretaceous to Eocene in age. An array of Deccan trap exist, they are frequently weathered leading to formation of Murom, rubbles and clayey and black cotton soil. The Basalt rock is of varying composition, their flow beds are together known as Deccan trap, The Igneous activity during upper Cretaceous period released tremendous outburst of volcanic energy resulting in the eruption of thick series of lava and associated pyroclastic materials lava flows called as Basalt is a significant event in the evolution of the Deccan Plateau. The Basalt rock is the solidified lava flow of Upper cretaceous to eocene period, the Basalt outcrop runs for nearly 800km towards the coast of Mumbai. This portion is tail end of Basaltic lava flows in Vidharba towards east and south east.

Archaean Rocks:

The Archaeans of Nagpur district are comprised of two distinct lithological units; the older unit comprising gneisses and schists resulting from repeated metamorphism of ancient sediments (similar to Dharwar formation of Southern India) and a younger group of gneisses representing perhaps a granitic intrusion into above metasediments. As both these rock units have suffered intense deformation and metamorphism it is difficult to distinguish them from each other and consequently are generally grouped together as unclassified metamorphic and crystalline series.

Sausar and Sakoli Series:

Rocks of the older metasedimentary group have been mapped in great detail and named Sausar series (occurring in the Northern 'Nagpur-Chhindwada' region) and Sakoli series (occurring in the Southern 'Nagpur-Bhandara' region); the latter, viz., Sakoli series are assumed to be an upward continuation of the former, viz., Sausar series. The Sausar series is further subdivided into stages mostly on their lithology; the Lohangi, Mansar and Chorbaoli being important in view of their containing manganese ore zones. The rock types comprising these series include biotite-gneiss, quartz-pyroxene-gneiss, calciphyre, crystalline limestone, quartzite, mica-schist, hematite-schist, pegmatite and various manganiferous rocks known as Gondite. Gondite (named after the aboriginal tribe 'Gonds' found in these areas) is a rock composed of quartz and manganese Garnet 'spessar-tite'. Many other rock types carrying rare species of manganese minerals such as *Blanfordite*-a manganese pyroxene (from Kachurwahi

and Ramdongri), Vrendenburgite-a strongly magnetic manganese ore (from Beldongri), *Hollandite*- crystalline form of psilomelane (from Junawani) and *Beldongrite*-black pitch like mineral regarded as an alteration product of spessartite, have been grouped under the Gondite series. Of the other minerals found in the manganiferous rocks of the region, *Sitaparite*, *Chiklite*, *Winchite*, *Juddite*, *Rhodonite* and *Piedmontite* deserve mention. An excellent exposure of crystalline limestone containing piedmontite nodules occurs in the Pench river at Ghogra (Gokula) about 3 km. north-east of Parseoni.

Streaky-Granitiegneisses:

Rocks of the younger group comprise coarse grained granitic gneisses, prevalent amongst which, is streaky biotite gneiss which at places covers large areas. These are, however, distinguished from schists and gneisses of sedimentary origin (Sausar series) in view of their not being confined to any particular horizon, and occurring adjacent to any of the stages of the Sausar series. Another feature of these rocks is the occurrence in them of coarse pegmatite intrusive. Based on these and other lines of field evidence, it is thought that these rocks are intrusive into the Sausar series.

Structure of Archaean Rocks:

The Archaean rocks of this district have a very complex structural pattern. The Sausar series (northern belt) generally dips towards south-south-east or south and the Sakoli series to the north-north-west while the middle or axial region may be a zone of faulting or overthrust. In the Sausar series the southern part is composed of isoclinal folds with steep (50° - 80°) dips to south; in the middle strip the folds are recumbent, with 30° to 60° dip to the south, while the northern strip shows thrust sheets. There are many steep dipping strike faults which are generally thrust faults. Three 'Nappe' units have been recognised in the Nagpur-Chhindwada region at Sapghota, Ambajhari and Deola-par from west to east all of them having a low southernly dip. 'Nappe' is a structure wherein a sheet of rocks has been tectonically transported far from its original site. Earlier folds in Sausar series have been refolded by late stage deformation and the resulting 'cross-fold' structure is seen at Ramtek, Junawani and Deolapar. Lineations of various kinds are well developed in the Archaean rocks of the district, all of which plunge 20° to 30° towards East.

Gondwana Supergroup:

Rocks referable to the Talchir, Barakar and Kamthi stages of the Gondwana system of fluviatile and lacustrine origin were deposited in troughs, generally produced

by faults, which in many cases form the boundary of Gondwanas with older rocks and therefore known as 'Boundary fault'. The Kelod-Kamptee line which marks the north-east boundary of Kamthi beds with Archaeans is a boundary fault. The Gondwana formations have been affected by other minor faults as revealed in several drillholes put down to prove the existence of coal seams around the towns of Kanhan and Kamptee. There is a marked unconformity between the Barakars and Kamthis; during the time interval indicated by this unconformity, Barakars were partially or completely eroded away in some areas and the Kamthis rest directly over the Talchirs. At other places absence of Barakar outcrops is due to overlap (extension of a strata in a conformable sequence beyond the boundaries of those lying beneath) by Kamthis.

Talchirs:

Talchir beds are exposed at Kodadongri (north of Patansaongi) and 9 km. north of Nagpur near Suradevi hills, while to 8 km. north of these hills minor exposures are seen. Talchirs comprise green shales and sandstones with minor intercalations of clay and rest unconformably with a basal conglomerate over the Archaean rocks.

Barakars:

Coal-bearing Barakar beds consisting of white and grey sandstones and grits, fireclays and carbonaceous shales are exposed in Tekadi-Silewada-Patansaongi and Bhokara-Chakki- Khapa tract. They are also reported from below the Lameta beds near Umrer. Barakar outcrops are generally lacking in the district, being either overlapped by Kamthis or concealed under the alluvium. About 200 metres north of Kanhan Railway Station a drill hole has revealed Barakars beneath the alluvium.

Kamthis:

These rocks occupy an area which is bounded by Kelod-Kamptee line towards north-east along which Kamthis have been faulted against Archaeans. Southwards they stretch upto Bhokara, 6 km. north of Nagpur. The western boundary is the irregular edge of the Deccan basalts. At Silewada, about 8 km. northwest of Kamptee, a low range of hills is composed of Kamthis. Detached from above, two inliers are seen in the trap area to the west. One of these (about 14 km. long by 6 wide) lies to the north-east of Bazargaon and the other roughly 54 km. north-west of Nagpur at Ghorkheri (6 km. long by 4 wide). Kamthis trend in west-north-west-east-south-east direction with 5° to 30° dip towards south- south-west and their estimated thickness is about 1,500

km. Predominantly composed of soft and coarse grained sandstones, Kamthis also contain fine grained mica-ceous sandstones, hard and gritty sandstones and homogeneous and compact shales. Bazargaon inlier contains considerable thickness of conglomerates composed of white quartz pebbles set in a matrix of grit. Interstratified with this conglomerate is a fine red argillaceous sandstone. Fossil flora include species of *Phyllothea*, *Vertebraria*, *Pecopteris*, *Gangamopteris*, *Angiopteridium*, *Macrotaeniopteris*, *Noeggera-thiopsis* and *Glossopteris*. The best known localities for fossils in Kamthis are the stone quarries at Silewada and Kamptee.

Lametas:

Lametas, also known as Infratrappeans for their subjacent position to traps (Deccan basalts), are fresh water deposits which rest horizontally over the older Gondwana and Archaean rocks with an unconformity. Lametas which rarely attain a thickness up to 8 metres grade from calcareous sandstones to sandy limestones with intercalations of chert and clay. These occur at the foot of Kelod and Sitabuldi (Nagpur) hills, west of Adyal and at Ketapur. A large spread of these rocks is situated immediately to the west of Umrer. Lametas have also been found fringing the trap outliers in the north-west corner of the district. Fossil Mollusca found in the beds at Nagpur are *Melania*, *Paludina* and *Corbicula* and *Physa*.

Deccan Basalt (Traps) and Intertrappeans:

The western part of the district is covered by layers or doleritic and basaltic lavas, commonly known as 'traps' because of step like appearance of their outcrops, the term being of Scandinavian origin. Apart from the main area to the west, several outliers are found north-west of Bhivagad, whilst the southern end of the tongue of trap separating the Pench Valley in Chhindwada district just crosses the border into Nagpur.

These traps are of fissure-eruption type, i.e., they welled up through long narrow fissures in the earth's crust and flowed out as horizontal layers one over the other. Individual flows (layers) have been traced for distances of 100 km. in this district. Some layers are hard and compact while others are soft, vesicular or amygdaloidal having cavities filled with secondary calcite, zeolite and quartz. Columnar joints, sheeting and spheroidal weathering are characteristic of these rocks. The Deccan traps belong to 'Plateau basalt' type, essentially composed of plagioclase (mostly labradorite) and augite with some magnetite. Palagonite is abundant in the basalts near Nagpur. These rocks are

generally dark grey in colour having a specific gravity of 2.9.

Geological succession of the Nagpur District:

Name of the formation	Age
Soil	Recent.
Deccan basalt flows (Traps)with Associated Intertrappean sediments	Lower Eocene to pper cretaceous
Lametabeds	Cretaceous.
Gondwana group: Kamthi stage Barakar stage Talchir stage	Permian Corboniferous
Streaky Granitiegneisses Sausar and Sakoli series of metasediments	Archaeans

Soil:

In the Archaean area the rocks are hidden beneath a considerable thickness of alluvialsoil, deposited by the tributaries of the Kanhan and the Wainganga rivers. In the trappean area the soil is usually the black cotton soil known as regur with Kankar, which is also found in the soils on the Archaean areas.

1) Disrctict wise details of rivers and others Stream:

Sr. No.	Name of river	Area drained in sq. km	% area drained in district
1	Kanhan	1488	46 %
2	Pench	557	17 %
3	Wardha	223	07 %
4	Kolar	996	30 %

2) Sailerent features of important rivers and streams

Sr. No	Name of the river or stream	Total length in the district in km	Place of origin	Altitude at origin
1	Kanhan	113	Damua, Satpura range, MP	-
2	Pench	56	Junnarde, Chindawara District, MP	1048m
3	Wardha	60	Khairwani near Multai, Betul. District, MP	785m
4	Kolar	54	N-E corner of Katol Taluka, MH	600m

Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
Kanhan River (29)	6.450	1009	452300.00	271380.00
Pench River (2)	0.845	120	43300.00	25980.00
Kolar River (1)	0.450	60	27000.00	16200.00
Sur River (1)	0.250	45	12500.00	7500.00

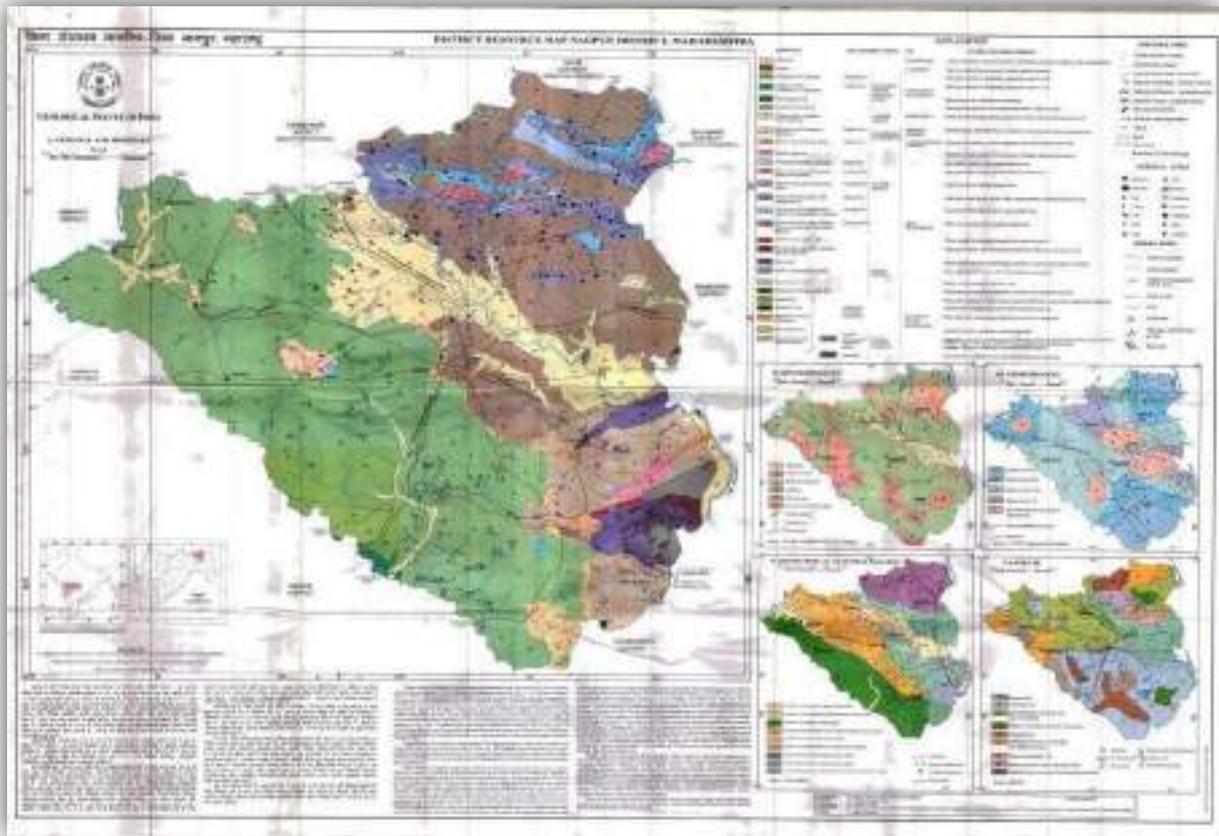
Mineral potential

Sr. No.	Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
2018	7063875	3803625	205992	11073492

Methodology adopted for calculation of mineral potential

The mineral potential is calculated based on field investigation and geology of the catchment area of the river or stream. As per the site conditions and location, depth of mineable mineral is defined. The area for removal of the mineral in a river or stream can be decided depending on geo-morphology and other factors, it can be 50% to 60% of the area of a particular river or stream. For Example, in some hill States mineral constituents like boulders, river bor Bajri, sand up to a depth of one meter are considered as resource mineral. Other constituents like clay and silt are excluded as waste while calculating the mineral potential of particular river or stream.

The District Survey Report shall be prepared in the district and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on the district's website for twenty-one days. The comments received shall be considered and if found correct, shall be incorporated in the final Report to be finalised within six months by the District Environment Impact Assessment Authority.



.Fig: Geological map of Nagpur District

RECOMMENDATION OF ENFORCEMENT & MONITORING GUIDELINES FOR SAND MINING BY MOEF&CC-2020

Introduction:

The Ministry of Environment Forest & Climate Change formulated the Sustainable Sand Management Guidelines 2016 which focuses on the Management of Sand Mining in the Country. But in the recent past, it has been observed that apart from management and systematic mining practices there is an urgent need to have a guideline for effective enforcement of regulatory provision and their monitoring. Section 23 C of MMDR. Act 1957 empowered the State Government to make rules for preventing illegal mining, transportation and storage of minerals. But in the recent past, it has been observed that there was large number of illegal mining cases in the Country and in some cases, many of the officers lost their lives while executing their duties for curbing illegal mining incidence. The illegal and uncontrolled illegal mining leads to loss of revenue to the State and degradation of the environment. India is developing at a faster pace and much technological advancement has already been taken place in the surveillance and remote monitoring in the field of mining. Thus, it is prudent to utilize the technological advancement for the effective monitoring of the mining activities particularly sand mining in the country.

Use of latest remote surveillance and IT services helps in effective monitoring of the sand mining activity in-country and also assist the government in controlling the illegal mining activity in the country. Thus, there is a need for an effective policy for monitoring of sand mining in the Country which can be enforced on the ground. These guidelines focus on the effective monitoring of the sand mining since from the identification of sand mineral sources to its dispatch and end-use by consumers and the general public. Further, the effective monitoring and enforcement require efforts from not only Government agencies but also by consumers and the general public. (Source: EM guidelines, MoEF&CC, New Delhi 2020).

The need for replenishment study for river bed sand is also required in order to "nullify the adverse impacts arising due to excessive sand extraction". No riverbed mining will be allowed during the monsoon. In cases where rivers become district boundaries or state boundaries, the districts or states sharing the boundary shall constitute the combined task force for monitoring of mined materials. Mining activity and participate in the preparation of District Survey Reports (DSR) by providing appropriate inputs. The guidelines say the

detailed survey needs to be carried out for quantification of minerals and the demand and supply of the riverbed material through market survey, including the future demand for the next five years.

OBJECTIVE OF GUIDELINES

1. Identification and Quantification of Mineral Resource and its optimal utilization.
2. To regulate the Sand & Gravel Mining in the Country since its identification to its final end-use by the consumers and the general public.
3. Use of IT-enabled services & latest technologies for surveillance
4. Reduction in demand & supply gaps.
5. Setting up the procedure for replenishment study of Sand
6. Post Environmental Clearance Monitoring.
7. Procedure for Environmental Audit
8. To control the instance of illegal mining.

Salient Features of the Guidelines

District Survey Report:

The guidelines provide the procedure to be followed for identifying areas where mining can be allowed or prohibited. It provides guidelines for preparing a district survey report, which includes: Preparing a report before granting a mining lease, and Defining mining and no mining zones based on certain environmental and social factors.

Preventing Illegal Mining:

The guidelines suggest that sites can be monitored remotely. Drones can also be used for quantity estimation and land use monitoring. Further, the guidelines propose night surveillance of mining activity through night-vision drones. The environmental damages incurred due to illegal mining will be assessed by a committee constituted by the District Administration;

Environmental Clearance:

Environmental Clearance for mining is given by regulatory after considering the potential environmental impact. However, it has been observed that often the Letter of Intent (LoI) is granted for a location which is not feasible for environment-friendly mining. The guidelines provide that LoIs should be granted for those locations which have the least possibility of an impact on the environment nearby habitation.

The guidelines also encourage for online sale and purchase of sand and other riverbed materialsto make the process transparent.

Preparation of District Survey Report:

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

Considering the importance of district survey report, the Ministry of Environment Forest and climate change, after consultation with experts dealing with mining-related matters, formulated the following guidelines for the preparation of comprehensive District Survey Report for sand mining.

- a) District Survey Report for sand mining shall be prepared before the auction/c-auction/grant of the mining lease/Letter of Intent (Lol) by Mining department or department dealing the mining activity in respective states.
- b) The first step is to develop t entory of the River Bed Material and Other sand sources in the District. In order to make the inventory of River Bed Material, a detailed survey of the district needs to be carried out, to identify the source of River Bed Material and alternative source of sand (M-Sand). The source will include rivers, de-siltation of reservoir/dams. Patta lands/Khatedari Land, M-sand etc.
- c) District Survey Report is to be prepared in such a way that it not only identifies the mineral bearing area but also define the mining and no mining zones considering various environmental and social factors.
- d) Identification of the source of Sand & M-Sand. The sources may be from Rivers, Lakes, Ponds, Dams, De-silting locations, Patta land/Khtedari lands. The details in case of Rivers such as [name, length of river, type (Perennial or Non-Perennial), Villages, Tehsil,

District], in case of Lakes, Ponds, Dams, De-silting locations [Name, owned/maintained by (State Govt/PSU), area, Villages, Tehsil, District] in case of Patta land/Khtedari lands [Owner Name, Sy No. Area, Agricultural/Non-Agricultural, Villages, Tehsil, District], in case of M-Sand Plant (Owner Name, Sy No, Area, Quantity/Annum, Villages, Tehsil, District], needs to be recorded as per format.

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

f) The permanent boundary pillars need to be erected after identification of an area of aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters

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

h) Demand and supply of the Riverbed Material through market survey needs to be carried out. In addition to this future demand for the next 5 years also needs to be considered.

- i) It is suggested that as far as possible the sensitive areas should be avoided for mining, unless local safety condition arises. Such deviation shall be temporary & shall not be a permanent feature.
- j) The final area selected for the mining should be then divided into mining lease as per therequirement of State Government. It is suggested the mining lease area should be so selected asto cover the entire deposition area. Dividing a large area of deposition/aggradation into smallermining leases should be avoided as it leads to loss of mineral and indirectly promote illegalmining.
- k) Cluster situation shall be examined. A cluster formed when one mining lease of homogenous mineral is within 500 meters of the other mining lease. In order to reduce the cluster formation mining lease size should be defined in such a way that distance between any two clusters preferably should not be less than 2.5 Km. Mining lease should be defined in such a way that the total area of the mining leases in a cluster should not be more than 10 Ha.
- l) The number of a contiguous cluster needs to be ascertained. Contiguous cluster is formed whenone cluster is at a distance of 2.5 Km from the other cluster.
- m) The mining outside the riverbed on Patta land/Khatedari land be granted when there is possibilityof replenishment of material In case, there is no replenishment then mining lease shall only be granted when there is no riverbed mining possibility within 5 KM of the Patta land/Khatedari land. For government projects, mining could be allowed on Patta land/Khatedari land but the mining should only be done by the Government agency and material should not be used for sale in the open market Cluster situation as mentioned in para k above is also applicable for the mining in Patta land/Khatedari land.
- n) The State Government should define the transportation route from the mining lease considering the maximum production from the mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely etc. is available with the State Government. It is suggested that the transportation route should be selected in such a way that the movement of trucks tippers/tractors from the villages having habitation should be avoided. The transportation route so selected should be verified by the State Government for its carrying capacity.
- o) Potential site for mining having its impact on the forest, protected area, habitation, bridges etc, shall be avoided. For this, a sub-divisional committee may be formed which after the site visit shall decide its suitability for mining. The list of mining lease after the

recommendation of the Committee needs to be defined in the following format given in as Annexure-II. The Sub Divisional Committee after the site visit shall make a recommendation on the site for its suitability of mining and also records the reason for selecting the mining lease in the Patta land. The details regarding cluster and contiguous cluster needs to be provided as in Annexure-III The details of the transportation need to be provided as in Annexure IV.

p) Public consultation-The Comments of the various stakeholders may be sought on the list of mining lease to be auctioned. The State Government shall give an advertisement in the local and national newspaper for seeking comments of the general public on the list of mining lease included in the DSR. The DSR should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public The comments so received shall be placed before the sub-divisional committee for active - consideration. The final list of sand mining areas [leases to be granted on riverbed &Patta land/Khatedari land, de-siltation location (ponds/lakes/dams). M-Sand Plants (alternate source of sand)] after the public hearing needs to be defined in the final DSR in the format as per Annexure-V.

ANNEXURES

Compliance of Enforcement and Monitoring Guidelines for Sand Mining-2020**Details of Sand/M-Sand Sources****a) Rivers**

River Name/M- Sand	Total Stretch of River(in Km)	Type of River (Perennial or Non- Perennial)
Kanhan River	12.84	Non- Perennial
Pench River	2.32	Non- Perennial
Kolar River	0.45	Non- Perennial
Sur River	0.90	Non- Perennial

b) De-siltation (Lakes/Ponds/Dams etc.)

Name of Reservoir/Dams	Maintain/Cpntrolled By State Govt./PSU etc.	Location	District	Tehsil	Village	Size (Ha)
Nil						

c) Patta Lands/Khatedari Land

Owner	Sy. No.	Area (ha)	District	Tehsil	Village	Agriculture Land (Yes/No)
Nil						

d) M sand

Plant Name	Owner	District	Tehsil	Village	Geo-Location	Quantity Tonnes/Annum
Nil						

ANNEXURE NO- II

List of Potential Non Excavated Mining Leases (Proposed Sand Ghat) 2023-2024

Sr. No	River	Lease Details	Area (in HA)	Distance In Km from PA/BR/WC	Distance from Forest (In KM)	Mining Leases within 500m (if yes cluster area)	Total excavation in brass/annum considering digging max as per survey	Mineral to be mined (Sand/Bajri /RBM etc.)	Existing/Proposed)
Mauda									
1	Kanhan	Kirnapur	4.95	27	Approx 500 m	No	14021	Sand	Proposed
2	Sur	Sirsoli	1.27	15	Approx 500 m	No	1987	Sand	Proposed
3	Kanhan	Wadna	3.0	18	Approx 500 m	No	5088	Sand	Proposed
Parseoni									
4	Pench	Garanda	1.55	11.38	Approx 500 m	No	4388	Sand	Proposed
5	Pench	Ghat Rohana	2.78	15.87	Approx 500 m	No	7420	Sand	Proposed
Kamptee									
6	Kanhan	Ungaon	4.81	21.77	Approx 500 m	No	16996	Sand	Proposed
7	Kanhan	Chikna-B	2	25	Approx 500 m	No	8480	Sand	Proposed
8	Kanhan	Bhamewada	1.8	27.69	Approx 500 m	No	3180	Sand	Proposed
Saoner									
9	Kanhan	Wakodi	3.5	5.47	Approx 500 m	No	9894	Sand	Proposed
10	Kanhan	Isapur-A	3.6	8.5	Approx 500 m	No	10176	Sand	Proposed
11	Kanhan	Rohana	2.1	10	Approx 500 m	No	7420	Sand	Proposed
12	Kanhan	Ramdongri-A	3.15	7.05	Approx 500 m	No	8904	Sand	Proposed
13	Kanhan	Ramdongri-B	4	7	Approx 500 m	No	11307	Sand	Proposed
14	Kanhan	Karajghat	3.52	4.51	Approx 500 m	No	7473	Sand	Proposed
15	Kanhan	Kocchi	3.6	5	Approx 500 m	No	6360	Sand	Proposed
16	Kolar	Kawadas	1.57	15.69	Approx 500 m	No	2782	Sand	Proposed
17	Kanhan	Bawangaon-B	2.7	15.5	Approx 500 m	No	5724	Sand	Proposed
Kuhi									
18	Kanhan	Chichghat	3	18.65	Approx 500m	No	5300	Sand	Proposed

List of Potential Excavated Mining Leases (Proposed Sand Ghat) 2023-2024

Sr. No	River	Lease Details	Area (in HA)	Distance In Km from PA/BR/WC	Distance from Forest (In KM)	Mining Leases within 500m (if yes cluster area)	Total excavation in brass/annum considering digging max as per survey	Mineral to be mined (Sand/Bajri/RBM etc.)	Existing/Proposed
Mauda									
1	Kanhan	Mouda (Chikna Ghat)	3.83	23	Approx 500 m	No	12196	Sand	Proposed
2	Kanhan	Mohkhedi	4.90	34	Approx 500 m	No	15583	Sand	Proposed
3	Sur	Mahalgaon -A	2.28	16.4	Approx 500 m	No	4028	Sand	Proposed
4	Sur	Mahalgaon -B	1.92	17	Approx 500 m	No	3401	Sand	Proposed
5	Kanhan	Dahadi	1.05	18	Approx 500 m	No	1855	Sand	Proposed
Parseoni									
6	Pench	Yesamba	1.05	12.05	Approx 500 m	No	2987	Sand	Proposed
7	Kanhan	Juni Kamptee (Gadeghat)	3.60	20	Approx 500 m	No	11448	Sand	Proposed
8	Pench	Palora	2.40	5.65	Approx 500 m	No	11024	Sand	Proposed
9	Kanhan	Singardip	3.45	22.06	Approx 500 m	No	10971	Sand	Proposed
10	Pench	Pipla	2.42	9.42	Approx 500 m	No	12840	Sand	Proposed
11	Pench	Waghoda	4.92	12.18	Approx 500 m	No	26077	Sand	Proposed
12	Kanhan	Saholi-B	2.50	15.23	Approx 500 m	No	7067	Sand	Proposed
13	Pench	Nayakund	1.62	6.78	Approx 500 m	No	3434	Sand	Proposed
14	Kanhan	Pardi K	4.50	9.9	Approx 500 m	No	12720	Sand	Proposed
15	Kanhan	Saholi-A	1.60	14.23	Approx 500 m	No	3392	Sand	Proposed
Kamptee									
16	Kanhan	Bina	4.90	17.69	Approx 500 m	No	12120	Sand	Proposed
17	Kanhan	Neri	4.85	21.19	Approx 500 m	No	17169	Sand	Proposed

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18	Kanhan	Chikna-A	3.20	34.56	Approx 500 m	No	10176	Sand	Proposed
Saoner									
19	Kanhan	Gosewadi - A	4.8	6.44	Approx 500 m	No	13568	Sand	Proposed
20	Kanhan	Khapapeth	3.75	4.5	Approx 500 m	No	7950	Sand	Proposed
21	Kanhan	Raiwadi	2.25	0.43	Approx 500 m	No	6360	Sand	Proposed
22	Kanhan	Tembhurdoh	1.8	1.41	Approx 500 m	No	5088	Sand	Proposed

List of additional Potential Mining Leases (Proposed Sand Ghat) 2023-2024

Sl No	Taluk a	Name of Sand Ghat	Name of River/N alla	Adjoin ing Survey No	Revised Propose d Length Width (m)		Dep th	Ar ea (H a)	Bra ss	Mineral to be mined (Sand/Bajri/ RBM etc.)	Existing/Prop osed)
1	Moud a	Kumbha pur	Kanhan	156/2, 133, 134/1, 135/1, 136/1, 137	50 0	50	0.60	2.5 0	530 0	Sand	Proposed
2	Kamp tee	Sonegao n Raja	Kanhan	337 Part, 338, 339	75 2	65	0.60	4.8 8	103 35	Sand	Proposed
3	Parse oni	Dahega on Joshi	Kanhan	726, 727, 733	45 0	10 0	0.80	4.5 0	795 0	Sand	Proposed
4	Saone r	Badega on	Kanhan	618/2, 431, 433	30 0	50	0.50	1.5 0	265 0	Sand	Proposed
5	Saone r	Ramdon gri K	Kanhan	140	21 0	50	0.50	1.0 5	185 5	Sand	Proposed

Annexure III

Cluster & Contiguous details

Cluster:

River Name	Cluster No	Lease No	Location(Riverbed/patta /Land)	Village	Area(In Ha)	Tatal Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

Contiguous Cluster:

River Name	Contiguous Cluster No	Lease No	Location(Riverbed/patta/Land)	Village	Area(In Ha)	Tatal Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

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Annexure IV

Transportation Routes for 18 Non Excavated Sand Ghat individual and lease in Cluster

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Kirnapur	1	9	9	450	Kuchha Road	Unpaved
Sirsoli	1	11	11	300	Kuchha Road	Unpaved
Vadhna	1	6	6	469	Kuchha Road	Unpaved
Parseoni						
Garanda	1	6	6	336	Black Topped/ Paved road already exists	Unpaved
Ghat Rohana	1	3	3	455	Black Topped/ Paved road already exists	Unpaved
Kamptee						
Ungaon	1	5	5	397	Kuchha Road	Unpaved
Chikna-B	1	3	3	458	Kuchha Road	Unpaved
Bhamewada	1	3	3	700	Black Topped/ Paved road already exists	Unpaved
Saoner						
Wakodi	1	9	9	300	Kuchha Road	Unpaved
Isapur-A	1	6	6	354	Black Topped/ Paved road already exists	Unpaved
Rohana	1	9	9	209	Kuchha Road	Unpaved
Ramdongri-A	1	4	4	830	Black Topped/ Paved road	Unpaved

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					already exists	
Ramdongri -B	1	3	3	668	Kuchha Road	Unpaved
Karajghat	1	9	9	1001	Black Topped/ Paved road already exists	Unpaved
Kocchi	1	6	6	252	Kuchha Road	Unpaved
Kawadas	1	3	3	620	Black Topped/ Paved road already exists	Unpaved
Bawangao n-B	1	4	4	200	Kuchha Road	Unpaved
Kuhi						
Chichghat	1	6	5	640	Kuccha Road	Unpaved

Transportation Routes for 22 Excavated Sand Ghat individual and lease in Cluster

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Mouda (Chikna Ghat)	1	3	3	934	Kuchha Road	Unpaved
Mohkhedi	1	7	7	747	Kuchha Road	Unpaved
Mahalgaon -A	1	6	6	469	Kuchha Road	Unpaved
Mahalgaon -B	1	5	5	409	Black Topped/ Paved road already exists	Unpaved
Dahadi	1	4	4	1560	Kuchha Road	Unpaved
Parseoni						
Yesamba	1	9	9	500	Kuchha Road	Unpaved

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Juni Kamptee (Gadeghat)	1	4	4	800	Kuchha Road	Unpaved
Palora	1	9	9	608	Kuchha Road	Unpaved
Singardip	1	7	7	429	Black Topped/ Paved road already exists	Unpaved
Pipla	1	6	6	339	Black Topped/ Paved road already exists	Unpaved
Waghoda	1	4	4	737	Kuchha Road	Unpaved
Saholi-B	1	4	4	122	Kuchha Road	Unpaved
Nayakund	1	3	3	469	Kuchha Road	Unpaved
Pardi K	1	4	4	236	Kuchha Road	Unpaved
Saholi A	1	4	4	128	Kuchha Road	Unpaved
Kamptee						
Bina	1	4	4	639	Kuchha Road	Unpaved
Neri	1	9	9	1300	Black Topped/ Paved road already exists	Unpaved
Chikna-A	1	7	7	630	Kuchha Road	Unpaved
Saoner						
Gosewadi - A	1	3	3	855	Kuchha Road	Unpaved
Khapapeth	1	7	7	413	Black Topped/ Paved road already exists	Unpaved
Raiwadi	1	4	4	232	Kuchha Road	Unpaved
Tembhurdoh	1	7	7	440	Black Topped/ Paved road already exists	Unpaved

Transportation Routes for 5 Additional Sand Ghat individual and lease in Cluster

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Kumbhapur	1	3	3	934	Kuchha Road	Unpaved
Sonegaon Raja	1	7	7	747	Kuchha Road	Unpaved
Dahegaon Joshi	1	6	6	469	Kuchha Road	Unpaved
Badegaon	1	5	5	1863	Kuchha Road	Unpaved
Ramdongri K	1	4	4	860	Kuchha Road	Unpaved

Annexture V

Final List of Potential Mining Leases (Existing & Proposed)

Details of Sand Ghats (River bed) eligible in 2023-2024:

List of 18 Sand Ghats applied for revalidation of EC for the year 2023-2024

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)		Depth	Area	Brass
1	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	80	0.80	4.95	14021
2	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	250	45	0.50	1.125	1987
3	Mouda	Vadhna	Kanhan	S.No. 52 part, 54, 55 adjacent part	300	80	0.60	2.40	5088
4	Parseoni	Garanda	Pench	S.No. 104 Part	345	45	0.80	1.55	4388
5	Parseoni	Ghat Rohana	Pench	S.No. 46 part	500	60	0.80	2.78	5653
6	Kamptee	Ungaon	Kanhan	S.No. 211 part, 212, 217, 218, 219, 222	650	74	1.0	4.81	16996
7	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	50	1.20	2.00	8480
8	Kamptee	Bhamewada	Kanhan	S.No. 128 part, 129, 135/2, 136, 144 Part	600	30	0.50	1.80	3180
9	Saoner	Wakodi	Kanhan	S.No. 44 part	500	70	0.80	3.50	9894
10	Saoner	Isapur-A	Kanhan	S.No. 94	450	80	0.80	3.60	1017

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				part, 115, 116, 117, 118, 119, 120, 126 part					6
11	Saoner	Rohana	Kanhan	3 part 7 part	35 0	60	1.00	2.10	7420
12	Saoner	Ramdongri- A	Kanhan	30 part, 31, 32	45 0	70	0.80	3.15	8904
13	Saoner	Ramdongri- B	Kanhan	143 part, 144 part	40 0	10 0	0.80	4.00	1130 7
14	Saoner	Karajghat	Kanhan	S.No. 15, part	47 0	75	0.60	3.52	7473
15	Saoner	Kocchi	Kanhan	S.No. 264, 267Part, 263 Part	45 0	80	0.50	3.60	6360
16	Saoner	Kawadas	Kolar	S.No. 219, 220, 244	45 0	35	0.50	1.57	2782
17	Saoner	Bawangaon -B	Kanhan	203, 204, 208	45 0	60	0.60	2.70	5724
18	Kuhi	Chichghat	Kanhan	43 part	30 0	10 0	0.50	3.00	5300

List of 22 Sand Ghats applied for EC for the year 2023-2024

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Revised Proposed Length Width (m)		Depth	Area (Ha)	Brass
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 542, 541 and 543 adjacent part	590	65	0.90	3.83	12196
2	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, adjacent part	490	100	0.90	4.90	15583
3	Mouda	Mahalgaon -A	Sur	S.No. 261 Pimpalgaon S.No. 23part, 24, 25, 26 adjacent part	380	60	0.40	2.28	4028
4	Mouda	Mahalgaon -B	Sur	S.No. 373, 372, 387 adjacent part	275	70	0.40	1.92	3401
5	Mouda	Dahadi	Kanhan	107 part, 108, 120,	350	30	0.50	1.05	1855

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				110, 111					
6	Parseo ni	Yesamba	Pench	S.No. 207 part	302	35	0.80	1.05	2987
7	Parseo ni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230 part, 241/1 part	400	90	0.90	3.60	11448
8	Parseo ni	Palora	Pench	S.No. 103 Part, 99 Part, 43 Part	400	60	1.30	2.40	11024
9	Parseo ni	Singardip	Kanhan	S.No. part 81, 82	460	75	0.90	3.45	10971
1 0	Parseo ni	Pipla	Pench	S.No. 353 Part, 354 Part	255	95	1.50	2.42	12840
1 1	Parseo ni	Waghoda	Pench	S.No. 127 part	410	120	1.50	4.92	26077
1 2	Parseo ni	Saholi-B	Kanhan	S.No. 104 part, 108/ 2, 109/2, 110/2, 112/3, 113/2, 115/2, 116/2 Part	500	50	0.80	2.50	7067
1 3	Parseo ni	Nayakund	Pench	33, 34 Part	360	45	0.60	1.62	3434
1 4	Parseo ni	Pardi K	Kanhan	153, 146 part	450	100	0.80	4.50	12720
1 5	Parseo ni	Saholi-A	Kanhan	S.No. 15 part, 16, 17, 18	400	40	0.60	1.60	3392
1 6	Kampte e	Bina	Kanhan	53 part, 56, 57/1, 57/2 part	490	100	0.70	4.90	12120
1 7	Kampte e	Neri	Kanhan	S.No. 217, 219, 220, 221, 223, 224 Part	565	86	1	4.85	17169
1 8	Kampte e	Chikna-A	Kanhan	S.No. 9, 10, 11	500	64	0.90	3.20	10176

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19	Saoner	Gosewadi - A	Kanhan	S.No. 285, 286, 287 part	480	100	0.50	4.80	8480
20	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	75	0.50	3.75	6625
21	Saoner	Raiwadi	Kanhan	S.No. 190	300	75	0.50	2.25	3975
22	Saoner	Tembhurdo h	Kanhan	S.No. 279, 274 and Old Gaonthan part	300	60	0.50	1.80	3180
					9157	1595		67.59	199261

List of additional Potential Mining Leases (Proposed Sand Ghat) 2023-2024

Sl No	Taluk a	Name of Sand Ghat	Name of River/N alla	Adjoin ing Survey No	Revised Propose d Length Width (m)		Dep th	Ar ea (H a)	Bra ss	Mineral to be mined (Sand/Bajri/ RBM etc.)	Existing/Prop osed)
1	Moud a	Kumbha pur	Kanhan	156/2, 133, 134/1, 135/1, 136/1, 137	500	50	0.60	2.50	5300	Sand	Proposed
2	Kamp tee	Sonegao n Raja	Kanhan	337 Part, 338, 339	752	65	0.60	4.88	10335	Sand	Proposed
3	Parse oni	Dahega on Joshi	Kanhan	726, 727, 733	450	100	0.80	4.50	7950	Sand	Proposed
4	Saone r	Badega on	Kanhan	618/2, 431, 433	300	50	0.50	1.50	2650	Sand	Proposed
5	Saone r	Ramdon gri K	Kanhan	140	210	50	0.50	1.05	1855	Sand	Proposed

b) Patta Lands/Khatedari Land:						
Owner	Sy. No	Area (Ha)	District	Tehsil	Village	Agricultural Land (Yes/No)
Nil	Nil	Nil	Nil	Nil	Nil	Nil

c) De-Siltation Location: (Lakes/Ponds/Dams etc.)						
Name of Reservoir / Dams	Maintain/Controlled by State Govt. / PSU etc.	Location	District	Tehsil	Village	Size (Ha)
Nil	Nil	Nil	Nil	Nil	Nil	Nil

d) M-Sand Plants:						
Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity Tonnes/Annum
Nil	Nil	Nil	Nil	Nil	Nil	Nil

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ANNEXURE VI – FINAL CLUSTER & CONTIGUOUS CLUSTER DETAILS

Cluster:

River Name	Cluster No	Lease No	Location(Riverbed/patta/Land)	Village	Area(In Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

Contiguous Cluster:

River Name	Contiguous Cluster No	Lease No	Location(Riverbed/patta/Land)	Village	Area(In Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

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ANNEXURE VII – FINAL TRANSPORTATION ROUTE FOR INDIVIDUAL LEASES & LEASES IN CLUSTER

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Kirnapur	1	9	9	450	Kuchha Road	Unpaved
Sirsoli	1	11	11	300	Kuchha Road	Unpaved
Vadhna	1	6	6	469	Kuchha Road	Unpaved
Parseoni						
Garanda	1	6	6	336	Black Topped/ Paved road already exists	Unpaved
Ghat Rohana	1	3	3	455	Black Topped/ Paved road already exists	Unpaved
Kamptee						
Ungaon	1	5	5	397	Kuchha Road	Unpaved
Chikna-B	1	3	3	458	Kuchha Road	Unpaved
Bhamewada	1	3	3	700	Black Topped/ Paved road already exists	Unpaved
Saoner						
Wakodi	1	9	9	300	Kuchha Road	Unpaved
Isapur-A	1	6	6	354	Black Topped/ Paved road already exists	Unpaved
Rohana	1	9	9	209	Kuchha Road	Unpaved
Ramdongri -A	1	4-	4	830	Black Topped/ Paved road already exists	Unpaved

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Ramdongri -B	1	3	3	668	Kuchha Road	Unpaved
Karajghat	1	9	9	1001	Black Topped/ Paved road already exists	Unpaved
Kocchi	1	6	6	252	Kuchha Road	Unpaved
Kawadas	1	3	3	620	Black Topped/ Paved road already exists	Unpaved
Bawangao n-B	1	4	4	200	Kuchha Road	Unpaved
Kuhi						
Chichghat	1	6	5	640	Kuccha Road	Unpaved

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Transportation Routes for 22 Excavated Sand Ghat individual and lease in Cluster

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Mouda (Chikna Ghat)	1	3	3	934	Kuchha Road	Unpaved
Mohkhedi	1	7	7	747	Kuchha Road	Unpaved
Mahalgaon -A	1	6	6	469	Kuchha Road	Unpaved
Mahalgaon -B	1	5	5	409	Black Topped/ Paved road already exists	Unpaved
Dahadi	1	4	4	1560	Kuchha Road	Unpaved
Parseoni						
Yesamba	1	9	9	500	Kuchha Road	Unpaved
Juni Kamptee (Gadeghat)	1	4	4	800	Kuchha Road	Unpaved
Palora	1	9	9	608	Kuchha Road	Unpaved
Singardip	1	7	7	429	Black Topped/ Paved road already exists	Unpaved
Pipla	1	6	6	339	Black Topped/ Paved road already exists	Unpaved
Waghoda	1	4	4	737	Kuchha Road	Unpaved
Saholi-B	1	4	4	122	Kuchha Road	Unpaved
Nayakund	1	3	3	469	Kuchha Road	Unpaved

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Pardi K	1	4	4	236	Kuchha Road	Unpaved
Saholi A	1	4	4	128	Kuchha Road	Unpaved
Kamptee						
Bina	1	4	4	639	Kuchha Road	Unpaved
Neri	1	9	9	1300	Black Topped/ Paved road already exists	Unpaved
Chikna-A	1	7	7	630	Kuchha Road	Unpaved
Saoner						
Gosewadi - A	1	3	3	855	Kuchha Road	Unpaved
Khapapeth	1	7	7	413	Black Topped/ Paved road already exists	Unpaved
Raiwadi	1	4	4	232	Kuchha Road	Unpaved
Tembhurdoh	1	7	7	440	Black Topped/ Paved road already exists	Unpaved

Transportation Routes for 5 Additional Sand Ghat individual and lease in Cluster

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Kumbhapur	1	3	3	934	Kuchha Road	Unpaved
Sonegaon Raja	1	7	7	747	Kuchha Road	Unpaved
Dahegaon Joshi	1	6	6	469	Kuchha Road	Unpaved
Badegaon	1	5	5	1863	Kuchha Road	Unpaved
Ramdongri K	1	4	4	860	Kuchha Road	Unpaved

SAND GHAT SITE SPECIFIC ENFORCEMENT & MONITORING PLAN AS PER GUIDELINES STIPULATED IN ENFORCEMENT AND MONITORING GUIDELINES FOR SAND MINING ISSUED BY MOEF&CC IN JANUARY 2020

Sr. No.	Condition as per E & M guideline	Compliance
1	Three-member committee for environmental audit	District Magistrate formed a committee for monitoring of compliances as per EM guidelines after grant of prior Environmental Clearance.
2	LOI should be preferably granted to those locations which have least possibility of an impact on the environment and nearby habitation	Environmental feasibility will be checked before issuance of LOI.
3	Identification of sand Ghats its quantification and feasibility considering various environmental parameters like proximity of protected area, wetlands, creeks, forest etc. and other factors such as places of archaeological importance, habitation, prohibited area etc.	All sand ghat locations are physically surveyed by technical committee as per Government of Maharashtra revised sand policy dated 28.01.2022 and ensured that all the parameters regarding sustainable sand mining is followed.
4	Mining plan and its initial level of mining leases at shorter interval say 10m x 10 m	Mining plans by DGM, Nagpur. It is ensured that Mining plan and its initial level of mining leases at shorter interval 10m x 10 m showing in surface plan
5	Responsibility of mine owner to obtain all statutory clearances	It will be ensured by District administration before commencement of mining.
6	Emphasis of district survey report and its format of reporting	Draft DSR will be published in accordance with format given in notification dated 25 July 2018.
7	Regular replenishment study to ascertain rate of depositing, plan and section needs to be prepared.	It is ensured that regular replenishment study to ascertain rate of depositing, plan and section to be prepared.
8	Movement of transportation of mineral from mining area to end user needs to monitor.	It will be ensured by using IT enabled services as per guidelines.
Preparation of District Survey Report		
9	Preparation of District Survey Report	DSR is prepared as per format S.O. 3611(E) dated 25.07.2018 and EM guidelines 2020 issued by MoEF&CC, New Delhi
10	Publication of District Survey Report	Draft DSR published on district portal for public inventory of river bed materials in the district comments.
11	Development of inventory of river bed material and other sources in the district.	Attached as Annexure I to V as per EM guidelines 2020

12	District Survey Report is prepared in such a way that it is not only identifies the mineral bearing area but also defines mining and no mining zones Considering environmental and social factors.	All the parameters are covered in final DSR.
13	Identification of sources of Sand and M-sand, De silting Locations, river type perennial or non perennial, village, tehsil, agriculture/nonagricultural land, M-sand plant etc.	Attached as Annexure-1, II and V
14	Defining the sources of Sand for identification of the potential area, entire river stretch needs to be recorded and area of aggradations/deposition needs to be ascertaining by comparing the level difference between outside river bed OGL and Water Level.	Areas of deposition are identified and levels are recorded for actual replenishment.
15	Boundary Pillars needs to be erected after identification of an area of aggradation and deposition outside bank of river at safe location for future survey.	Geographical co-ordinates of leases are marked on google Earth for future reference and to
16	Identifying mining and no mining zone shall Follow sensitively.	It is ensured that the mining activity and no mining zone shall be followed sensitively by mine owner
17	Demand and Supply for river bed material through market survey	Demand and supply is mentioned in the report on the basis of actual demand of various departments in the District and RBI's index. Based method which is given in Chapter 4.
18	Cluster situation shall be examined.	As per the sand mining is concerne there is no cluster situation in the District.
19	Mining outside river bed area on Patta/Khatedari land be granted when there is possibility of replenishment of material For govt. projects mining could be allowed on Patta/Kahedari land but mining should be done by Govt. agencies and material shall not be used for sale.	There is no sand mining outside the River bed.
20	State Govt. should define transportation route from mining lease considering maximum production from mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely	It is ensured that transportation route from mining lease considering maximum production from mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely
21	List of recommended sites in the format Annexure-II, Details of Cluster in Annexure-III and transportation route in Annexure IV needs to be provided	Attached as Annexure- II, III and IV
22	Public Consultation	Public consultation has been conducted on 26 th December 2022
23	Grant of Letter of Intent for leases falling in potential zone	After getting all the statutory clearance of sand ghats it will be auctioned as per sand mining policy of State Govt. 2023
24	The mining plan should include the original ground level recorded at an interval not more than 10 m x 10m along	Surface plan is prepared keeping OGL, at an interval of

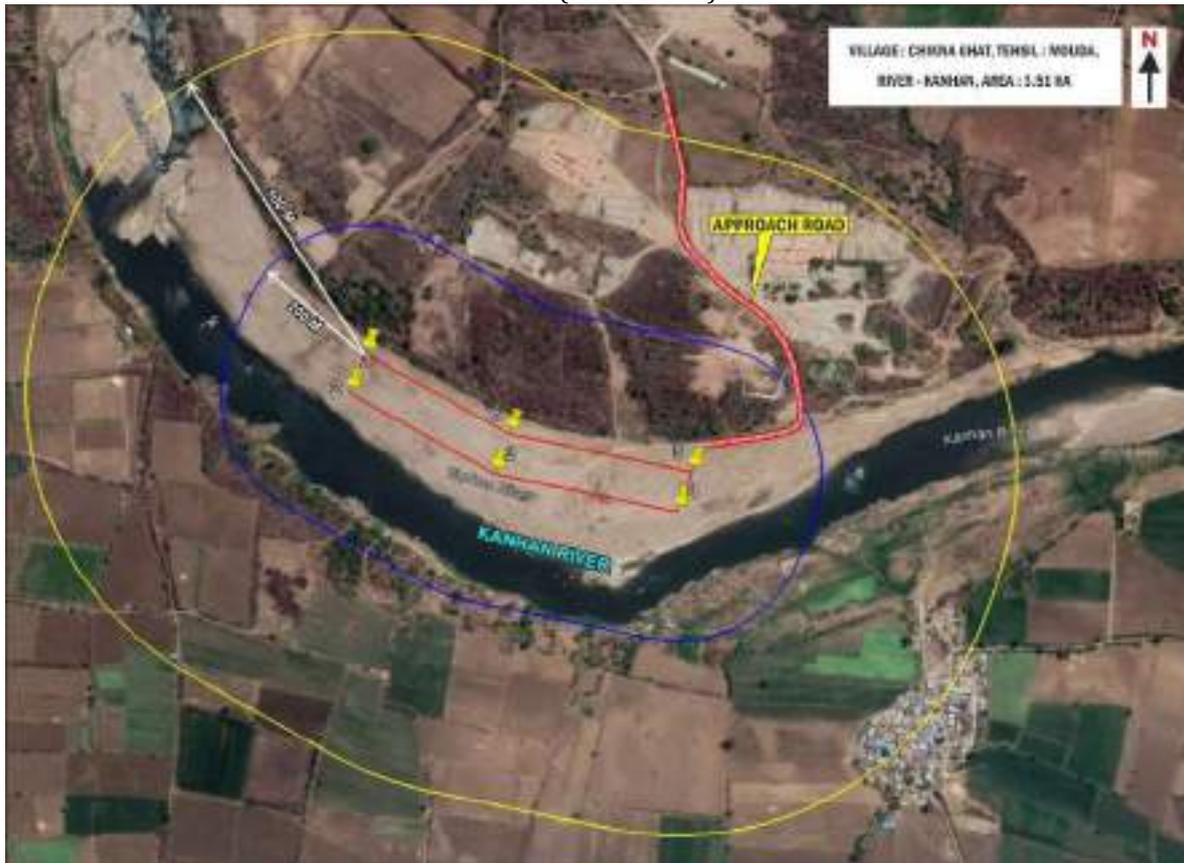
	and across the length of river	10 mx 10 m across length of river.
25	In addition to this outside mine lease and bank of river up to meter needs to be recorded	Details are given in Annexure-VII
26	Time period of monsoon should be defined in the DSR/MP.	Time period of monsoon is defined as 10th June to 30th September of every year during which scooping of sand is not allowed.
27	Details of replenishment needs to be included in the mining plan	Preparation of mining plan is done on the basis of established thickness.
28	Parts of river reach that experience deposition or aggradations shall be identified Leaseholder/Environmental clearance holder may be allowed to extract the sand and gravel deposit in these locations to aggradations problems	All the sand ghat locations are Depositional or Aggradation areas and it is ensured by Technical committee.
29	Distance of sites for sand and gravel mining shall be depending on replenishment rate of river. Sediment rating curve shall be developed and checked against extracted volume of sand and gravel	All the parameters are covered in the replenishment study.
30	Sand and gravel may be extracted across the I entire active channel during dry season	It will be ensured before commencement of Mining
31	Abandoned stream channels on the terrace and inactive flood plains are preferred rather than active channels and their deltas and flood plains. The stream should not be diverted to form inactive channel.	All sand ghat are exposed during non-monsoon period and their deltas and flood plains. The stream should not to diverted to form inactive channel.
32	Layers of sand and gravel which could be removed from river bed shall depend on width of river and replenishment rate of the river.	It is ensured by the technical committee, and Mineable depth is decided after physical survey and there is no possibility of adverse impacts on River morphology
33	Sand ghat shall not be allowed to be extracted where erosion may occur such as concave bank	it is ensured by Technical committee, All the sand ghat locations are Depositional or Aggradation areas and Sand ghat will not be allowed to be extracted where erosion may occur such as concave bank
34	Segment of braided river system should be used preferably falling within lateral migration area of river regime that enhances feasibility of sediment Replenishment.	All the sand ghat locations are Depositional or Aggradation areas and it is ensured by Technical committee.
35	Sand and gravel shall not be extracted from the bridge subjected to 250m on the upstream and 500 meter on downstream side	All sand ghat locations are at suitable distance form bridges as per Guidelines.
36	Mining depth should be restricted to 3 meters and distance from bank should be 1/4th of river width and should not be less than 7.5 meters	Mining depth is decided after physical survey conducted by technical committee and ensures that all the parameters is followed mentioned in the sand mining guidelines.

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37	Demarcation of mining areas with pillars and dereferencing should be done prior to start of mining	All the sand ghat locations are demarcated and georeferenced.
38	A buffer distance of 50m after every block of 1000m over which mining is undertaken or at such distance as may be the directed prescribed by the regulatory authority shall be maintained	All the parameters are followed.
39	Obtaining Environmental Clearance and other statutory clearance	No mining will be done before grant of prior Environmental Clearance.
40	Baseline data before commencement of Mining Operations	It will be ensured that collection of baseline data before commencement of mining Operation.
41	Generic Structure of Replenishment Study	Replenishment study conducted scientifically and included in DSR
42	Particle size distribution and bulk density of deposited material to be assessed	It is followed

Location map of Proposed Nagpur District Sand Ghat

Mouda (Chikna Ghat)



Kirnapur



Mohkhedi



Mahalgaoon-A



Mahalgaon-B



Sirsoli



Vadhna



Dahadi



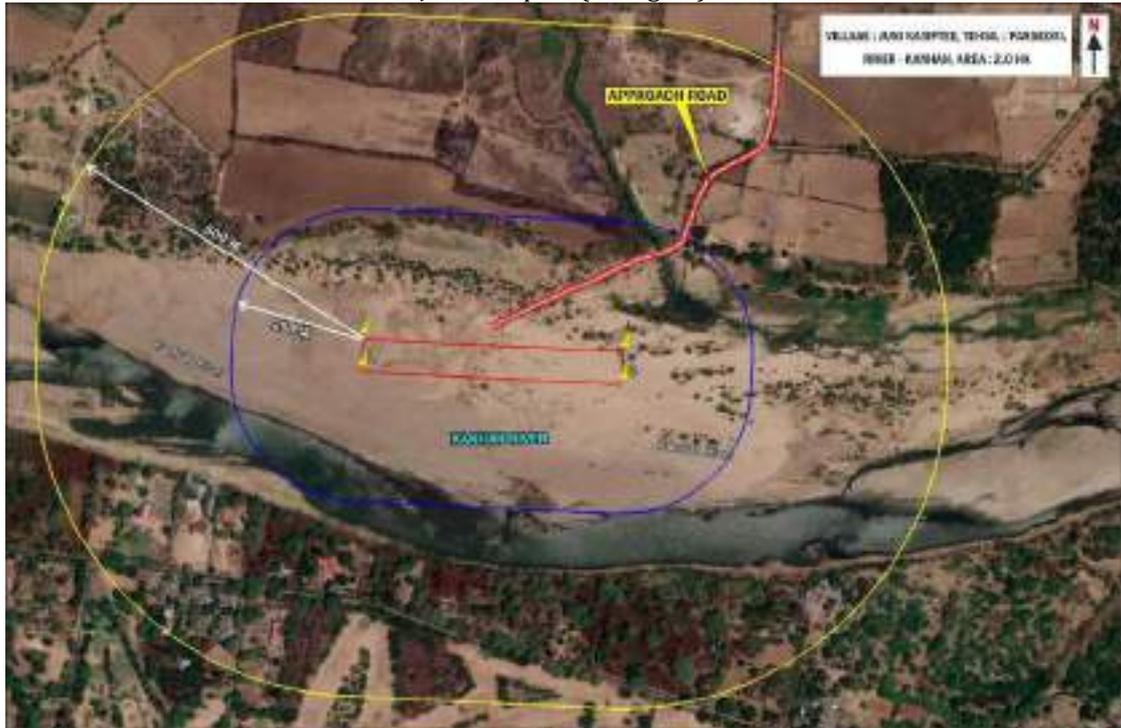
Garanda



Yesamba



Juni Kamptee (Gadeghat)



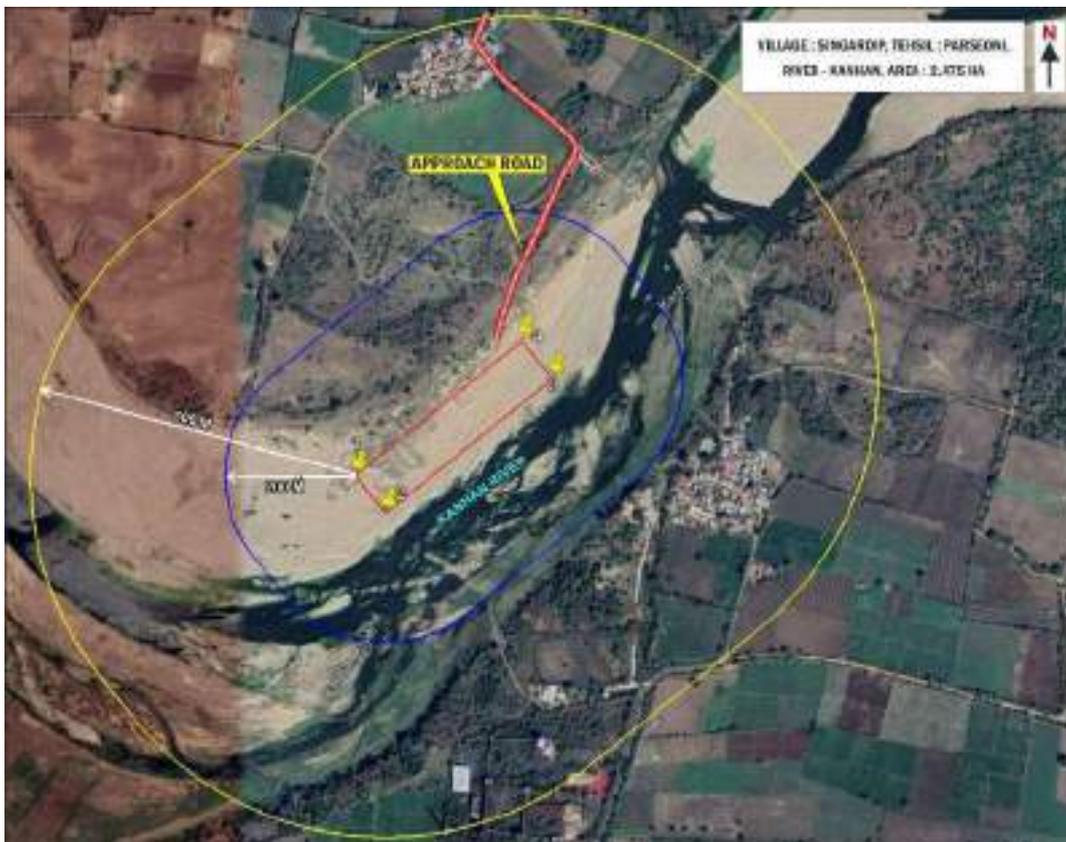
Ghat Rohana



Palora



Singardip



Pipla



Waghoda



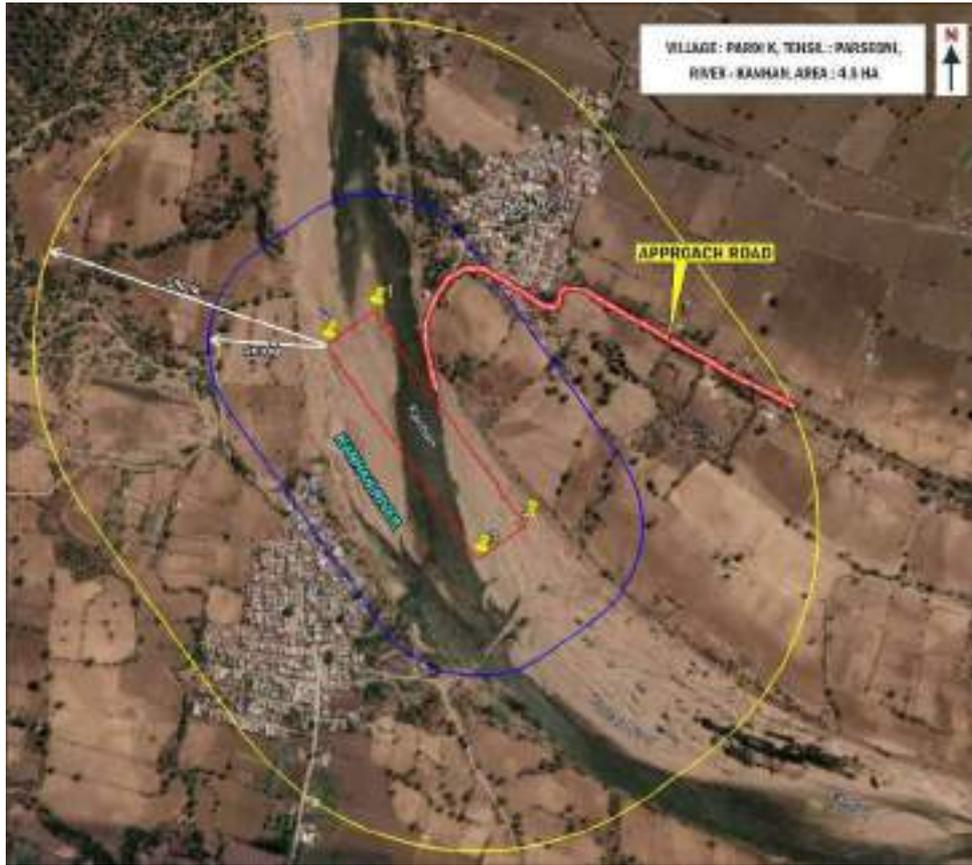
Saholi-B



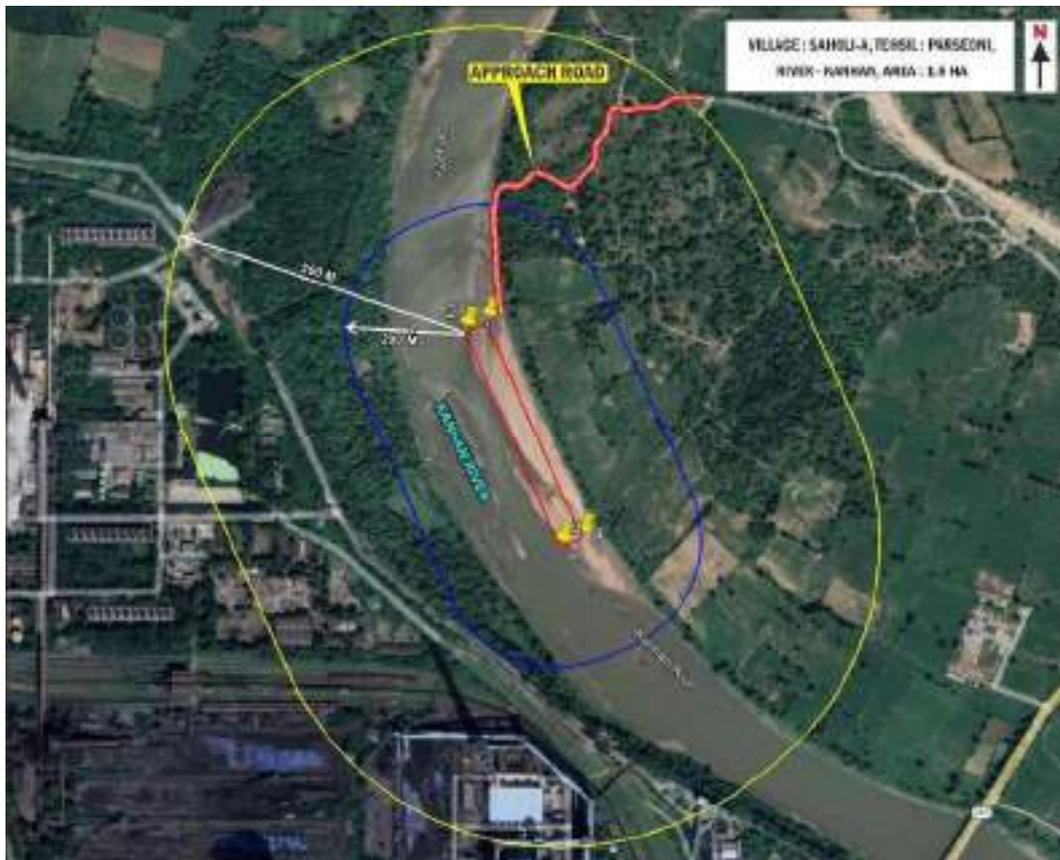
Nayakund



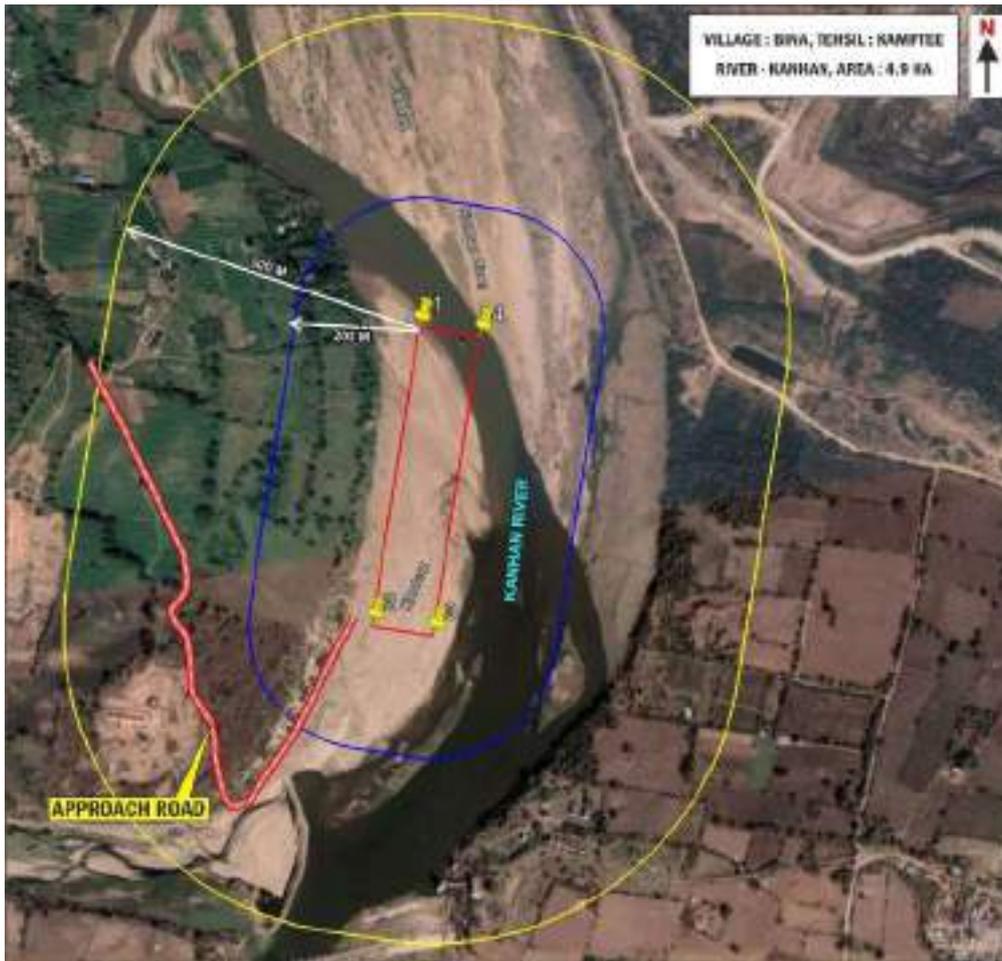
Pardi K



Saholi-A



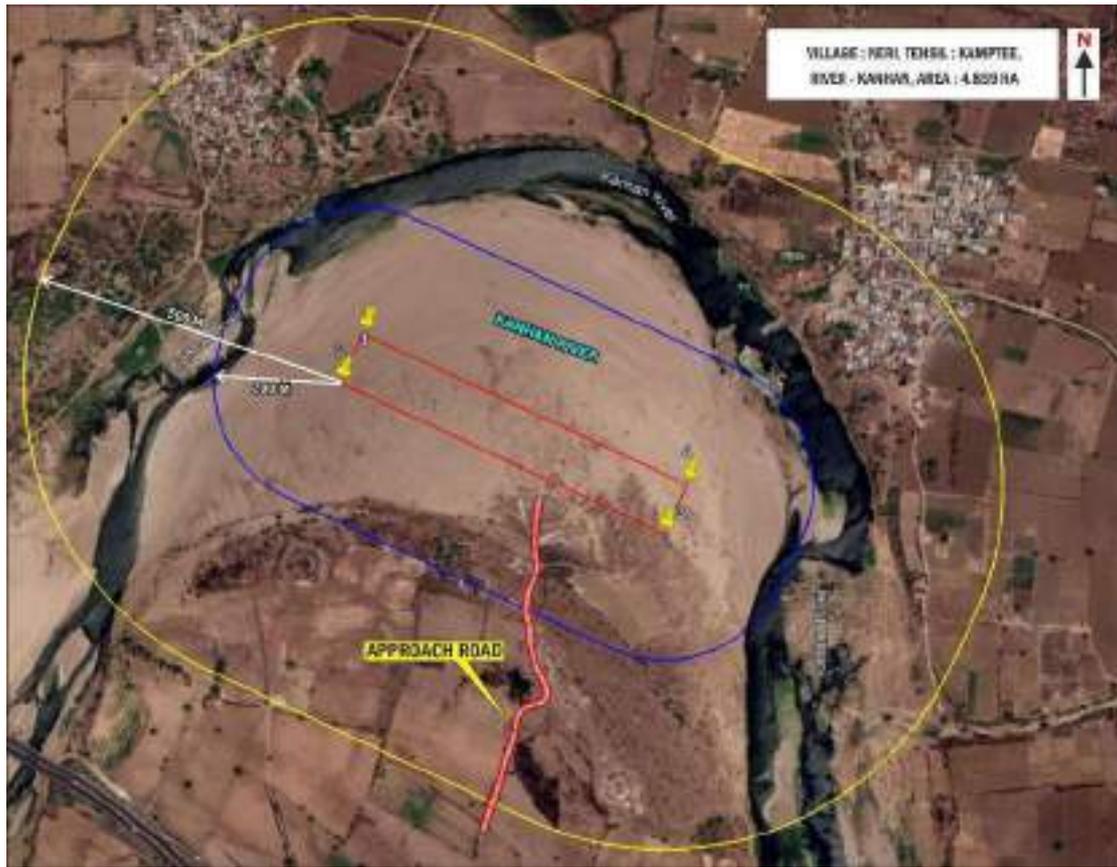
Bina



Ungaon



Neri



Chikna-A



Chikna-B



Bhamewada



Gosewadi -A



Wakodi



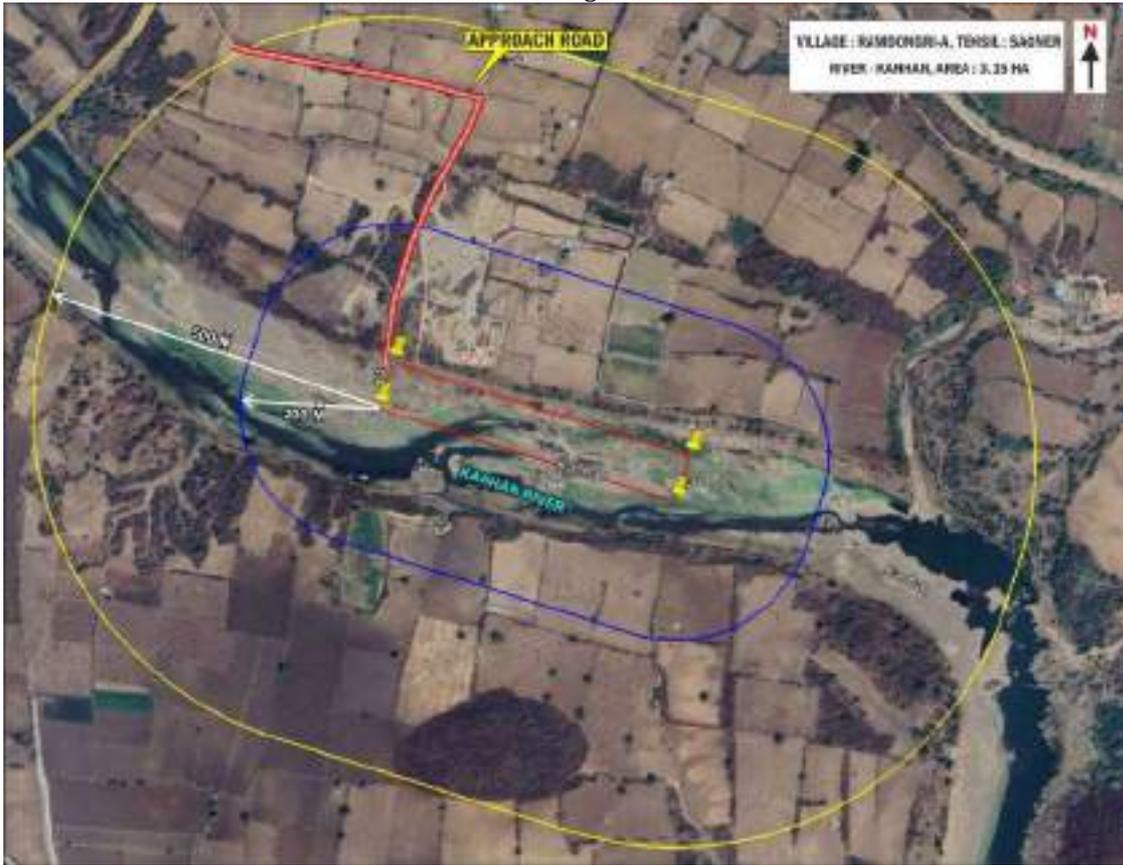
Isapur-A



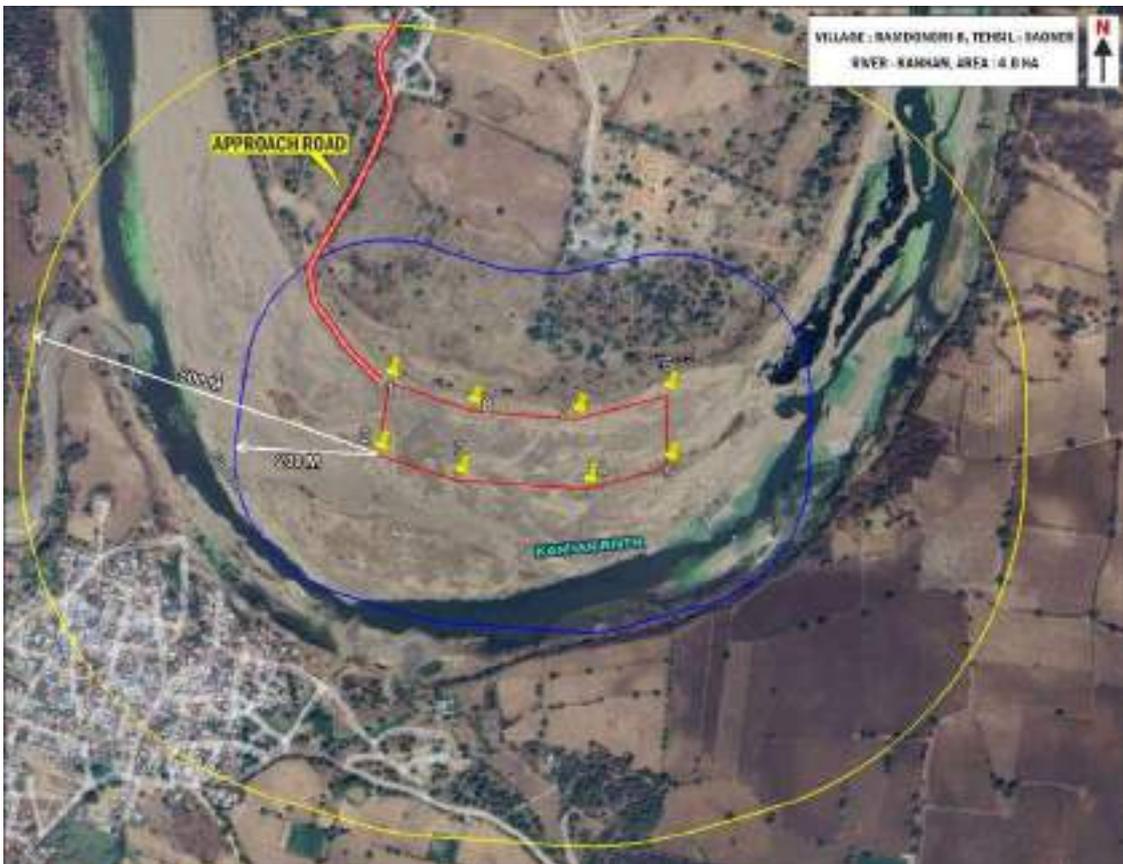
Rohana



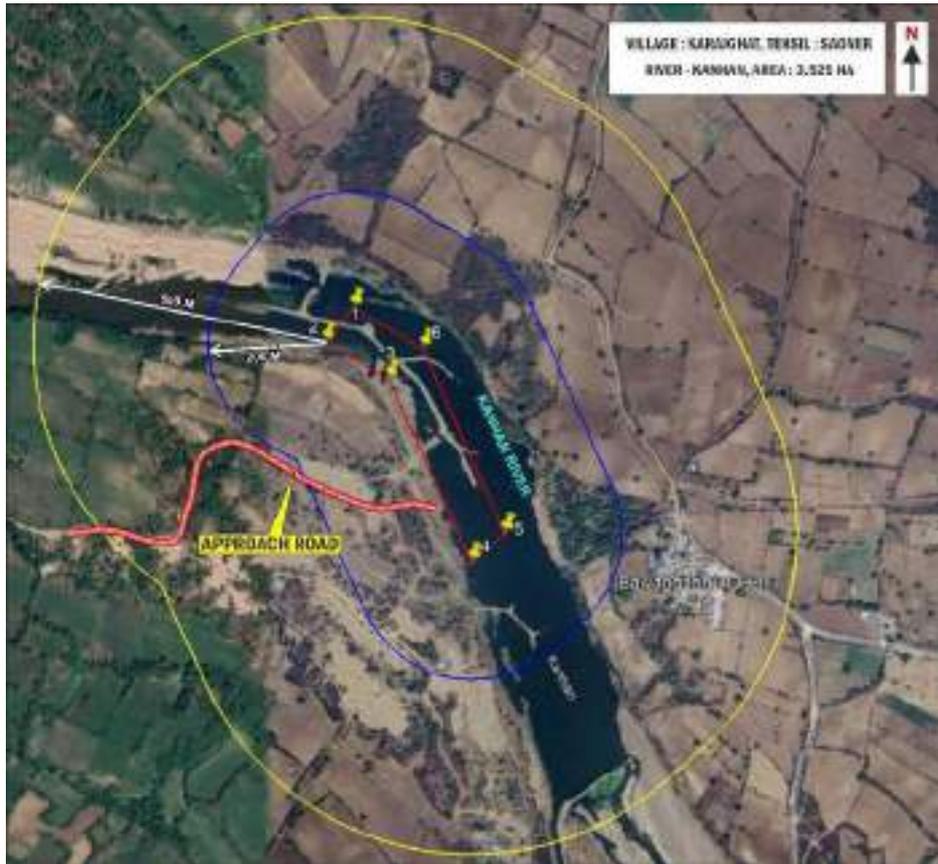
Ramdongri-A



Ramdongri-B



Karajhat



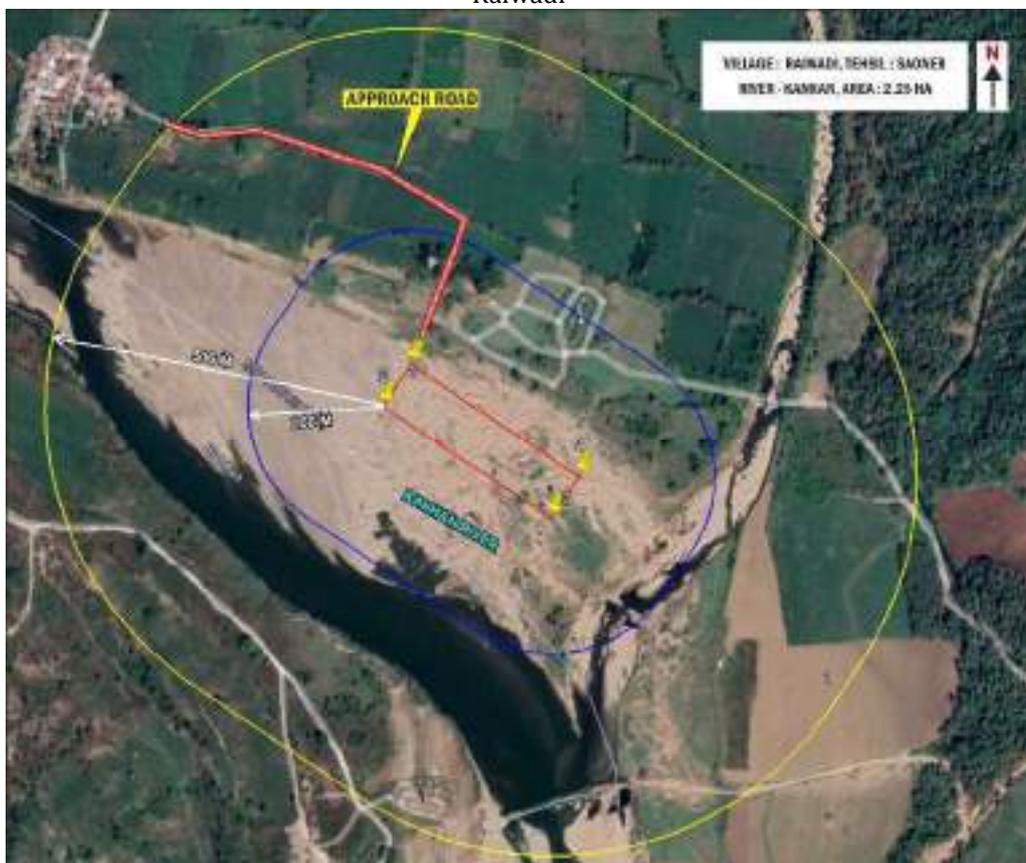
Khapapeth



Kocchi



Raiwadi



Tembhurdoh



Kawadas



Bawangaon-B



Chichghat



Kumbhapur



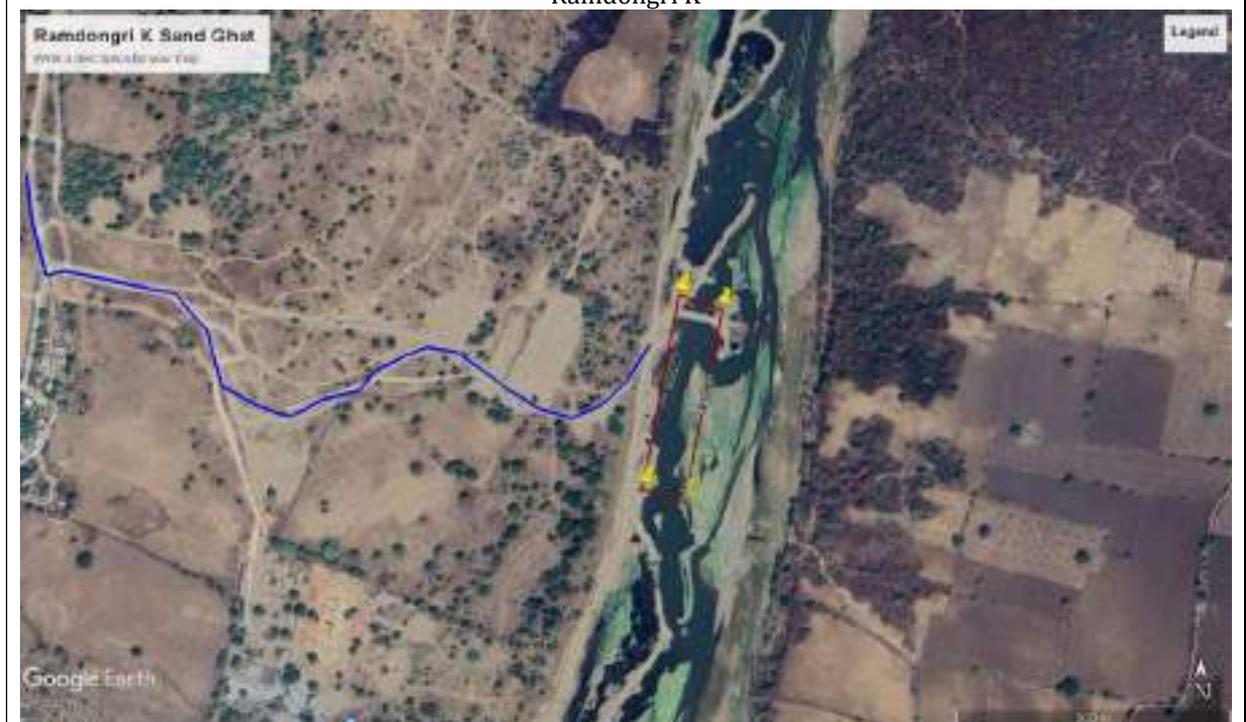
Dahegaon Joshi



Badegaon



Ramdongri K



Sonegaon Raja



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PART-B

FOR MINOR MINERALS OTHER THAN SAND MINING OR RIVER BED MINING

Prepared under:

- a) Appendix-X of MoEF&CC, Gol Notification S.O. 141(E) dated
15.1.2016 b) MoEF&CC, Gol Notification S.O. 3611(E) dated
25.07.2018**

CHAPTER 1 INTRODUCTION

Hon'ble Supreme Court of India dated 27th February, 2012 in LA. No.12-13 of 2011 in Special Leave Petition (C) No.19628-19629 of 2009, in the matter of Deepak Kumar etc. Vs. State of Haryana and Others etc., prior environmental clearance has made mandatory for mining of minor minerals irrespective of the area of mining lease. Accordingly, Ministry of Environment Forest & Climate Change (MoEF& CC) had issued Office Memorandum No.

LHIOII/47/2011-1A II(M) dated 18th May 2013. As per this O.M. all mining projects of minor minerals would henceforth require prior Environmental Clearance irrespective of the lease area. The stone quarry and sand quarrying projects need environmental clearance as per the MoEF guidelines and such pg. 47 projects are treated as Category 'B' even if the lease area is less than 5 Ha. Subsequently, various amendments were made as regards to obtain environmental clearance of the minor minerals.

The Hon'ble National Green Tribunal, vide its order dated the 13th January, 2015 in the matter regarding sand mining has directed for making a policy on environmental clearance for mining leases in cluster for minor minerals. As per the latest amendment S.O. 141 (E) & S.O.190(E) dated 15th January 2016 & 20th January in exercise of the powers conferred by sub-section (3) of Section 3 of the Environment (Protection) Act, 1986 (29 of 1986) and in pursuance of notification of Ministry of Environment and Forest number S.O. 1533 (E), dated the 14th September, 2006 the Central Government had constituted the District Level Environment Impact Assessment Authority (DEIAA), for grant of Environmental Clearance. for Category B2¹ Projects for mining of minor minerals, for all the districts in the country. But later on Hon. NGT, vide its order dated 13th Sept 2018, stated that for 0-5 Ha areas also recommendation of grant EC by SEIAA instead of DEAC/DEIAA.

The MoEF&CC in its Notification dated 15th January 2016 has prescribed Preparation of District Survey Report for Sand Mining or River Bed Mining and Mining of other Minor Minerals. A detailed procedure and format for preparation of District Survey Report is provided in the said Notification. Further the procedure for preparation of DSR and format is amended vide MoEF&CC Notification S.O. 3611(E) dated 25.07.2018. The DSR is defined at "Appendix -X (See Paragraph 7(iii)(a))" of the notification S.O.141(E)dated 15.01.2016 and S.O. 3611(E) dated 25.07.2018.

CHAPTER 2

OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

Nagpur district is very rich in minerals. Deposits of Coal, Manganese Ore, Dolomite, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore, Granites etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan, Kamptee. Apart from this the high grade coal found in Umred tahsil. Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saciner and Parshivani tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district.

Sr.No	Mineral	No of Mines
1	Manganese Ore	41
2	Coal	13
3	Dolomite	15
6	Sand (Stowing)	02
7	Stone Quarry	87

Table 2: Mineral production in Nagpur district

As such the demand of minor mineral in the District started an increasing trend. The increase could be gauged from the fact that during year 2016-17 the royalty receipt on minor mineral was merely Rs. 5.15 crores which has increased to Rs. 10.72 crores (Approx.) in the year 2017-18.

The quantity of minor mineral consumption is a thermometer to assess the rate of developmental activities being undertaken in a particular area. In order to meet the requirement of raw material for construction, the extraction of sand, stone and bajri is being carried out exclusively from the river beds and stone quarries respectively. The demand of sand is mainly met through by river borne sand whereas the demand of bajri/grit is either met through river borne collection or through manufactured grit by stone crushers. The demand of -dressed or undressed stone is met through the broken rock material from the hill slope.

CHAPTER 3

GENERAL PROFILE OF THE DISTRICT

3.1 District at a glance:

Nagpur is the winter capital of the state of Maharashtra, a fast-growing metropolis and third largest city in Maharashtra after Mumbai and Pune. With a population of 46,53,570 (2011) Nagpur Metropolitan Area is the 13th largest urban conglomeration in India. It has also recently been ranked as the cleanest city and the second greenest city of India.

Table 3.1: Brief Description of Nagpur District

Sr. No	Item	Statistic
1	Area	9892 sq.km
2	Population	4653570
3	No. Taluka	14
4	No. of Sub Division	4
5	No. of Councils	14
6	No. of Nagar Panchayat	6

3.2 Climatic Condition:

The Nagpur lies on 150-600m above sea level. Nagpur has tropical savannah climate with dry conditions prevailing for most of the year. In winter, there is much less rainfall than in summer. The Köppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 F). The highest recorded temperature in the city was 47.9 °C on 29 May 2013, while the lowest was 3.5 °C on 29 December 2018.

3.3 Forest Details

Sr. No	Description	Area
1	District Geographical Area	9892(Sq.km)
2	Total Forest Area	2765(Sq.km)
3	Forest Deptt. Area	2180(Sq.km)
4	Revenue Deptt. Forest Area	191(Sq.km)
5	F.D.C.M Forest Area	394(Sq.km)
6	Forest Division	Nagpur
7	Protected Area (if any)	Pench NP, Bor WLS (part)

Source: <https://mahaforest.gov.in>

3.4 Demographic features of the district

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171 and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23,911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932. Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76 % and female literacy was 85.07%. 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68.30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census whereas for rural area it is 942. (Source: <https://nagpur.gov.in/demography>)

3.5 Connectivity:

Nagpur is located at practically the geographical center of India; in fact, the Zero Milestone of India (a heritage monument) is in this city. (Nagpur is 837 km from Mumbai, 1094 km south of Delhi, 1092 km north of Chennai and 1140 km west of Kolkata). All major highways NH-7 (Varanasi - Kanyakumari) and NH-6 (Mumbai - Sambalpur - Kolkata) and major railway trunk routes (Mumbai, Chennai, Howrah and Delhi) pass through the city.

An electrified broad-gauge railway track connects Nagpur to the four major metros. Destinations connected include Mumbai, Delhi, Calcutta, Chennai, Kolhapur, Pune, Ahmedabad, Hyderabad, Jammu, Amritsar, Lucknow, Varanasi, Bhubaneswar, Thiruvananthapuram, Cochin, Gorakhpur, Visakhapatnam, Bangalore, Mangalore, Patna and Indore.

The Sonegaon airport is 7.5 kilometres south of Nagpur city. It is connected to some important Indian and international cities including Mumbai, Calcutta, Delhi, Hyderabad, Raipur, Singapore, Saudi Arabia and Bangkok. Thus, distance and connectivity with all the important Indian cities gives Nagpur an inherent advantage. It can be seen as a transport hub, connecting the Indian cities to each other and international destinations as well. Various IT and ITES companies are also viewing this characteristic as a strong positive factor. The city provides access to its own skilled manpower and also to that of the entire region. (Source: <https://www.nmcnagpur.gov.in/location-and-connectivity>)

CHAPTER 4

GEOLOGY AND MINERAL WEALTH

Regional Geology of the area:

Deccan trap encompasses major parts of Maharashtra state. Deccan trap belongs to Upper Cretaceous to Eocene in age. An array of Deccan trap exist, they are frequently weathered leading to formation of Murom, rubbles and clayey and black cotton soil. The Basalt rock is of varying composition, their flow beds are together known as Deccan trap, The Igneous activity during upper Cretaceous period released tremendous outburst of volcanic energy resulting in the eruption of thick series of lava and associated pyroclastic materials lava flows called as Basalt is a significant event in the evolution of the Deccan Plateau. The Basalt rock is the solidified lava flow of Upper cretaceous to eocene period, the Basalt outcrop runs for nearly 800km towards the coast of Mumbai. This portion is tail end of Basaltic lava flows in Vidharba towards east and south east.

Archaean Rocks:

The Archaeans of Nagpur district are comprised of two distinct lithological units; the older unit comprising gneisses and schists resulting from repeated metamorphism of ancient sediments (similar to Dharwar formation of Southern India) and a younger group of gneisses representing perhaps a granitic intrusion into above metasediments. As both these rock units have suffered intense deformation and metamorphism it is difficult to distinguish them from each other and consequently are generally grouped together as unclassified metamorphic and crystalline series.

Sausar and Sakoli Series:

Rocks of the older metasedimentary group have been mapped in great detail and named Sausar series (occurring in the Northern 'Nagpur-Chhindwada' region) and Sakoli series (occurring in the Southern 'Nagpur-Bhandara' region); the latter, viz., Sakoli series are assumed to be an upward continuation of the former, viz., Sausar series. The Sausar series is further subdivided into stages mostly on their lithology; the Lohangi, Mansar and Chorbaoli being important in view of their containing manganese ore zones. The rock types comprising these series include biotite-gneiss, quartz-pyroxene-gneiss, calciphyre, crystalline limestone, quartzite, mica-schist, hematite-schist, pegmatite and various manganese rocks known as Gondite. Gondite (named after the aboriginal tribe 'Gonds' found in these areas) is a rock composed of quartz and manganese Garnet 'spessar-tite'. Many other rock types carrying rare species of manganese minerals such as *Blanfordite*-a manganese pyroxene (from Kachurwahi

and Ramdongri), Vrendenburgite-a strongly magnetic manganese ore (from Beldongri), *Hollandite*- crystalline form of psilomelane (from Junawani) and *Beldongrite*-black pitch like mineral regarded as an alteration product of spessartite, have been grouped under the Gondite series. Of the other minerals found in the manganiferous rocks of the region, *Sitaparite*, *Chiklite*, *Winchite*, *Juddite*, *Rhodonite* and *Piedmontite* deserve mention. An excellent exposure of crystalline limestone containing piedmontite nodules occurs in the Pench river at Ghogra (Gokula) about 3 km. north-east of Parseoni.

Streaky-Graniticgneisses:

Rocks of the younger group comprise coarse grained granitic gneisses, prevalent amongst which, is streaky biotite gneiss which at places covers large areas. These are, however, distinguished from schists and gneisses of sedimentary origin (Sausar series) in view of their not being confined to any particular horizon, and occurring adjacent to any of the stages of the Sausar series. Another feature of these rocks is the occurrence in them of coarse pegmatite intrusive. Based on these and other lines of field evidence, it is thought that these rocks are intrusive into the Sausar series.

Structure of Archaean Rocks.

The Archaean rocks of this district have a very complex structural pattern. The Sausar series (northern belt) generally dips towards south-south-east or south and the Sakoli series to the north-north-west while the middle or axial region may be a zone of faulting or overthrust. In the Sausar series the southern part is composed of isoclinal folds with steep (50° - 80°) dips to south; in the middle strip the folds are recumbent, with 30° to 60° dip to the south, while the northern strip shows thrust sheets. There are many steep dipping strike faults which are generally thrust faults. Three 'Nappe' units have been recognised in the Nagpur-Chhindwada region at Sapghota, Ambajhari and Deolapar from west to east all of them having a low southernly dip. 'Nappe' is a structure wherein a sheet of rocks has been tectonically transported far from its original site. Earlier folds in Sausar series have been refolded by late stage deformation and the resulting 'cross-fold' structure is seen at Ramtek, Junawani and Deolapar. Lineations of various kinds are well developed in the Archaean rocks of the district, all of which plunge 20° to 30° towards East.

Gondwana Super group:

Rocks referable to the Talchir, Barakar and Kamthi stages of the Gondwana system of fluviatile and lacustrine origin were deposited in troughs, generally produced by faults, which in many cases form the boundary of Gondwanas with older rocks and therefore known as 'Boundary fault'. The Kelod-Kamptee line which marks the north-east boundary of Kamthi beds with Archaeans is a boundary fault. The Gondwana formations have been affected by other minor faults as revealed in several drillholes put down to prove the existence of coal seams around the towns of Kanhan and Kamptee. There is a marked unconformity between the Barakars and Kamthis; during the time interval indicated by this unconformity, Barakars were partially or completely eroded away in some areas and the Kamthis rest directly over the Talchirs. At other places absence of Barakar outcrops is due to overlap (extension of a strata in a conformable sequence beyond the boundaries of those lying beneath) by Kamthis.

Talchirs:

Talchir beds are exposed at Kodadongri (north of Patansaongi) and 9 km. north of Nagpur near Suradevi hills, while to 8 km. north of these hills minor exposures are seen. Talchirs comprise green shales and sandstones with minor intercalations of clay and rest unconformably with a basal conglomerate over the Archaean rocks.

Barakars:

Coal-bearing Barakar beds consisting of white and grey sandstones and grits, fireclays and carbonaceous shales are exposed in Tekadi-Silewada-Patansaongi and Bhokara-Chakki- Khapa tract. They are also reported from below the Lameta beds near Umrer. Barakar outcrops are generally lacking in the district, being either overlapped by Kamthis or concealed under the alluvium. About 200 metres north of Kanhan Railway Station a drill hole has revealed Barakars beneath the alluvium.

Kamthis:

These rocks occupy an area which is bounded by Kelod-Kamptee line towards north-east along which Kamthis have been faulted against Archaeans. Southwards they stretch upto Bhokara, 6 km. north of Nagpur. The western boundary is the irregular edge of the Deccan basalts. At Silewada, about 8 km. northwest of Kamptee, a low range of hills is composed of Kamthis. Detached from above, two inliers are

seen in the trap area to the west. One of these (about 14 km. long by 6 wide) lies to the north-east of Bazargaon and the other roughly 54 km. north-west of Nagpur at Ghorkheri (6 km. long by 4 wide).

Kamthis trend in west-north-west-east-south-east direction with 5° to 30° dip towards south- south-west and their estimated thickness is about 1,500 m. Predominantly composed of soft and coarse grained sandstones, Kamthis also contain fine grained micaceous sandstones, hard and gritty sandstones and homogeneous and compact shales. Bazargaon inlier contains considerable thickness of conglomerates composed of white quartz pebbles set in a matrix of grit. Interstratified with this conglomerate is a fine red argillaceous sandstone. Fossil flora include species of *Phyllothea*, *Vertebraria*, *Pecopteris*, *Gangamopteris*, *Angiopteridium*, *Macrotaeniopteris*, *Noeggeria-thiopsis* and *Glossopteris*. The best known localities for fossils in Kamthis are the stone quarries at Silewada and Kamptee.

Lametas:

Lametas, also known as Infratrappeans for their subjacent position to traps (Deccan basalts), are fresh water deposits which rest horizontally over the older Gondwana and Archaean rocks with an unconformity. Lametas which rarely attain a thickness up to 8 metres grade from calcareous sandstones to sandy limestones with intercalations of chert and clay. These occur at the foot of Kelod and Sitabuldi (Nagpur) hills, west of Adyal and at Ketapur. A large spread of these rocks is situated immediately to the west of Umrer. Lametas have also been found fringing the trap outliers in the north-west corner of the district. Fossil Mollusca found in the beds at Nagpur are *Melania*, *Paludina* and *Corbicula* and *Physa*.

Deccan basalts (Traps) and Intertrappeans:

The western part of the district is covered by layers of doleritic and basaltic lavas, commonly known as 'traps' because of step like appearance of their outcrops, the term being of Scandinavian origin. Apart from the main area to the west, several outliers are found north-west of Bhivagad, whilst the southern end of the tongue of trap separating the Pench Valley in Chhindwada district just crosses the border into Nagpur.

These traps are of fissure-eruption type, i.e., they welled up through long narrow fissures in the earth's crust and flowed out as horizontal layers one over the other.

Individual flows (layers) have been traced for distances of 100 km. in this district. Some layers are hard and compact while others are soft, vesicular or amygdaloidal having cavities filled with secondary calcite, zeolite and quartz. Columnar joints, sheeting and spheroidal weathering are characteristic of these rocks. The Deccan traps belong to 'Plateau basalt' type, essentially composed of plagioclase (mostly labradorite) and augite with some magnetite. Palagonite is abundant in the basalts near Nagpur. These rocks are generally dark grey in colour having a specific gravity of 2.9.

Geological Succsesion of the Nagpur District:

Name of the formation	Age
Soil	Recent.
Deccan basalt flows(Traps)with AssociatedIntertrappeansediments	Lower Eocene to upper cretaceous
Lametabeds	Cretaceous.
Gondwana group: Kamthistage Barakar stage Talchir stage	Permian Corboniferous
Streaky GranitiegneissesSausar and Sakoli series of metasediments	Archaeans

Soil:

In the Archaean area the rocks are hidden beneath a considerable thickness of alluvialsoil, deposited by the tributaries of the Kanhan and the Wainganga rivers. In the trappean area the soil is usually the black cotton soil known as regur with Kankar, which is also found in the soils on the Archaean areas.



Fig: Type of Soil in Nagpur District

CHAPTER 5 DRAINAGE AND IRRIGATION PATTERN

5.1 Basin/Sub basin

The district falls in the Godavari Basin which is further divided Kanhan sub basin and Pench Sub basin which is drained in the south. Important Rivers of the district are kanhan, Pench, Nag, Kolar, Sur and Wardha

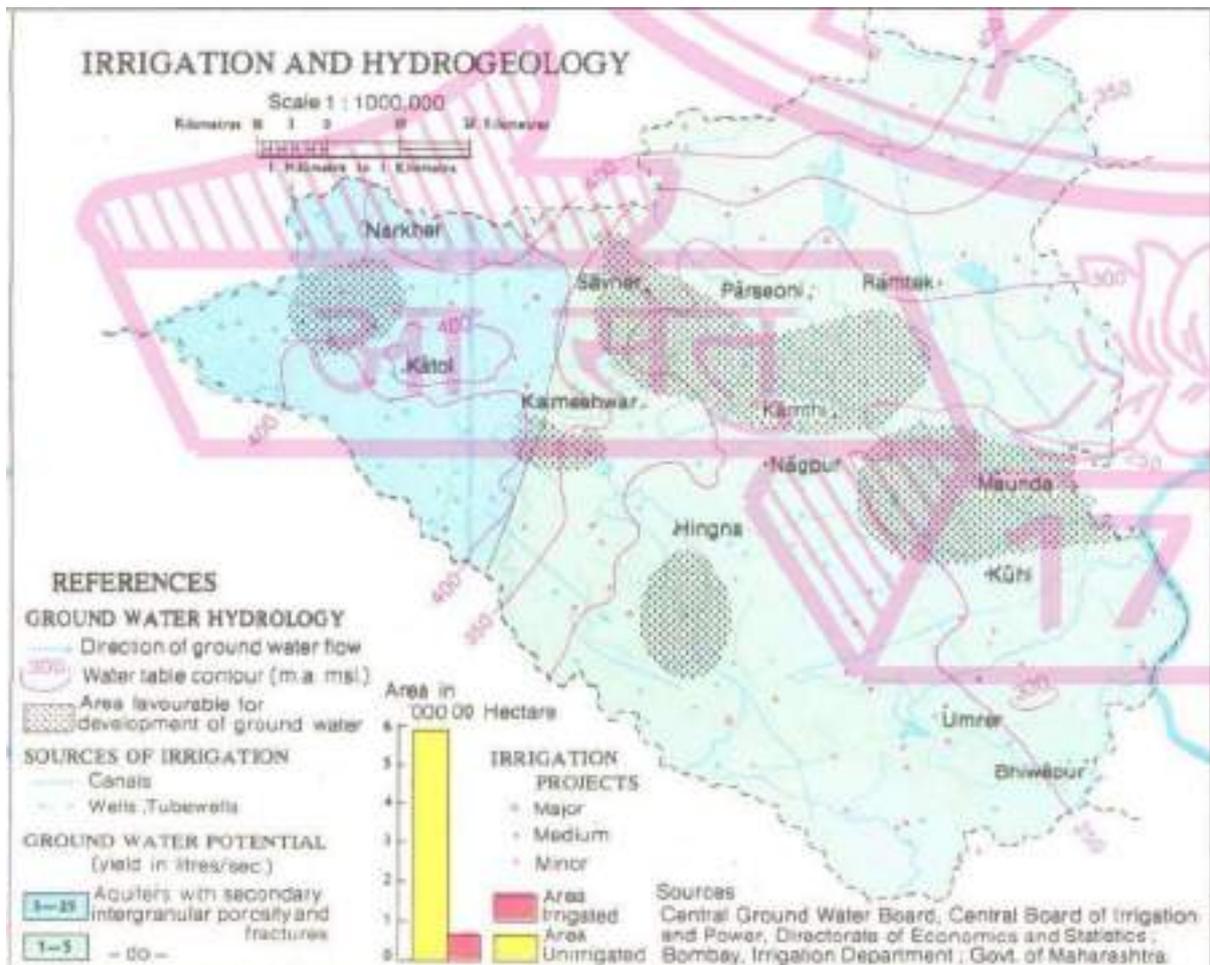


Fig: Irrigation and Hydrogeological Map of Nagpur District

5.2 Irrigation pattern:

Table 5.1: Irrigation pattern of the District

Irrigation	Area(*000 ha)		
Not irrigated area	134		
Gross irrigated area	228.9		
Rainfed Area	499		
Sources of Irrigation	Number	Area(*000 ha)	Percentage of total irrigated area
Canals		86.92	63.5
Tanks	216		2.6
Open wells	55277	56.16	27.1
Bore wells	5661	-	
Lift Irrigation schemes	3	-	
Micro Irrigation		-	
Drip	3433(Sets)	3.1	
Sprinkler	5353(Sets)	4.8	
Other sources (Please specify)	730	7.9	6.6
Total Irrigated Area			
Pump Sets	39189		
No. of Tractors	9951		

Source: Agriculture contingency plan of Nagpur

CHAPTER 6

LAND UTILIZATION PATTERN IN THE DISTRICT

Land Use pattern

The total area of the district is 986 thousands hectares of which forest cover 155 thousands hectares and area under cultivation or 643 thousands hectares. The land utilization pattern of the district is given in Table 6.1

Table 6. Land utilization

Sr. No.	Description	Area (Area in HaR)
1	Forest	1541
2	Barren & uncultivated	338
3	Land under non-agriculture	994
4	Cultivable waste land	345
5	Permanent Pasture	551
6	Misc. trees & groves	78
7	Current Fallow	208
8	Other fallow	217
9	Net area Shown	5592
10	Area shown more than once	1030
11	Gross cropped area	6622
12	Gro graphical area	9864
13	Cropping intensity	118
14	Cultivable area	6440

(Source: <http://krishi.maharashtra.gov.in/1074/Land-Utilization-Statistics>)



Fig: Land Use Map of Nagpur District

CHAPTER 7

SURFACE WATER AND GROUND WATER SCENARIO OF THE DISTRICT

7.1 GROUND WATER SCENARIO

Nagpur District is a part of the Wainganga alluvial plains and is underlain by quaternary alluvium comprising mainly sands of various grades with clay and kankar. The central alluvial plains extends from north to south are made up of finer clastics comprising mainly clay, silt, sandy clay with Kankar and subordinate sands.

7.2 HYDROGEOLOGY

The ground water in the area occurs both under confined and water table condition. It occurs in the zone of saturation within the granular zones encountered below the land surface. The principal source of replenishment to the ground water body is precipitation. The north-eastern and east central parts of the district are drained by the Wainganga and its tributaries. The central and western portion is drained by the Wene which is tributary of Wardha River. The aquifer material is comprised of fine to medium sand and coarse sand with gravel.

The important water bearing formations of Nagpur district are discussed below. A map depicting the hydrogeological features is shown in figure below.

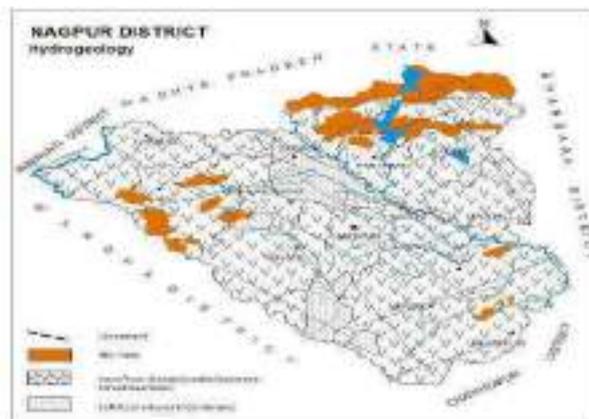


Fig: Hydrogeological Map of District

Water Level Scenario

Central ground water board periodically monitors the National Hydrograph network Stations (NHNS) Stations In Nagpur district, four times a year i.e., January May (Pre-monsoon) , August and November (Post-monsoon). The data on pre and post monsoon water level along with fluctuation during 2019.

Depth to Water Level-Pre-monsoon

The depth to water level in the district during May 2021 ranges between 0.05 (umrer) and 15.59 (Sathnaovi) mbgl. Depth to water levels during pre-monsoon (May 2019) has been depicted in Fig 7.2. Shallow water level within 10 m bgl are seen in almost entire district.

Water levels in the range of 10-20 m bgl are observed parts of Kamleshwar, Hingna, Narkhed, Paraseoni, talukas, as isolated patches.

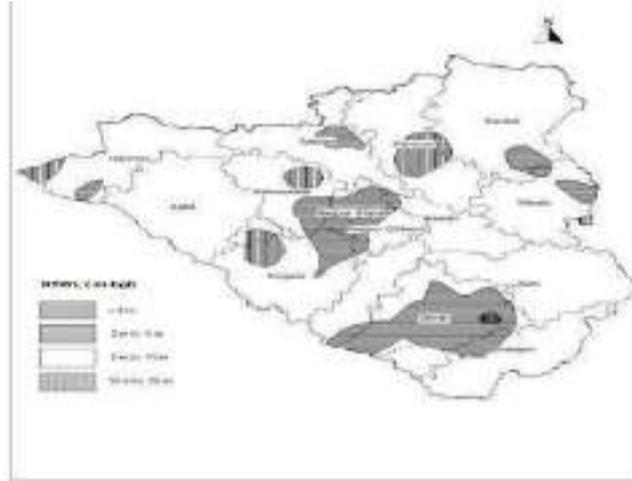


Fig 7.2: Depth to Water Level (Pre-monsoon-May)

Depth of water level-Post-monsoon

The depth to water levels during Nov. 2021 ranges between 0.60 m bel (Umrer) and 10.60 m (Manegaontek) Spatial variation in post-monsoon depth to waterlevels is shown in Fig 7.3. in the district the water levels are shallow within 10 m bgl Water levels of 2-5 m bgl is the most dominant range occupying major part of Ramtek, Mouda, Kuhi and Bhivapur talukas. Water level of less than 2 m bgl are observed in isolated patched i.e.part of Narkhed, Nagpur, Umrer and Mouda talukas.

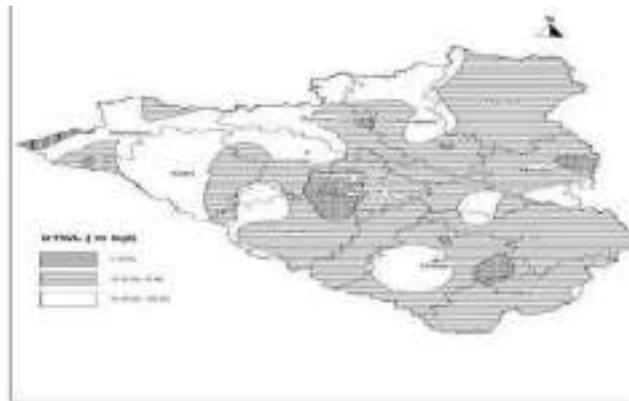


Fig. 7.3: Depth to Water Level (Post-monsoon-Nov. 2021)

Ground Water Resources

Central Ground Wates Board and Groundwater Survey and Development Agency (GSDA) have jointly estimated the ground water resorces of Nagpur district based on GEC-97 methodology. Taluka wise ground water resources are shown in Fig. 7.4. As per the estimation the net annual ground water availability comes to be 1058.12 MCM The total gross draft for all uses is estimated at 407.80 MCM with irrigation sector being the major consumer having a draft of 343.59 MCM The allocation for domestic and industrial water requirements are worked at 126.80 MCM. The net ground water availability for future

irrigation is estimated at 588.05 MCM. Stage of ground water development varies from 12.0% (Mouda) to 75% (Narkhed). The overall stage of ground water development for the district is 38.54% All the talukas have been categorised as "Safe".

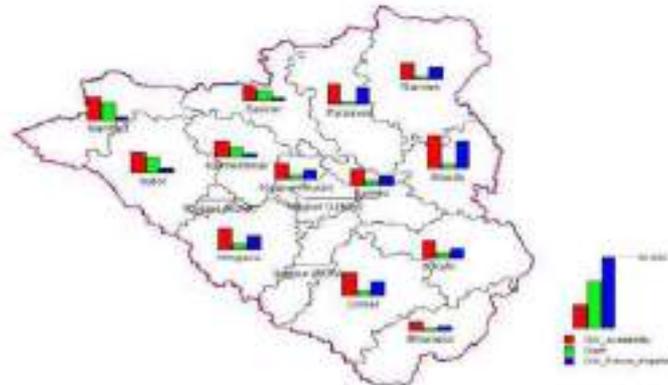


Fig: Ground Water Resources of the District

Ground Water Management Strategy

Ground water has special significance for agricultural development in the State of Maharashtra. The ground water development in some parts of the State has reached a critical stage resulting in decline of ground water levels. There is thus a need to adopt an integrated approach of development of ground water

Ground Water Development

The basalt is the main formation of the district and occupies an area of about 4300 sq. km. It is observed that the vesicular and weathered basalts are more productive than the massive and jointed basalts. Though the Archaeans are highly weathered, they form moderate potential aquifers. Alluvium is the most potential aquifer occurring in the district. In general, the Gondwana formation gives moderate to high yield while the Lameta is poor yielding aquifer in the district. Dug wells are most common ground water extraction structure in the district and are used for both domestic and irrigation purposes. The formation wise yield of dug wells is given in Table below.

Table No. 7.1: Formation-wise yield of Dugwells.

Sr. No	Rock Formation	Depth range (m bgl)	Yeild range (m ³ /day)		Remarks
			Winter	Summer	
1	Archaen	4.97-26.00	20-300	5-120	Weathered and fractured formation from good aquifers
2	Gondwana	8.00-19.65	40-200	20-80	Kamathi is the best aquifer
3	Lameta	5.85-17.15	-	-	Poor aquifer and cannot sustain pumping
4	Deccan Trap				
a	Massive Basalt	5.1-13.00	20-90	10-20	Poor aquifer Limited pumping
b	Vesicular	5.7-13-15	20-288	20.240	During Summer yield is

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	Basalt				Mostly between 20-60
					M ³ /day
c	Weathered Basalt	4.00-17.25	30-384	10-128	Summer yield is between 20 to 80 M ³ /day
d	Jointed Basalt	5.20-11.75	35-240	6-190	Summer yield is around 40 M ³ /day
5	Alluvium	8.10-16.30	110-300	40-300	Restricted along the Rivers and their tributaries

(Source: CGWB, Groundwater broacher of Nagpur District)

CHAPTERS 8
RAINFALL OF THE DISTRICT AND CLIMATIC
CONDITION

Climatic Condition:

The Nagpur lies on 150-600 above sea level. Nagpur has tropical savannah climate with dry condition prevailing for most of the year. In winter there is much less rainfall than in summer. The Koppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 °F) The highest recorded temperature in the city was 47.9 °C on 29 May, 2013, while the lowest was 3.5 °C on December 2021.

Rainfall of the District

Table 8.1: Rainfall of the District

Month	Normal Rain	Actual Rain	Rain Days
January	13.2	36.0	4.0
February	8.2	5.0	0.0
March	11.2	0.6	0.0
April	7.8	1.9	0.0
May	12.2	20.5	2.0
June	187.1	125.3	13.0
July	362.3	680.8	29.0
August	347.8	419.4	17.0
September	175.3	301.8	20.0
October	53.4	84.6	11.0
November	13.8	0.0	0.0
December	6.7	2.4	0.0
Total	1199.0	1678.3	96.0

Source: maharain.maharashtra.gov.in

Chapter 9
DETAILS OF MINING LEASES OF THE DISTRICT

List of mine holder in Nagpur District:

Sr · No.	Name of the Lease Holder	Mouza	Tahsil	Survey No.	Area in HR	Date of Order	EC Date	Valid ity Perio d (Yrs)	From Date	To Date
1	S K mehta through Ashish Mehta	Sayki	Umred	153/5	2.02	03/11/ 2018	07/08/2018	5	03/11/2018	02-11-2023
2	M/s Bestone minrals and pricost solution through Ullas Pagariya	Undri	Umred	142	4.80	10-12- 2018	11-12-2018	5	10-12-2018	09-12-2023
3	Sanjay Raghunath Tidke	Haladg aon	Umred	30, 57/2	3.97	30/10/ 2018	07/08/2018	5	30/10/2018	29-10-2023
4	Murli Govindra m Wadhwani	Pachga on	Umred	427	1.21	11-12- 2018	25-10-2018	5	11-12-2018	10-12-2023
5	Dilip Madhukar Sambare	Haladg aon	Umred	60	3.90	21-12- 2018	07-08-2018	5	21-12-2018	20-12-2023
6	Tushar Chandraka nt Wekhande	Undri	Umred	71, 69	1.26	20-03- 2019	25-10-2018	5	20-03-2019	19-03-2024
7	Shree Stone Crusher through Dinesh Pagariya	Salaim endha	Umred	37/1	1.74	25-02- 2022		5	25-02-2022	02-10-2023
8	AEC Metals through Sanjay Vijaywargi ya	Sayki	Umred	125/2	1.90	20-03- 2019	25-10-2018	5	20-03-2019	19-03-2024
9	Karan	Pachga	Umred	429	2.06	09-05-	25-10-2018	5	09-05-2019	08-05-2024

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	Shyamkumar Jaiswal	on				2019				
10	Abdul Quadir Mo. Ismail	Surgao n	Umred	195	8 Acre	01-07-2014		10	17-09-2014	16-09-2024
11	Contero Minerals Pvt Ltd Through Swapnil Bhende	Sayki	Umred	146, 148	3.00	20-03-2019	06-09-2017	5	20-03-2019	19-03-2024
12	Murli Govindram Wadhwani	Pachga on	Umred	426	2.30	27-11-2018	15-10-2018	5	27-11-2018	26-11-2023
13	M/s Siddheshwar Infra through Shyam Jaiswal	Pachga on	Umred	479/2, 479/3	2.04	17-01-2018	07-08-2018	5	17-01-2018	16-11-2023
14	Vishal Ajay Jaiswani	Haladga on	Umred	81, 83	4.54	03-11-2018	07-08-2018	5	03-11-2018	02-11-2023
15	Suresh Kumar Bhagwandas Kunjwani	Surgao n	Umred	368	3 Acre	08-08-2014		10	10-10-2014	09-10-2024
16	M/s Ashokwan Enterprises through Kalpana Bhende	Surgao n	Umred	368	5.50 Acre	08-07-2014		10	17-09-2014	16-09-2024
17	Manoj Trilokchand Arora	Salaimendha	Umred	27	1.47	08-03-2021	05-01-2021	5	05-01-2021	17-12-2024
18	S K Mehta & Co. through Arvind Suresh Kumar Mehta	Pachga on	Umred	147/1, 147/2, 149	4.90	01-11-2018	25-10-2018	5	01-11-2018	30-10-2023
19	Vinod Ramkaran Mittal	Surgao n	Umred	368	2.02	29-06-2015	15-05-2014	10	24-07-2015	23-07-2025
20	Pramod Ramkaran das Mittal	Surgao n	Umred	341	5 Acre	28-08-2015	07-05-2013	10	10-09-2015	09-09-2025

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21	M/s Luky Metal thru Mahesh M. pinjani	undri	umred	72	1.07	25-02-2021	05-01-2021	05-01-2021 to17-12-2024	25-02-2021	17-12-2024
22	Shri Vyankatesh Casting Pvt Ltd through Jitendra Sarda	Pachgaon	Umred	512/2, 513	1.88	14-11-2018	25-10-2018	5	14-11-2018	13-11-2023
23	Sundar D Khatri	Surgao n	Umred	368	1.15	23.04. 2015		10	29-06-2015	28-06-2025
24	Anand Eknath Lokhande	Surgao n	Umred	354/1, 353	1.10	10-10-2014	07-05-2013	10	31-01-2015	30-01-2025
25	Shri Agrawal Minerals through Sushilkumar Agrawal	Bhiwapur (Ooty)	Umred	64	2.36	02-05-2019	25-10-2018	5	02-05-2019	01-05-2024
26	Ashwin Sureshku mar Mehta	Paradga on	Umred	153	4.11	01-11-2018	25-10-2018	5	01-11-2018	30-10-2023
27	Sachin Laxmikant Pitale	Surgao n	Umred	359	1.75	14-11-2018	07-08-2018	5	14-11-2018	13-11-2023
28	Rajesh Shardanan d Jaiswal	Khapri (Raja)	Umred	76/1	0.21	01-11-2018	25-10-2018	5	01-11-2018	31-10-2023
29	Sitaram Parasram Kamble	Khapri (Raja)	Umred	76/1	0.80	06-08-2018	13-07-2018	5	06-08-2018	05-08-2023
30	Harcharan singh Ranjeetsin gh Bhatiya	Surgao n	Umred	368	7 Acre	04-08-2014		10	10-10-2014	09-10-2024
31	Bhagwanji bhai Dhanjibhai Patel TRANSFER to Shyamlal G	Pachga on	Umred	521/2	2.66	14/11/ 2018, 22/02/ 2019	03-10-2016	5	14/11/2018, 22/02/2019	13-11-2023

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	Wadhvani , Mayur M Wadhvani									
32	Rahul Maniram Yadav	Haladg aon	Umred	77/1	2.91	01-12- 2018	25-10-2018	5	01-12-2018	30-11-2023
33	Shri Purushott am Bhimji Patel	Pachga on	Umred	516, 517	1.96	19-05- 2020	12-03-2020	5	19-05-2020	17-12-2024
34	Shri Purushott am Bhimji Patel	Pachga on	Umred	480/2	1.38	17-11- 2018	25-10-2018	5	17-11-2018	16-11-2023
35	Omraj Dattuji Jichkar	Uti	Umred	162-1, 162-2	2.68	16-03- 2022		3	16-03-2022	06-08-2025
36	Smt Meena Ajay jaiswani	Mohap a	Umred	43	2.72	22-03- 2022		5	22-03-2022	21-03-2027
37	Smt Meena Ajay jaiswani	Mohap a	Umred	43	2.72	22-03- 2022		5	22-03-2022	21-03-2027
38	Shri Lokesh Damodhar Zode	Dhurkh eda	Umred	200/1	2.50	10-08- 2022		5	10-08-2022	09-08-2027
39	Akash Ghanshya m Gangwani	Khadga on	Nagpu r Rural	234	2.02	30-07- 2020	16-01-2016	5	30-07-2020	29-07-2025
40	Murli Govindra m Wadhvani	Khadga on	Nagpu r Rural	152	2.71	10-01- 2022		5	10-01-2022	10-01-2027
41	Radha Stone Industries through Pawan S Bihani	Salai Godha ni	Nagpu r Rural	206/1, 206/2	1.21	22-02- 2022		5	22-02-2022	07-10-2023
42	Shri Ram Govindra m Wadhvani	Khadga on	Nagpu r Rural	171/3	2.44	06-01- 2022		5	06-01-2022	08-12-2027
43	Prakash Wamanra o Atkar	Mahur zari	Nagpu r Rural	148, 149, 150, 163	3.00	16-11- 2018	25-10-2018	5	16-11-2018	15-11-2023
44	Ghanshya m	Khadga on	Nagpu r Rural	239	1.83	30-07- 2020	25-10-2018	5	30-07-2020	29-07-2025

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	Gurumal Gangwani									
45	Rajesh Ladharam madhwani	Navegaon	Nagpur Rural	37	2.30	31-03-2022		5	31-03-2022	30-03-2027
46	Aditi Stone Industries Through Dilip Rajaram Warjurkar	Navegaon	Nagpur Rural	41	2.12	30-08-2021	06-07-2020	5	30-08-2021	17-12-2024
47	Shri Kulind Sitaram Mankar	Khadgaon	Nagpur Rural	158	1.01	21-09-2021	05-01-2021	5	02-09-2021	17-12-2024
48	Shailesh Shankar patil	Mahurzari	Nagpur Rural	245	2.00	18-08-2021		5	18-08-2021	17-12-2024
49	Shri Mihir Varun Hiranwar	Panjari	Hingna	61/4	1.18	29-09-2022		5	29-09-2022	28-09-2027
50	Niti Prashant Agrawal TRANSFER TO Kamalnayan Concrete through Ramniwas Gupta	Singardip (Rithi)	Hingna	138/1, 138/2, 138/3	4.69	16-07-2019	25-10-2018	5	16-07-2019	15-07-2024
51	Altaf Ahmad Majid Ahmad	Sawangi Aasola	Hingna	67	2.81	29-01-2015		10	29-01-2015	23-02-2025
52	Ashish Anand Durugkar	Kohla	Hingna	6/1	1.47	20-03-2019	25-10-2018	5	20-03-2019	19-03-2024
53	M K Builders Pro. Manohar Sukhdyal Arora	Panjari	Hingna	68	2.00	15-05-2015		10	28-08-2015	27-08-2025
54	Kailash Pandurang Thakre	Panjari	Hingna	68	2.00	15-05-2015		10	28-08-2015	27-08-2025
55	Mayuresh Mukund Hardas	Haladgaon	Hingna	146	5 Acre	26-09-2013		10	05-10-2013	04-10-2023
56	Mukesh Shyamlal Lulla	Singardip (Rithi)	Hingna	97	1.20	31-07-2020	19-12-2014	5	31-07-2020	21-12-2023

57	Radheshyam Durugkar	Haladgaon	Hingna	146	10 Acre	05-10-2013		10	18-10-2013	17-10-2023
58	Pramod Shriram Dehankar, President, Cargo MIHAN Prakilpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-8)	Sawangi (D)	Hingna	186	4.00	09-10-2013		10	17-09-2014	16-09-2024
59	Pramod Shriram Dehankar, President, Cargo MIHAN Prakilpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-9)	Sawangi (D)	Hingna	186	4.00	09-10-2013		10	17-09-2014	16-09-2024
60	Pramod Shriram Dehankar, President, Cargo MIHAN Prakilpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-10)	Sawangi (D)	Hingna	186	4.00	09-10-2013		10	17-09-2014	16-09-2024
61	Sunil Borikar, President, MIHAN Prakilpgrast Berojgar Bahu-	Sawangi (D)	Hingna	186	4.00	08-07-2014		10	08-07-2014	07-07-2024

	Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-3)									
62	Sunil Borikar, President, MIHAN Prkalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-4)	Sawangi (D)	Hingna	186	4.00	08-07-2014		10	08-07-2014	07-07-2024
63	Sunil Borikar, President, MIHAN Prkalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-5)	Sawangi (D)	Hingna	186	4.00	08-07-2014		10	08-07-2014	07-07-2024
64	Ashish Anand Durugkar	Haladgaon	Hingna	146	5 Acre	23-07-2014	07-05-2013	10	19-08-2014	18-08-2024
65	Balaji Buildcon through Sanjay C Heliwal	Haladgaon	Hingna	146	10 Acre	04-08-2014	07-05-2013	10	17-09-2014	16-09-2024
66	Keshav Dhanraj Sontakke (SR-17)	Sawangi (D)	Hingna	186	4.00	09-10-2013	13-05-2013	10	10-10-2014	09-10-2024
67	President, Cargo Prkalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari	Sawangi (D)	Hingna	186	4.00	09-10-2013	13-05-2013	10	10-10-2014	09-10-2024

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	Sanstha (SR-18)									
68	President, Cargo Prakilpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-19)	Sawangi (D)	Hingna	186	4.00	09-10-2013	13-05-2013	10	10-10-2014	09-10-2024
69	PBA Infrastructure TRANSFER to Drishti Structural Engineering Pvt. Ltd. Through Sunil Wadhawan	Sawangi (D)	Hingna	194/3, 194/5	2.83	31/01/2019, 30/07/2019	07-08-2018	5	31/01/2019, 30/07/2019	30-01-2024
70	Rushi Ramesh Agrawal	Metamuri	Hingna	101	3 Acre	24-02-2015	19-12-2014	10	16-03-2015	15-03-2025
71	Mahesh Arvind Sabne	Haladgaon	Hingna	146	5 Acre	26-09-2013	07-05-2013	10	26-09-2013	25-09-2023
72	Prashant Anandrao Durugkar	Kohala	Hingna	7	1.92	22-03-2022		5	22-03-2022	21-03-2027
73	Anil Subhashkumar Agrawal, Smt Haripriya Suresh Malhotra	Singardip (Rithi)	Hingna	86, 87, 88, 89, 90	3.36	30-07-2020	27-03-2020	5	23-11-2020	22-10-2025
74	Manikrao Dabre TRANSFER to Rahul M Dabre	Singardip (Rithi)	Hingna	64	3.97	06-11-2018	25-10-2018	5	06-11-2018	05-11-2023
75	Kamal R. Agrawal	Mhasala	Hingna	125,126	1.97	15-02-2021	05-01-2021	17/12/2024	05-01-2021	17-12-2024
76	Tushar Madan	Chhatrapur	Saoner	85/1	1.87	15-06-2021	23-12-2020	5	26-04-2021	25-04-2026

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	Umathe									
77	M/s D D Associates through Nilesh Ravindra Damle	Chhatrapur	Saoner	74/3	1.89	21-07-2020	10-06-2020	5	21-07-2020	20-07-2025
78	Pravin Sukhdev Bhaishwar	Borgaon (Jangli)	Saoner	100, 101	4.30	17/05/2019	25-10-2018	5	17/05/2019	16-05-2024
79	Ankit Constructio Shri Kishor Kanhere	Khapri (Uma)	Kalme shwar	84/2	3.58	02-12-2021	29-04-2021	5	02-12-2021	17-12-2024
80	Vijaykumar Chetumal Kewalramani	Khapri (Uma)	Kalme shwar	93/1	0.84	15-09-2014	13-05-2013	10	01-12-2014	30-11-2024
81	Vijay Ramchandra Kukreja	Khapri (Uma)	Kalme shwar	90	1.75	18-03-2019	25-10-2018	5	18-03-2019	17-03-2024
82	Shri Dnyanashwar Shankarrao Nimbalkar	Junewani (Panaya)	Kalme shwar	45	2.83	30-08-2022		5	30-08-2022	29-03-2027
83	M/s Om Saibaba Constructo n Through Ajay G Batra	Kawadasi (Barad)	Bhiwapur	113	4.00	11-07-2020	31-03-2020	5	11-07-2020	10-07-2025
84	Om Stone Crusher through Subhash Natthuji Dewalkar	Kawadasi (Barad)	Bhiwapur	43/1, 42/2, 42/3	4.49	11-07-2020	31-03-2020	5	11-07-2020	10-07-2025
85	Moh. Sajid Shafik Ahamad Ansari	Kaudasi (Barad)	Bhiwapur	115, 116	3.24	10-08-2022		5	10-08-2022	09-08-2027
86	Shri Ajay Gopaldas Jaswani	Chargaon (Ghotadi)	Bhiwapur	27, 29/2, 29/3	1.75	10-08-2022		5	10-08-2022	09-08-2027
87	Shri Shrawan Vitthal Lamsonge	Chargaon (Ghotadi)	Bhiwapur	105/3	2.00	10-08-2022		5	10-08-2022	09-08-2027

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Chapter 10

DETAILS OF ROYALTY & REVENUE RECEIVED

The details of Royalty collected in lakhs are as follows.

Sr. No.	Year	Target	Total Collection (Rs in Lakhs)
1	2023-2024	15583.00	5590.50 (Till July)
2	2022-2023	13913.00	15415.96
3	2021-2022	20978.00	15991.85
4	2020-2021	20700.00	18398.80
5	2019-2020	13800.00	13984.28
6	2018-2019	13500.00	15067.87
7	2017-2018	12000.00	13513.07

Table10.1: Details of royalty collected

Chapter 11

DETAILS OF PRODUCTION OF SAND OR BAJRI OR MINOR MINERAL

In Nagpur district number of development project like Railway, Metro Rail, Ring Roads, Outer ring roads, Samruddhi Express Highway and so on are going on, which requires a large quantity of minor mineral - stone (metal), murrom, soil, sand; for construction purpose. This lead to increasing demand for the minor minerals which can be easily verified from the royalty collected from during last five years.

The details of production are as follows.

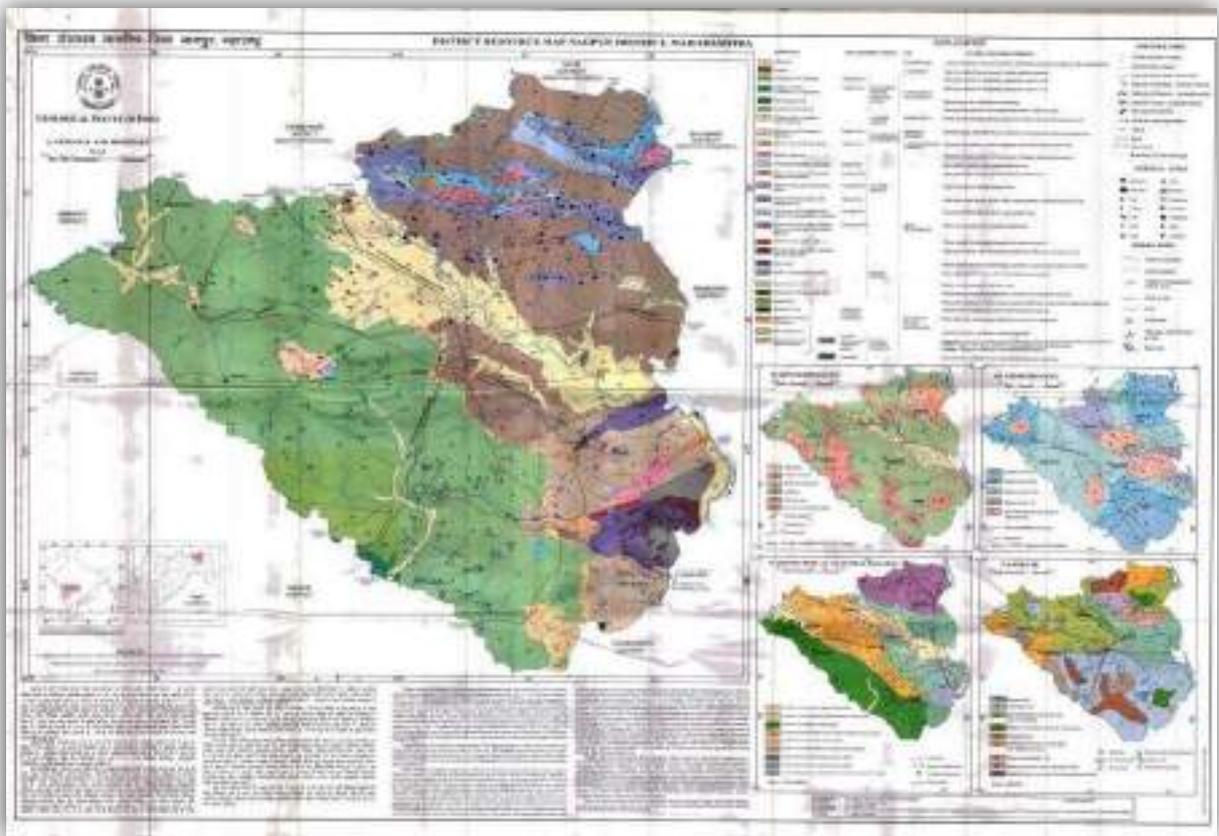
Table 11.1: Details of production of minor mineral:

Sr No	Year	Production (Brass)	Dispatch Quantity
1	2022-2023	2752850.00	2477565.00
2	2021-2022	3051987.55	2749538.333
3	2020-2021	5105667.00	4599700.00
4	2019-2020	3880637.7	3496070.00
5	2018-2019	4181333.925	3766967.5
6	2017-2018	3749876.925	3378267.5

Table 11.2 : Details of Production of Sand

Sr no	Year	Auctioned Sand Ghats	Proposed Quantity	Dispatched Quantity	Remark
1	2022-2023	40	314109	57328.20	
2	2021-2022	1	7420	7420	
3	2020-2021	20	174673	172373	
4	2019-2020	0	0	0	Sand Ghat not auctioned due to PIL 67/2017
5	2018-2019	11	79742	79742	
6	2017-2018	0	0	0	Sang Ghat not auctioned due to PIL 67/2017
7	2016-2017	31	213883	213883	

Chapter 12 MINERAL MAP OF THE DISTRICT



Source: Geological Survey of India

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Chapter 13

LIST OF LETTER OF INTENT (LOI) HOLDERS IN NAGPUR DISTRICT

Sr.No	Name	Village Name	Taluka	Survey No.	Hectore	LOI issue Date
1	Nandkishor Ramteke	Singardeep Rithi	Hingna	25	1.41	21/7/2018
2	Jyoti Ramteke	Singardeep Rithi	Hingna	26	1.41	21/7/2018
3	Neeti Agrawal	Singardeep Rithi	Hingna	138/1,2,3	4.69	27/8/2018
4	Shyam Wahane	Singardeep Rithi	Hingna	94	1.43	16/3/2019
5	Rrushiraj Infra C/o Tarun Hiranwar	Savangi	Hingna	190	1.14	8/11/2019
6	Kahid Johar Ibrahim Gondiwala	Kohla	Hingna	6/2	3.23	11/5/2020
7	Rahul Yadao	Haldgaon	Umred	77/1	2.91	3/9/2018
8	Rahul Patel	Uti	Umred	97/1	2.60	3/9/2018
9	Rambhau Musle	Uti	Umred	95/2, 95/3	3.25	11/2/2019
10	Subhash Grovar	Sukli Pai.	Umred	89/2, 89/3	3.25	11/2/2019
11	Chirag Jain	Pardgaon	Umred	150/2, 150/3	1.70	11/2/2019
12	Pawanputra Concrete C/o Yogesh Taori	Parsodi (Uti)	Umred	158/2, 158/3 158/6	4.93	2/7/2019
13	Pawanputra Concrete C/o Amit Taori	Sayki	Umred	147/1,2,3,4	4.82	8/7/2019
14	Pawanputra Concrete C/o Yogesh Taori	Parsodi (Uti)	Umred	131/1,2,3,4,5	4.91	8/7/2019
15	Purshottam Patel	Umred	Umred	516, 517	1.96	13/9/2019

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16	Manish Mishra	Sayki	Umred	163/1	2.33	20/9/2019
17	Mayank Mishra	Sayki	Umred	163/2	2.32	21/9/2019
18	Vinod Choukase	Masalkund	Umred	20/1	3.63	30/9/2019
19	Yogesh Taori	Kawdsi (Barad)	Umred	28/1, 28/2, 28/3	4.98	9/10/2019
20	P.L.Agraval C/o Paras Agraval	Sayki	Umred	140/4, 141, 142	5.00	9/10/2019
21	Tekchand Gangwani	Pachgaon	Umred	546/6, 546/7	3.83	13/12/2019
22	Vandna stone crusher C/o Gaorav Jichkar	Uti	Umred	144	1.29	6/1/2020
23	Vandna stone crusher C/o Omraj Jichkar	Uti	Umred	145	1.70	6/1/2020
24	Jash Techno Treders	Bhivapur (Uti)	Umred	67	3.07	26/2/2020
25	Rahul Patel	Uti	Umred	97/1, 97/2	3.00	24/6/2020
26	Shoiab Shadikbhai Vali	Pitesur	Nagpur Gramin	43	3.77	11/2/2019
27	Pankaj Khadse	Salaigodhani	Nagpur Gramin	184/1	2.73	28/2/2019
28	Amir Siyab Vali	Pitesur	Nagpur Gramin	54	1.74	16/3/2019
29	Shreedatt stone C/o Murlidhar Amdhare	Salaigodhani	Nagpur Gramin	206/1/1	1.22	29/11/2019
30	Shreedatt stone C/o Murlidhar Amdhare	Salaigodhani	Nagpur Gramin	184/2	1.21	6/1/2020
31	Kulind Mankar	Khadgaon	Nagpur Gramin	158	1.01	11/5/2020

32	Sarla Hiranwar	Mahurjhari	Nagpur Gramin	238/2	2.02	17/6/2020
33	Raja Patel	Borgaon Jan.	Saoner	133/2	1.80	4/8/2018
34	Dric Infra. C/o Nilima Dahake	Borgaon Jan.	Saoner	120/2	1.30	24/12/2019
35	Om Saibaba C/o Ajay Batra	Kavdsi (Barad)	Bhivapur	113	4.00	9/10/2019
36	B.V.M.Crusher LTD	Chargaon (go)	Bhivapur	35/1	4.28	6/3/2020
37	Bediwale Enterprises Pvt. Ltd.	Kavdsi (Barad)	Bhivapur	107/2 ँ	1.62	29/7/2020
38	Shyam Vadhvani	Khapri (Uma)	Kalmeshwar	83/2	0.89	11/11/2019
39	Harish Kevalramani	Khapri (Uma)	Kalmeshwar	55/7	0.81	10/2/2020
40	Sandeep Surajbhan Gupta	Pachgaon	Umred	570/2	1.74	10/13/2020
41	Dilip Madhukar Sambare	Haladgaon	Umred	62, 63, 208	3.63	10/13/2020
42	Block Rock C/o Ramandeep Bindra	Haladgaon	Umred	86/1, 88, 89/1, 89/3 91/1, 91/2, 91/3, 210/211/212/1, 210/211/212/2	16.40	10/13/2020
43	Sandesh Ajay Jaiswani and Vishal Ajay Jaiswani	Haladgaon	Umred	102 (Part) 104, 105, 106/2, 107, 108,111, 112/1, 112/2, 113	14.80	12/9/2020
44	Sandesh Ajay Jaiswani and Vishal Ajay Jaiswani	Haladgaon	Umred	59/1, 59/2, 59/3, 59/5, 81, 82/1, 82/2, 83, 84, 86/2, 89/2, 89/4	19.12	12/9/2020
45	Partha Shyam Jaiswal and Karan Shyam Jaiswal	Masalkund	Umred	35, 36, 41	12.77	1/25/2021

46	Anil Sadashiv Vat	Salaimendha	Umred	8, 9	9.98	1/25/2021
47	Irshan Majid Shete	Metaumri	Hingna	86/2	4.00	2/8/2021
48	Tushar Madanrao Umathe	Chatrapur	Saoner	85/1	1.87	2/8/2021
49	Prashant Aanandrao Durugkar	Kohla	Hingna	7	1.92	2/25/2021
50	Mesars. Paras Stone Industries Pro. Sunil Ns. Mishra	Singardeep Rithi	Hingna	24/1	4.73	2/24/2021
51	Habib Rhib Beg	Mahurjhari	Nagpur Gramin	162/3	1.41	3/12/2021
52	Nitin Kedar Kamble	Salaimendha	Umred	57	2.02	5/27/2021
53	Praful Prakash Dewalkar	Uti	Umred	131, 132, 133, 134, 135/1, 137, 138, 139	7.12	5/28/2021
54	P.L.Agrawal	Sayki	Umred	138, 140/3, 140/4, 141, 142	4.00	5/28/2021
55	Dhyaneshwar Shankar Nimbalkar	Junevani	Saoner	45	2.83	6/11/2021
56	Mihir Tarun Hiranwar	Panjari	Saoner	61/4	1.18	7/2/2021
57	Omprakash Dwarkadas Gurubakshani	Pachgaon	Umred	495/1	2.02	7/7/2021
58	Rohit Sonbaji Musle	Chatrapur	Umred	208, 209, 211	2.31	7/7/2021
59	Ram Govindrao Wadhwani	Kadgaon	Saoner	171/3	2.44	8/11/2021
60	Murli Govindram Wadhwani	Kadgaon	Nagpur Gramin	152	2.71	8/11/2021
61	Mayank Ramprakash Mishra	Sayki	Umred	163/1, 163/2	4.65	8/31/2021
62	Rajesh Ldharam Madhwani	Navegaon	Nagpur Gramin	37	2.30	8/30/2021
63	Khemraj Mate & Dhanraj	Chargaon (Gotadi)	Bhiwapur	35/1	3.47 out of 4.28	07/20/2022

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	Mate					
64	Amol Prabhakar Pillare	Salaimendha	Umred	18/2	1.20	29/07/2022
65	Shahid Habib Baig and three others	Mahurzhari	Nagpur Rural	256 257	2.00 ha out of 5.01	29/08/2022
66	Vinit Sanjar Agrawal	Metmangrud (Ri)	Umred	105,104,103,102,101,100,99,98	3.84 out of 7.19	01/09/2022
67	Ashok Pandit Shirsagar	Tandurwani	Kamptee	74/1	1.36	28/07/2022
68	Preeti Vinit Agrawal	Mohpa	Umred	45 A	1.80	08/09/2022
69	Mihir Tarun Hiranwar	Panjara	Hingana	61/1	1.18	02/06/2022
70	Basil Paul Gorge	Durkheda	Umred	208	2.00 ha out of 3.64 ha	17/08/2022
71	M/s jagrutshwar Metals Pvt Ltd	Singardip (Rithi)	Hingana	137/3	1.21 ha	17/08/2022
72	Vishal Ajay Jaiswani, Sandesh Ajay Jaiswani and Ajay Jaiswani	Godhani	Umred	72/1, 72/2, 72/3, 72/4 and 72/5	4.00 out of 8.51	17/08/2022
73	Meena Ajay Jaiswani	Metmangru	Umred	92/2 and 94	2.65 out of 2.90	17/08/2022
74	Ajay Shyamlal Bachwani	Metmangru	Umred	46,47 &48	4.95 Ha out of 9.15 Ha	08/02/2022
75	M/s Pruthvi Metals & Metals by Partner Sunil Shatrugan Mishra	Singardeep (Rithi)	Hingana	74,75,76	4.84 Ha	20/03/2023

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Chapter 14 TOTAL MINERAL RESERVE AVAILABEL IN THE DISTRICT

Minerals	Quantity (Metric Ton)
Basalt	7515280.50
Murrum	2890492.50
Soil	1156197.00
Sand (For year 2022-2023)	2.62 Mill. Tonnes

CHAPTER 15 QUALITY GRADE OF MINERAL

The minor mineral depots in the District are quite good in respect of quality and quantity. The method of mining should be adopted Opencast Mining Method for digging, excavation and removal of stone with the help of traditional drilling and blasting methods.

Basalt stone is used as boulders of different sizes for dam construction, embankment work etc. After crushing into different sizes, it can be used in construction and road projects. Fine grained compact basalt and Medium grained sandstone type of aggregate is available in the district so that the quality of stone available in Nagpur district is building grade stone confirming IS standards IS:7779 (Part II/Sec 3) of 1979 and also in terms of strength it is confirming IS standards IS: 1121 (Part 2 to 4) 1974

CHAPTER 16 USE OF THE MINERAL

Basalt:

Basalt is used for a wide variety of purposes. It is most commonly crushed for use as an aggregate in construction projects. Crushed basalt is used for the road base, concrete aggregate, asphalt pavement aggregate, railroad ballast, filter stone in drain fields, and many other purposes. Basalt is also cut into dimension stone. Thin slabs of basalt are cut and sometimes polished for use as floor tiles, building veneer, monuments, and other stone objects.

Moorum:

Moorum is also a type of soil, mostly used for construction purposes. Generally, it is deep brown or red in color. Moorum is used in plinth filling, road pavements, backfilling in trenches, footing pits etc. It is a suitable type of soil in the construction field, since it does not contain any organic matters and can be compacted easily forming a hard surface.

Ordinary Sand/ River Sand

Sand is a very useful material in all types of construction activities. It is mainly used as one of the important items in concrete mix and used for plastering work.

CHAPTER 17

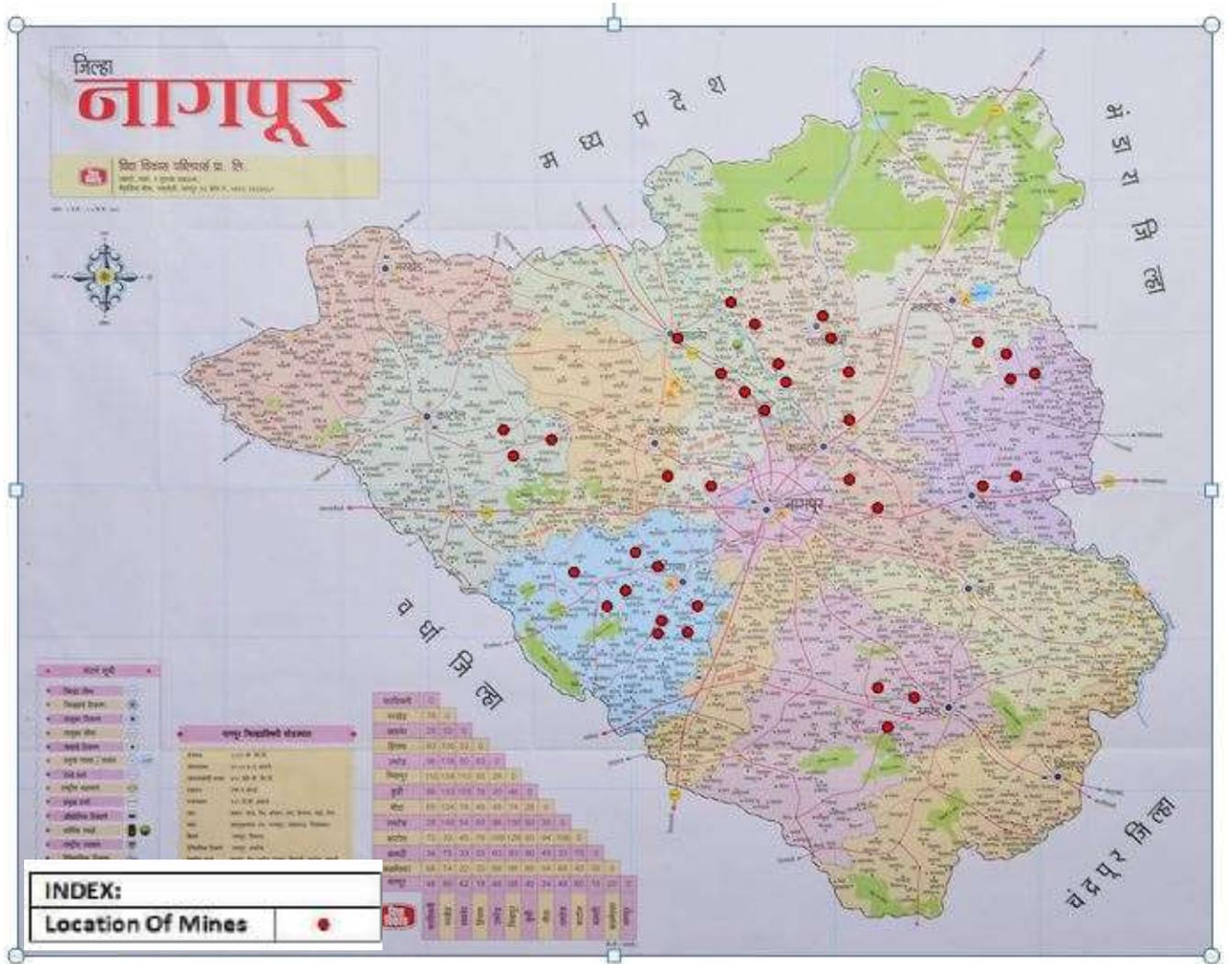
DEMAND AND SUPPLY OF THE MINERAL:

Basalts are the ultrabasic igneous rocks which are an important component in construction of any kind. These are used as building stone, in railway ballast and most important is used in concrete as important raw material where they are available in abundance. Along with the increasing need of developing infrastructure there is an increase in demands of basalt. As it has high compressive strength, high shear strength, it proves to be a compact, stable and sound rock which make difficult for anything to replace. The rock might be omnipresent all over the Maharashtra but a compact, un-weathered rock is present in very limited quantities.

Table: Demand and Supply

Sr.No.	Year	Production (Brass)	Dispatched Quantity (Brass)
1	2022-2023	2752850.00	2477565.00
2	2021-2022	3051987.55	2749538.333
3	2020-2021	5105667.00	4599700.00
4	2019-2020	3880637.7	3496070.00
5	2018-2019	4181333.925	3766967.5
6	2017-2018	3749876.925	3378267.5

CHAPTER 18 MINING LEASES MARK ON MAP



CHAPTER 19
DETAILS OF THR AREA OF WHERE THERE IS A CLUSTER
OF MINING LEASE

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Pachgaon									
1	Priya Pradip Kolhe	Pachgaon	510, 511	1.60	5	29-11-2017	28-11-2022	23-05-2018	
2	Karan Shyamkumar Jaiswal	Pachgaon	429	2.06	5	09-05-2019	08-05-2024	17-06-2019	
3	M/s D C Gurubakshani	Pachgaon	494/1, 494/2	2.50	5	01-06-2017	31-05-2022	13-07-2017	
4	Murli Govindram Wadhvani	Pachgaon	426	2.30	5	27-11-2018	26-11-2023	15-03-2019	
5	M/s Siddheshwar Infra through Shyam Jaiswal	Pachgaon	479/2, 479/3	2.04	5	17-01-2018	16-11-2023	06-02-2019	
6	S K Mehta & Co. through Arvind Sureshkumar Mehta	Pachgaon	147/1, 147/2, 149	5.16	5	01-11-2018	30-10-2023	19-11-2018	
7	Santoshkumar Tekchand Gangwani	Pachgaon	505	2.13	5	02-12-2016	01-12-2021	08-12-2016	
8	Shri Vyankatesh Casting Pvt Ltd through Jitendra Sarda	Pachgaon	512/2, 513	1.88	5	14-11-2018	13-11-2023	26-11-2018	
9	Khushal Bapurao Bhoyar	Pachgaon	450/3	1.50	5	06-12-2016	05-12-2021	21-12-2016	
10	Harinarayan Shyamsundar Gupta	Pachgaon	351	3.08	5	13-12-2016	12-12-2021	17-02-2016	
11	M/s Siddheshwar Infrastructure through Shyam L Jaiswal	Pachgaon	480/1, 480/4	4.25	5	22-11-2016	21-11-2021	08-12-2016	
12	Tekchand Gurumal Gangwani	Pachgaon	540, 546/4, 535, 536/1	4.55	5	15-03-2017	14-03-2022	27-03-2017	

13	Vyankateshwara Basalt Corporaton TRANSFER to Anil Jayram Panchbudhe	Pachgaon	523/2, 523/3	1.60	5	20/04/2017, 22/06/2019	19- 04- 2022	09-10-2020	
14	Bhagwanjibhai Dhanjibhai Patel TRANSFER to Shyamlal G Wadhvani, Mayur M Wadhvani	Pachgaon	521/2	2.66	5	14/11/2018, 22/02/2019	13- 11- 2023	29-12-2018	
15	Shri Purushottam Bhimji Patel	Pachgaon	516, 517	1.96	5	19-05-2020	17- 12- 2024	24-06-2020	
16	Karan Shyamkumar Jaiswal	Pachgaon	480/2	1.38	5	17-11-2018	16- 11- 2023	26-03-2019	
17	Murli Govindram Wadhvani	Pachgaon	427	1.21	5	11-12-2018	10- 12- 2023	15-03-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sayaki									
1	S K mehta through Ashish Mehta	Sayki	153/5	2.02	5	03/11/2018	02- 11- 2023		
2	AEC Metals through Sanjay Vijaywargiya	Sayki	125/2	1.90	5	20-03-2019	19- 03- 2024	18-09-2019	
3	Contero Minerals Pvt Ltd Through Swapnil Bhende	Sayki	146, 148	4.82	5	20-03-2019	19- 03- 2024	04-10-2019	
4	M/s AEC Minerals through Shailabh Radheshyam Vijaywargiya	Sayki	124/1, 124/2	3.40	5	20-03-2017	19- 03- 2022	27-03-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Haladgaon									
1	Sanjay Raghunath Tidke	Haladgaon	30, 57/2	3.97	5	30/10/2018	29-10-2023	10-12-2018	
2	Dilip Madhukar Sambare	Haladgaon	60	3.90	5	21-12-2018	20-12-2023	16-01-2019	
3	Black Rock Crusher through Ramandip Bindra	Haladgaon	210, 211, 212	5.68	5	02-05-2018	01-05-2023	05-06-2018	
4	Vishal Ajay Jaiswani	Haladgaon	81, 83	7.04	5	03-11-2018	02-11-2023	17-12-2018	
5	Rahul Maniram Yadav	Haladgaon	77/1	2.91	5	01-12-2018	30-11-2023	30-01-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Haladgaon									
1	Mayuresh Mukund Hardas	Haladgaon	146	5 Acre	10	05-10-2013	04-10-2023	19-11-2007	Govt
2	Radheshyam Durugkar	Haladgaon	146	10 Acre	10	18-10-2013	17-10-2023	08-10-2013	Govt
3	Ashish Anand Durugkar	Haladgaon	146	5 Acre	10	19-08-2014	18-08-2024	25-07-2014	Govt
4	Balaji Buildcon through Sanjay C Heliwal	Haladgaon	146	10 Acre	10	17-09-2014	16-09-2024		Govt
5	Mahesh Arvind Sabne	Haladgaon	146	49.85	10	26-09-2013	25-09-2023	26-09-2013	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Undri									
1	M/s Bestone minrals and pricost solution through Ullas Pagariya	Undri	142	14.89	5	10-12-2018	09-12-2023	10-12-2018	
2	Tushar Chandrakant Wekhande	Undri	71, 69	1.26	5	20-03-2019	19-03-2024	03-06-2019	
3	M/s Luky Metal thru	undri	72	1.07	05-01-2021	25-02-2021	17-12-2024	07-07-2021	

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	Mahesh M. pinjani				to17-12- 2024		
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Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Surgaon									
1	Nagsen Zinger Lokhande	Surgaon	192	1.00	EC 22/04/2023	23-04-2019	22-04-2023	03-05-2019	
2	Sunil Gangadhar Kimmatkar	Surgaon	354/1	29.91	10	28-05-2013	27-05-2023	06-05-2013	Govt
3	Sukhdyal Lalchand Arora	Surgaon	354/1	29.91	EC 29/11/2022	02-02-2013	11-02-2023	05-02-2013	Govt
4	Prachi Enterprises, Pradip Prakash Rupani	Surgaon	368	86.77	10	25-06-2013	24-06-2023	29-05-2013	Govt
5	Nitin Krushnarao Vaidya	Surgaon	354	29.91	10	15-02-2013	14-02-2023		Govt
6	Abdul Quadir Mo. Ismail	Surgaon	195	12.55	10	17-09-2014	16-09-2024	15-07-2014	Govt
7	Sureshkumar Bhagwandas Kunjwani	Surgaon	368	86.77	10	10-10-2014	09-10-2024	11-08-2014	Govt
8	M/s Ashokwan Enterprises through Kalpana Bhende	Surgaon	368	86.77	10	17-09-2014	16-09-2024	20-08-2014	Govt
9	Vinod Ramkaran Mittal	Surgaon	368	86.77	10	24-07-2015	23-07-2025		Govt
10	Pramod Ramkarandas Mittal	Surgaon	341	23.74	10	10-09-2015	09-09-2025	28-08-2015	Govt
11	Sundar D Khatri	Surgaon	368	86.77	10	29-06-2015	28-06-2025	30-04-2015	Govt
12	Anand Eknath Lokhande	Surgaon	354/1, 353	30.27	10	31-01-2015	30-01-2025	17-11-2014	Govt
12	Sachin Laxmikant Pitale	Surgaon	359	1.75	5	14-11-2018	13-11-2023	20-12-2018	
13	Nitin Krushnarao Vaidya	Surgaon	354		10	15-02-2013	14-02-2023		
14	N D Enterprises through Nikunj D Shah	Surgaon	368	86.77	10	29-09-2011	28-09-2021		Govt
15	S N Enterprises through Suresh Kungwani	Surgaon	368	86.77	10	29-09-2011	28-09-2021		Govt
16	Harcharansingh Ranjeetsingh Bhatiya	Surgaon	368	86.77	10	10-10-2014	09-10-2024	19-08-2014	Govt
17	Shri Altaf Ahmad	Surgaon	354/1	29.91	10	30-03-2019	29-03-2023	08-03-2013	Govt
18	Shri Altaf Ahmad	Surgaon	354/1	29.91	10	29-05-2013	28-05-	08-03-2013	Govt

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Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Salaimendha									
1	Shree Stone Crusher through Dinesh Pagariya	Salaimendha	37/1	2.06	5	08-11-2016	07-11-2021	08-11-2016	
2	Krishna Stone Crusher Through Rupesh Khat	Salaimendha	66, 67, 68, 71, 72	3.92	5	02-12-2016	01-12-2021	19-01-2017	
3	Shri Gajanan Stone ind. Swati Ravikumar Pillare	Salaimenda	18/1	1.20	5	20-03-2017	19-03-2022	31-03-2017	
4	Manoj Trilokchand Arora	Salaimendha	27	1.47	5	05-01-2021	17-12-2024	06-04-2021	
5	Pawankumar Satyanarayan Bihani	Salaimendha	30	1.57	5	05-12-2017	04-12-2022	14-12-2017	
6	Gajanan Stone Industries through Ravikumar Prabhakar Pillare	Salaimendha	78/1	1.20	5	20-03-2017	19-03-2022		
7	Devendra Suryabhanji Shirbhate	Salaimendha	37/2	2.00	5	11-01-2017	10-01-2022	11-01-2017	
8	Vinod Gulabrao Pillare	Salaimendha	16/1	1.01	5	07-10-2017	06-10-2022	23-10-2017	
9	Sweta Stone Through Shashikant Awaghate	Salaimendha	29/2-1	1.00	5	29-11-2017	28-11-2022	16-01-2018	
10	Amol Prabhakar Pillare	Salaimendha	18/2	1.20	5	07-12-2017	06-12-2022	06-01-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sawangi (D)									
1	Pramod Shriram Dehankar, President, Cargo MIHAN Prkalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-8)	Sawangi (D)	186	4.00	10	17-09-2014	16-09-2024	17-04-2014	Govt

2	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-9)	Sawangi (D)	186	4.00	10	17-09-2014	16- 09- 2024	17-04-2014	Govt
3	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-10)	Sawangi (D)	186	4.00	10	17-09-2014	16- 09- 2024	17-04-2014	Govt
4	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-3)	Sawangi (D)	186	4.00	10	08-07-2014	07- 07- 2024		Govt
5	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-4)	Sawangi (D)	186	4.00	10	08-07-2014	07- 07- 2024		Govt
6	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-5)	Sawangi (D)	186	4.00	10	08-07-2014	07- 07- 2024		Govt
7	Keshav Dhanraj Sontakke (SR-17)	Sawangi (D)	186	4.00	10	10-10-2014	09- 10- 2024		Govt
8	President, Cargo Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-18)	Sawangi (D)	186	4.00	10	10-10-2014	09- 10- 2024		Govt
9	President, Cargo Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-19)	Sawangi (D)	186	4.00	10	10-10-2014	09- 10- 2024		Govt

10	PBA Infrastructure TRANSFER to Drishti Structural Engineering Pvt. Ltd. Through Sunil Wadhawan	Sawangi (D)	194/3, 194/5	2.83	5	31/01/2019, 30/07/2019	30- 01- 2024	27-11-2020	
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Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Agreement Date	Land Govt/Pvt
Khadgaon									
1	Akash Ghanshyam Gangwani	Khadgaon	234	2.02	5	30-07- 2020	29- 07- 2025	22-02-2016	
2	Murli Govindram Wadhvani	Khadgaon	152	2.71	5	09-12- 2016	08- 12- 2021	29-12-2016	
3	Rushiraj Infra through Prop Tarun R Hiranwar	Khadgaon	171/2	1.78	5	20-04- 2017	19- 04- 2022	04-05-2017	
4	Mohini Vijay Naik	Khadgaon	225	1.56	5	14-12- 2017	13- 12- 2022	06-06-2018	
5	Shri Ram Govindram Wadhvani	Khadgaon	171/3	2.44	5	09-12- 2016	08- 12- 2021	29-12-2016	
6	Ghanshyam Gurumal Gangwani	Khadgaon	239	1.83	5	30-07- 2020	29- 07- 2025		

Sr. No.	Name of the Lease Holder	Village	Tahsil	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Singardip (Rithi)										
1	Harish Dashrath Fulsunge	Singardip (Rithi)	Hingna	96	1.43	5	09-03- 2018	08- 03- 2023	23-05-2018	
2	Rajesh Ramkisan Nikhare	Singardip (Rithi)	Hingna	137/1	1.62	5	22-11- 2017	21- 11- 2022	15-12-2017	

3	Niti Prashant Agrawal TRANSFER TO Kamalnayan Concrete through Ramniwas Gupta	Singardip (Rithi)	Hingna	138/1, 138/2, 138/3	4.69	5	16-07-2019	15-07-2024	29-08-2019	
4	Mukesh Shyamlal Lulla	Singardip (Rithi)	Hingna	97	2.72	5	31-07-2020	21-12-2023	27-10-2020	
5	M/s Jagruteshwar Metals Pvt. Ltd. Through Laxmi C Kapse	Singardip (Rithi)	Hingna	136	2.07	5	26-10-2017	25-10-2022	30-11-2017	Govt
6	Anil Subhashkumar Agrawal, Smt Haripriya Suresh Malhotra	Singardip (Rithi)	Hingna	86, 87, 88, 89, 90	6.51	5	23-11-2020	22-10-2025	23-11-2020	
7	M/s Jagruteshwar Metals Pvt. Ltd. Through Vaishali P Kapse	Singardip (Rithi)	Hingna	148	2.22	5	25-01-2017	24-01-2022	25-01-2017	
8	Manikrao Dabre TRANSFER to Rahul M Dabre	Singardip (Rithi)	Hingna	64	3.97	5	06-11-2018	05-11-2023	14-12-2018	
9	Rank Silicon Industries Pvt Ltd through Sayyappa Raju	Singardip (Rithi)	Hingna	92	9.80	5	03-05-2018	02-05-2023	21-05-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Agreement Date	Land Govt/Pvt
Khapri (Raja)									
1	Rajesh Shardanand Jaiswal	Khapri (Raja)	76/1	1.45	5	01-11-2018	31-10-2023	26-11-2018	Govt
2	Sitaram Parasram Kamble	Khapri (Raja)	76/1	2.02	5	06-08-2018	05-08-2023	05-12-2018	Govt
3	M/s B R Aakre	Khapri (Raja)	79	3.94	5	30-01-2018	29-01-2023	03-12-2018	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mahurzari									
1	Prakash Wamanrao Atkar	Mahurzari	148, 149, 150, 163	7.82	5	16-11-2018	15-11-2023		
2	Smt. Sultana Habib Baig	Mahurzari	148, 149, 150, 163	1.01	5	06-07-2021	11-05-2023	30-07-2021	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Bhiwapur (Ooty)									
1	Shri Agrawal Minerals through Sushilkumar Agrawal	Bhiwapur (Ooty)	64	2.36	5	02-05-2019	01-05-2024	10-06-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Paradgaon									
1	Ashwin Sureshkumar Mehta	Paradgaon	153	4.62	5	01-11-2018	30-10-2023	19-11-2018	

Sr. No.	Name of the Lease Holder	Mouza	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Lawa									
1	Rushiraj Infra through Tarun Rushiraj Hiranwar	Lawa	229/2	1.77	5	23-11-2016	22-11-2021	09-12-2016	
2	Tulsabai Ganesh Hiranwar	Lawa	236	1.91	5	21-01-2017	20-01-2022	21-01-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Navegaon									
1	Santoshkumar Yaduka	Navegaon	21/1	2.02	5	01-08-2017	31-07-2022	09-08-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Pitesur									
1	Zoeb Sadikbhai Wali & Others	Pitesur	43	3.77	5	20-08-2020	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Khapri (Uma)									
1	Vijaykumar Chetumal Kewalramani	Khapri (Uma)	93/1	0.84	10	01-12-2014	30-11-2024	29-09-2014	
2	M/s Sawala Traders through Nikunj D Shah	Khapri (Uma)	87/1	3.00	5	16-11-2016	15-11-2021		
3	Sureshkumar R Jagyasi	Khapri (Uma)	91	3.19	5	01-04-2017	31-03-2022	20-04-2017	
4	Ram Govindram Wadhvani	Khapri (Uma)	55/6	1.21	5	02-05-2018	01-05-2023	01-06-2018	
5	Vijay Ramchandra Kukreja	Khapri (Uma)	90	1.75	5	18-03-2019	17-03-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Chhatrapur									
1	Ashok Hiranman Umathe	Chhatrapur	218	2.47	5	27-09-2017	26-09-2022		
2	Tushar Madan Umathe	Chhatrapur	85/1	1.87	5	26-04-2021	25-04-2026	30-06-2021	
3	Umesh Nagorao Nimje	Chhatrapur	197	1.07	5	01-01-2018	31-12-2022		
4	Sudhakar Bapurao Bandhekar	Chhatrapur	213	2.00	5	17-03-2016	16-09-2021		

5	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	74/3	1.89	5	21-07-2020	20-07-2025		
6	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	204, 207	3.14	5	05-06-2020	05-05-2023	25-06-2020	
7	ketankumar arunkumar singh	Chhatrapur	72/1,72/2	3.72	05-05-2023	27-07-2021	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Panjari									
1	Shri Anil Balkisan Hiranwar	Panjari	61/2	1.18	5	27-09-2017	26-09-2022	02-11-2017	
2	M K Builders Pro. Manohar Sukhdyal Arora	Panjari	68	2.00	10	28-08-2015	27-08-2025		Govt
3	Kailash Pandurang Thakre	Panjari	68	2.00	10	28-08-2015	27-08-2025		Govt
4	Madhu Industries Through Shri Subhashchandra Agrawal	Panjari	55/2, 55/3	2.96	05/05/2023	29-01-2021	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mhasala									
1	Modern Minerals Industries through Mo. Asad Rangunwala	Mhasala	109/1	10.16	5	28-11-2017	27-11-2022	20-01-2018	
2	Quality Minerals through Mo. Samir Rangunwala	Mhasala	109/1	10.16	5	28-11-2017	27-11-2022	20-01-2018	
3	Kamal R. Agrawal	Mhasala	125,126	1.97	17/12/2024	05-01-2021	17-12-2024		

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Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Kawadasi (Barad)									
1	M/s Om Saibaba Constructon Through Ajay G Batra	Kawadasi (Barad)	113	5.47	5	11-07-2020	10-07-2025	20-08-2020	
2	Om Stone Crusher through Subhash Natthuji Dewalkar	Kawadasi (Barad)	43/1, 42/2, 42/3	4.49	5	11-07-2020	10-07-2025	24-08-2020	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Salai Godhani									
1	Arvind Janrao Gajbhiye	Salai Godhani	186/2, 186/3	2.59	5	16-12-2016	15-12-2021		
2	Radha Stone Industries through Pawan S Bihani	Salai Godhani	206/1, 206/2	1.21	5	06-12-2016	05-12-2021	13-12-2016	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Navegaon									
1	Vijay Kumar Onkarmal Yadukar	Navegaon	45/1	1.78	5	05-06-2017	04-06-2022	09-08-2017	
2	Nayan Jamnadas Makdiya	Navegaon	30/7, 30/9	2.00	5	19-11-2016	18-11-2021	12-09-2016	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sawangi Aasola									
1	Altaf Ahmad Majid Ahmad	Sawangi Aasola	67	2.81	10	29-01-2015	23-02-2025	22-02-2025	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Kohla									
1	Ashish Anand Durugkar	Kohla	6/1	1.47	5	20-03-2019	19-03-2024	06-05-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Khairi Khurd									
1	Shri Sana Stone Crusher Pvt Ltd. Through Mo. Akram Sheikh	Khairi Khurd	86/1	2.83	5	20-03-2017	19-03-2022	21-03-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mohgaon Zilpi									
1	Nandkishor Burade	Mohgaon Zilpi	28/2	1.80	5	01-02-2017	31-01-2022	01-02-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Mandav Ghorad									
1	Saikrupa Stone Crusher (LLP) through Ashish Tonde	Mandav Ghorad	161/2, 162	2.01	5	20-12-2017	19-12-2022	15-01-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Metaumri									
1	Rushi Ramesh Agrawal	Metaumri	101	3 Acre	10	16-03-2015	15-03-2025	24-02-2015	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Borgaon (Jangli)									
1	Pravin Sukhdev Bhaiswar	Borgaon (Jangli)	100, 101	4.30	5	17/05/2019	16-05-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Nimji									

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1	M/s Indirabai Girde Stone Quarry, Prop Rakesh Ramesh Girade	Nimji	347 Old, 94 New	2.20	5	03-07- 2017	02-07- 2022	15-01-2018	Govt
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CHAPTER 20

DETAILS OF ECO-SENSITIVE AREA

In Nagpur District there are following Eco sensitive zones

- 1) Umred Karandala Wildlife Sanctuary
- 2) Pench National Park and Mansinghdeo Wildlife Sanctuary
- 3) Bor Wildlife Sanctuary.

CHAPTER 21

IMPACT ON THE ENVIRONMENT DUE TO MINING

ACTIVITY:

The baseline environment quality to represent the background / existing environmental scenario of various environmental components such as air, noise, land ecological and socio-economic status of the study area. All the mine owners in the district assured to follow stipulated conditions of EC for sustainable and environment friendly mining.

1. Impact on Air Environment

The baseline status for air environment includes reconnaissance, identification and selection of specific significant air pollution due to the project activity and measuring their existing levels. The data required to assess the ambient status was collected, analysed and evaluated through a well-designed to assess the ambient air quality monitoring (AAQM) network.

Sources:

- Fugitive dust emission during mining activities inside the Quarry area like site preparation, drilling, blasting, excavation, loading of material transport and dumping of the stone
- Some amount of SO₂, NO_x and CO will be generated due to plying of mine machinery like Excavator, compressors, Jack Hammer, etc and transporting vehicles.

2. Impact on Water Environment:

Since the mining activity is related to excavation of stone, well above ground water table of the area, water contamination is not likely to be there. As basalt is a nontoxic material, so any contact of water with material does not produce any toxic pollutant. If there is a need of dewatering for the mine, then NOC will be opted from competent authority.

3. Impact on Noise Environment:

The main objective of noise monitoring in the study area is to establish the baseline noise levels and assess the impact of the total noise expected to be generated during the project operations in the project site.

Sources:

The main sources of noise pollution are identified as

- Mining activities inside the Quarry area like Drilling, Blasting, loading.
- Noise generated due to transporting vehicles.

4. Impacts due to Ground Vibration and Fly Rocks.

- The major source of ground vibration from the mine is blasting, however controlled blasting activity is being carried out. The major impact of the ground vibrations is on the domestic houses located in the villages surrounding the mine lease area. The kuchha houses are more prone to cracks and damage due to the vibrations. Apart from this, the ground vibrations may develop a fear factor in the nearby settlements
- Another impact due to blasting activities is fly rocks. These may effect on the houses nearby the mining lease area and may cause injury to humans and animals.

5. Impact on Flora and Fauna

In the District most of the mine leases proposed on barren or scanty vegetated area so minimal impact is observed on existing flora, however in some cases trees needs to be cut down for mining activities and prior approval for it will take from competent authority. All existing and proposed mine leases is will be away from forest area and wild life sanctuaries, so minimal impact is observed on wild life.

6. Impact on Land Environment:

The topography of the mine lease area altered due to on-going/ proposed mining activities it will be altered further due to the proposed mining operations as per the approved mining plan. Due to mining operations, mine pits and dumps are being developed within the mine lease area.

7. Impact on Socioeconomics:

Critically analyzing the existing environmental status of the socio-economic profile and visualizing the scenario with the project, the impacts of the project would be varied and may generate positive impacts of the mining in the region that are stated below:

- . The mining operations will provide direct & indirect employment village people.
- . The villages and their inhabitants & domestic animals will not be disturbed due to mining as quarry is far from their settlements.
- . Local work force will be given first preference for employment.
- . Mining activities will benefit the local people due to provision of more infrastructural facilities (developments of approach routes within the village area).

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Currently there are 40 existing mining leases in the District and as per area of the mine leases 10-20 people are engaged by direct employment i.e. 400-800 people employed.

CHAPTER 22

REMEDIAL MEASURES TO MITIGATE THE IMPACT OF MINING ON THE ENVIRONMENT

Particulars	Details		
Air Quality Management	<p>Adoption scientific mining methods to reduce dust emission from point and line source:</p> <p>Scientific methods of mining and pollution control systems are being will be adopted in the mine to control dust emissions from point and line sources, as follows:</p> <p>Point Source: These includes drilling, blasting, loading, unloading, manual sizing and grading activities</p> <ul style="list-style-type: none"> • Use of wet drilling/ drills with dust arrestors to control dust generation during drilling activities • Blasting to be avoided during high winds and overcast conditions. • Controlled blasting by using delay detonators is already adopted. • Avoiding secondary blasting by use of rock breakers. • Water sprinkling on blasted material before loading • Reducing dropping height of excavator bucket while loading material into dumpers/tippers. • Reducing dropping height for trucks during unloading. • Provision of mobile tanker for water sprinkling arrangement <p>Line Source: These includes Haul roads & approach roads</p> <ul style="list-style-type: none"> • Development of plantation along approach road. • Periodic maintenance of tippers dumpers used for Mineral transport • Periodic maintenance of haul roads • Regular water sprinkling on haul roads. 		
	<table border="1" style="width: 100%;"> <tr> <td style="width: 40%; text-align: center;">Monitoring</td> <td> <ul style="list-style-type: none"> • Periodic air quality monitoring will be done and adequate measures will be taken </td> </tr> </table>	Monitoring	<ul style="list-style-type: none"> • Periodic air quality monitoring will be done and adequate measures will be taken
Monitoring	<ul style="list-style-type: none"> • Periodic air quality monitoring will be done and adequate measures will be taken 		
Noise Management	<p>Standard specified mining equipment is being /will be used and the equipment will be in good working conditions, properly lubricated and maintained to keep Noise within permissible limits.</p> <p>Drilling is being will be carried out with sharp drill bits which help in reducing noise and same will be continued</p> <p>Controlled blasting with proper spacing and optimum charge/delay will be Maintained.</p> <p>Tall trees with heavy foliage are being /will be planted along the boundary of mining lease area which will act as a natural barrier to propagating noise.</p> <p>Regular noise monitoring is being /will be carried at project site to check compliance with prevailing rules.</p> <p>Personal Protective Equipment's (PPEs) like ear plugs/car muffs are provided.</p>		

Particulars	Details
Vibration	<ul style="list-style-type: none"> • Blasting will be carried out by person with blaster's certificate issued by DGMS or by outside agency necessary. • Safety tools and implements that are required will be kept adequately near blasting site at the time of charging. • Portable blasting shelter will be provided near the blasting site • Blasting will be preferably done during 12.30PM to 2.00 PM depending

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	<p>on seasonal variation of break hours or the end of the day in order to ensure that no person or animals are within the blasting zone.</p> <ul style="list-style-type: none">• Misfires will be handled carefully as per stipulated procedures.• Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.
Greenbelt Development	Plantation will be carried out at the approach road and vicinity area to control Dust, Air & Noise Pollution and improve aesthetic environment.
Water Environment	<ul style="list-style-type: none">• Construction of garland drains and settling tanks to divert surface runoff 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 wall and garland drain and adequate treatment system like settling ponds shall be provided around the OB dump for proper surface runoff management• 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 effluent if any from mine shall be discharged to soak pit via septic tank constructed as per BIS specification.• Water conservation measures shall be taken by rain water harvesting and recycling and reuse of treated mine water after getting NOC from competent authority.

CHAPTER 23

RECLAMATION

As per the Government order and rule the applicant has to submit Mine Plan with Mine Closure Plan for their respective leases Reclamation of the mined out pit by way of back filling will not be possible because of the existence of the mineral up to deeper depth. The quarry depth will not be blocked and the quarry owner may exploit the same and precede further deep after taking clearances according to acts and rules applicable hence the detailed Quarry Closure Plan will be submitted further. Top soil would be utilized for intensive plantation and green belt development along the quarry area.

As generation waste is much less as in the case minor mineral mining, then following action taken place:

1. Plantation on the broken up surface if the depth of quarry is not much below the surrounding surface level.
2. Converted water reservoir after stabilization of the slopes if the exhausted quarry continues much below the surrounding surface level.
3. It is preferred to encircle the abundant either wire fencing or retaining wall with plantation from the safety point of view.

CHAPTER 24

RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

Hazard analysis involves the identification and quantification of various hazards (unsafe conditions) that will exist in the mines. On the other hand, risk analysis deals with the identification and quantification of risks, mining equipment and personnel are exposed to, due to accidents resulting from the hazards present in the mine. Risk analysis follows an extensive hazard analysis. It involves the identification and assessment of risks the neighboring populations are exposed to as a result of hazards present.

In the sections below, the identification of various hazards, probable risks, maximum credible accident analysis, and consequence analysis are addressed which gives a broad identification of risks involved. Based on the risk estimation disaster management plan has to be prepared.

The mining will be carried out under the management control and direction of a qualified Mine Manager holding a first class manager's certificate of competency. The DGMS have been regularly issuing standing orders, model standing orders and circulars to be followed by the mine management in case of disaster, if any. Moreover, mining staff will be sent to refresher courses from time to time to keep them alert.

Mining is among the most hazardous activities all around the world, being always accompanied with different accidents, injuries, loss of lives, and land damages. Dimension stone quarrying constitutes a big portion of mining activities. In risk assessment the words Hazards and Risks are often used and it is necessary to be clear what Hazards and Risks are:

- A hazard is anything that has the potential to cause harm
- The risk is how likely it is that a hazard may cause actual harm.

Having defined the work to be undertaken, risk assessment will give a clearer picture of what could go wrong and how serious an accident could be. It will depend upon following a set model which will enable the risk to be assessed.

Hazard identification at Stone quarry site

Hazard identification and risk assessment is a continual process. At mining operation following could be the main hazard:

- ❖ Drilling operation
- ❖ Blasting operation
- ❖ Health Hazard
- ❖ Accident at site/crusher
- ❖ Transportation
- ❖ Natural hazards

It is performed to identify whatever could cause injury, damage, ill-health, financial loss and loss of reputation to the organization. Hazard identification is an analysis to determine whether a risk agent under plausible conditions would cause harm to population or the environment.

Mitigation measures

A) Drilling:

1. Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
2. Deep wetting of drilling zones shall be done by water sprinkling before starting drilling.
3. During the drilling operations the efforts shall be made to reduce dust generation by taking appropriate measures

B) Blasting:

1. Proper blasting geometry shall be designed.
2. Blast site shall be wetted before and after blasting operations are completed.
3. Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation.
4. Blasting shall be conducted only during favorable weather conditions and only during the day time and permissible hours.
5. The blasting operations shall be given publicity the local area through Announcement and other available media so that local people become aware of the blasting activities being undertaken in the area.
6. The vibrations should be monitored periodically in consultation with the local Mining authorities.
7. The storage of the explosives and its transfer to and from the quarry area shall be strictly in accordance with the conditions listed in the permission granted by Explosives Department

C) Heavy Earth moving Machinery (HEMM):

1. The operator/ transporter shall carry out regular maintenance of the machinery and vehicles.
2. The speed limit shall be adhered to
3. Operator's cabin of the HEMMs should preferably be air conditioned at least air tight.
4. The smoke emission should conform to the standards notified in Motor Vehicle Act.
5. The trucks carrying the mined products shall be covered with tarpaulin so that there are no fugitive emissions during transportation.
6. The transportation should not through the busy roads in the city/towns/villages if by pass roads are available.

D) Haul Roads:

1. All the haul and roads shall be mettled and well maintained.
2. Unmettled haul roads shall be free of ruts and pot holes.
3. All haul roads and surface roads shall be regularly sprayed with water.
4. Plantation alongside haul roads (avenue plantation) shall be carried out done.

E) Overburden:

1. Non-operative dumps shall be subjected to technical and biological reclamation.
2. Plantation over and around over burden stability of slopes, prevention of dust by wind action and soil erosion during the run off. Wetting of surface of O. B. dump shall be regularly practiced.

Occupational Health & Safety Measures to Control Dust Inhalation

All the necessary precautions would be adopted to prevent dust generation at site and to be dispersed in the outside environment. However, for the safety of workers at site, engaged at strategic locations/dust generation points like loading and unloading points, dust masks would be provided Dust masks would prevent inhalation of RPM thereby reducing the

risk of lung diseases and other respiratory disorders. Regular health monitoring of workers will be carried out.

Health and Safety Monitoring Plan

All the potential occupational hazardous work places would be monitored regularly. The health of employees working in these areas would be monitored once in two years for early detection of any ailment due to exposure to plant operation.

Personal Protective Equipment (PPE):

The following PPE will be provided to the persons working in the quarry area:

- ❖ Steel-Shoed Industrial Safety Shoes
- ❖ Safety Helmet
- ❖ Earmuffs and Earplugs by workers, who are working in areas.
- ❖ Safety Goggles & Safety Belts

Disaster Management Plan

The Disaster Management Plan is aimed to ensure safety of life, protection of environment, protection of installation and restoration of production. For effective implementation of the Disaster Management Plan, it should be widely circulated and personnel training should be given.

The objective of the Disaster Management Plan is to make use of the combined resources of the mine and the outside services to achieve the following:

- ❖ Effect the rescue and medical treatment of casualties;
- ❖ Safeguard other people;
- ❖ Minimize damage to property and the environment,
- ❖ Initially contain and ultimately bring the incident under control;
- ❖ Secure the safe rehabilitation of affected area
- ❖ Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency.
- ❖ Emergency escape route will be designated.

CHAPTER 25

OCCUPATIONAL HEALTH ISSUES IN THE DISTRICT

As all the precautions are taken during mining operations, no health issues are found till date (2016-20).

CHAPTER 26

PLANTATION AND GREENBELT DEVELOPMENT IN **RESPECT OF LEASES ALREADY GRANTED IN THE** **DISTRICT**

Plantation and greenbelt development is as per approved mining scheme for respective leases previously granted in the District and all proposed lease holder are adhere to comply with the stipulated conditions mentioned in the EC. As per the Approved Environmental Clearance General Condition Point No.10 Green belt development is carried out by lease holder in mine lease area along 7.5m barrier.

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Revised Policy for issuing Gravel / Sand.

Government of Maharashtra

Department of Revenue & Forests.

Government Resolution No: MMR – 10/1021/C- No.
82/Kha – 1,

Hutatma Rajguru Square,

Madam Cama Road, Secretariat, Mumbai – 32.

Date: 28th January, 2022.

Ref: -

- 1) Govt. Resolution, Dept. of Revenue & Forests No: MMR-10-1014 / C. No. 500/Kha dated 21st May, 2015.
- 2) Govt. Resolution, Dept. of Revenue & Forests No: MMR-10/0219/C.No.9/Kha-1 dated 3rd September, 2019.
- 3) Article Five of Maharashtra Miner Minerals Mining / Excavation (Development and Regulation) Rules, 2013.

Preamble:-

In the article 5 of the Maharashtra Miner Mineral excavation (Development and Regulation) Rules, 2013, there is a provision made for issuing garble / sand accumulated on the Banks of Canal, River and bay back waters. In the Rule No.70, provision has also been made by stating as – “The auction, usage etc. and its related terms and conditions as well as its governing work process will be notified from time to time by the Government through Specific Notifications.” Accordingly vide previous Government Resolution No. MMR-10 /1014 /C. No. 500 / Kha dated 21.05.2015 for issuing gravel/sand present on the bay area banks and shores, the policy has been already declared. Accordingly vide MMR-10/0219/C. No.9/Kha dated 3rd September, 2019, in connection with issuing of gravel/sand located on the river banks, necessary policy too has been declared.

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In connection with the excavation of gravel/sand present on the bay shore area, in accordance with the related policy dated 21.05.2015, any person/institution who/which is traditionally engaged in the traditional occupation of manual lifting and diving method as the accumulation value was found to be increased by 15% per year, due to which for the method of accumulating sand for sand blocks by mining it from there the price for single process was used to be decided in accordance with the auction rate for excavation of sand through mechanical method as a result of which the price became exorbitantly increased, many complaints were received. Therefore, in connection with such Complaints, under the Chairmanship of Hon'ble Revenue Minister, a Meeting was organized.

Similarly, the Department of mining has published Sand Mining Framework during March, 2018. Therefore, by making study in many states of this

country, in connection with the factors necessary to be taken into notice while issuing permission for excavation of gravel/sand, necessary directions have been issued under the same. Similarly, the Hon'ble National Green Tribunal (NGT) in its O. A. No. 368/2015 dated 19.09.2018, has established co-ordination with the Ministry of Environment, Forests and Change of Climate, has given directions to make necessary convenient changes in Sustainable Sand Mining Guidelines, 2016 and also in accordance with Sand Mining Framework, 2018. In addition to that, similarly in Public Interest Litigation Petition No. 110/2018 came up before the Hon'ble Division Bench: Nagpur of Mumbai High Court, the Hon'ble High Court was assured to prepare revised sand policy by the State Government. Accordingly, the Ministry of Environment & Forests, Climate Change of the Central Government with whom co-ordination was established by the State Government and in

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order to prepare new gravel / sand issue policy, a committee was established under the Chairmanship of the Resp. Director, Directorate of Geology and Mining and said Committee made study of the policy adopted by the various state governments in this regard so far. Accordingly vide the Government Resolution dated 03.09.2019 issued the New Revised Gravel/Sand Issue Policy.

In accordance with the Government Resolution dated 03.09.2019 in connection with the subject of excavation of gravel/sand on the river banks, in order to conduct auction of the Sand Blocks, prior to issuing of advertisements, the proposal to seek permission from the Environment Authority through the District Collector's Office, in the Past used to be presented to the Department of Environment for their approval. But, after the Mining Plan has been prepared, until the Environment Clearance / Permission is obtained, a lot of time of used to be

consumed which has come to the Notice. At many places, even after necessary permission for sand bogs has been procured from the Department of Environment, when the auction process was found to be not successful, a lot of Government Machinery and efforts as well as time used to be gone into a sheer waste and turned unproductive as appeared from the above. Therefore, the Survey of the Sand Blocks and their related Mining Plan was commenced to be prepared by the Office of the District Officer after which the auction of sand bogs was organized and the government thought of then procuring necessary environment clearance by putting said responsibility upon the successful auction bidder himself.

In accordance with the Environmental permission, increasing of the handling fee by 6% every year provision was already existed in Government Resolution dated 03.09.2019, it was found that the

handling fee of sand block was getting enhanced year after year substantially as a result of which the auction purchasers were not showing any interest in participating in the auction as a result of which the auctions were found to be not successful. As a result of that illegal mining of sand increased resulting in considerable loss of revenue to the Government. Therefore, in order to fix the handling fee of sand blocks afresh, the issue was under consideration of the Government.

The Central Government through its Ministry of Environment, Forests and Climate Change through the medium of Sustainable Sand Mining Guidelines – 2020 has given clear guidelines in connection with the above vide Government Notification No: C. G. D. L.-A 28032020-218948 which has been published on 28th March, 2020.

After the Sand Policy dated 03.09.2019 was issued, in accordance with those guidelines, to include the

above issue in the Sand Policy was under due consideration of the government. In follow up to the same, the Sand Policy of Gujarat and Andhra Pradesh States was taken up for study, for the purpose of recommendation of reforms, necessary directions were issued to the Divisional Commissioner, Nashik Division, Nashik. The Divisional Commissioner, Nashik has presented his report in this regard to revise the Sand Policy dated 03.09.2019 on the basis of which to take revised decision in this regard, resolution was made as a result of which the Policy dated 21.05.2015 of disposal of sand from Bay banks was merged with Policy dated 03.09.2019 corresponding to the disposal of sand mined from the river banks and through this merger to declare a totally new policy in a comprehensive manner was under the consideration of the government.

Government Resolution: -

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In the back drop the elaborate introspection made in the above Preamble of this subject matter, in connection with the subject of sand/gravel disposal subject related Policy making, the earlier decisions dated 21.05.2015 and 03.09.2019 were superseded and in order to follow a revised work process in connection with mining of gravel/sand from the river banks and bay shore the government has stipulated the following new revised guideline principles.

SCHEDULE No.1

Procedure for mining and transportation of Gravel/Sand.

- I Survey and fixation of Gravel/Sand Blocks:
 - A-1. Survey and fixation of Gravel/Sand Blocks for mining of sand in order to clear the waterway route of Maharashtra Coast-line, to survey and decide the gravel/sand blocks which need to be managed: -

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- (a) In order that the waterway on the coastal line of Maharashtra convenient and smooth for water transportation, from time to time, it is necessary to remove periodically accumulated gravel/sand forming the sand blocks there by excavating the same, so it is necessary to conduct the survey of the available quantity and up to the extent of how many blocks the operation of excavation needs to be undertaken, for which technical accessories are needed or should be employed to remove the sand and if such technical accessories are put into usage, then how may suction pumps and dredgers need to be installed or operated needs to be assessed and decided by the Maharashtra Maritime Board.
- (b) as above, after the concerned chief executive officer, Maharashtra Maritime Board with an intention to make the western Coastal line of

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Maharashtra smooth and convenient, to decide the geographical area where sand mining is necessary, the estimated quantity of sand in store which needs to be excavated to make the waterway smooth, to find out the available approach road, after which the same will be got confirmed by the Maharashtra Maritime Board and only then to mine the sand necessary arrangements and to regulate such arrangement, concerned District Officer/Collector is being authorized hereby.

- (c) in order to make appropriate arrangement for excavation of sand by local persons on the coastal water front of Maharashtra, through manual and diving method as followed traditionally, on behalf of the Chief Executive Officer, Maharashtra Maritime Board the task will be marked by the concerned District Collector/Addl. District Collector in accordance with the recommendation

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made by the District Level Sand Monitoring committee by marking the block as – “Reserved Plot for mining through traditional manual/diving method without holding any auction.”

- (d) In order to ensure the water way clear and trouble free by maintaining requisite minimum depth, if it becomes necessary to operate dredger type of technical accessories, then the concerned District Collector/Addl. District Collector will mark on behalf the Maharashtra Maritime Board on the basis of recommendation made by District level Sand Monitoring committee as – “ Sand Block reserved for mining of sand through mechanical/technical means”.

A-2. Survey of Gravel/Sand on river banks and taking decision: -

- 1) Spot inspection of the sand blocks present on river bank will be conducted by taking necessary

action by the technical Sub Committee
comprising: -

- i. The Tehsildar: Chairman.
 - ii. Deputy Engineer, Department Of Water Resources: Member.
 - iii. Deputy Engineer, Department of Water Resources: Member.
 - iv. Junior Geologist (Nominated by the Directorate Of Geology & Mining): Member.
 - v. Authorized Departmental Representative of the Maharashtra Pollution Control Board: Member.
- 2) If the mining of sand on the parts which has been affected by drought and consistent scarcity will adversely influence the availability of drinking water as well as on the environment, let such parts be not included in the sand blocks meant for mining of sand.

- 3) While deciding the sand blocks through aforesaid above Technical Sub Committee, let the local rain fall, geographical condition and let other environmental subject related issues be taken into due thought and consideration to evaluate that the sand block is fit for mining or not regarding which will recommend to the Taluka level Sand Monitoring Committee.

I Sand Monitoring Committee: -

1. Taluka Sand Monitoring Committee: -

For each and every Taluka of the District, there will be a Taluka Sand Monitoring Committee. (The constituted Committee in such a manner will be here afterwards denoted as Taluka Level Committee.)

The constitution of said Committee will be as under:

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- 1) District Officer: Chairman.
- 2) Chief Executive Officer, District Council: Member.
- 3) Superintendent of Police/Commissioner of Police:
Member.
- 4) Addl. District Collector: Member.
- 5) Executive Engineer, Public Works Department;
Member.
- 6) Executive Engineer, Department of Water
Resources: Member.
- 7) Deputy Conservator of Forests: Member.
- 8) Regional Transport Officer: Member.
- 9) Regional Officer, Maharashtra Pollution Control
Board: Member.
- 10) Senior Geologist, Ground Water Survey
Authority/System: Member.

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11) District Mining Officer: Member Secretary.

If found necessary for procuring advice on special or specific issues and for securing guidance related to the same, any other expert person or officer can be also appointed as Invited Member.

III Authority and responsibilities of Sand Monitoring Committee: -

1) The Meeting of the Taluka Level Committee will be held once in every two months.

2) It will present the following proposals in connection with the following issues to the District Level Committee.

i) In accordance with Government Resolution No: MMR -10/0215/C. No. 12/Kha dated 17th November, 2018, the Sand Block which is financially non-remunerative and weak be kept reserved for Government Residential / Housing

Project.

- ii) In accordance with the Government Resolution No. MMR-10/0215 /C. No. 12/Kha dated 17th November, 2018, for the Local Residents, for their house hold and agricultural utility, the Environmental Permission procured Sand Block related Royalty rate be fixed as reserved for Sand Mining.
- iii) For the Public Authority Project / Scheme under the Control of and belonging to Central / State Government, let the Sand Block be kept reserved in the name of any Authority nominated by the Government for such project / scheme.
- iv) For Maharashtra State Mining Corporation, let the Sand Blocks located in the river bank be kept under reservation.

- v) To recommend the Sand Block for the purpose of auction.
- 3) From the Sand Blocks decided by the Taluka Level Committee for Sand Mining, it will decide the estimated quantity of Sand to be mind. While fixing the Sand Block, it is necessary to present the Certified Map of the Specific Block with its longitude and Latitude.
- 4) The Taluka Level Committee will co-operate with the and will assist the District Level Committee in preparing the District Survey Report in accordance with the directions given in the Sustainable Sand Mining Guidelines, 2016 and Sand Mining Framework, 2018 and the various directions issued from time to time by the Ministry of Environment, Forests and Climate Change of the Government of India.

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- 5) In order to issue Public Notification of the Sand Blocks decided by the Taluka Committee through E-auction processing, and in connection with the reservation of any plot among them for Government Work, the Joint Spot Inspection Report and its entire substantiating papers along with clear recommendation will be presented by it to the District Level Committee.
- 6) In accordance with the Terms and Conditions stipulated in the Environmental permission given by the Committee, to ensure that whether the mining at the Sand Blocks is being carried out or not regarding which monitoring and supervising will be conducted by the Taluka Level Committee.
- 7) In order to ensure effective implementation of the policy, this committee will make necessary recommendations to the District Level Sand Monitoring Committee.

- 8) The work of this Committee is also to search for Sand Blocks present in its work area, as alternative for sand mining of the sand from river banks, to search for other resources such as mud mixed gravel, underground gravel etc. and recommend the same to the District Level Committee.
 - 9) This Committee will decide Sand Blocks for Notified Areas under PESA Act, 2011 and in accordance with the amendments of said Act effected from time to time.
 - 10) Apart from the above, the Taluka Level Committee will also fulfill the responsibilities entrusted to it by the District Level Sand Monitoring Committee.
- (B) District Level Committee:-
- 1) The District Level Committee will hold its Meeting

once in every three months.

- 2) For able monitoring, the Committee can implement Digitization of all sand blocks in the District under its Jurisdiction through Maharashtra remote monitoring system and through recognized agency as necessary.
- 3) It will discuss on the proposals presented to it by the Taluka Level Committee and if necessary will make changes in such proposals and then said District Level Committee will take necessary action as under:-
 - i) Financially weak Sand Blocks Units will be kept under reservation for the purpose of Government Housing Scheme in accordance with the Provision made under Government Notification No: MMR-10/0215, C. No./92 / Kha dated 17th November, 2018.

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- ii) In accordance with the Provision made under Government Notification No: MMR-10/0215, C. No./92 / Kha dated 17th November, 2018, from the Sand Blocks that have been approved under Environmental Clearance for the purpose of Domestic and Agricultural utility by the local residents, the necessary Sand Blocks will be kept under reservation at the rate of royalty rate of the above permitted Sand Blocks.
- iii) In order to extract sand through traditional Manual / diving method, to give permission to the Local persons, Institutions, necessary Sand Blocks will be sufficiently kept under Reservation.
- iv) For the Maharashtra State Mining Corporation, the Sand Blocks located on the river banks will be reserved.
- v) To decide the sand blocks for auction.

- 4) For the above No.3 purpose, recommendation will be done by this committee for the environmental clearance.
- 5) The work process for deciding the sand blocks be ensured to be in accordance with the directions of the Hon'ble National Green Tribunal from time to time as well as within the provisions of the Notification issued by the Ministry of Environment, I Forests and Climate Change from time to time.
- 6) For The Purpose Of Procurement Of Necessary Permissions Required Regarding Environment Issues And For Works To Be Carried Out In Connection The Same, In order to Prepare The District Survey Report, appoint Recognized Consultants also this committee has necessary Authority.

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- 7) For undertaking the process of Sand Auction, the bidding price be decided in accordance with the Direction of the Government as given in the above reference on per brass or per matric ton basis.
- 8) This Committee will also take appropriate decision in connection with excavation / Development of Gravel / Sand and its transportation.
- 9) In order to implement effective the decision, this committee will issue notices to various concerned Government / Non-Government and local self government institutions as necessary.
- 10) Through this Government Resolution, whatever provisions Terms & Conditions have been fixed therein, subject to them this Committee will give approval for excavation of sand from Sand Blocks and will also recommend accordingly to the

District Collector for giving necessary approval as required.

11) The committee will also conduct enquiry in connection with complaints received related to illegal excavation of miner mineral as well as its transportation and will render its responsibilities as a vigilance authority also in this regard.

IV) Recommendation by the village council in connection with the Gravel / Sand Auction present on the river bank:-

After the Gravel / Sand Block on the river bank has been decided, in order to conduct auction of these Sand Blocks, it is compulsory to procure necessary recommendation of the concerned Local Village Committee. After the reference has been procured by the Village Committee, it will hold its meeting and decide the reference subject in said meeting within a month's period invariably

as it is bound to do so. If the Village Committee refuses to approve in its resolution, then let a Village Council be organized under the Presidency of the Sub-Divisional Officer (Revenue) and on the basis of his recommendation and on the basis of the Merit – Demerit, the recommendation related to the auction of sand at this level be made to the District Level Sand Monitoring Committee.

- V) Reservation of Sand Blocks for the utility of various Departmental projects of the State Government:-

For the purpose of Projects undertaken by Central/state government or for any Public Corporation under its control, or for any Agency nominated by them, the sand blocks need to be kept in reserve. From such reserved sand blocks, the necessary sand required for the construction

activity related to the above projects, excavation of such requisite sand the approval can be given by the District Collector by making such sand available for government work at the rate equal to the royalty amount of sand as decided by the state from time to time or as depicted in the Balance Sheet of related government work, whichever that is higher among the two be taken into consideration.

VI) Reservation Of River Bank Located Sand Blocks For The Maharashtra State Mining Corporation: -

1) The District Collector in accordance with his voluntary discretion, as well as in accordance with the demand made by the Maharashtra State Mining Corporation, can keep in reservation the sand blocks in the concerned district for mining and Sale through said Corporation.

2) The mining activity can be got carried out by the

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Corporation on its own or through any agent as it deems fit and proper.

- 3) The storage of such excavated sand, can be sold by the Corporation by arranging a depot for said purpose and can sell it in accordance with the already approved rate of the State Government.
- 4) From the Money procured from above sell of sand, at the rate decided by the Government from time to time, the corporation will deposit the royalty amount with the State Government.
- 5) For the purpose of transportation of sand sold by the Corporation, transit pass can be procured from Concerned District Collector in accordance with mahakhanij system.

Schedule No. Two.

- I) Mining Plan for mining of Gravel / Sand:- in accordance with the directions given from time to

time by the Ministry of Environmental, Forest and Climate Change as well as under Sustainable Sand Mining Guidelines, 2016 and under Sand Mining Framework, 2018, prior to the auction of the Sand Blocks, the District Collectors Office will prepare the Mining Plan for the stipulated period.

II) Environment Permission:-

1) Environmental Permission for mining of Gravel / Sand from bay coastline Sand Blocks:-

In accordance with the Order dated 27.02.2012 of the Hon'ble Supreme Court in Special Leave Petition (c) No. 19628 - 19629 / 2009 and in accordance with the Order dated 29.05.2014 passed by the Hon'ble National Green Tribunal, Western Division, Division Bench: Pune in Application No. 34 (THC) / 2013 (WZ), prior to the excavation of Gravel / Sand, necessary permission should be taken for environmental

clearance by the CEO, Maharashtra Meritime Board in accordance with the provision under the Notification EIA - 2006 dated 14th September, 2006 of the Department of Environment & Forests of the Central Government.

- (a) Under the process of Without auction permit to excavate sand through traditional manual and diving process from the Sand Blocks reserved for said person for the sake of local persons, in order to give them necessary permission for excavation, there is no necessity to procure environmental clearance. In such cases necessary proceedings can be initiated in accordance with the Office Order dated 08.11.2011 of the Ministry of Environment and Forests of the Central Government by the concerned District Collector.
- (b) For the purpose of sand/gravel mining from the reserved sand blocks through

mechanical/technical means, the directions issued by the Hon'ble Supreme Court, Hon'ble High Court, Hon'ble National Green Tribunal as well as in accordance with the provisions under the Notifications issued from time to time by the Ministry of Environment, Forest and Climate Change it is necessary to take prior permission from the Environment Authority and to do whatever that is necessary to be able to get it, until then no mining can be carried out. For said purpose, in accordance with the provisions made under the Notification dated 12th September, 2006 of the Central Government, Accredited Environment Consultant can be appointed. The expenditure necessary for the same can be met in accordance with the provisions made under Government Notification dated 01 September, 2016 of the Department of Industry, Labour and Energy. The proposal for necessary funds to get

Environmental Permission has to be presented by the CEO, Maharashtra Maritime Board to the Managing Director, Maharashtra State Mining Corporation, Nagpur.

(c) In order to Mine Gravel / Sand located in the Sand Blocks of costal regulation zone, the prior approval of Maharashtra Coastal Zone Management Authority should be procured by the CEO, Maharashtra Maritime Board.

2) Environmental Permission for mining of Gravel / Sand for river bank:-

(a) In accordance with the directions given from time to time by the Hon'ble Supreme Court, Hon'ble High Court, Hon'ble National Green Tribunal and under the provisions made in the Notification issue by the Ministry of Environment, Forests and Climate Change, prior to the excavation of Miner Mineral, necessary Environmental Permission

needs to be acquired in advance without which mining become illegal. For said purpose necessary action has to be taken and permission as necessary needs to be invariably procured prior to the commencement of mining.

- (b) After the auction of the Sand Blocks in the District has been held, if the Sand Block has been approved in favour of the successful bidders, then a Letter of Interest (LoI) has to be issued to the successful bidder. Thereafter, on the basis of this LoI, it will become the responsibility of the successful bidder to procure necessary Environmental Permission.
- (c) Prior to the excavation of Gravel / Sand from the Plot, the process of procuring approval / recognition in accordance with the Notifications issued from time to time by the Central Government Ministry of Environment, Forests and

Climate Change from the Expert Appraisal Committee as well as Environment Impact Assessment Authority which has to be involved in after the auction process has been completed.

- (d) After the Environment Permission have been procured, unless the remaining balance amount has been deposited and after necessary agreement has been executed, until then no excavation activity be indulged in by the successful bidder or anybody on his behalf.
- (e) It is invariable that all the terms and conditions mentioned in the Environment Clearance Permission granted by the Environment Impact Assessment Authority should be ably complied with and whether it has been complied with fully or not has to be inspected from time to time by the concerned Taluka Tehsildar, concerned Sub-Divisional Officer, concerned District Mining

Officer as well as Additional District Collector.

- (f) The specific auction bidder who has violated the Terms and Conditions agreed in the Environmental Permission mentioned above, against whom necessary action will be taken and if not let it be ensured to be taken under Maharashtra Land Revenue Act, 1966 as well as Environmental Protection Act, 1986 and in Order to unable to take such action, necessary Report be submitted by the Tehsildar every 6 months through the District Mining Officer to the Department of Environment.

SCHEDULE No. THREE

Deciding Upset Price for auction of sand Blocks:-

- a) The mining period of sand from the allotted sand block will be for a period of 5 years from the date of approval. Moreover, the maximum permitted

extent of the Sand Block can be up-to 5 hectare. Accordingly the Sand Block fixing process, the process of mining sand from the unit and in Order to fix the upset price of the Sand Block, the procedure to be adopted will be as under.

- i) Let boundary limits be fixed on the Map Mining Plan of the related Sand Block according to the Annual Plan included in the Mining Plan and let the Mining Activity to be undertaken during the entire auction validity period be planned accordingly.
- ii) The Royalty amount of Sand as decided from time to time by the Government its related estimated excavated quantity of sand from concerned sand block, when these two are multiply the figure that is reached be decided as the upset price of the sand corresponding to said specific Sand Blocks.
- iii) In the Publication and advertisement related to

sand auction, let the upset price be also published.

- iv) The upset price will be in terms of either each brass or in terms each metric ton.
 - v) Under the mining plan at spots where mining has been completed in accordance with the plan, on same spot no mining should be conducted. This responsibility should be taken up by the concerned Successful auction bidder.
 - vi) Let enquiry be made regarding enhancement of Revenue after two years and according to necessity regarding decision making of upset price, there will be system based changes.
- B) For Manual and Diving extraction based reserved Gravel / Sand Blocks:-
- (i) In order to fix the upset price of the Reserved Gravel / Sand Blocks of Sand intended to be

extracted through Manual and Traditional Dining Method, Let the District Collector / Additional District Collector concerned take into due consideration the Sand Stock available for issuing in each of these Sand Blocks.

- (ii) While giving permission to the Local Manual workers and divers who excavate the sand from their Reserved Category Gravel / Sand Blocks, let amount payable be calculated on the basis of contemporarily prevailing Royalty per brass or as applicable per each metric ton.

SCHEDULE No. FOUR

- (1) Eligibility criteria for auction bidders.
 - (a) Any person / Company / Institution will be declared as in eligible for taking part in the auction bidding proceedings provided -
 1. Any person who is a minor by age, who is Bankrupt

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and who is mentally handicapped is ineligible to take part in the auction.

2. Any person who is holding a productive post with the Central of State Government.
3. Those persons who are indulged in dead rent of any ancillary mineral related royalty payment (to mean) persons/establishments not listed in Defaulters List of evading Royalty of Ancillary Mineral to the District Collectorate, due dead Rank, due Revenue Tax to the Government etc. as published by concerned Authority.
4. That person who has morally been degraded and who has been indulged in illegal mining and illegal transportation of excavated mining material in the past and who has also undergone punishment / sentence for the same.
5. If the turnover of the nearest past financial year is

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found less than the acceptable quantity (for each person, it is fixed at 5% of the value of the sand block and for a company / establishment a turnover of 10% fluctuation.

- (b) The person / Company / Institution should submit proof of paying Income Tax Regularly, provide his Pan Number and his Goods and Service Tax Departmental Identity Pin No. allotted to him.
- (c) Person / Institution desiring to fill up the auction tender Form, should deposit the Tender Application Fee equivalent to Rs. 2000/- if the Sand Block upset price is less than Rs. 10.00 Lakh and Rs. 5000/- if the upset price is more than Rs. 10.00 Lakh. This payment should be made through a cheque drawn in the name of District Collector of the Concerned District as directed by him or in the method as advised by him.
- (b) Each person / Institution who intends to Participate

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in the auction should deposit 25% of the advance amount of upset price as Security along with the tender application form.

(2) Authorization to conduct the auction of the Sand Blocks: -

(a) Auction of all the sand blocks within the district at District Level will be conducted under the control of District Officer.

(b) In case any sand block well within the revenue division corresponding to more than one specific district, then let the District Officers of both two districts conduct joint inspection have mutual discussion and decide the same as a joint sand block and then, let the related report be forwarded to the Divisional Commissioner and he will give direction to one District Officer among the two officers to conduct the auction proceedings of the aforesaid Joint Sand Block. Only such District

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Officer complete the proceedings of auction as per the direction of the Commissioner. Let the income generated from such option be proportionally divided among the Two Districts in accordance with the size of the portion of Sand Block covered by the individual District jurisdiction.

In connection with such Joint Sand Blocks, if there is no consensus reached in between both the Divisional Commissioner, then let the proposal be presented to the Government for taking Final Decision in this regard.

Schedule No. Five

Method of conducting auction of Gravel / Sand Blocks

The auction proceedings of the Sand Blocks recommended by the District Sand Regulating Committee will be conducted in accordance with e-

tendering/ e-auction process.

- (1) All the Sand Blocks will be determined for auction in accordance with the provision made under the Notifications issued from time to time by the Ministry of Environmental, Forest and Climate Change as well as the Directions issued from time to time by the Hon'ble Supreme Court, concerned Hon'ble High Court as well as Hon'ble NGT.
- (2) The auction period will include even rainy season also. For reckoning purpose, the rainy season will be from 10th June, 30th September. During said rainy seasonal period no mining is of sand is permitted. This should be brought clearly to the notice of the auction participants to clear any illusion in this regard.
- (3) While fixing the mining period, let following facts be taken into due consideration: -

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- (a) The rate of Annual valuation of sand which is needed to be deposited again.
 - (b) Feasibility Report of availability of sand by the Irrigation Department as well as ground water survey Development System.
 - (c) Environmental permission and the local and geographical condition mentioned in the mining plan.
 - (d) Guideline instructions issued from time to time by the State and Central Governments as well as Guideline Principles in the Sustainable Sand Mining Guidelines, 2016 & 2020 as well as Sand Mining Framework, 2018.
- (4) The advertisement auction related to the Sand Blocks has to be published in advance in at-least two prominent news papers of the District before 15 days of holding the auction and a copy of the

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same be also displayed on the Notice Board of the Office of the Zonal Revenue Officer. The advertisement be also uploaded on the Official Website of the Government.

- (5) In the above mentioned advertisement in connection with the auction of the Sand / Gravel, the particulars related to excavation period, Survey Number of the Plot wherein the Sand Block to be auctioned is present, Sand Block No., Name of the Gravel / Sand Block, approximate estimated quantity of Sand / Gravel present the Sand Block, the Upset Price of the Sand Block etc. needs to be clearly satisfied to clear any doubts regarding the same.
- (6) Auction holder before taking part in the auction, he should inspect whether sufficient and expected stock is available at the interested sand block or not, whether any transportation road facility is

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existent or not should be got confirmed by him. Only through the permitted accessories, he should responsibly indulge in mining of sand. Therefore, the objection that no sufficient stock is available in the sand block, no necessary road is available for transportation, the problem of presence of water in the sand block or finding of soil mixed with sand etc. related objections cannot be made thereafter, once the auction has been successfully bid and for all these problems no compensation is admissible and no claim is entertained from him and no refund of the auction money bid already will be refunded back to him.

- (7) Person / Institution who desires to take part in the auction should present the deposit amount through RTGS / NEFT in the procedure as instructed by the District Officer.

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- (8) In connection with the proposed action, if any complaint / objection / information is received, then the concerned District Officer / Additional District Collector and in case of Joint Sand Blocks, the Divisional Commissioner should conduct the necessary inspection / enquiry and in the course of the same if he finds sufficient reasons for such complaint / objection / information, then he should pay decisive conclusion above holding the auction of the concerned Sand Block.
- (9) In order that the auction of all Gravel / Sand Blocks is conducted simultaneously on the same day, let the concerned Divisional Commissioner plan as under:-
 - (a) The sand Block wise auction of all the Gravel / Sand Blocks decided to be held in the District be organized at the Head Quarter of the District on the same day.

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- (b) Due to any reason if the auction proceedings of all intended Gravel / Sand Blocks within the District could not be held on the Schedule day, the pending work can be continued on the morning period of the next day.
- (c) All the concerned District collectors and the Addl. District Collectors of the Districts related to their individual districts, related to Sand Auction should undertake the proceedings under their supervision and they should not entrust the work to any other officer under them under any circumstances.
- (d) In connection with combined sand block, its related Divisional Commissioner should get the proceedings completed under his own supervision and control. The Divisional Commissioner under any circumstances should not get this work done through any other officer.

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Schedule Number Six.

- I) Process of Auction.
 - (1) In all auctions which will be conducted on the basis of e-tender and e-auction process, the bid has to be started with an amount more than the upset price declared by the Government and every bid has to increased in its next call by at-least 1000 Rupees or its multiple.
 - (2) The highest bidder will be declared as the successful bidder.
 - (3) From the successful bidder, 25% of the total auction amount should be got deposited within 48 hours of holding the auction in the Office of the District Collector / Divisional Commissioner and only then the Letter of intent can be released in his name.
 - (4) Remaining 75 % of the auction bid amount has to

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be paid within the stipulated period and to guarantee the same and assurance Letter needs to be executed by the Successful Bidder on Rs. 100/- Stamp Paper.

- (5) The Environmental permission should be procured for a period extending up to the conclusion of the entire agreed mining and let it be at-least up to the period of mining plan envisaged for a period of five years of mining lease.
- (6) After the successful bidder has manage to obtain environmental clearance, he has to present it in the Office of the District Collector, deposit the 75% bid amount within 30 days either in the District Collectors Office or in the Office of the Divisional Commissioner as the case may be and the proposal for environmental permission can be submitted by the auction holder to the department of environment within 45 days of holding the auction

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and if he did not do so, the 10% amount of the advance security money will be levied as Penalty upon him.

- (7) After the highest bid amount has been completely paid by the successful bidder, then he will be allowed to execute an agreement with the Government only after that, the physical possession of the chosen sand block will be handed over to him.
- (8) If the auction participant's tender has not been admitted, then the EMD Paid by him will be refunded back to him after the auction proceedings have been concluded.
- (9) The tender of the highest bidder in the auction will be accepted and on such acceptance, for the purpose of conducting survey, he should deposit Rs. 5000/- or as necessary by submitting the same through cheque or deposit it in the name of Deputy

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Director cum Senior Geologist, under water survey and Development System / Authority and be deposited in the Office the District Collector.

- (10) The decision to accept the bid of the highest bidder of the tender or to reject the same will be solely upon the Concerned Additional District Collector / District Collector or the Divisional Commissioner as the case may be and the decision made by him needs to be communicated on the same day to the concerned bidder. In case the tender has been rejected to such bidder, then a detailed reason for the same in clarification should be conveyed to the bidder.
- (11) Under exceptional circumstances, the $\frac{3}{4}$ amount equal to 75% of the Highest bid amount can be allowed to be paid within an extended period of 15 days at the discretion of the District Collector. But for such delay, the concerned bidder should also

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deposit additional interest @ of 15% per annum.

The Government has got right to extend the period of 75% payment under extra ordinary circumstances.

(12) On the agreement to be executed with the bidder, necessary stamp fee should be deposited by the bidder in accordance with the stipulated provisions under Maharashtra Stamp Act and the Stamp Fee also needs to be paid in accordance with the contemporary Government Resolution in this regard.

(13) While executing the Lease Agreement by the auction holder / permit holder, to guarantee the compliance of related terms and conditions, should pay a security amount of 20% amount of the upset price which needs to be deposited with the District Collector / Additional District Collector or the Divisional Commissioner as the case may be. Only

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at the end of conclusion of mining period, on due satisfaction of all agreed terms and conditions by the bidder, the above amount will be refunded back to him and in case of violation said amount is liable to be confiscated.

- (14) The bidder / permit holder is also required to pay the fee charged by District Council / Panchayat Committee or as decided by the State Government and is also required to pay contribution amount as decided by the State Government to the District Mining Establishment.
- (15) After the above agreement has been done by the bidder, he should take physical possession of the Sand Block allotted to him / bid by him within 7 days and if any delay occurs without any valid reason, in handing over the possession to the bidder, let necessary disciplinary action be taken against the concerned Officer / Staff.

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- (16) While giving the physical possession of the Sand Block to the successful bidder, let the related Panchanama be conducted in the presence of Tehsildar and District Mining Officer of the Concerned District. If there are any existent ditches, let the same be mentioned in the Sand Block possession Panchnama also and let the photography of the same be clicked through drone.
- (17) The bidder is bound upon to adopt Mahakhanij System and any other system as directed by the State Government.
- II) Re-auction of the Gravel / Sand Blocks and if the re-auction could not be held, then the necessary action to be taken thereafter, regarding the same:-
- A)
- (1) Remaining $\frac{3}{4}$ amount payable by the bidder should be paid within the stipulated period and in case of

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default to pay the same or if the agreement is not worked out within the stipulated period, the possession of the bid sand block will not be handed over to the bidder. And the already deposited amount of $\frac{1}{4}$ part with the government will be forfeited and the sand block bid in the past by him will be re-auctioned.

- (2) Due to any reason if the auction of the sand block is cancelled, then re-auction of the same be held afresh.
- (3) In case of re-auction, if the amount bid and realized in such re-auction is less than the previous auction bid amount, the difference in between the two amounts be deducted from the amount if any refundable to the abandoned bidder, however, if the amount earned through revised auctions more than the previous bid amount, the previous bid owner does not have any right to claim on said

amount in anyway.

- (4) If less upset price amount is received, then reasons for the same be mentioned and such block be re-auction.
- (B) Even after taking action as above, if any Sand Block does not get lease out in any auction proceeding, then to reserve such block for Maharashtra State Mining Corporation, the District Collector has got necessary right regarding the same. From such Sand Block, the excavation of sand can be undertaken by either the corporation itself or through any agent. From the amount realized from the sale of sand, after deducting the Government Royalty amount deposited with the Government, remaining amount will go to the income of the corporation. For the transportation of the sand sold by the Corporation, the District Collector of the Concerned District will issue the

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necessary transport / transit pass as necessary.

- (C) If the bidder needs to sell sand in a place other than the site of excavation of sand, then he can store the same in an alternative place which must be at-least 1 kilometer away from the Sand Block Site and he should procure necessary Trading License for said purpose.
- (D) Method to be adopted for the disposal of Gravel / Sand confiscated in illegal mining / illegal transportation:-
 - (1) In order to prevent the theft of such confiscated sand and also to protect the confiscated sand from the vagaries of nature such as rain, storm etc, and in order to avoid the depletion of quantity due to sunshine etc, let such stock be disposed of by selling it through auction within one month of

confiscation.

- (2) The auction of the confiscated sand will be conducted by the Sub-Divisional Officer in accordance with the Upset Price of the concerned Sand Block.
- (3) In connection with the auction of the confiscated Gravel / Sand after the action has been taken as above, even if the Sand could not be sold in any auction, then let it be made available for Government Construction work at a price in accordance with the balance sheet of the Government of the Concerned District after deducting the royalty amount for the same. For which necessary approval be given by the District Collector.

Schedule Number Seven

- (1) For the mining of Gravel / Sand, the General Terms

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and Conditions as well as restrictions imposed by the State are as under:- Which should be included without fail in the agreement that is entered by the Government with the permit holder / auction bidder:-

- (i) The bidder / permit Holder should erect a display board in the sand block approved to him, fix the boundaries of the Mining Area and erect boundary pillars depicting the boundary corners of the mining site. He should not indulge in mining other than this stipulated area. By taking necessary prior permission from the District Collector / Officer he should display at the site the names of the contractor, sub-contractor, Manager, Employees and their addresses etc. and said display board should also described the location of the site correctly.
- (ii) In accordance with the Order dated 27.02.2012 of

the Hon'ble Supreme Court in Special Leave Petition (c) No. 19628 - 19629 / 2009 and in accordance with the Order dated 29.05.2014 passed by the Hon'ble National Green Tribunal, Western Division, Division Bench: Pune in Application No. 34 (THC) / 2013 (WZ), prior to the excavation of Gravel / Sand, necessary permission should be taken for environmental clearance by the CEO, Maharashtra Meritime Board in accordance with the provision under the Notification EIA - 2006 dated 14th September, 2006 of the Department of Environment & Forests of the Central Government.

- (iii) In order that the concentration of the sand on the river bank be consistent for which let bench mark be fixed and below the Bench Mark, no mining should be conducted under any circumstances. Moreover, once the Bench Mark has been fixed, it

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should not be removed or allowed fall down. Moreover, due to mining activity there, so that no water level in the nearby water wells gets depleted, necessary care should be taken by the bidder / excavator.

- (iv) The bidder has got right to excavate sand only in the extent approved to him officially.
- (v) The excavation of Gravel / Sand at the bid site should be carried out strictly during 6:00 a.m. to 6:00 p.m. Beyond these hours no excavation should be indulged in and if found, it will be treated as illegal and necessary action will be taken against the same.
- (vi) While indulging in any permitted sand block adjacent to Railway Bridge of Road culvert, let sand be excavated by living at least 600 meters (2000 Feet) away from such bridge/culvert on its either side.

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- (vii) It is necessary to maintain requisite stipulated distance away from the embankment, Dam, Bund of constructions constructed in accordance with Kolhapur System of Construction as stipulated by the Department of Embankments / Divisional Commissioner / District Collector.
- (viii) The distance of 100 meters away from Public drinking water system and tank storage system as well as the necessary stipulated distance as fixed by the Ground Water Survey and Development Authority be abided compulsorily while undertaking mining of sand.
- (ix) No sand / Gravel should be excavated from the land used for Road / Walkway / road strip.
- (x) In order to transport sand from river banks, river stream, heavy vehicles should not be employed, the auction holder must establish a depot adjoining

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the main road near to the sand block side where his transportation tractor trolley be kept and at said sand depot, he should install CCTV compulsorily and its footage be submitted to the concerned Tehsildar on Weekly basis.

- (xi) The purpose of providing sand for excavation is not the sole purpose of auction, permit, commercial revenue or acquiring other revenue, but the main purpose is for achieving development and hence sand is being provided only for the development purpose in a well regulated and controlled manner. The purpose of allowing sand excavation is also that due to excessive accumulation of sand, so that no flood waters enter the nearby agricultural fields / residential area, only such excessive sand quantity which endangers the surroundings is only permitted to be excavated by indulging in secured and safe excavation within the permitted limits.

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After the bidder has been approved and issued permit for sand excavation, he should commence such excavation within one week of taking its possession of the sand block bid by him successfully.

- (xii) Apart from the above, in connection with the mining of Gravel / Sand, the other Terms and Conditions mentioned in the Statement attached to this is bound upon the bidder.
- (2) In order to effectively prevent and control illegal excavation of sand, to ensure that no financial burden is additionally levied upon the Government, let necessary care be taken by implementing necessary plans and tactics by the District Collector and incorporate them in the Terms & Conditions of the agreement agreed with the bidder.
- B) Implements to be used for the mining of Sand / Gravel:-

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1. Excavation of sand from the river banks sand blocks should be under taken by adopting only manual method which is non-mechanical.
2. The responsibility to decide the mining tools for Sand / Gravel mining in accordance with the quantum of sand available as well as in accordance with the Local Condition of Geographical site in accordance with the Provisions of Sustainable Sand Mining Guidelines, 2016 and Sand Mining Framework, 2018 and the compliance as to be made due permission procured from the Ministry of Environmental, Forest and Climate Change subject to the Terms & Conditions agreed with the same.

Schedule Number Eight.

Restrictive Plan:-

In order that no illegal mining and transportation of sand occurs, let the concerned District Collector

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/ Officer / Divisional Commissioner take action as under:-

- 1) Let a single road be adopted for transporting sand corresponding to a specific single sand block.
- 2) Let check post be established in the vacant space near to the sand blocks by the District Collector for which necessary funds be made available by the District Planning Committee in accordance with the amount decided by the State Government and let a weigh bridge be established there.
- 3)(a) In order that photography can be recorded in evidence at each and every sand block round the clock on 24/7 basis, after the auction has been concluded let the CCTV installation be provided. In order to transport the sand stock from sand block site all the transport vehicle movement be recorded in the village in the course of their transit and the expenditure incurred in the installation of

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these CCTVs should be borne by the successful auction bidder to whom the permit has been granted.

- (b) The addresses of the above CCTV installation spot should be provided by the Auction bidder to the concerned District Collector/Departmental Collector as well as the Department of Forests. The Auction holder should submit the recording of the CCTV filming the site of excavation, movement of sand etc. in CD format should be submitted to the concerned Office of the Tahasildar for every 15 days invariably.
- (c) In connection with the above CCTV installation process, if any CCTV Camera is found to be in switched off or non-functioning condition for longer period, by taking into due consideration of the approved sand stock, on the basis of which sand was made available for intended excavation, will be

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treated as the production related to the number of days on which such CCTV system was found non-operative and by taking into notice the rate per each brass of sand quantity, for such non-functioned CCTV days, penalty will be collected.

- 4) Let every village accountant of the village should regularly visit the work area of sand block within their village jurisdiction and make their visit entry in the visit book of the bidder which has been Certified by the concerned Tehsildar. When the Village Accounts visit the Sand Block daily the signature must be made by him in said register with date and time of visit.
- 5) Even the concerned circled officer should regularly visit the work place of the sand block, conduct inspection and make entry of his such visit in the Register of Daily visit, also mention date time in writing and put his signature.

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- 6) Let the concerned Tehsildar, Sub-Divisional Officer, Additional District Collector also periodically visit the sand blocks active in their area, their visit entry be made in the General Diary of visit and make their signature with date.
- 7) While the Officers inspect the sand blocks, let them make keen specific observations in connection with the following issues without fail:-
 - (a) The quantity of sand mined ever since the date of commencement of mining until the date of inspection at the spot of visit corresponding to the Sand Block.
 - (b) Every month, the weight of the mined sand be majored every month in the presence of concerned Village Accountant and Village worker.
 - (c) If any culver or bridge is present on the river bank, then kindly make observation that below or

adjacent to the bench mark whether any sand has been excavated or not and the observations be recorded in the visit book.

- (d) Let it also be observed that whether any mining is being carried out at any turning point of the river stream and whether any pork-lane or JCB machine has been used for excavation or dredging or not be also observed and the visit observations be made in the visit book.
 - (e) Whether the filing of excavated sand has been made at the requisite stipulated distance from the mining spot or not be also observed and let it be entered accordingly in the visit book.
- 8) The District Officer / Collector should ensure that the Inspection related Standards are abided in Letter and Spirit strictly. Even after the Inspections as above, still it is found that illegal excavation is being carried out within the jurisdiction of the

Collector, then by holding that the concerned Officers under him are in collusion with such illegal transporters / Miners and against them let disciplinary action related proposal be made to the Divisional Commissioner or through the Divisional Commissioner to the State as the case may be.

Schedule Number Nine.

- 1) Method.
 - (a) For the purpose of transportation of sand, procedure stipulated by the Central / State Government from time to time should be abided as well as their directions also needs to be follow. Moreover, in order that the detection of illegal mining / transportation related vigilance / watch does not become a heavy burden of the Finance of the State Government, such a viable method or procedure be adopted for which let necessary directions be issued by the District Officer /

Collector. Let care be taken to ensure that in the process of mining sand / miner mineral due to the adopted procedure no loss of revenue occurs to the Government and for said purpose, the facility to make use of MRSAC Technology is solely at the discretion of the District Collector.

- (b) In order to make it viable to control the illegal mining / transportation of the miner mineral for said purpose let the Tehsildar / Sub-Divisional Officer / District Level Officer / Departmental Officer at their own level with the co-operation of Police, Transport Department Officials / Staff and Revenue Officials / Staff and through independent vigilance / watch and ward personal, an action plan be adopted collectively by the District Collector / Additional District Collector and Divisional Commissioner such a squad will take cumulative responsibility to watch, to apprehend, to arrest the

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illegal persons indulged in this acts and take necessary action against them.

- (c) The work area in which illegal mining / transportation of Miner Mineral comes to light corresponding to specific Revenue Officer or Staff of the Department, they will be held as responsible for the same and by assuming as such, let necessary investigation be conducted regarding the above and if it is found during the investigation that if any local officer / staff is found to be negligent regarding such acts of illegal mining / transportation or has found to be not in control of such situation, by laying responsibility upon him, let disciplinary action regarding the same be taken against him as per Rules.

- 2) Monthly Report of Mining:-

The information related to the Number of Sand Blocks available in a District, how many of them

have been auctioned, regarding how many Sand Blocks auction has not been held, how much revenue has been earned to the State Government from the Auction, from each of the above Sand Blocks in the District, how much quantity of Sand in terms of brass has been excavated per month, in one specific District how many cases of illegal transportation of have been detected in a month, against how many offenders cases have been instituted, related Monthly Statement should be submitted by the Additional District Collector / Officer / District Collector to the State Government, Director, Directorate of Geology and Mining.

3) Village Monitoring Committee:-

In those villages where sand stocks are available for auction insufficient quantity, in those villages, a Village Monitoring Committee be established with

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following constituent members:-

(1) Village Panchayat Sarpanch: Chairman.

(2) Village worker: Member.

(3) Police Head: Member.

(4) Watchman: Member.

(5) Village Accountant: Member Secretary.

Above Village Monitoring Committee should hold its meeting once in every 15 days and conduct a survey of the illegal Gravel / Sand mining in their area and if they have any suggestions or advice in connection with the same, let the same be appraised or conveyed to the concerned Tehsildar or District Collector.

Schedule Number Ten.

Village Panchayat Fund provided by District Mineral Establishment Fund:-

Provision has been made to establish District Mineral Establishment in every District which has been affected by mining activity by covering the same through a State Government Notification issued under section 9 (b) of the Central Government Mines and Mineral (Development & Regulation Act, 2015). Accordingly in accordance with Government Notification No. MDF – 0615 /51 /C. No. 34 / Industry – 9 dated 01.09.2016 of the Department of Industry, Energy & Labour, in each mining district, in order to improve the quality of Environment Conditions, planning has to be made and for funding of such plan the allocated fund will bear the Environmental solution related expenditure.

By establishing District Mineral Foundation, it has been decided to collect 10% contribution for said foundation from the Royalty amount deposited to

the State by mining lease holders, permit holders and sand auction bid holders. From said fund, finance is to be made available for building necessary roads, health maintenance etc. in the Village Panchayat area concerned.

Vide Notification No. MDF - 0615/ 51/C.No.34/ Industry - 9 dated 01.09.2016 of the Government, out of the amount getting deposited in the District Mineral Foundation, 5% is used for incurring administrative and establishment expenses of said foundation. By honoring said limit from said fund, expenses can also be made for the following purposes according to necessity within the specified limit:-

1. Making plan to prevent illegal mining and transportation.
2. If the confiscated vehicle is in shut down condition, to shift it to a safe place making necessary plan.

3. For the protection of confiscation sand stock, to appoint a security guard and also to appoint security personal for the purpose of security of Areas Officers.
4. To higher private vehicles for Vigilance and Inspection Squad.
5. To make estimation of availability of sand, supervision of sand mining, to establish modernized project / technology for methodological usage.

Schedule Number Eleven.

District Level Complaint Redressal Committee in connection with problems and difficulties related to mining of Gravel / Sand:-

In order to look into the Problems of the auction holders in Mining of the Sand from the auctioned sand blocks, in order to look into the complaints lodged by various persons, institutions in

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connection with sand mining and its supervision, the above mentioned District Level Sand Monitoring Committee will function.

- (a) If any of the Sand Block related auction bidding has been finalized and after that for mining sand from the concerned Sand Block if the auction holder faces any problems / hurdles / difficulties etc., let such auction bidder / Complainant / Firm submit their Complaint Application to the Concerned Tehsildar. After concerned Tehsildar procure such complaint, he will conduct necessary enquiry for examining the Mining Problem and submit his report before the above committee and on the basis of said report the Committee should take decision within 15 days.
- (b) If complainant is received from any person / Firm / Institution that in the sand block site, the Terms & Conditions of auction are being found to be

violated in Mining of sand or due to illegal Sand Mining, if any problem or adverse effect in the river bank villagers arises regarding drinking water and irrigational water, or due to the transportation of sand in Motor vehicle, if any agricultural field / road adjoining the river bank is suffering damage etc., then the redressal of such complaint on due enquiry by the Tehsildar be conducted and his report be presented before the aforesaid Committee regarding which the committee should take necessary decision within 15 days.

- (c) If the auction holder is unable to indulge in or continue his legitimate mining activity of sand due to local protest or due to conditions out of his control or due to any natural calamity, then in connection with the same, the person suffering the problem submit his complaint application directly before the District Level Committee. In this regard

on receiving written application, the committee will personally conduct spot visit of the problematic spot, Survey the Sand Block, conduct Local Enquiry regarding the issues mentioned in the Complaint, take up the matter in the committee meeting, hold discussion after which two either to redress the problem or to shut down the sand block, necessary decision will be taken within 15 days of receiving such complaints and let the decision taken be conveyed accordingly to the auction holder, complainant, Local Revenue Officer. Kindly note that let sufficient care be taken to videograph the survey in connection with the complaint conducted by the District Level Committee.

- (d) If the Complainant does not agree with the decision taken by any of the above committee, he has got right to appeal before the Divisional Commissioner. Such concerned Divisional

Commissioner has got the right to re-consider the decision taken by the District Level Committee and pronounced his decision within 15 days which needs to be then conveyed to the concerned Complainant as well as the District Collector.

- (e) In connection with the Compliant received regarding Mining of sand as above, let the Committee conduct enquiry and if it has made a decision to put an end to the excavation of sand from such problematic sand block, then let the agreement conducted with the concerned auction holder be immediately dismissed. In order to refund the amount of auction corresponding to the part of the period not indulged in by him for mining due to the decision taken to shut down it, let necessary action be taken in accordance with the provisions made under Article No.12 of the related Government Resolution.

- (f) If the contract of Sand Mining is canceled during the validity period of the contract and if the auction holder is objected / prohibited from mining sand, then such bidder does not have got any right to file case against the Government.

Schedule Number Twelve.

- (1) Procedure for refund of auction amount:-
- 1) Reasons related to refund of auction amount and associated rights:-
- a) After the completion of successful auction bidding of sand blocks, if the auction holder's deposited amount or any other amount by him has been deposited with the Government, then due to any unavoidable reasons, if he is unable to take possession of the Sand Block allotted to him, under such circumstances, after the spot inspection has been conducted by the District Level Committee, if

comes to the opinion that it is not possible to give the possession to him and submits a Report accordingly with their recommendation, only then it will be possible to duly consider the possibility of refunding him the entire amount of auction.

- b) If the auction bidder has paid the auction amount and other associated amount related to the same with the Government, but due to any Court Order, Government Order or Order of any Higher Authority for discontinuation of Mining in the allotted Sand Block then for said period of stay given by the Court, proportionate amount can be considered to be refunded for specific period.
- c) Due to any other reasons, if it is not possible to conduct the mining of Sand such as due to protest by the Local Villagers, due to objections by the Administration etc., then in such a case, the District Level Committee will conduct Spot

Inspection, verify the reasons mentioned by the lease holder and the villagers regarding the problem related to mining in the specific block, then if the committee also feels that it is really not possible conduct mining at the block under question, then it's clear opinion and recommendation will be forwarded by the committee to the District Collector / Officer. Then said concerned District Officer will scrutinize the reason mentioned by the Committee and will provide all necessary papers to the auction holder and give him an opportunity to present his view point and clarification in response after which only pass a Logical Order.

- (2) Calculation of valid refund amount of auction that can be paid back:-
 - (a) The value of the sand per each brass or per each Metric Ton be ascertained in accordance with the

sand stock related to the auction and the amount payable in said auction be taken into due consideration as the case may be.

- (b) The estimated payable amount of the auction and the period available for mining sand, on said basis the average quantity of sand that needs to be mined per day be decided. Then , for the period for which the auction bidder was constrained to keep his mining activity halted or stayed, on said period basis and in accordance with the sand stock that could not be mined during said stay period be also decided.
- (c) Then, in between the numerical figures of the sand stock decided as per above Sub Para No. (b) and the practically non- mined stock, whichever is less be reckoned for calculation in accordance with the rate per each brass or each metric ton as the case may be for the purpose of final calculation.

- 3(3) For following reasons, the auction amount cannot be refunded:- In accordance with the Terms & Conditions of Gravel / Sand Block issuing policy as well as in accordance with the Terms & Conditions mentioned in the tender Notice, before part taking in the process of auction by any auction bidder, he has to ascertain that whether his expected sand stock is available on the sand block proposed to be chosen by him and whether road for transportation of mined sand is available or not and whether sand can be excavated from the permissible tools and implements and in accordance with permitted methods or not, whether necessary transportation roads are readily available or not, whether the sand contains mixed mud or not and whether in the sand block any water is there or not and whether section pump operation permission is available or not needs to

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be found out by the bidder on his own before participating in the auction, if objection is raised due to above reasons, under any circumstances the amount deposited to the Government corresponding to the auction bid will not be refunded back to him as it is not permissible.

If there is any mutual difference in connection with issuing of Sand / Gravel related permission on the basis of Government Memo, Government Circular or Government Letter based Government Order, Notice or any provision in the Government Resolution, then the provision made in the Government Resolution will be treated as full and final and action will be taken accordingly.

This Government Resolution is being hereby released under the consent officially procured on the basis of Non-formal Reference No. 466/2021/ Expenditure – 9 dated 22 November, 2021.

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This Government Resolution has been also publicly made available on the official website of the Government of Maharashtra: www.maharashtra.gov.in and its codec for downloading is 202201281451561619. This Order has been digitally signed.

In the name of and by the Order of Hon'ble State Governor of Maharashtra.

	RAMESH SHIVAJI CHAVAN (Ramesh Chavan) Joint Secretary to the Govt.	Signature related digital Codec.
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Copy to:-

1)	Principal Secretary to the Hon'ble State Governor, Rajbhawan, Malbar Hill, Mumbai.
2)	Hon'ble Chief Minister, Maharashtra State, Secretariat, Mumbai.
3)	Personal Secretary Chief Minister, Maharashtra State, Secretariat, Mumbai.
4)	Personal Secretaries of all the Ministers, Secretariat, Mumbai.
5)	Resp. President, Maharashtra Legislative Assembly, Mumbai.
6)	Resp. Speaker, Maharashtra Legislative Assembly, Mumbai.
7)	Opposite Party leader, Maharashtra Legislative Assembly, Mumbai.
8)	Legislative Assembly, Mumbai.

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9)	Personal Secretaries to all the State Rank Minister of Maharashtra State, Secretariat, Mumbai.
10)	All members of Legislative Assembly/ Legislative Council, Vidhan Bhawan, Mumbai.
11)	Accountant General -1, Maharashtra State (Accounts & Audit), (Accounts Examination), Mumbai.
12)	Accountant General -2, Maharashtra State (Accounts & Audit), (Accounts Examination), Nagpur.
13)	All Department of the Secretariat.
13)	All Divisional Commissioners.
14)	Director, Directorate of Geology and Mining, Nagpur.
15)	Director, Ground Water Survey and Development Directorate, Maharashtra State, Pune.

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16)	Conservator in-chief of Forests, Nagpur.
17)	All District Collectors.
18)	All Sub-Divisional Officers.
19)	All Tehsildars.
20)	All Executives of the Department of Revenue & Forests, Secretariat, Mumbai -400032.
21)	Guard File - "Kha", Executive, Department of Revenue & Forests Secretariat Mumbai 400032.

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RETURN

Other Terms & Conditions in connection with the
Auction of Gravel/Sand.

- (1) While mining Sand / Gravel by the Auction Holder from river Bank / Canal etc., from the sand block allocated to him, he should take necessary precaution to ensure that no natural resources and environment is negatively affected by taking all necessary responsibility.
- (2) The auction holder should not indulge in any act which can create hurdle to the disposal rights of the villagers.
- (3) The sand Block holder should keep and maintained daily account related Register Book in connection with the quantity of sand excavated, sold, transported from the site etc. This Register as well as other necessary papers should be always made available at the mining sight for the inspection

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officers who visit the site such as the District Collector, Geology and Mining Directorate Inspectors etc.

- (4) If permission or permit is needed to be taken for transportation of sand from the Block, in such cases, Co-operative Societies and Institutions should be given preference.
- (5) While transporting sand, the stock loaded on to the transporting vehicle should be covered with plastic paper or tarpaulin sheet completely on the top and sides and if this precaution is not abided, punitive action of levying fine etc. will be undertaken against the violator.
- (6) While transporting the sand, let the permit holder transport the material well within the permitted limits of the carrying capacity of the concerned vehicle. If it is found that the transporter is transporting more quantity than the permitted

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quantity in accordance with the capacity of the vehicle, by holding that the entire loaded stock of sand as illegal and necessary action for the same will be taken as per Rule. The punitive action will be taken for the same and the confiscated sand will be re-auctioned.

- (7) While mining sand and while transporting it, if any accident occurs, information related to the same should be immediately given by the auction holder to the nearest Police Station.
- (8) The auction holder is bound upon to abide by the Terms & Conditions of the Rules as well as miner minerals excavation Rules & Regulations as well as Maharashtra Land Revenue Act's governing provisions. The complete usage of the excavated land should be made as an ancillary mineral itself.
- (9) At the time of excavation of sand, if any major mineral of industrial usage is found to be present,

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the information related to the same should be brought to the attention of Departmental Commissioner / District Collector / Additional District Collector by the auction holder by the contractor within 7 days of finding the same.

- (10) If more sand quantity is found exceeding the estimating quantity during the stipulated period, on that the auction holder does not have any right on the same and no permission is granted to the bidder to excavate more than permitted quantity of sand.
- (11) The responsibility to excavate the sand is to be carried out by the bidder from the Area Allotted to him in the auction as well as mentioned in the agreement given to him and during the period granted to him and excavated by using the machinery and equipment permitted for the same, if there is no sufficient stock of sand at the spot or

no access road is available or there is no sufficient water necessary for excavation or there is earth mixed in the sand or due to any natural calamity etc. the period of excavation granted vide the agreement cannot be extended or the sand block cannot be exchanged for such reasons.

- (12) The sand excavated or dug related stock, its auction be done within the District directed by the Additional District Collector/ District Collector itself and for the storage of sand necessary land has to be used by taking permission for non-agricultural usage of land by the bidder / excavator. Before the contract period of sand gets expired, the sand already excavated before that should not be shifted from the site after 10 days of expiry of permitted period and its ownership will go to the State only. In connection with the value of such sand stock or in connection with its ownership, no right should be

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declared by the bidder or the contractor and in connection with the same no case can be registered against the State.

Similarly after the stipulated period of auction of 10 days has been completed, under any circumstances, no permission will be granted for shifting or transpiration of the sand stock lying there and for transportation of such stock no two way pass will be granted.

- (13) Without prior permission of the Government the Bidder cannot transfer the Sand Block to anybody else and should not allow anybody to conduct mining in the said block and after the auction no partnership can be established newly.
- (14) In order to ensure that the bidder has excavated sand from the specific site of the sand block permitted to him only regarding which necessary monthly statement should be submitted by him

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within 10th day of every month to the District Collector. It has been found that this condition is being not abided at present by the excavator. As it has come to the Notice of the Department, due to that if any auction holder is found to be not submitting the same on monthly basis regularly within the stipulated period, his contract may be dismissed or the Additional District Collector / District Collector reserves his right to take punitive action against him.

- (15) After Siltation Study has been done, in order to prevent sunshine on the land, necessary planning suggested should be followed by and implemented by the auction holder / contractor without laying any condition or without asking any remuneration. While undertaking excavation and transportation, let the land does not be expose to sun be guaranteed by the auction holder himself.

- (16) The auction holder / contractor under any circumstances cannot demand extension of mining lease period of sand in addition to the period granted to him under the auction / agreement entered in with him. For transportation of sand, he should make use of the presently existent roads only and no separate alternative road will be provided to him. The responsibility to get any new road available to him will be solely upon the auction holder. In case of transportation blockade due to any reason, the period of lease or excavation cannot be extended and for said reason, the sand block already allotted him cannot be changed.
- (17) After any illegal sand stock is confiscated, necessary action for that will be taken against him under rule 48 (7) and (8) of Maharashtra Land Revenue Act, 1966.

- (18) Let the information related to the transport used for transportation of sand be conveyed to the Tehsildar / District Collector by the auction holder / permit holder. Under any circumstances, the load capacity of the vehicle should not be increased than the permitted quantity and limit.
- (19) In the course of excavation of sand, due to any reason if any loss or damage occurs to private property, its responsibility and liability will be solely upon the auction holder only and its estimation will be made by the concerned competent officer and in this regard his decision will be full and final and such an estimated amount of loss / damage related recovery will be treated as land Revenue Arrear recovery only and will be collected accordingly from the auction holder.
- (20) While undertaking excavation of sand by the contractor / bidder, due to that danger for the

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construction to the nearby houses and buildings regarding which sufficient precaution should be compulsorily taken and ensured that no such danger arises to the neighboring homes and buildings etc. In such cases the decision taken by the Additional District Collector / District Collector will be final.

Action to be taken in case the Auction Bidder/Permit Holder violates the admitted and governing terms and conditions: -

- (a) If the bidders collude with each other as a result of which if the process of selected sand blogs decided to be auction is not bid by any of the contractors / applicant due to the above collusion and if they indulge in loss of revenue to the Government, for that they will be treated as indulged in illegal excavation and transportation and they will be

black listed permanently for preventing them from participation in any further auction of sand in the state.

- (b) If it is found that excavation has been conducted beyond the block permitted by the Environment Authority, the Security Deposited amount collected from the bidder excavator will be forfeited by the Government and the permit approved in his favour will be dismissed and action will be taken against him under the stipulations of Section 48 (7) and (8) of Maharashtra Land Revenue Code, 1966.
- (c) If valid barcode printed pass for transit of sand is not found with the driver transporting the sand or if the validity period of the pass possessed by him in his vehicle is found to have been expired, then against such violator, action will be taken under the provisions of Section 48 (7) and (8) of Maharashtra Land Revenue Code, 1966.

- (d) If any of the excavator / contractor is found to have been involved in any illegal excavation / transportation, action will be taken against him as per the contemporary Rules & Regulations.

According to the rules in force, while taking action against the concerned crime will be registered under sections 34, 14, 379, 392, 393, 394, 396 etc. of I. P. C. r/w 48(8) to confiscate the machinery used for sand mining and to confiscate vehicle/s used to transport the same as well as to confiscate the illegally mined sand too.

- (e) In cases related to illegal mining of sand and transportation, the penalty will be imposed on the basis of market value of the Sand and for that purpose, the District Collector should take average Market Price every year and fix the market rate of

Sand as on 1st January and accordingly let the penalty amount be collected from the accused person. Before initiating punitive action against the Offender let him be issue notice and given an opportunity to be heard and then let a clear order be passed against him.

While taking necessary action in connection with illegal sand mining and transportation if it is found that the action taking revenue officers/staff are subjected to criminal attack or at the site of the block or on the transportation route and vehicle if any crime is found to be indulged in against such organized crime, action will be taken against such persons under the stipulations of MPDA & MCOCA Act, 1981.

- (e) Any bidder excavator who has been found to have violated the terms and conditions of Environmental permission granted, he will be liable to be acted

upon under the provisions of Maharashtra Land Revenue Act, 1966 as well as Environmental Protection Act, 1986 by taking necessary action according to these loss.

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