

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Apti -1	Deoli	Wardha	6	1.06	278mx38mx0.50m	1866

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

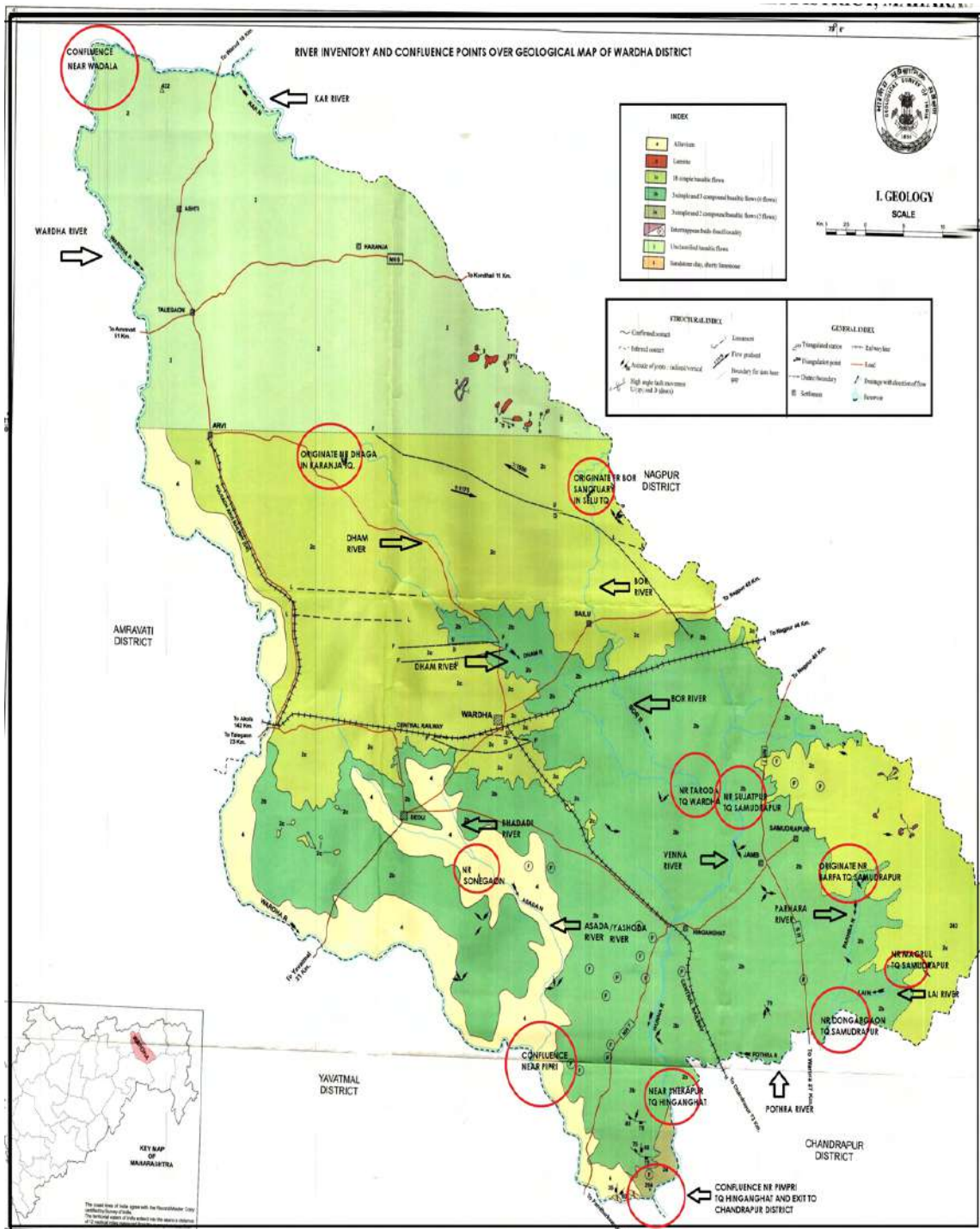
Local geology:

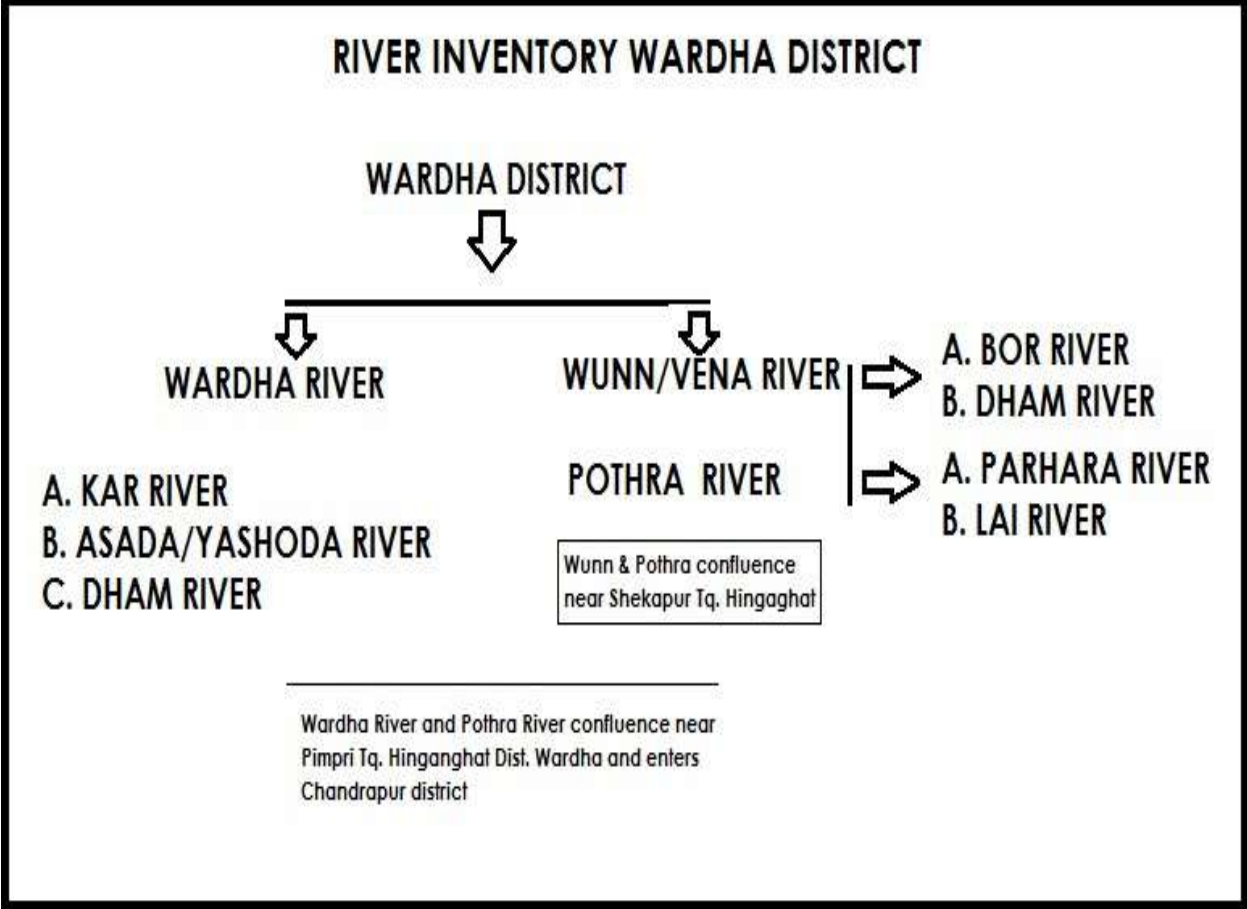
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
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Approach road available over pandan rd of 0.36 Km connecting SH 244 Pulgaon rd and 550m connecting Panchdhara rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
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sand ghatwise proposed production is enclosed as annexure -1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:
 Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.
- iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Apti -1	Deoli	Wardha	6	1.06	278mx38mx0.50m	1866

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	278 mx 38 m x 0.50 m

ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्वी	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	257, उमरा- 259, 258, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	दिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

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1	Aurangpur (Rith) - Umra	Samudrapur	Wana	Umra 257,258,259 Aurangpur – 18,21,22	1.23	490mx25mx0.50m	2164

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

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south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

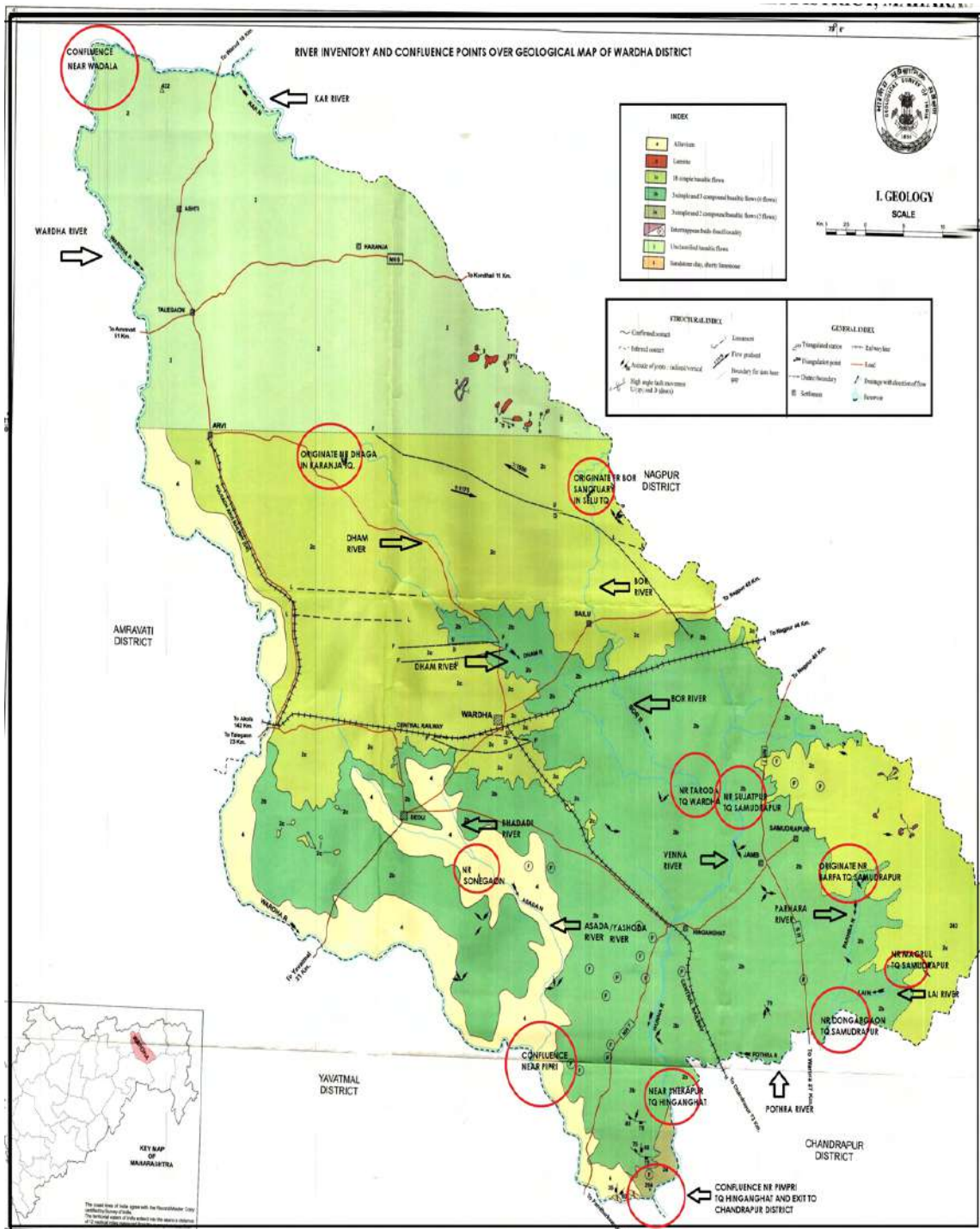
Local geology:

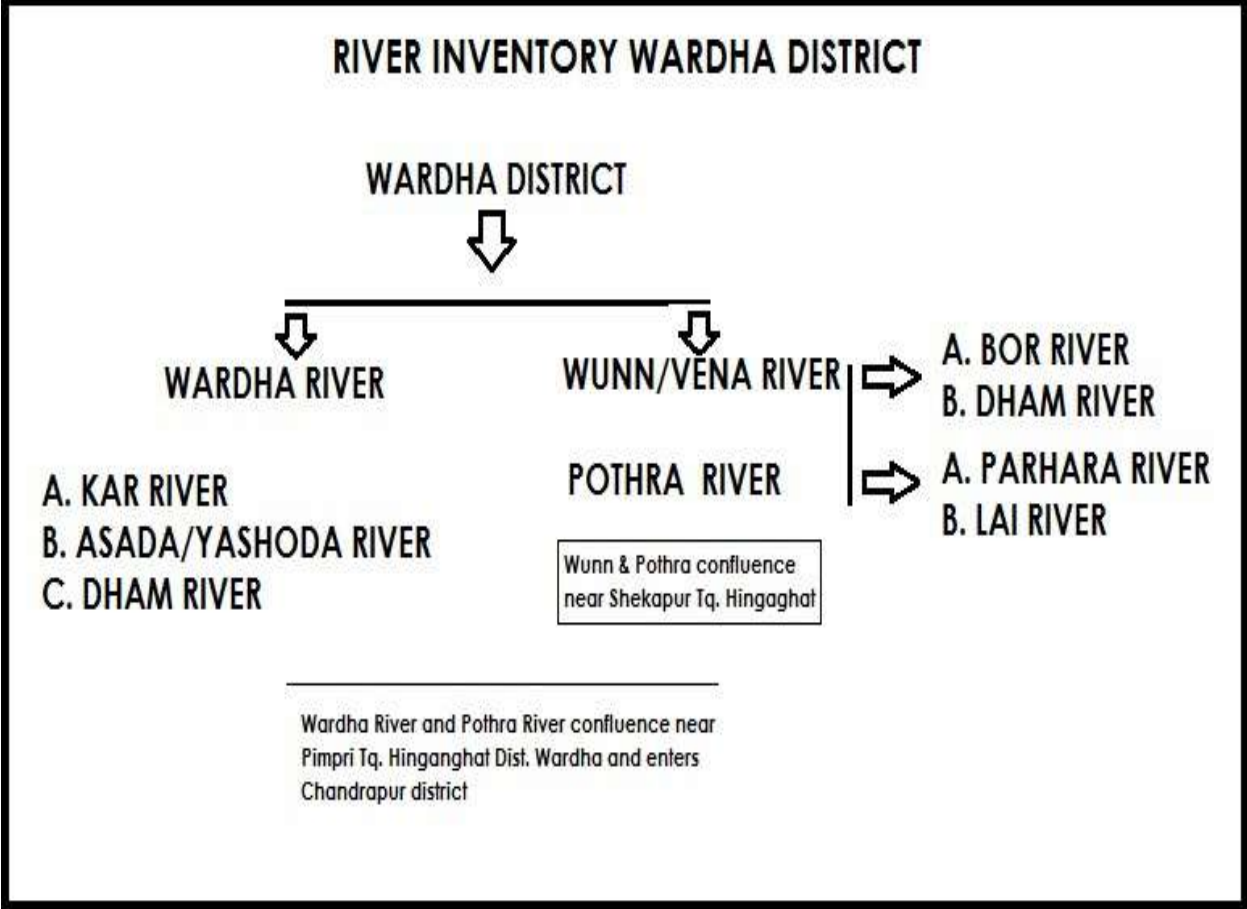
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Aurangpur (Rith) - Umra	Samudrapur	Wana	Umra 257,258,259 Aurangpur – 18,21,22	1.23	490mx25mx0.50m	2164

Approach road available over pandan rd of 0.530 Km connecting Umra - Kandhali rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

**iv) Magnitude of operation:
Proposed production**

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Aurangpur (Rith) - Umra	Samudrapur	Wana	Umra 257,258,259 Aurangpur - 18,21,22	1.23	490mx25mx0.50m	2164

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.

- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Aurangpur (Rith) - Umra	Samudrapur	Wana	Umra 257,258,259 Aurangpur – 18,21,22	1.23	490mx25mx0.50m	2164

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	490 mx 25 m x 0.50 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Barbadi	Samudrapur	Wana	147,148,149,116/2/A,116/2/B	1.00	400mx25mx0.40m	1413

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

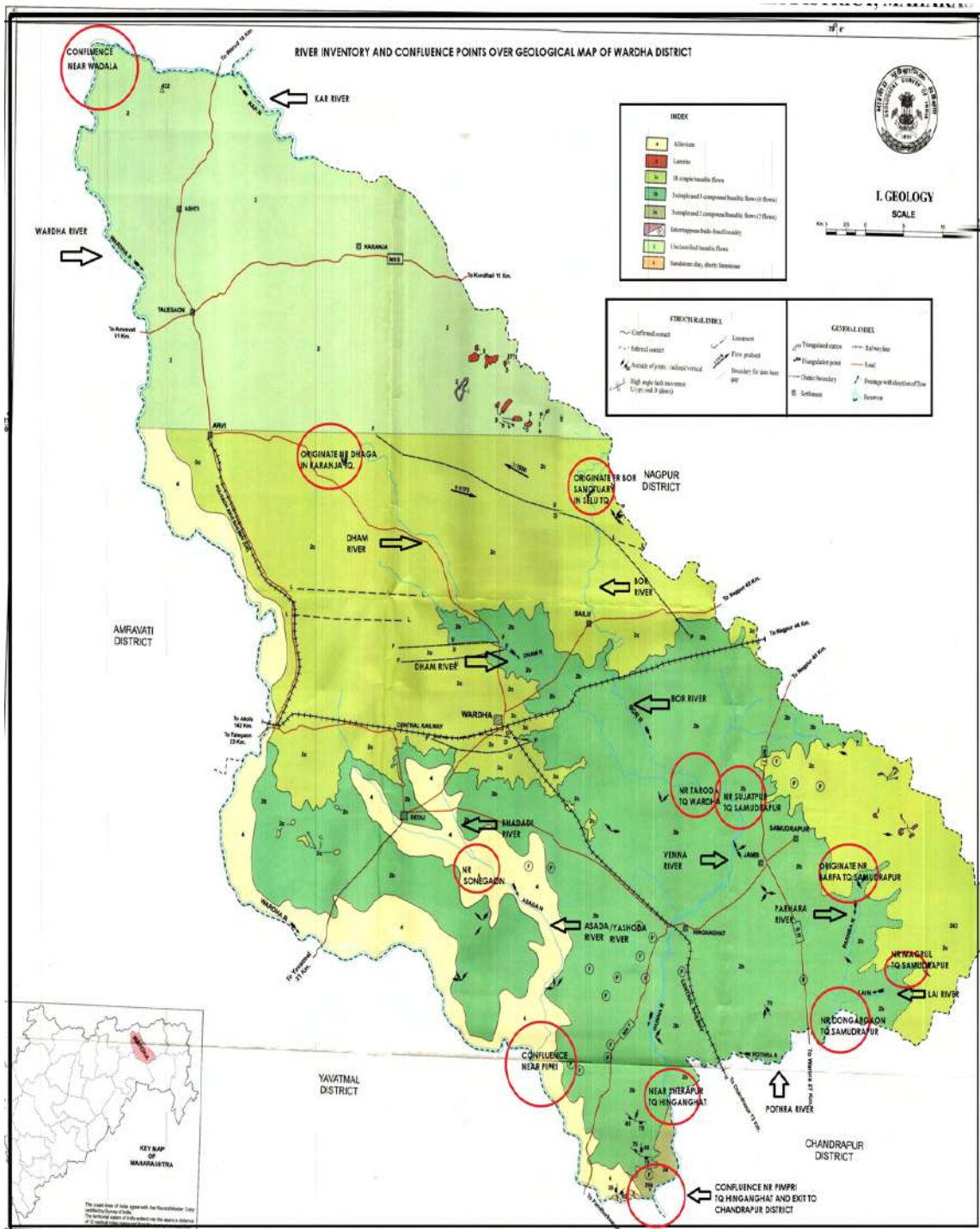
Local geology:

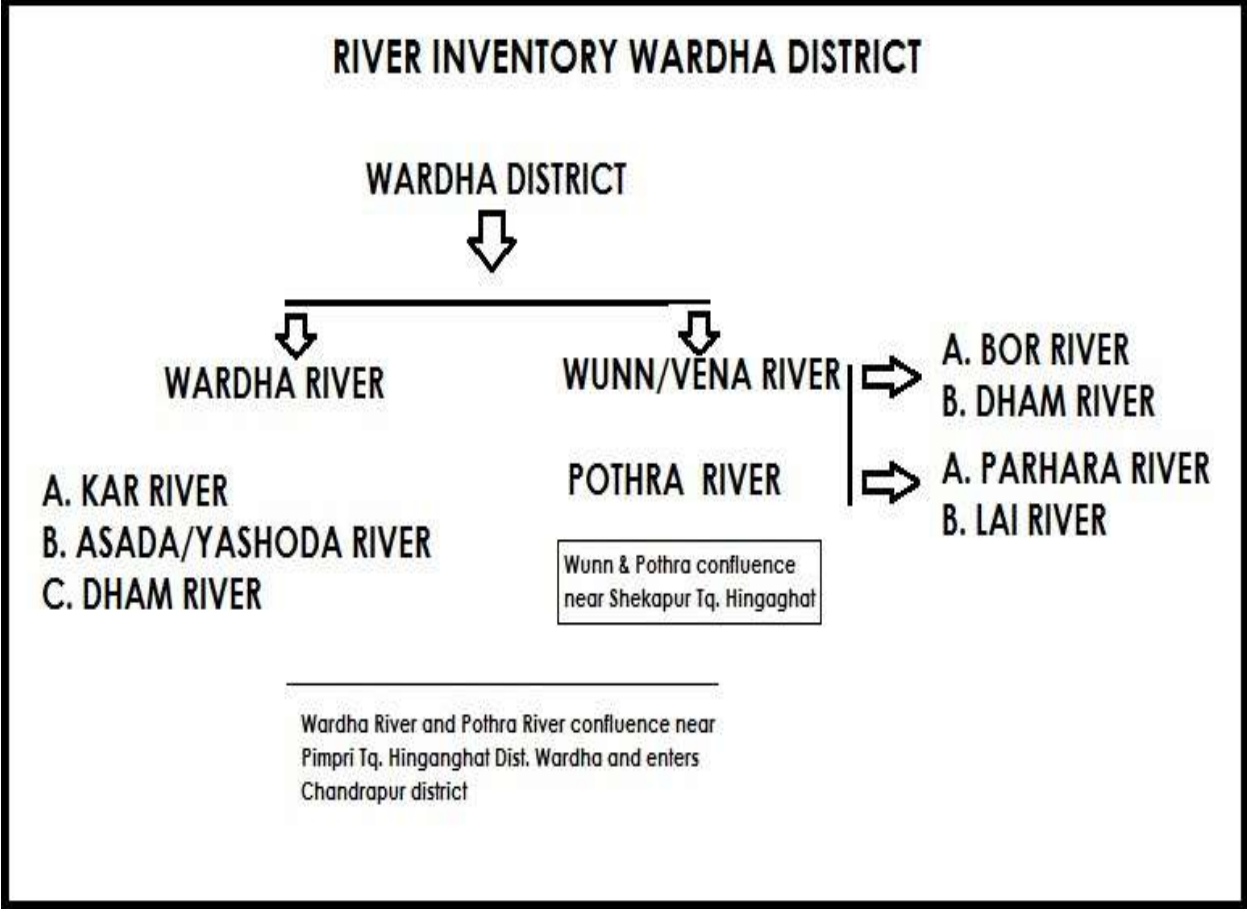
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Barbadi	Samudrapur	Wana	147,148,149,116/2/A,116/2/B	1.00	400mx25mx0.40m	1413

Approach road available over pandan rd of 0.530 Km connecting Umra - Kandhali rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in	Area in cum.	Available Sand in
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					Ha	LxBxD (m ³)	Brass
1	Barbadi	Samudrapur	Wana	147,148,149,116/2/A,116/2/B	1.00	400mx25mx0.40m	1413

sand ghatwise proposed production is enclosed as annexure -1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as **1.560m³/day** per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease

and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.

v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .

vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

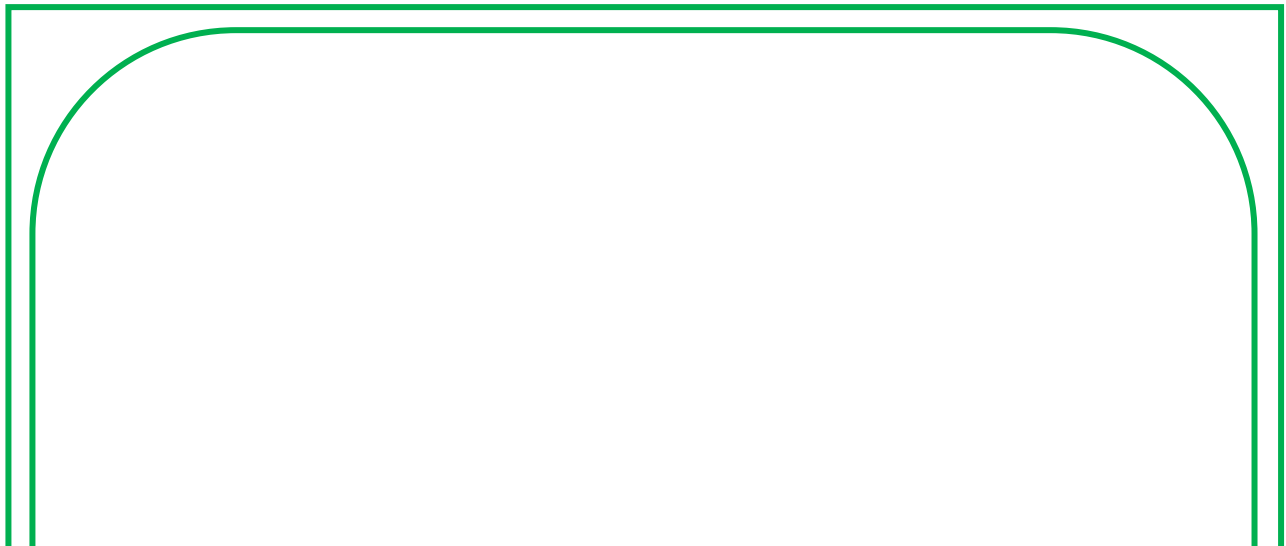
Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Barbadi	Samudrapur	Wana	147,148,149,116/2/A,116/2/B	1.00	400mx25mx0.40m	1413

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	400 mx 25 m xo.40 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Bhagva 1	Hinganghat	Yashoda	13,14,15 partial	1.05	350mx30mx0.50m	1855

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhoni and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

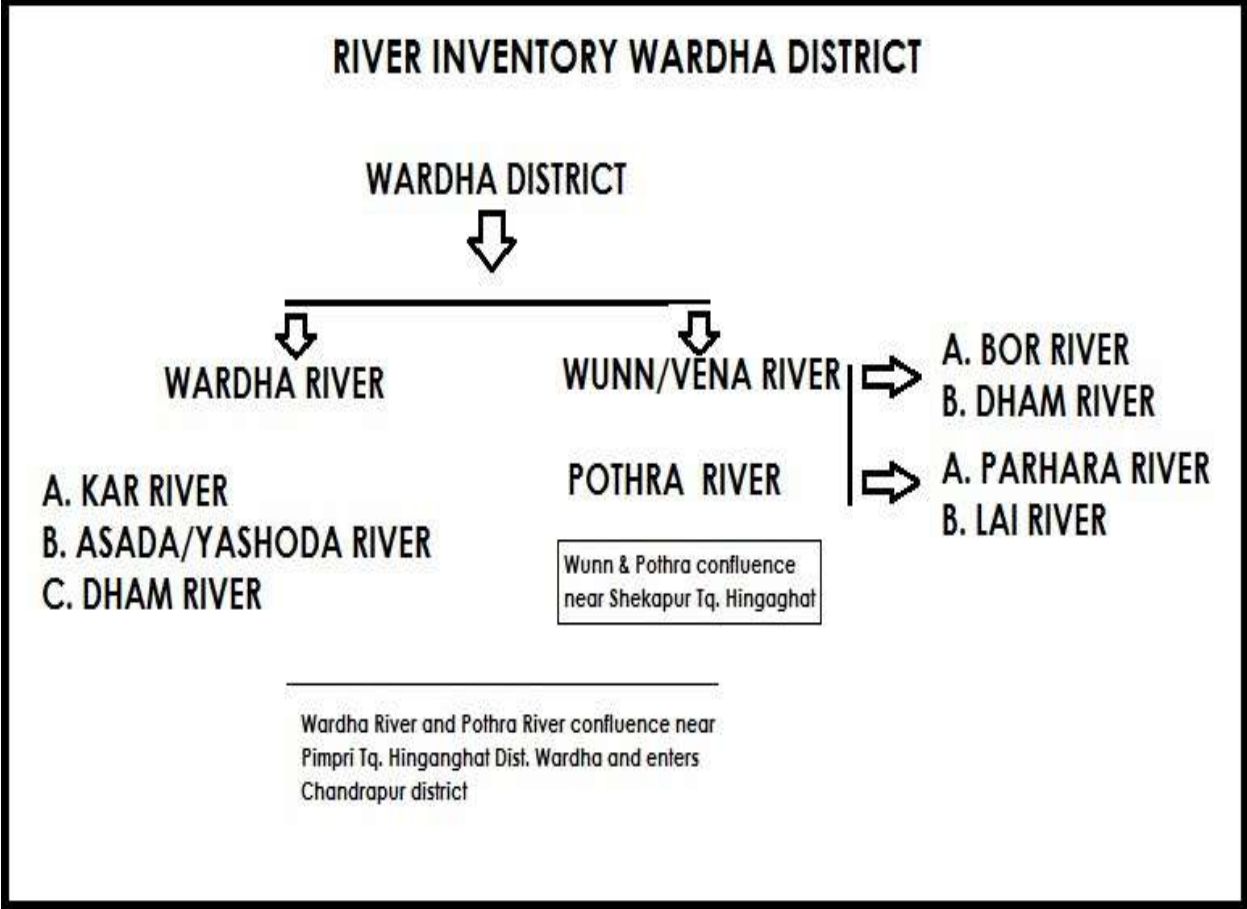
Local geology:

Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.



Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Bhagva 1	Hinganghat	Yashoda	13,14,15 partial	1.05	350mx30mx0.50m	1855

Approach road available over pandan rd of 0.90 Km connecting Changi Bhagwa – Kanchangaon rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

**iv) Magnitude of operation:
Proposed production**

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Bhagva 1	Hinganghat	Yashoda	13,14,15 partial	1.05	350mx30mx0.50m	1855

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Bhagya 1	Hinganghat	Yashoda	13,14,15 partial	1.05	350mx30mx0.50m	1855

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	350 mx 30 m x0.50 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वर्धा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वर्धा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वर्धा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वर्धा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वर्धा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वर्धा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वर्धा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वर्धा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वर्धा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वर्धा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वर्धा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Bhagva 2	Hinganghat	Yashoda	121,122,123/2 partial	1.05	350mx30mx0.50m	1855

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

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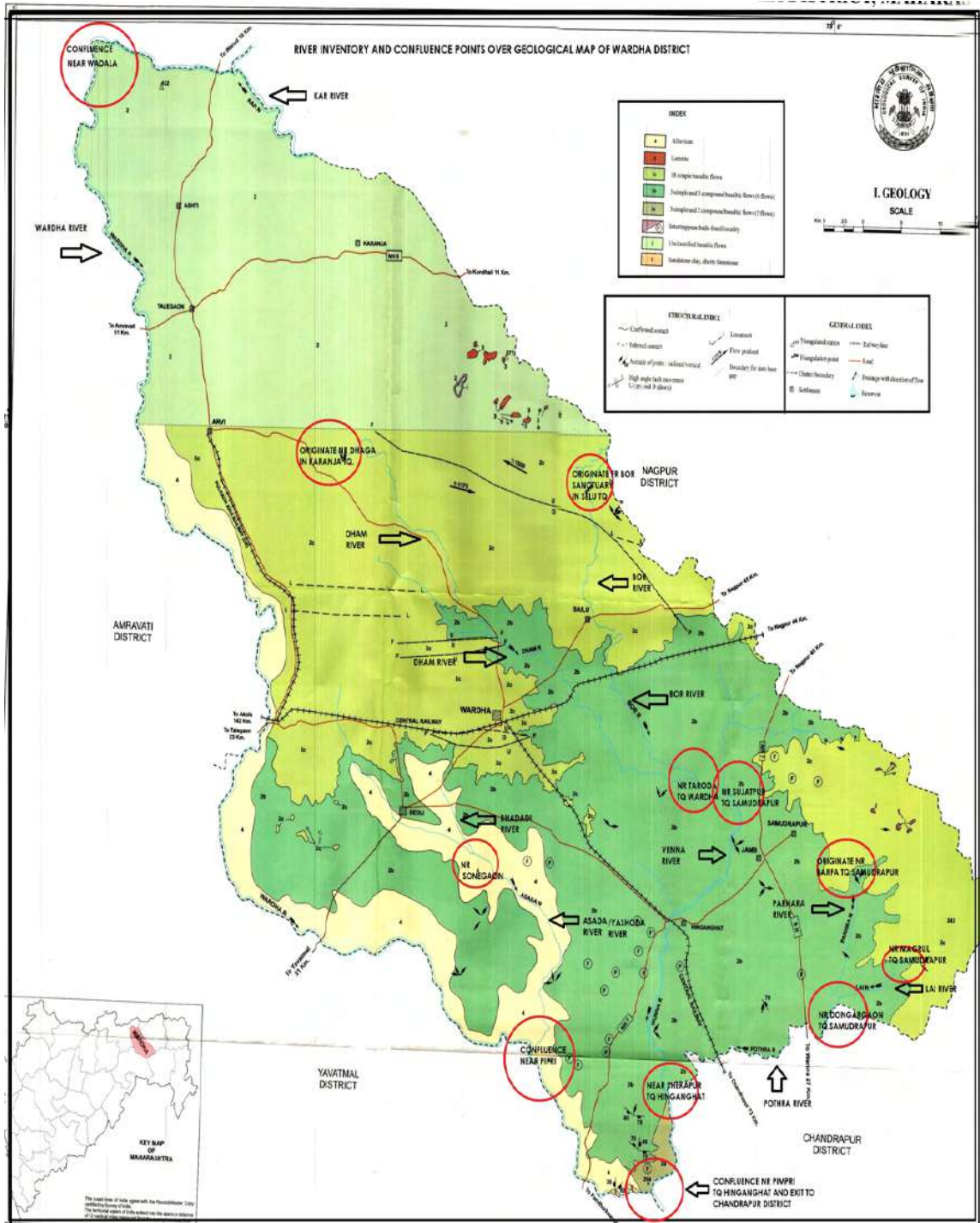
Local geology:

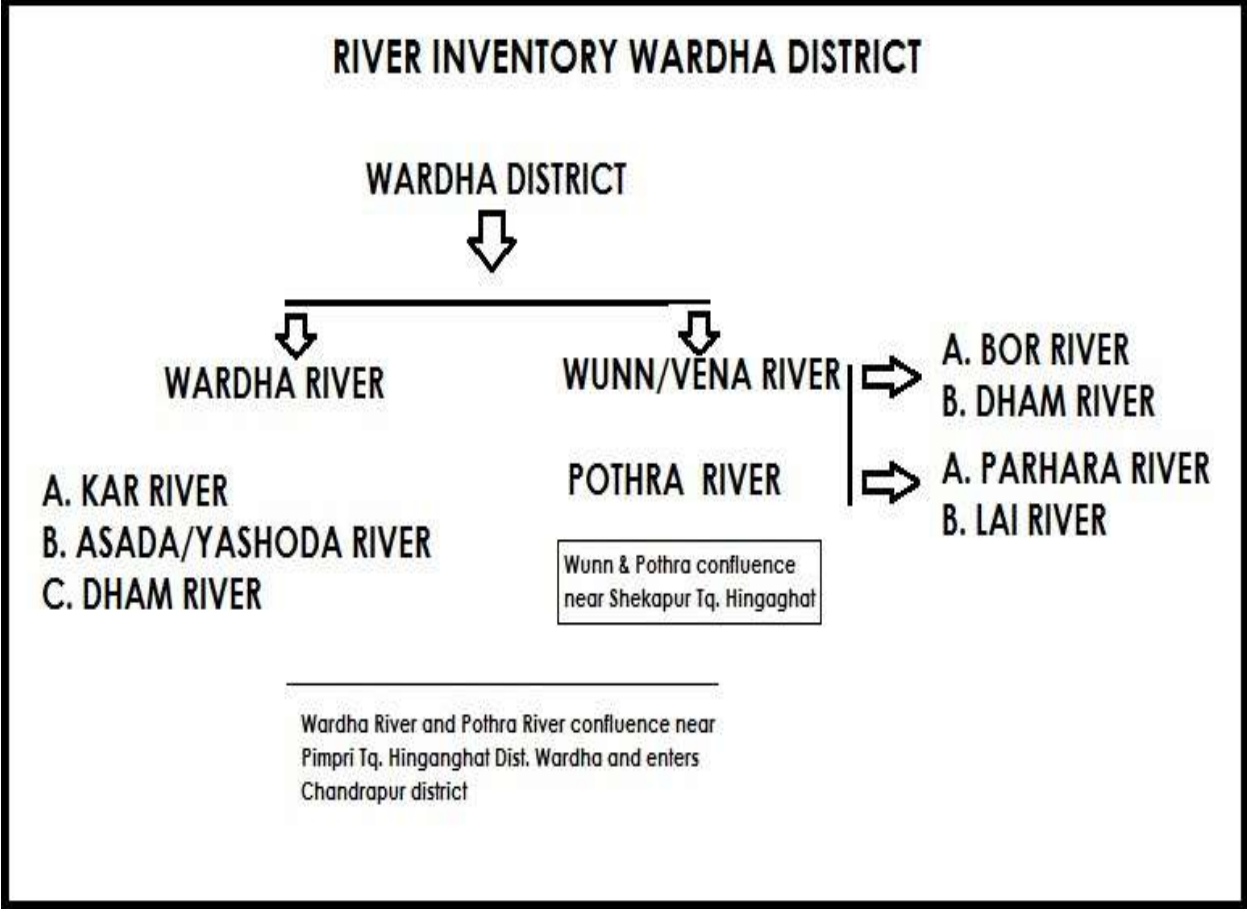
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Bhagva 2	Hinganghat	Yashoda	121,122,123/2 partial	1.05	350mx30mx0.50m	1855

Approach road available over pandan rd of 0.72 Km connecting Bhagva - Chanki rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

**iv) Magnitude of operation:
Proposed production**

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Bhagva 2	Hinganghat	Yashoda	121,122,123/2 partial	1.05	350mx30mx0.50m	1855

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

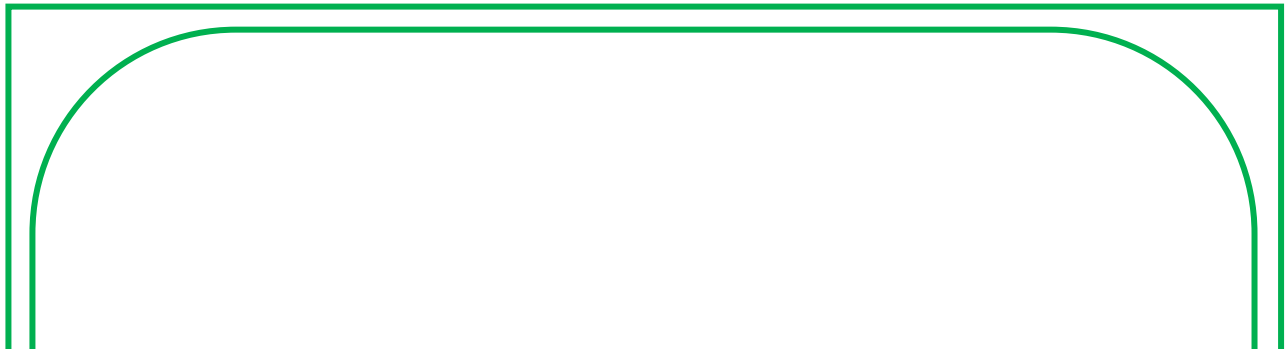
Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Bhagva 2	Hinganghat	Yashoda	121,122,123/2 partial	1.05	350mx30mx0.50m	1855

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	350 mx 30 m x0.50 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Borgaon Da	Hinganghat	Wana	14,15,16,18,19,20,238	1.00	400mx25mx0.80m	2827

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

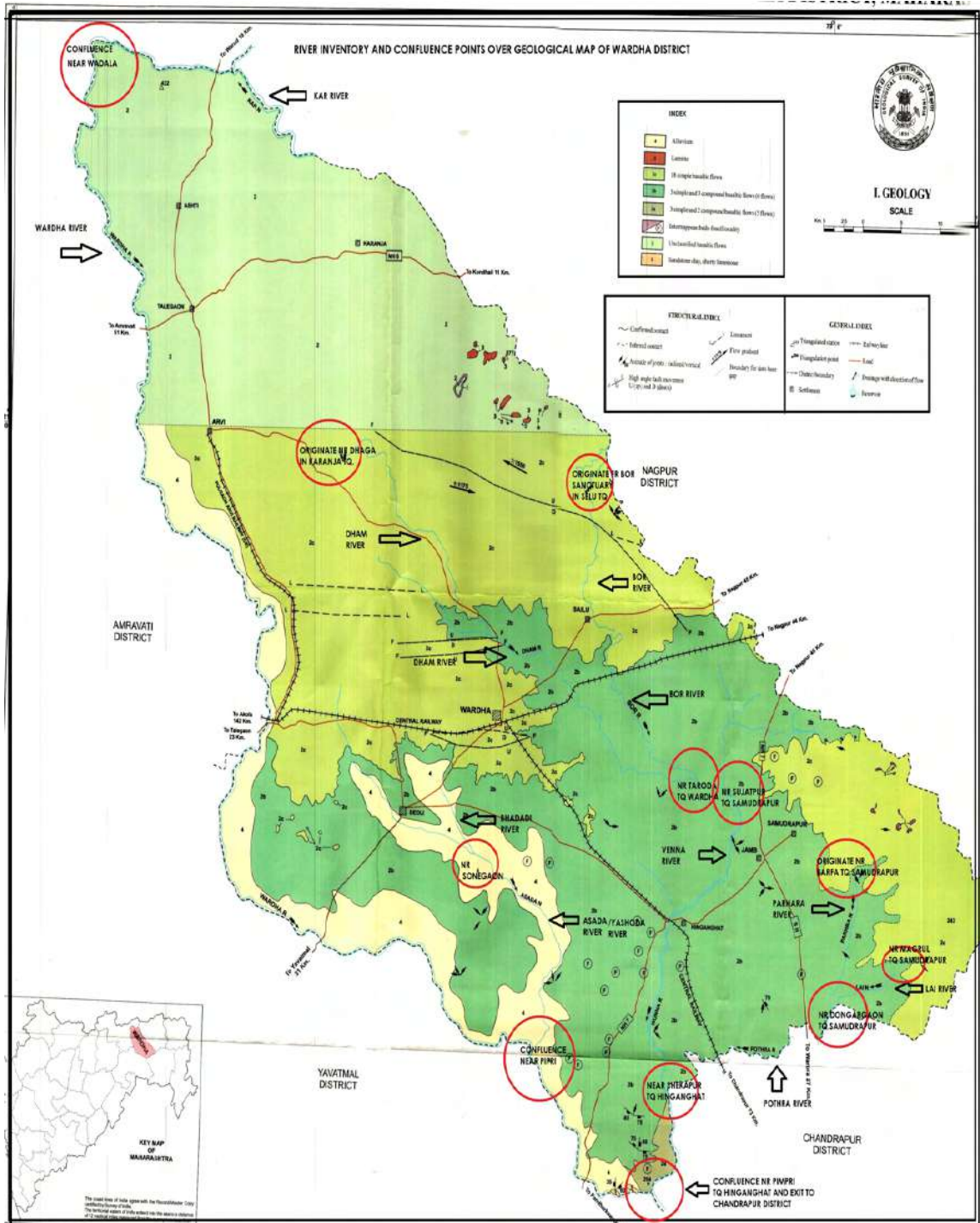
Local geology:

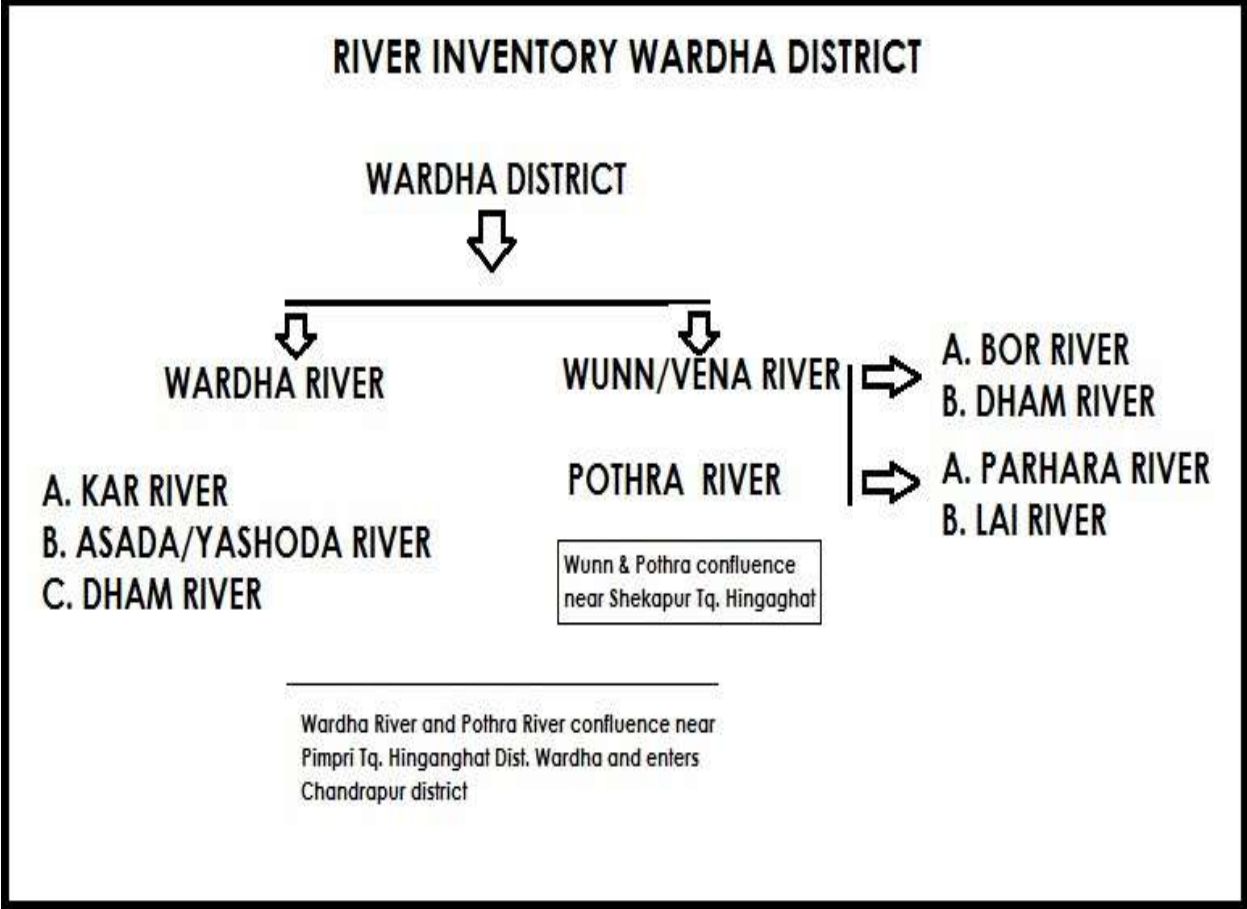
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Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Borgaon Da	Hinganghat	Wana	14,15,16,18,19,20,238	1.00	400mx25mx0.80m	2827

Approach road available over pandan rd of 560m and then to Borgaon Road

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

**iv) Magnitude of operation:
Proposed production**

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Borgaon Da	Hinganghat	Wana	14,15,16,18,19,20,238	1.00	400mx25mx0.80m	2827

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Borgaon Da	Hinganghat	Wana	14,15,16,18,19,20,238	1.00	400mx25mx0.80m	2827

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	400 mx 25 m x0.80 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chakur	Samudrapur	Wana	8,6,13/1,13/2,15/1,15/2,197,198,199,200	1.25	500mx25mx0.45m	1988

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhoni and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

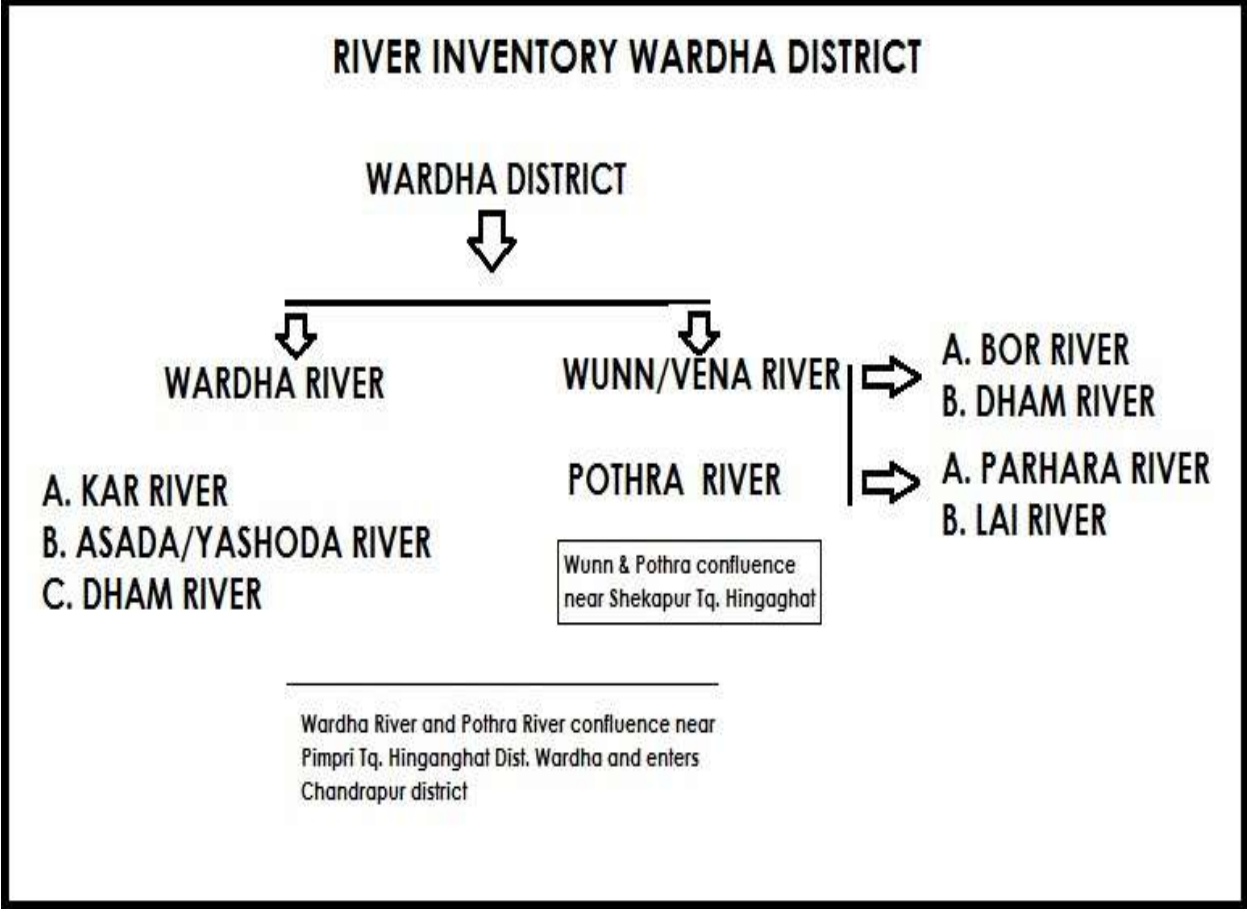
Local geology:

Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.



Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chakur	Samudrapur	Wana	8,6,13/1,13/2,15/1,15/2,197,198,199,200	1.25	500mx25mx0.45m	1988

Approach road available over pandan rd of 0.53 Km connecting Chakur - Kankati rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chakur	Samudrapur	Wana	8,6,13/1,13/2,15/1,15/2,197,198,199,200	1.25	500mx25mx0.45m	1988

sand ghatwise proposed production is enclosed as annexure -1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chakur	Samudrapur	Wana	8,6,13/1,13/2,15/1,15/2,197,198,199,200	1.25	500mx25mx0.45m	1988

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	500 mx 25 m x 0.45 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chikmoh	Hinganghat	Wana	109,129,130,131,149,150,152,153,228	3.60	900mx40mx0.50m	6360

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

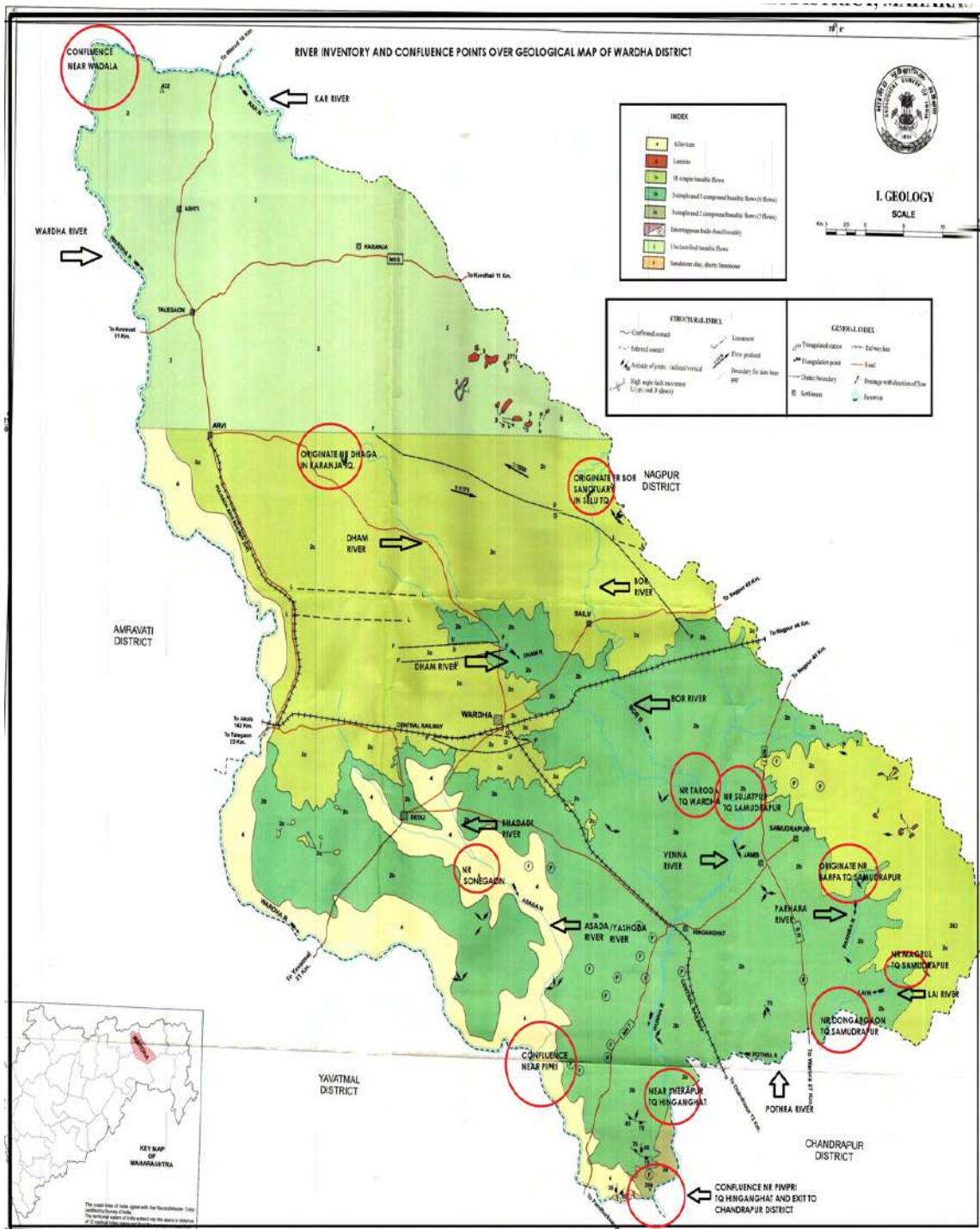
Local geology:

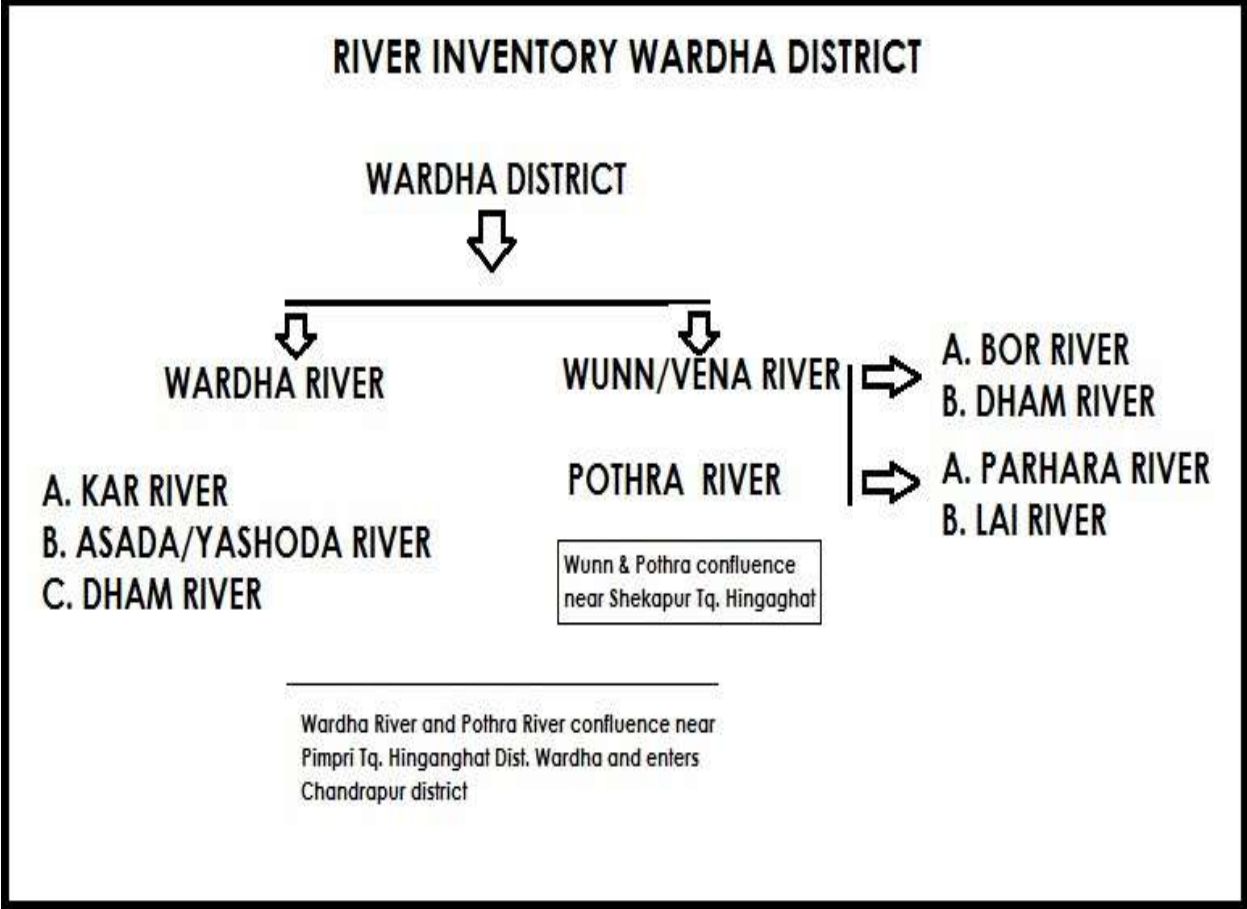
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chikmoh	Hinganghat	Wana	109,129,130,131,149,150,152,153,228	3.60	900mx40mx0.50m	6360

Approach road available over pandan rd of 1 Km connecting Chikmoh-Burkoni rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chikmoh	Hinganghat	Wana	109,129,130,131,149,150,152,153,228	3.60	900mx40mx0.50m	6360

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.960m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.960
Total	1.960

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 48 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one

year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .

vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

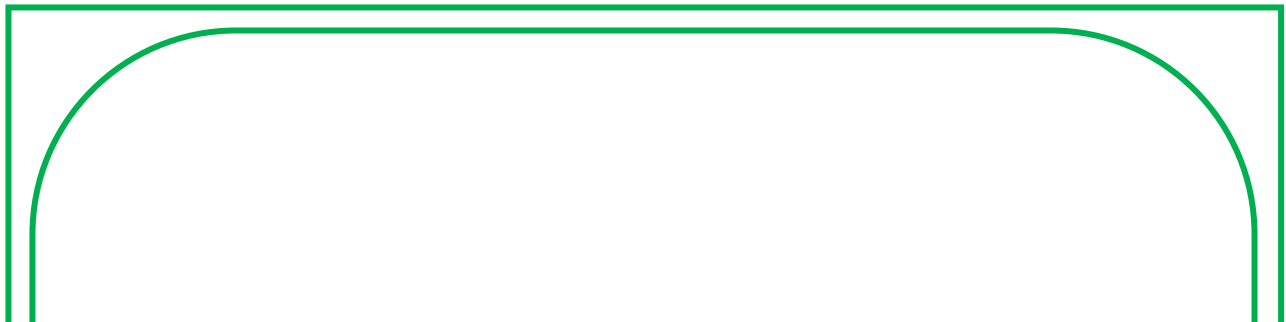
Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chikmoh	Hinganghat	Wana	109,129,130,131,149,150,152,153,228	3.60	900mx40mx0.50m	6360

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	900 mx 40 m x0.50 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chincholi Bu	Hinganghat	Wana	48/1,48/2,48/3	1.40	400mx35mx0.50m	2473

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly

recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

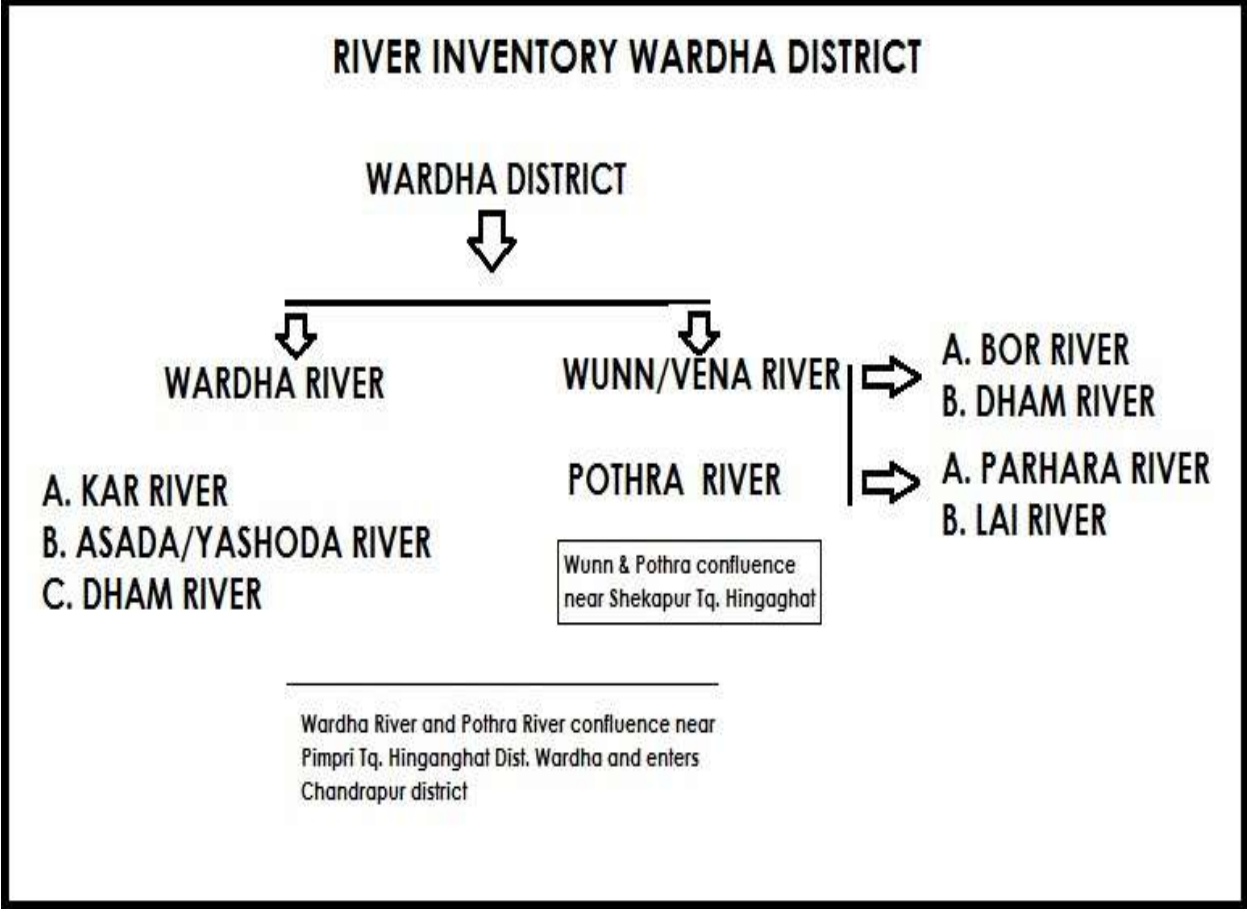
Local geology:

Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.



Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chincholi Bu	Hinganghat	Wana	48/1,48/2,48/3	1.40	400mx35mx0.50m	2473

Approach road connect to Chincholi road at 380m

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chincholi Bu	Hinganghat	Wana	48/1,48/2,48/3	1.40	400mx35mx0.50m	2473

sand ghatwise proposed production is enclosed as annexure -1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:
 Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.
- iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Chincholi Bu	Hinganghat	Wana	48/1,48/2,48/3	1.40	400mx35mx0.50m	2473

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	400 mx 35 m x0.50 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dhivari Pipari	Hinganghat	Wana	9,10,151,153,154,155,156	1.60	400mx40mx0.40m	2261

Proponent

**District Mining Officer
Wardha Collector Office,
Wardha**

Consultant

**Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)**

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly

recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

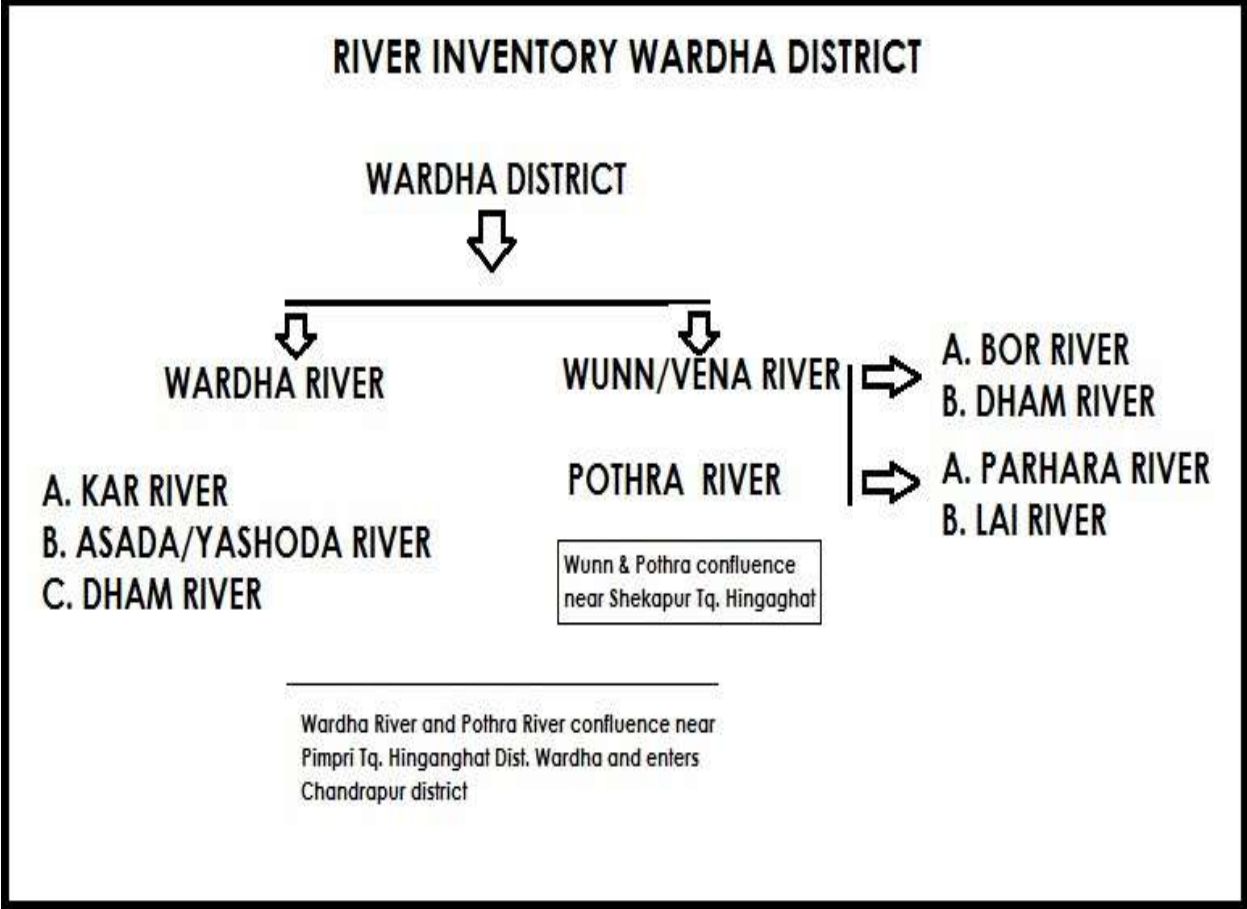
Local geology:

Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.



Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dhivari Pipari	Hinganghat	Wana	9,10,151,153,154,155,156	1.60	400mx40mx0.40m	2261

Dhivri Pimpri road connect at 430 m rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dhivari Pipari	Hinganghat	Wana	9,10,151,153,154,155,156	1.60	400mx40mx0.40m	2261

sand ghatwise proposed production is enclosed as annexure -1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as

monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.

v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .

vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dhivari Pipari	Hinganghat	Wana	9,10,151,153,154,155,156	1.60	400mx40mx0.40m	2261

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	400 m x 40 m x 0.40 m

ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dhochi	Hinganghat	Wardha	125/A/1,127,128,135,172/1,173/1,174/A,130/1,129/1,136,168,169/1,170/1	1.16	290mx40mx0.50m	2049

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

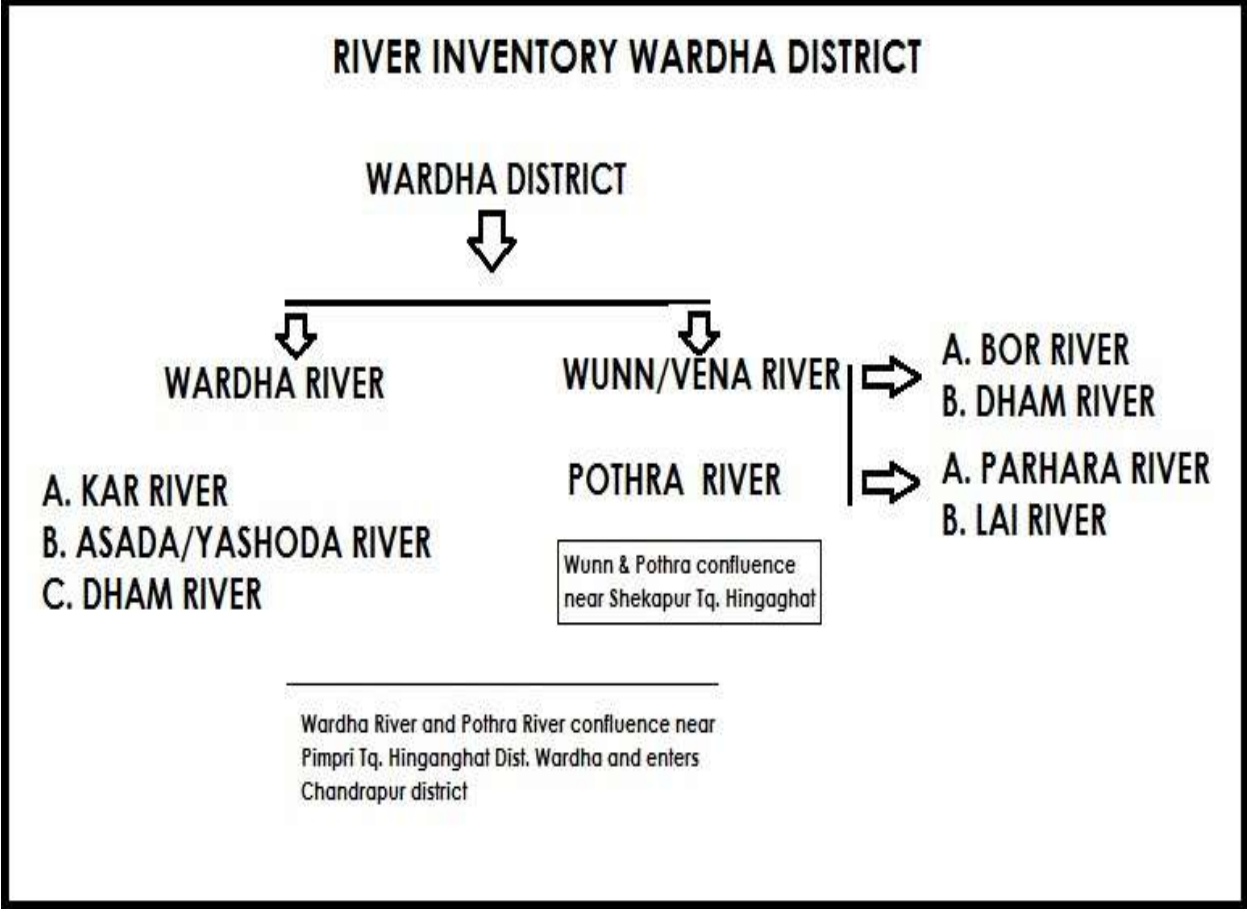
Local geology:

Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.



Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dhochi	Hinganghat	Wardha	125/A/1,127,128,135,172/1,173/1,174/A,130/1,129/1,136,168,169/1,170/1	1.16	290mx40mx0.50m	2049

Approach road available over pandan rd Distance 135 m to connect Kochi-Sawangi Village Rd

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

**iv) Magnitude of operation:
Proposed production**

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dhochi	Hinganghat	Wardha	125/A/1,127,128,135,172/1,173/1,174/A,130/1,129/1,136,168,169/1,170/1	1.16	290mx40mx0.50m	2049

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:
 Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.
- iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dhochi	Hinganghat	Wardha	125/A/1,127,128,135,172/1,173/1,174/A, 130/1,129/1,136,168,169/1,170/1	1.16	290mx40mx0.50m	2049

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	290 mx 40 m x0.50 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dighi Wadgaon	Arvi	Wardha	Dighi-112,113,Wadgaon 124/4,125,126,132	1.50	500mx30mx0.50m	2650

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly

recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

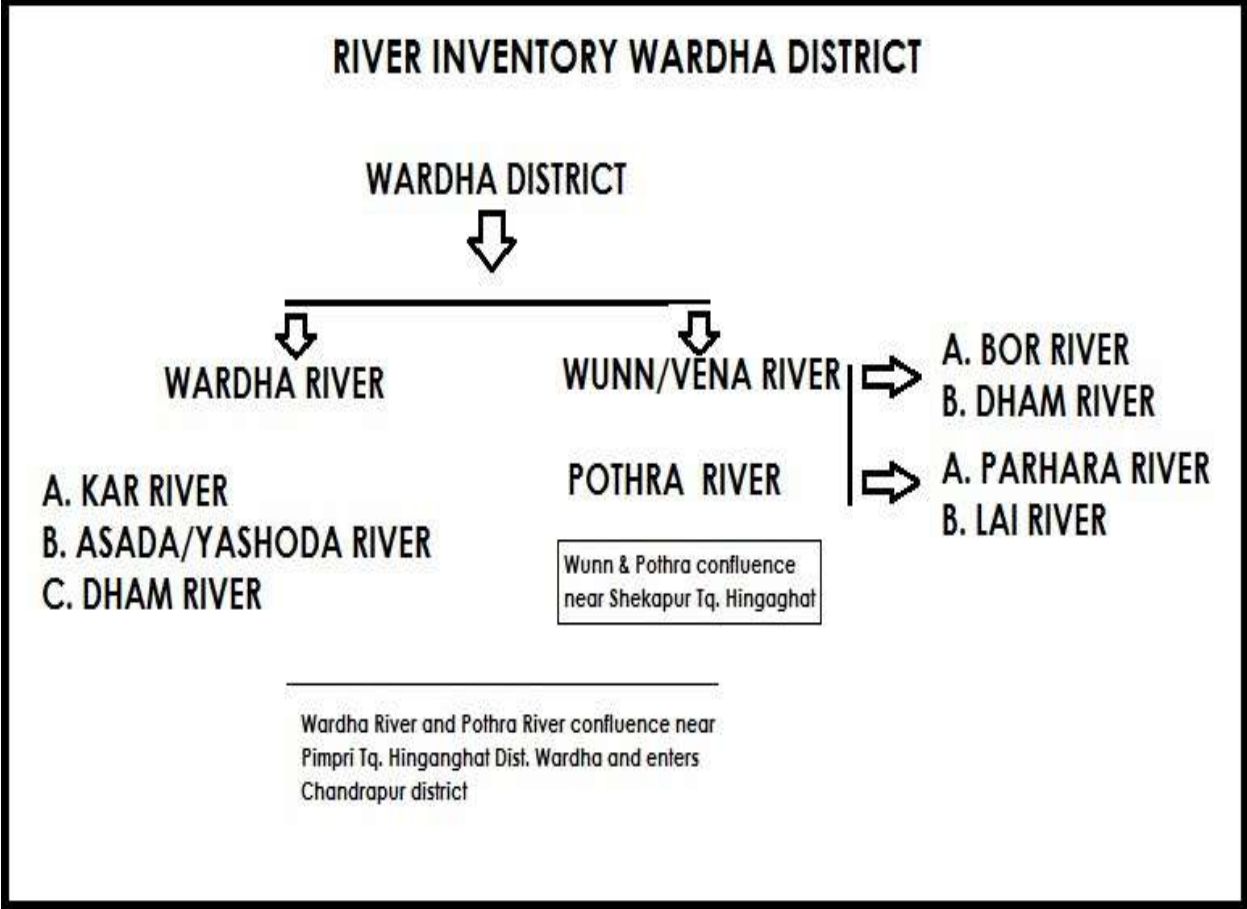
Local geology:

Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.



Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dighi Wadgaon	Arvi	Wardha	Dighi-112,113,Wadgaon 124/4,125,126,132	1.50	500mx30mx0.50m	2650

Approach road available over pandan rd of 1.5 Km connecting Saikheda - Hiwara rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dighi Wadgaon	Arvi	Wardha	Dighi-112,113,Wadgaon 124/4,125,126,132	1.50	500mx30mx0.50m	2650

sand ghatwise proposed production is enclosed as annexure -1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Dighi Wadgaon	Arvi	Wardha	Dighi-112,113,Wadgaon 124/4,125,126,132	1.50	500mx30mx0.50m	2650

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	500 mx 30 m x 0.50 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Ganeshpur Borkhedi	Hinganghat	Wana	Ganeshpur – 48,49,52,54,56,57 Borkhedi – 23,24,28,29,30,31	1.80	900mx20mx0.50m	3180

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the

south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

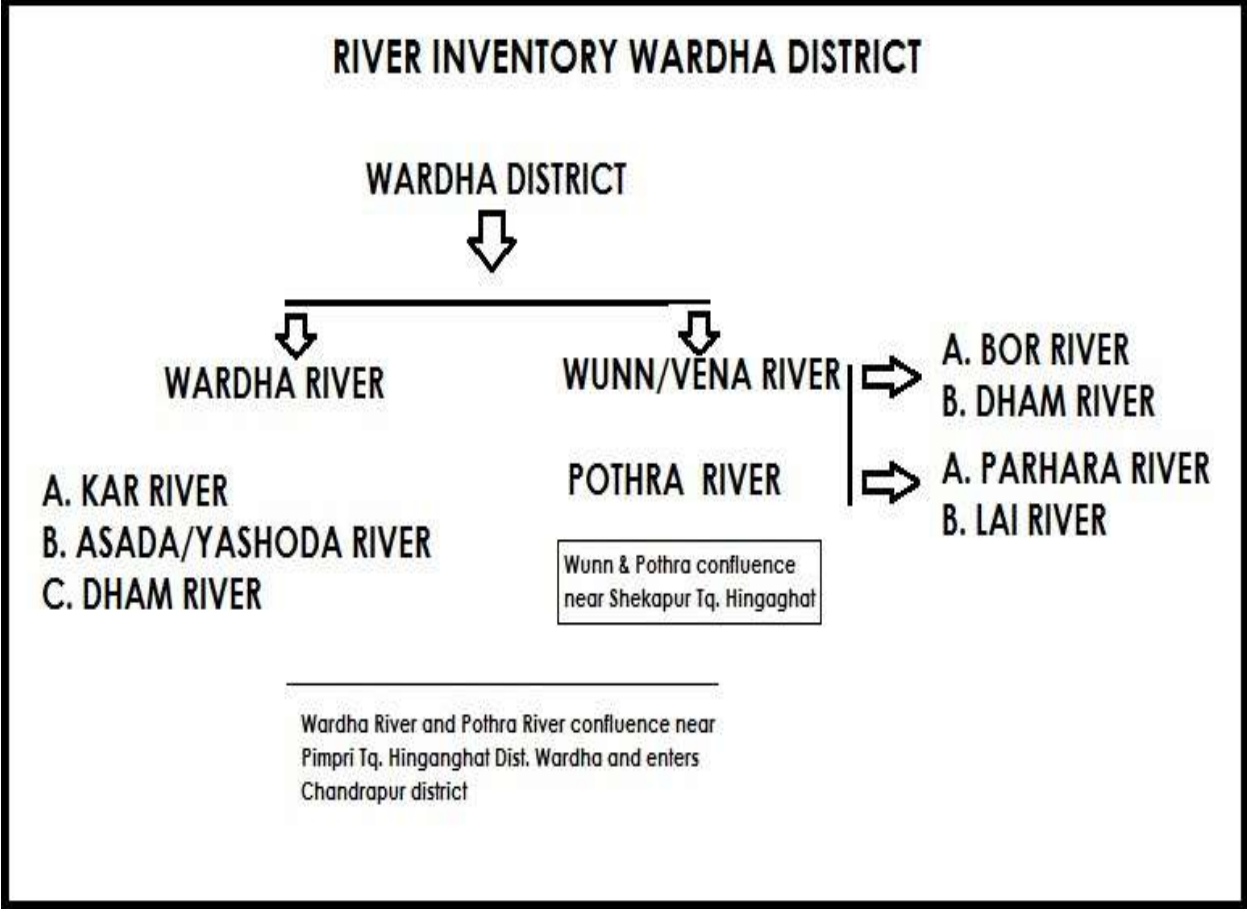
Local geology:

Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.



Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Ganeshpur Borkhedi	Hinganghat	Wana	Ganeshpur – 48,49,52,54,56,57 Borkhedi – 23,24,28,29,30,31	1.80	900mx20mx0.50m	3180

Approach road available over pandan rd of 0.60Km connecting Borkhedi - Ganeshpur rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

**iv) Magnitude of operation:
Proposed production**

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Ganeshpur Borkhedi	Hinganghat	Wana	Ganeshpur – 48,49,52,54,56,57 Borkhedi – 23,24,28,29,30,31	1.80	900mx20mx0.50m	3180

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one

year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .

vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Ganeshpur Borkhedi	Hinganghat	Wana	Ganeshpur – 48,49,52,54,56,57 Borkhedi – 23,24,28,29,30,31	1.80	900mx20mx0.50m	3180

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	900 mx 20 m x0.50 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
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18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Hiwra Ka -1	Deoli	Wardha	27 to 32	1.50	500mx30mx0.70m	3710

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

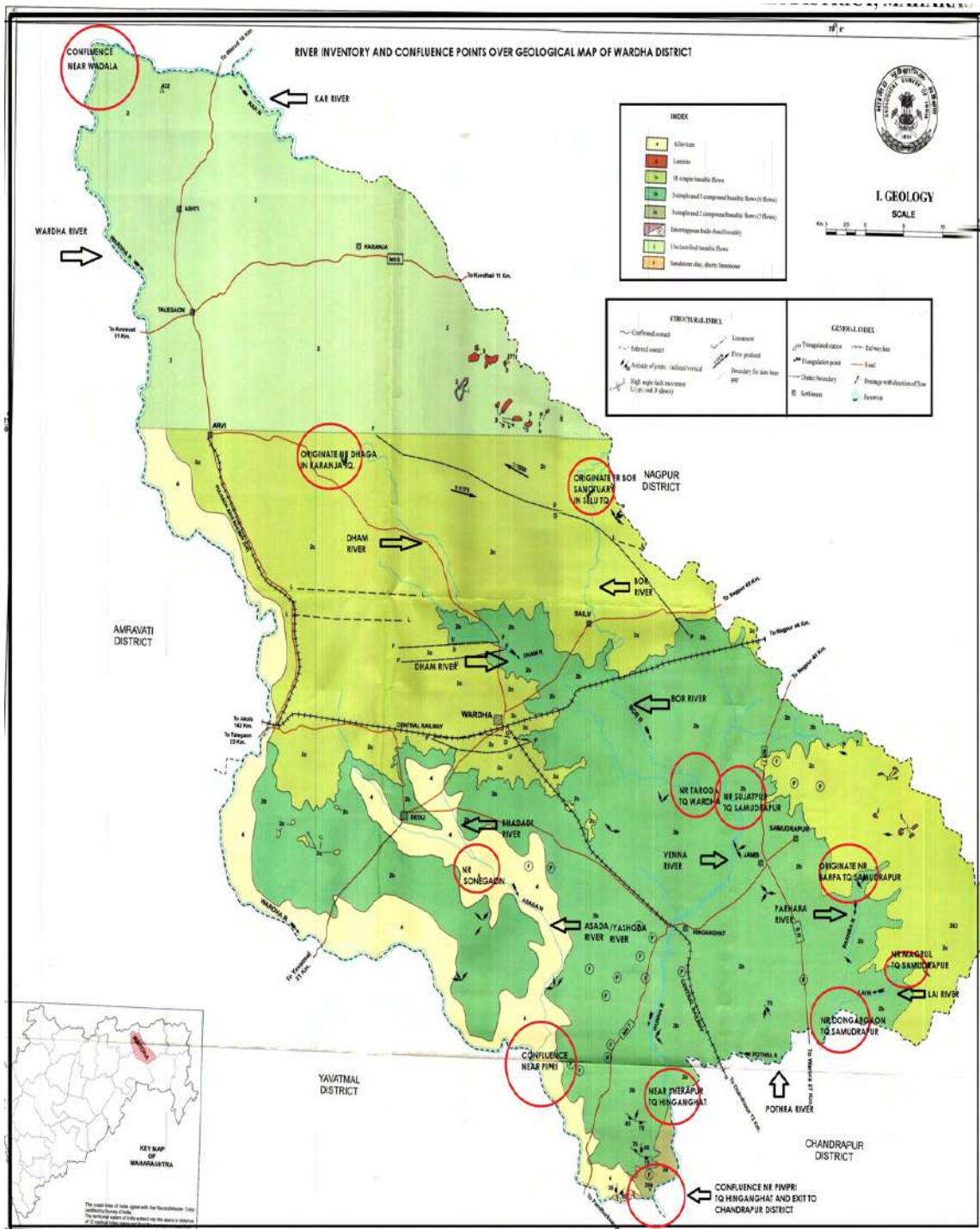
Local geology:

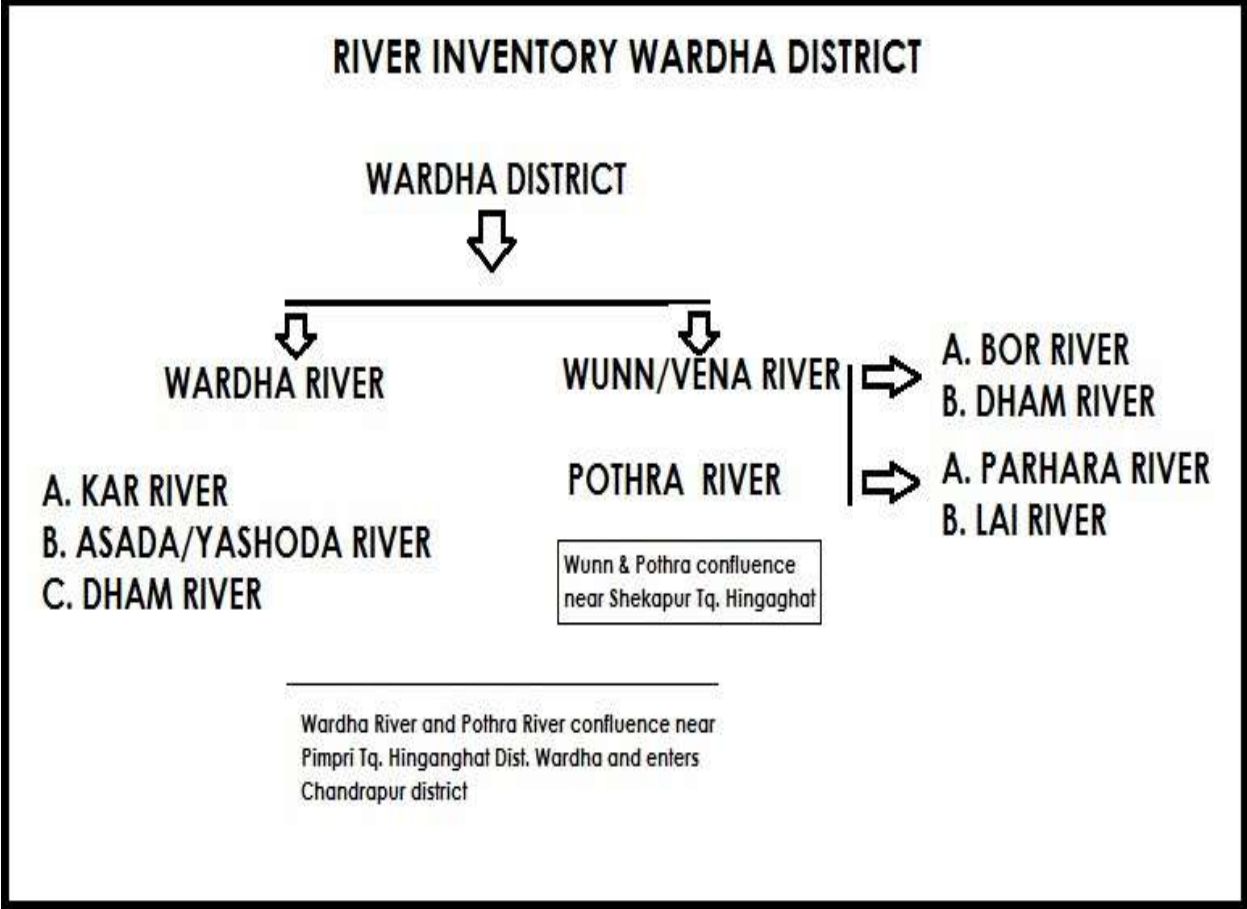
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Hiwra Ka -1	Deoli	Wardha	27 to 32	1.50	500mx30mx0.70m	3710

Approach road available over pandan rd of 0.50 Km connecting Hasanpur - Kotha rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

**iv) Magnitude of operation:
Proposed production**

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Hiwra Ka -1	Deoli	Wardha	27 to 32	1.50	500mx30mx0.70m	3710

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.760m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.760
Total	1.760

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 38 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Hiwra Ka -1	Deoli	Wardha	27 to 32	1.50	500mx30mx0.70m	3710

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	500 mx 30 m x 0.70 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्वी	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	257, उमरा- 259, 258, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	दिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Hiwra	Hinganghat	Wardha	18,20	2.50	500mx50mx0.45m	3975

Proponent

**District Mining Officer
Wardha Collector Office,
Wardha**

Consultant

**Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)**

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

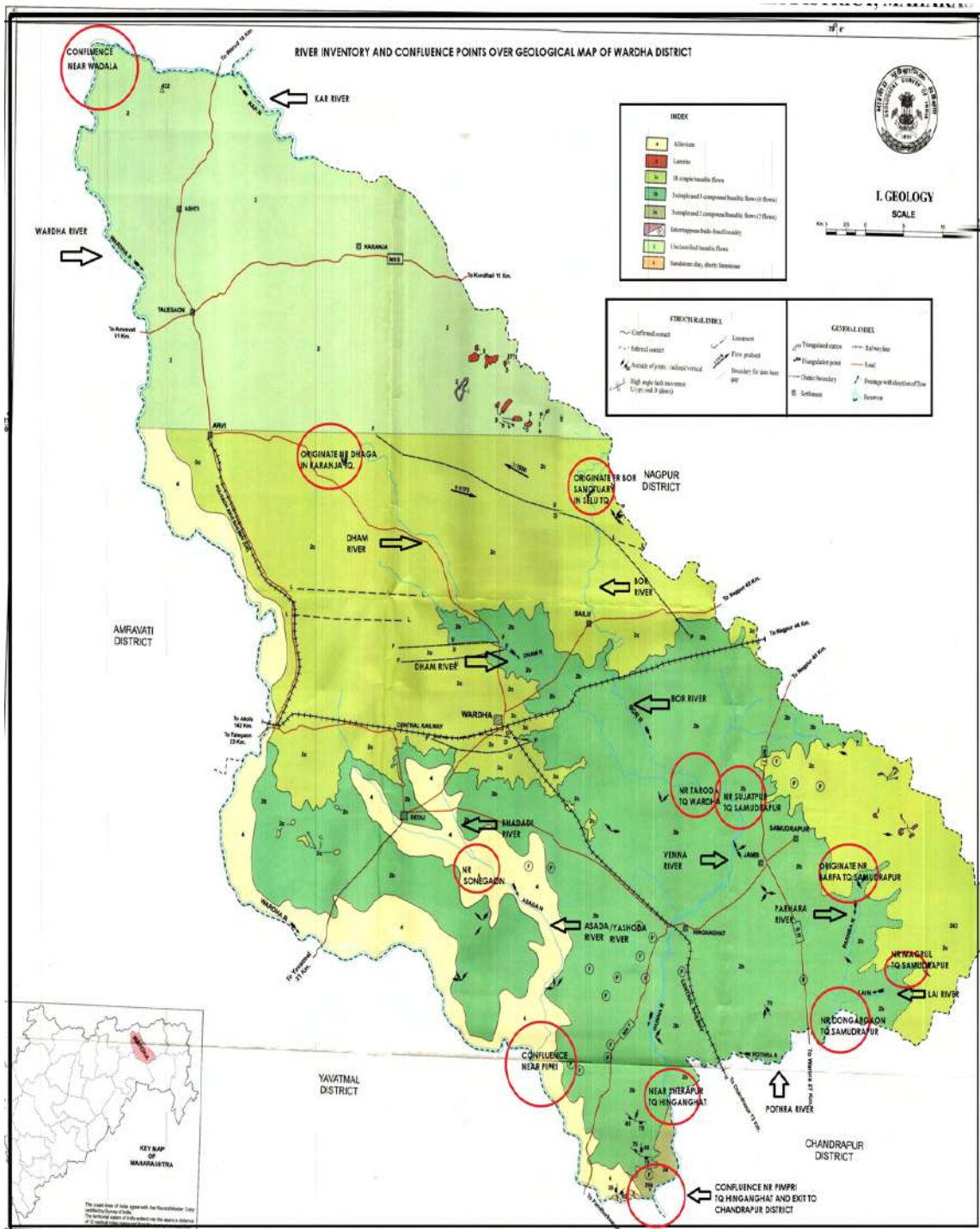
Local geology:

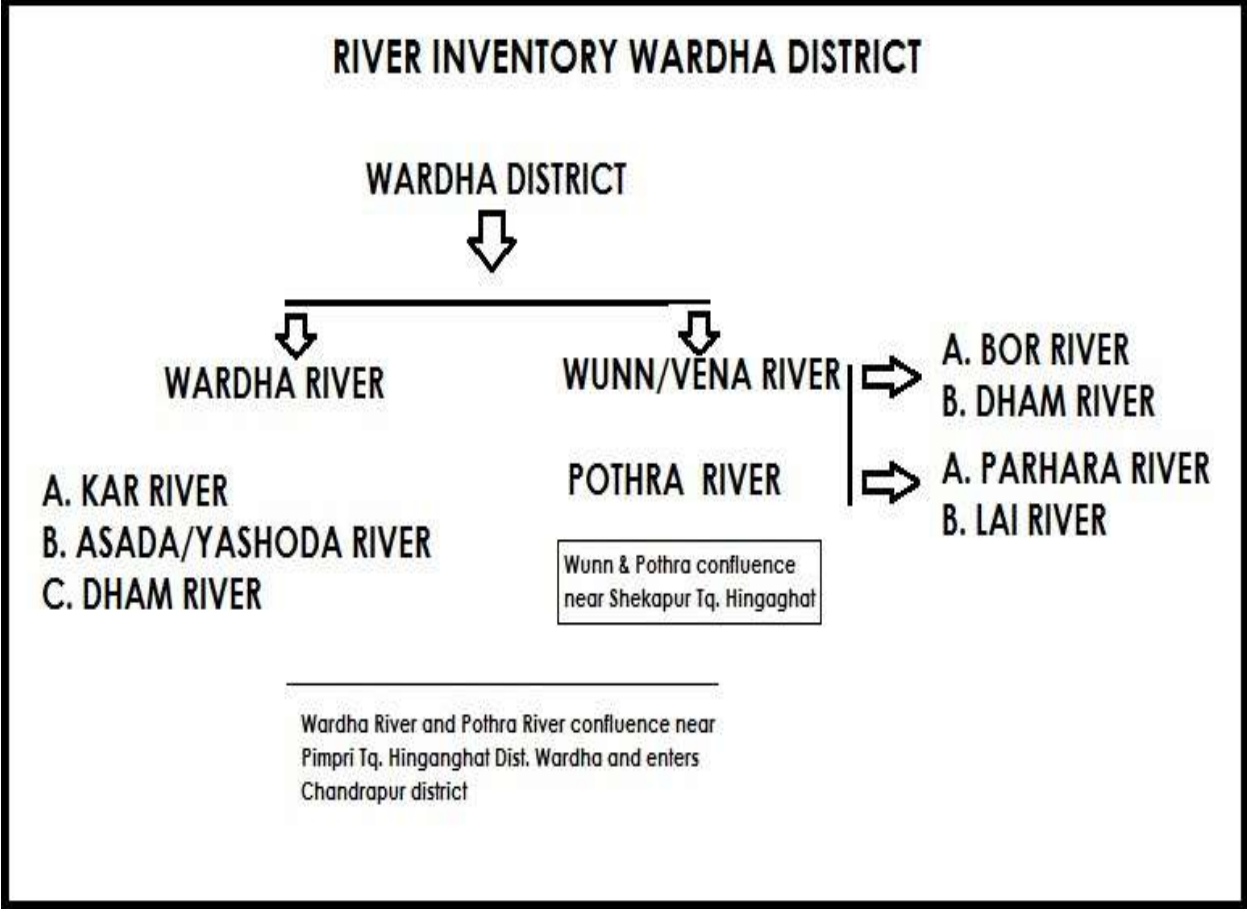
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Hiwra	Hinganghat	Wardha	18,20	2.50	500mx50mx0.45m	3975

Approach road connect to Hiwra rod at 590m

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Hiwra	Hinganghat	Wardha	18,20	2.50	500mx50mx0.45m	3975

sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:
 Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.
- iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Hiwra	Hinganghat	Wardha	18,20	2.50	500m x 50m x 0.45m	3975

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	500 m x 50 m x 0.45 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Kajalsara	Hinganghat	Pothra	269,270,273,274	1.05	420mx25mx0.50m	1855

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

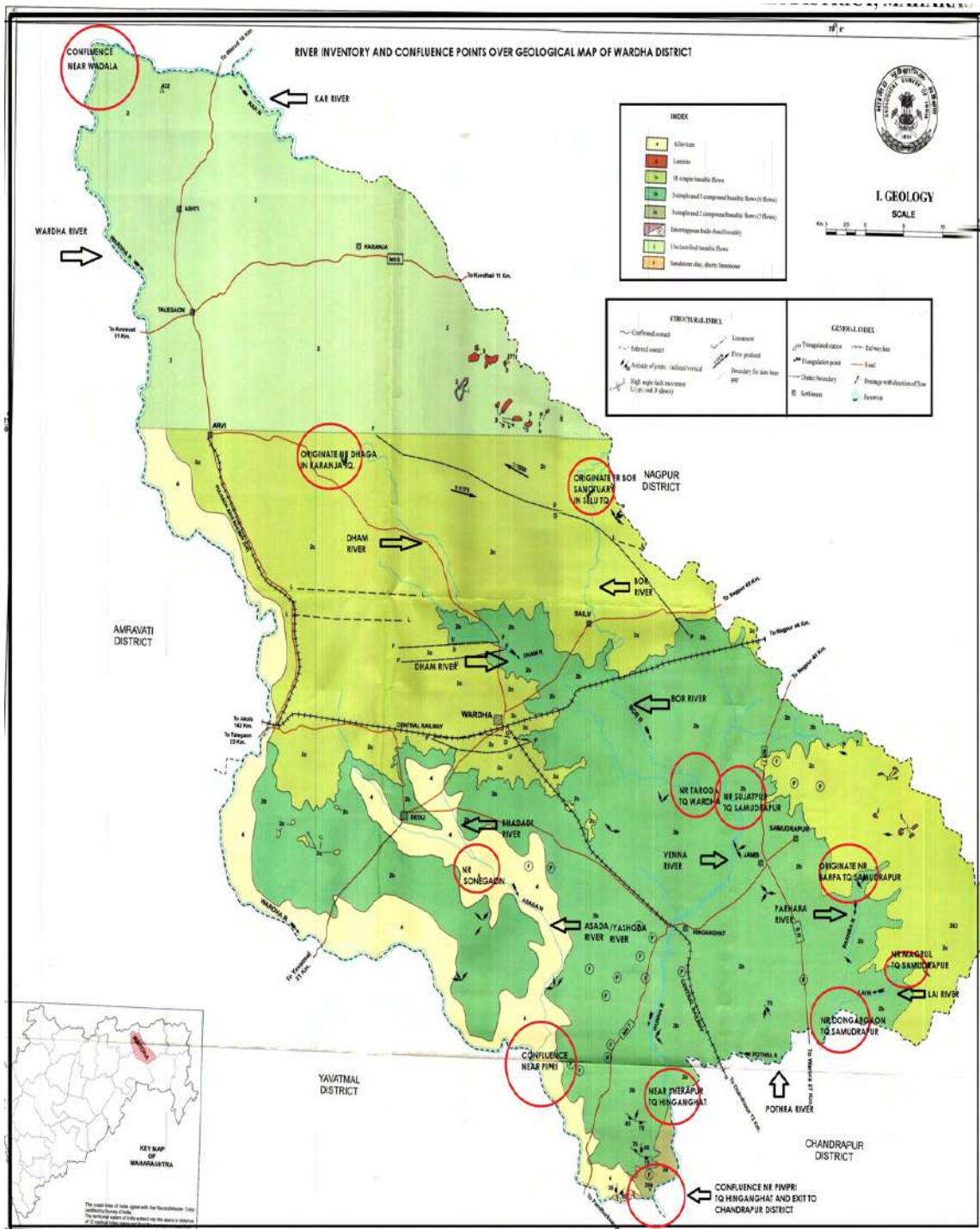
Local geology:

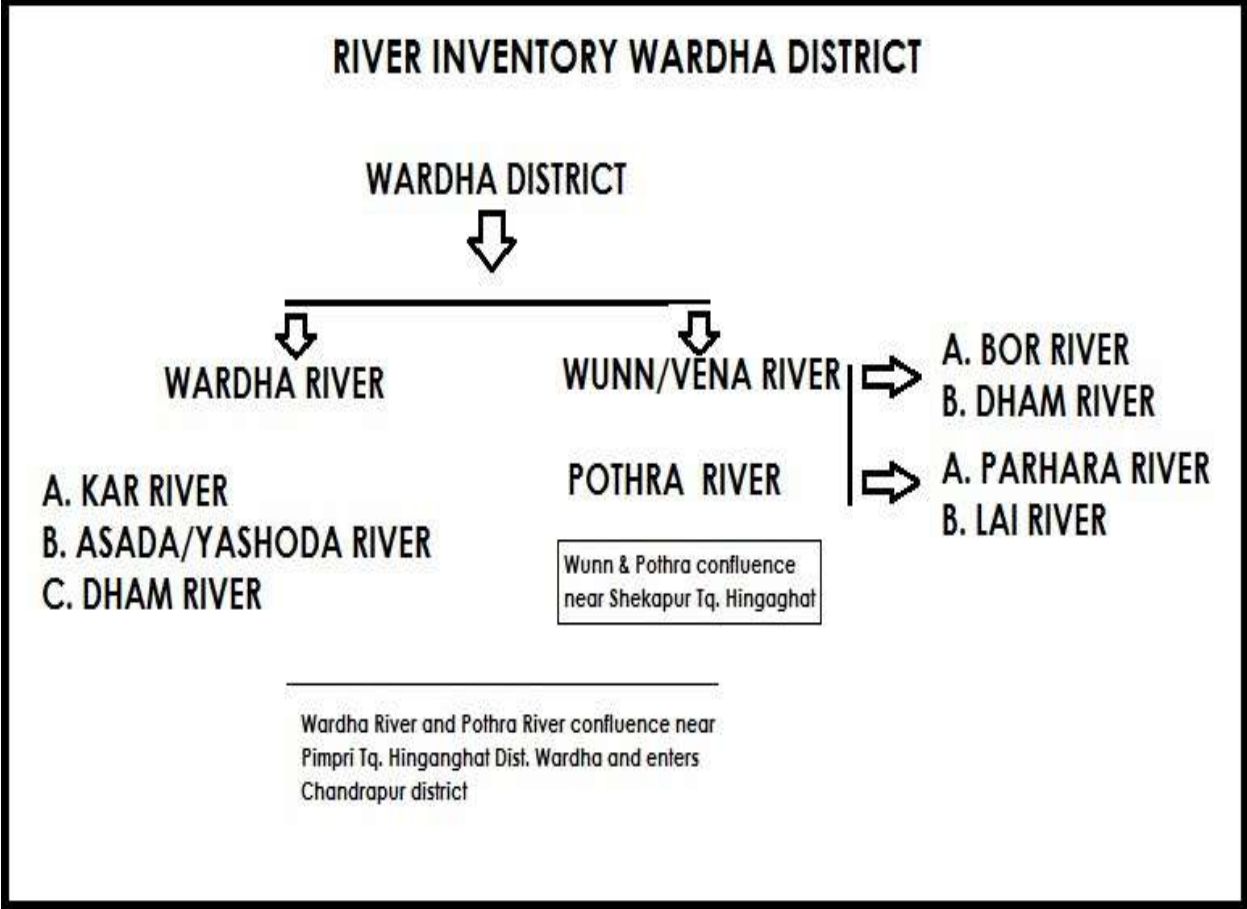
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Kajalsara	Hinganghat	Pothra	269,270,273,274	1.05	420mx25mx0.50m	1855

Approach road available over pandan rd of 0.30 Km connecting Kajalsala - Jaitapur rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

**iv) Magnitude of operation:
Proposed production**

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Kajalsara	Hinganghat	Pothra	269,270,273,274	1.05	420mx25mx0.50m	1855

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:
 Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.
- iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

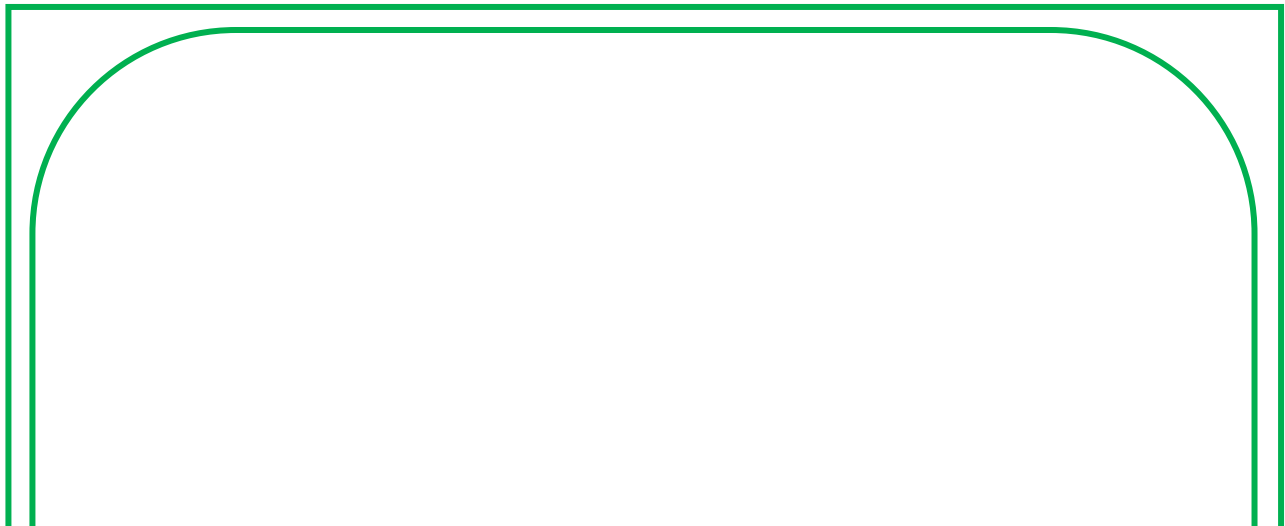
Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Kajalsara	Hinganghat	Pothra	269,270,273,274	1.05	420mx25mx0.50m	1855

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	420 mx 25 m x0.50 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Khardi Bhardi	Hinganghat	Wana	Khardi-1,2,3,12/3 Bhardi-2,3,4,5,6,7	2.80	800mx35mx0.50m	4947

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the

south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

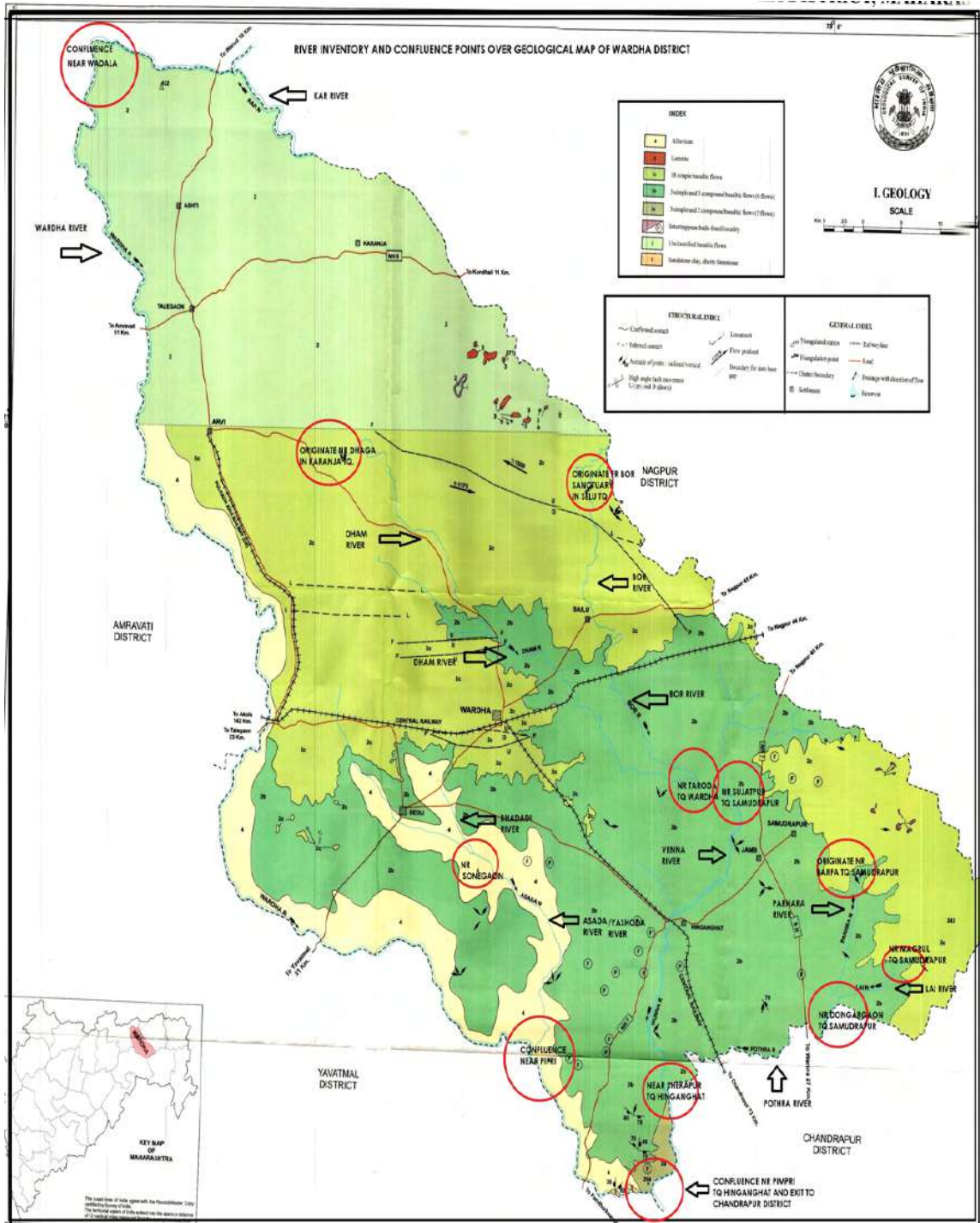
Local geology:

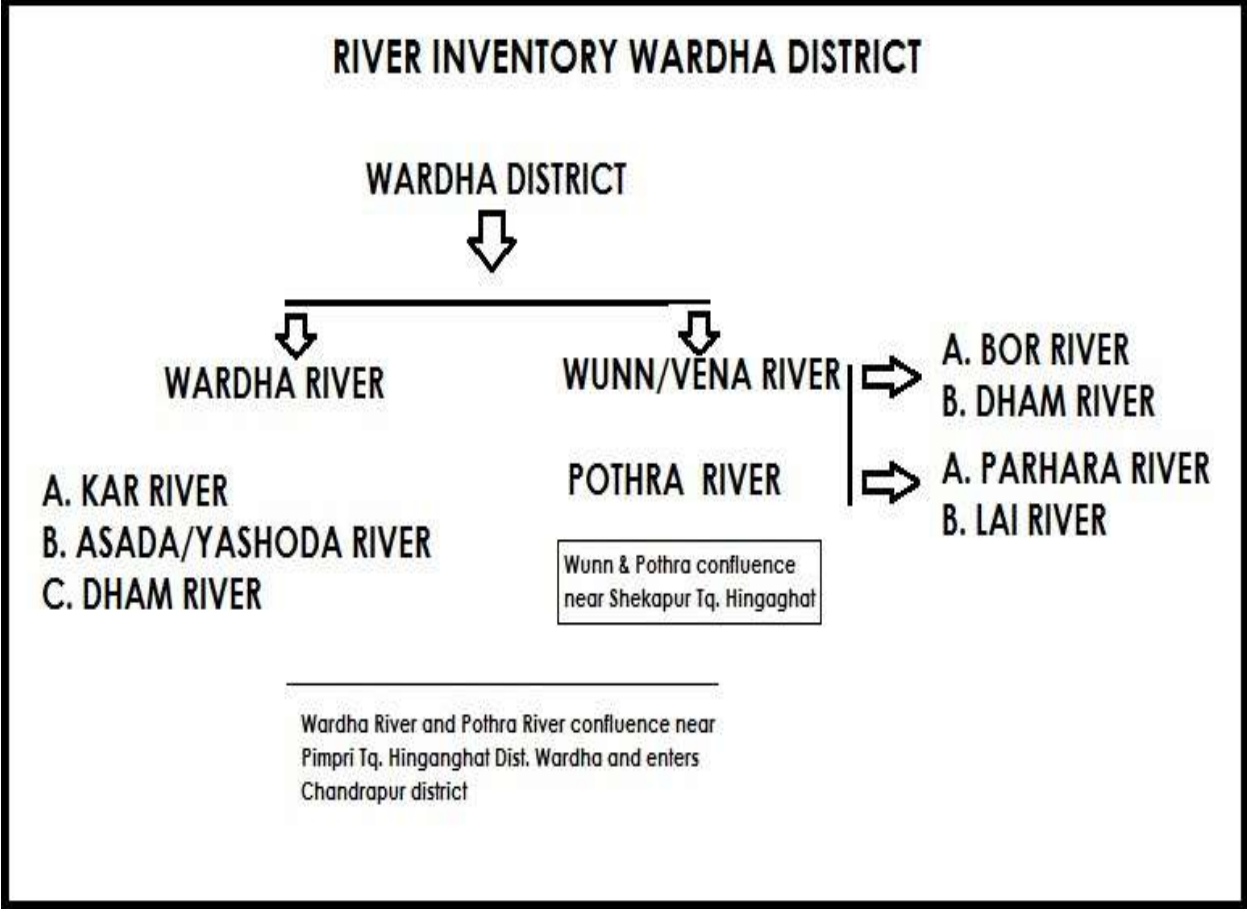
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Khardi Bhardi	Hinganghat	Wana	Khardi-1,2,3,12/3 Bhardi-2,3,4,5,6,7	2.80	800mx35mx0.50m	4947

Approach road available over pandan rd of 0.55 Km connecting Chincholi – Hinganghat rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Khardi Bhardi	Hinganghat	Wana	Khardi-1,2,3,12/3 Bhardi-2,3,4,5,6,7	2.80	800mx35mx0.50m	4947

sand ghatwise proposed production is enclosed as annexure -1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.960m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.960
Total	1.960

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 48 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one

year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .

vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Khardi Bhardi	Hinganghat	Wana	Khardi-1,2,3,12/3 Bhardi-2,3,4,5,6,7	2.80	800mx35mx0.50m	4947

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	800 mx 35 m x0.50 m

ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

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Proponent

**District Mining Officer
Wardha Collector Office,
Wardha**

Consultant

**Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)**

NOVEMBER 2021

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Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

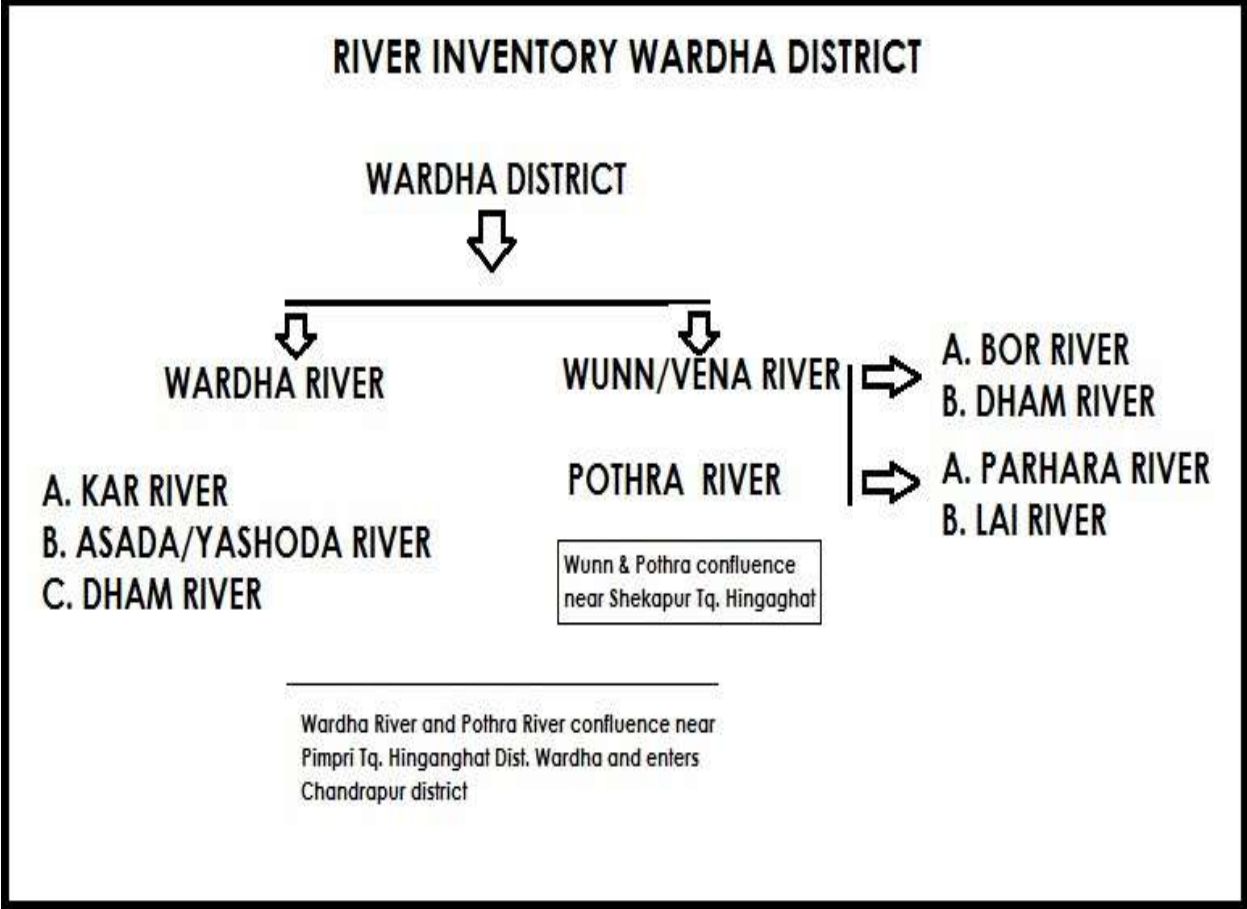
Local geology:

Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.



Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mandgaon 1	Samudrapur	Wana	219,220	2.50	500mx50mx0.50m	4417

Approach road available over pandan rd of 1.55 Km connecting Mandgaon - Taroda rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mandgaon 1	Samudrapur	Wana	219,220	2.50	500mx50mx0.50m	4417

sand ghatwise proposed production is enclosed as annexure -1 Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.760m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.760
Total	1.760

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 38 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mandgaon 1	Samudrapur	Wana	219,220	2.50	500mx50mx0.50m	4417

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	500 mx 50 m x 0.50 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mandgaon 2	Samudrapur	Wana	285,286,287,288,298,444,345,346,347,348,861	3.00	600mx50mx0.40m	4240

Proponent

**District Mining Officer
Wardha Collector Office,
Wardha**

Consultant

**Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)**

NOVEMBER 2021

Pre-feasibility Report

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The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhoni and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

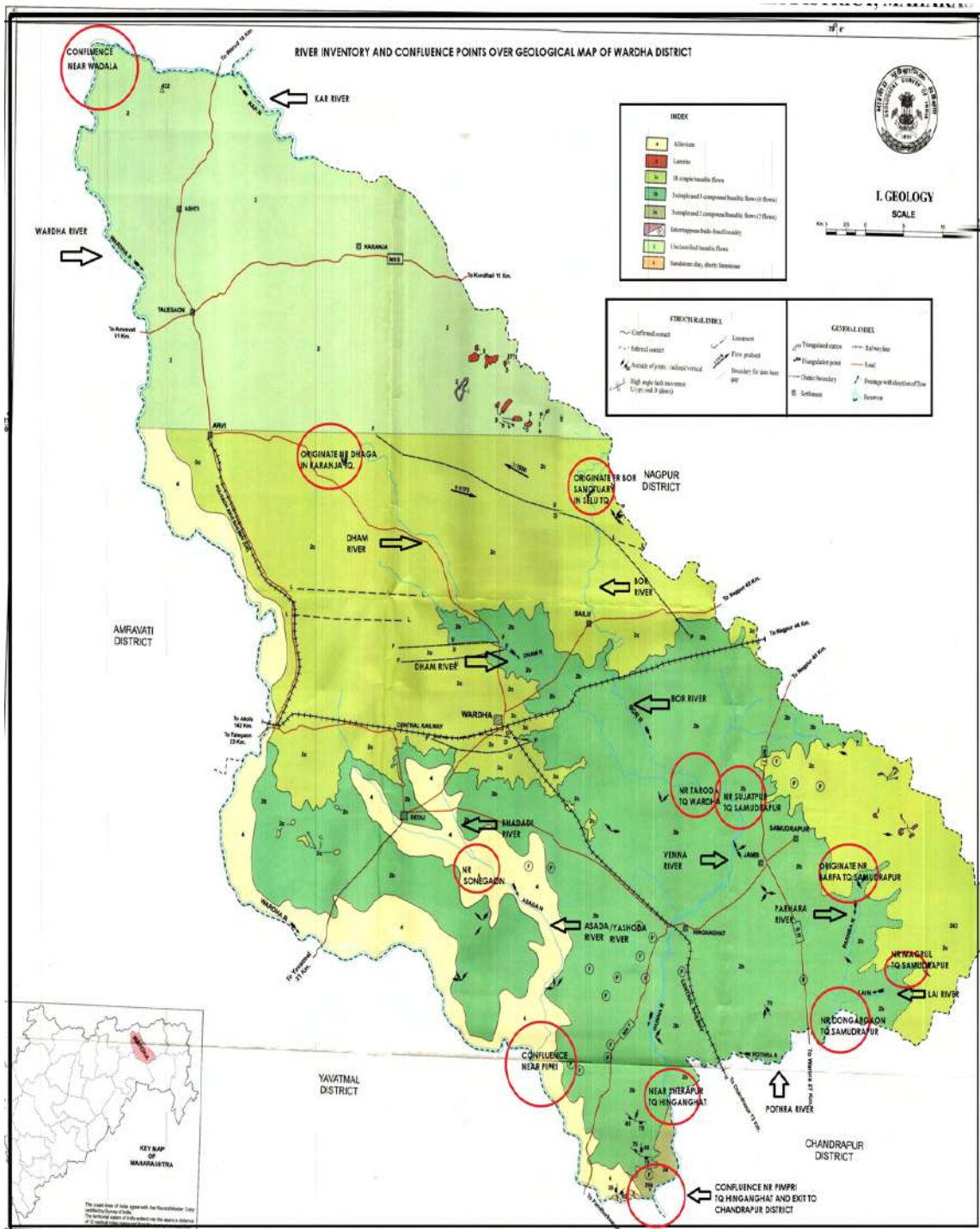
Local geology:

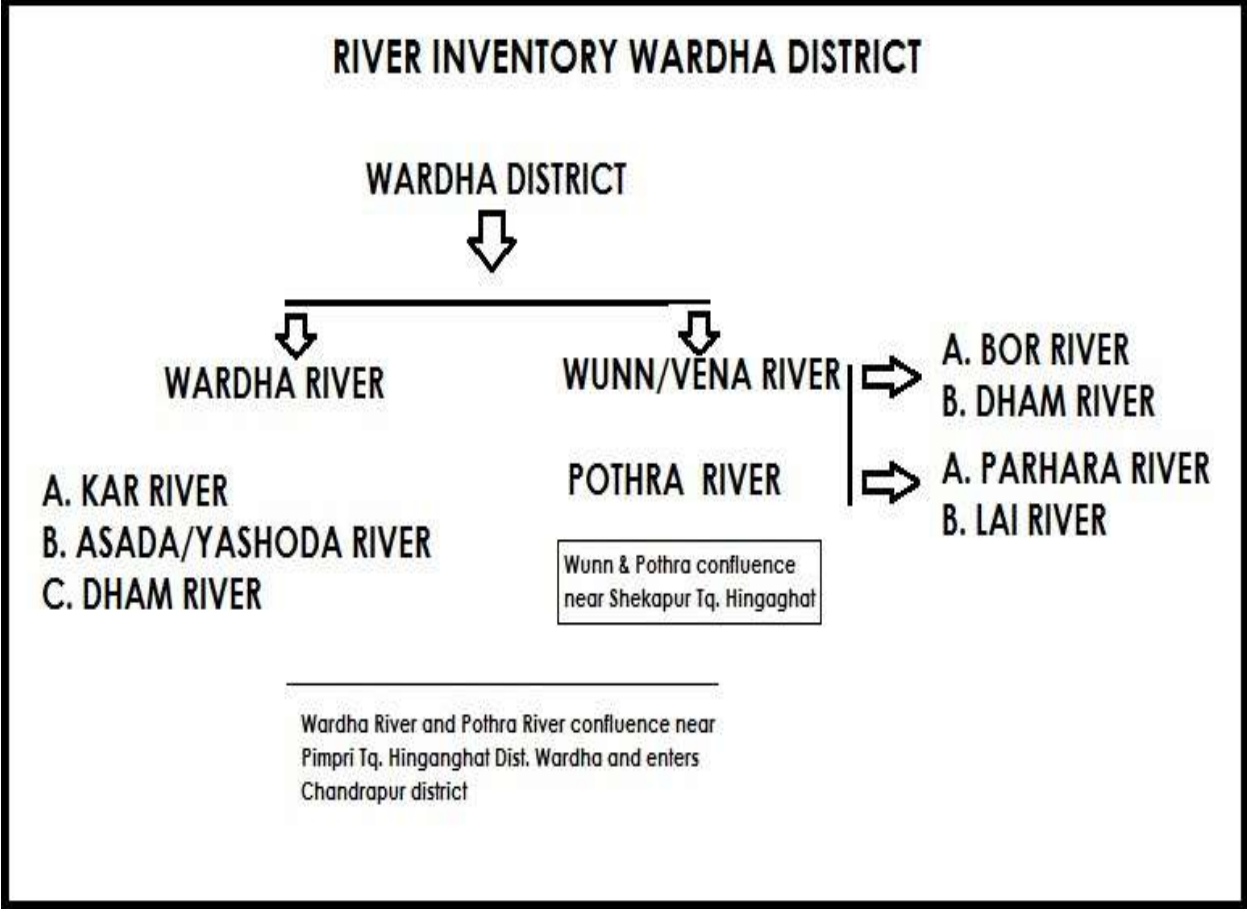
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mandgaon 2	Samudrapur	Wana	285,286,287,288,298,444,345,346,347,348,861	3.00	600mx50mx0.40m	4240

Approach road available over pandan rd of 0.63 Km connecting Shedgaon - Mandgaon rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mandgaon 2	Samudrapur	Wana	285,286,287,288,298,444,345,346,347,348,861	3.00	600mx50mx0.40m	4240

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.760m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.760
Total	1.760

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 38 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mandgaon 2	Samudrapur	Wana	285,286,287,288,298,444,345,346,347,348,861	3.00	600mx50mx0.40m	4240

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	600 mx 50 m x 0.40 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mangaon	Samudrapur	Wana	6,7,8,10	1.80	400mx45mx0.80m	2226

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

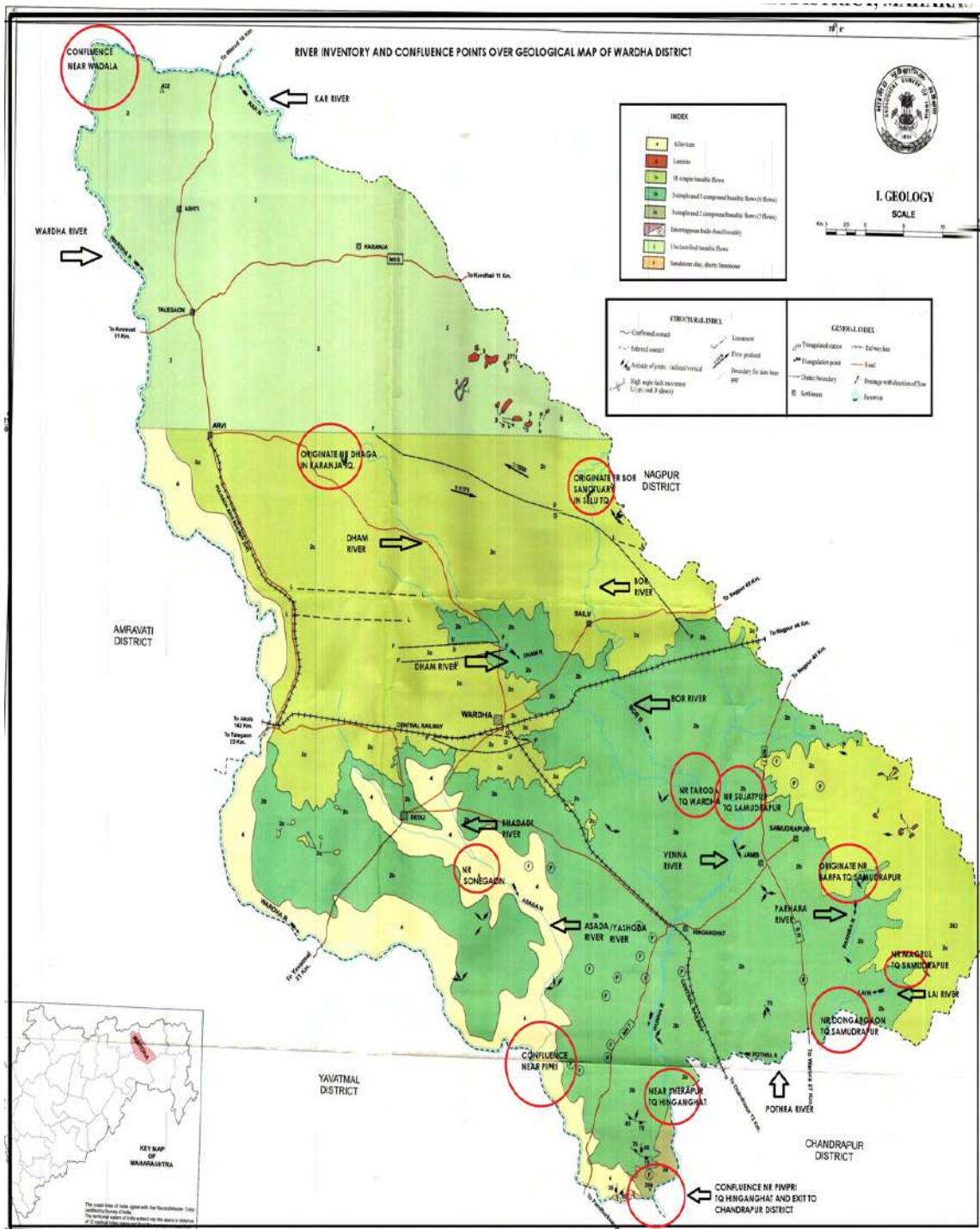
Local geology:

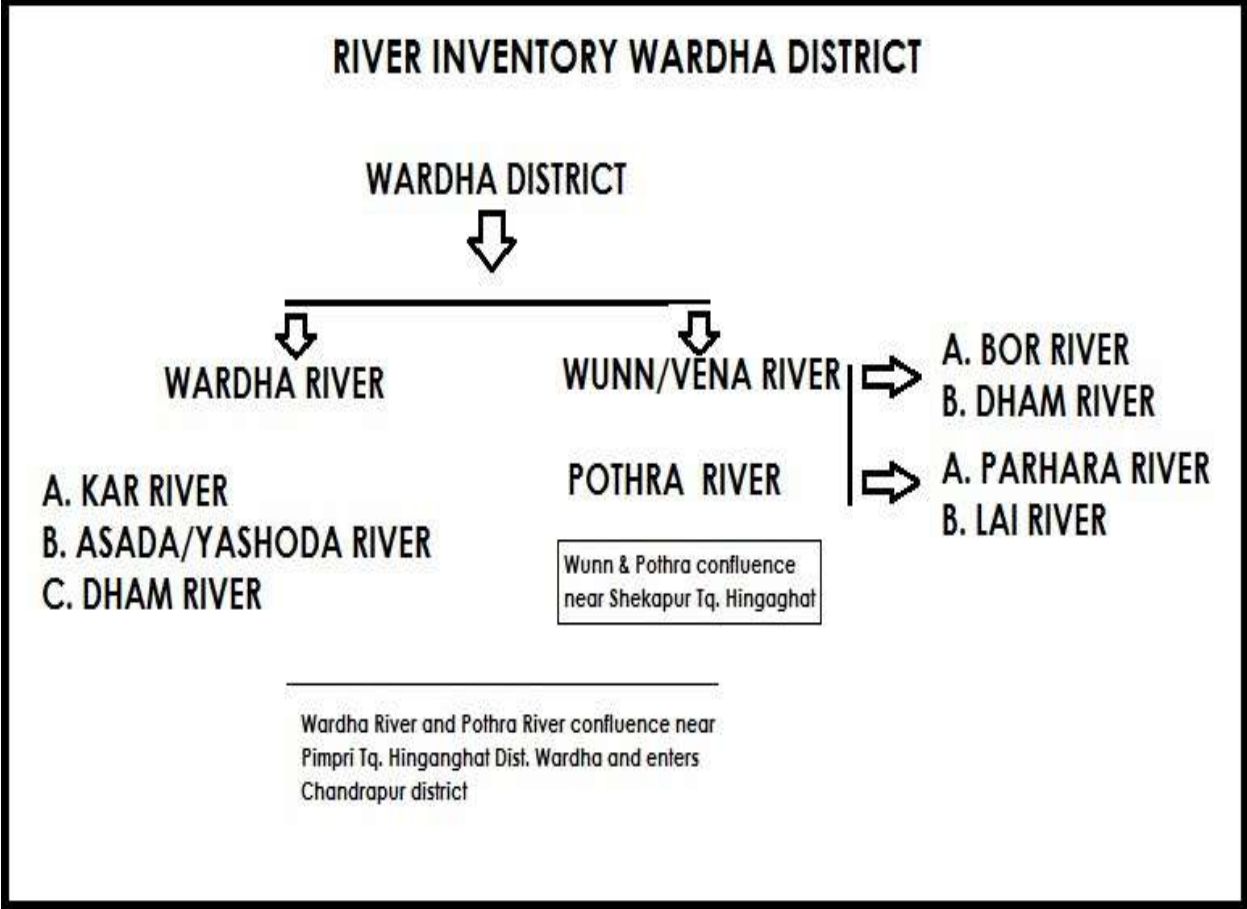
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mangaon	Samudrapur	Wana	6,7,8,10	1.80	400mx45mx0.80m	2226

Approach road available over pandan rd of 0.33 Km connecting Mangaon - Mandgaon rd

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mangaon	Samudrapur	Wana	6,7,8,10	1.80	400mx45mx0.80m	2226

sand ghatwise proposed production is enclosed as annexure -1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

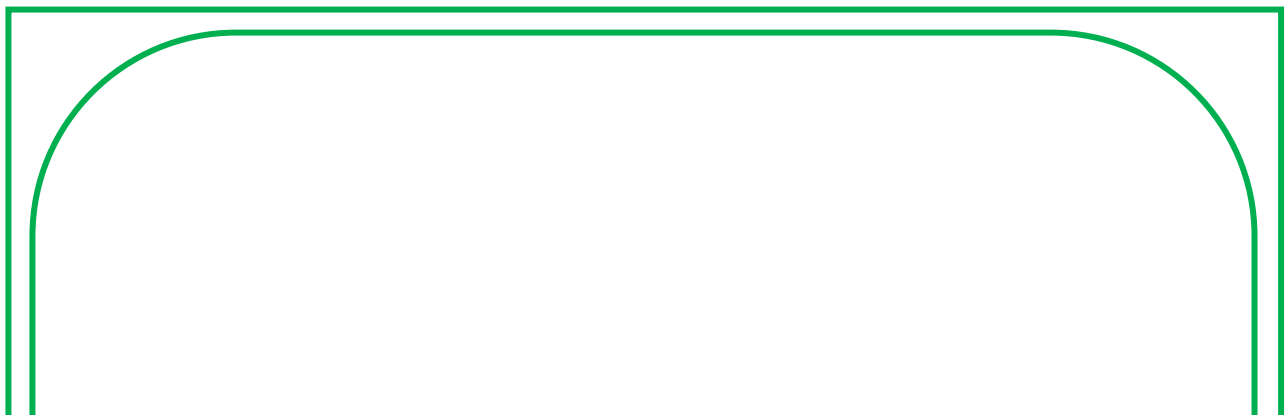
Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Mangaon	Samudrapur	Wana	6,7,8,10	1.80	400mx45mx0.80m	2226

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	400 mx 45 m x 0.80 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Menkhat	Samudrapur	Wana	45,46	1.23	350mx35mx0.45m	1948

Proponent

**District Mining Officer
Wardha Collector Office,
Wardha**

Consultant

**Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)**

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly

recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

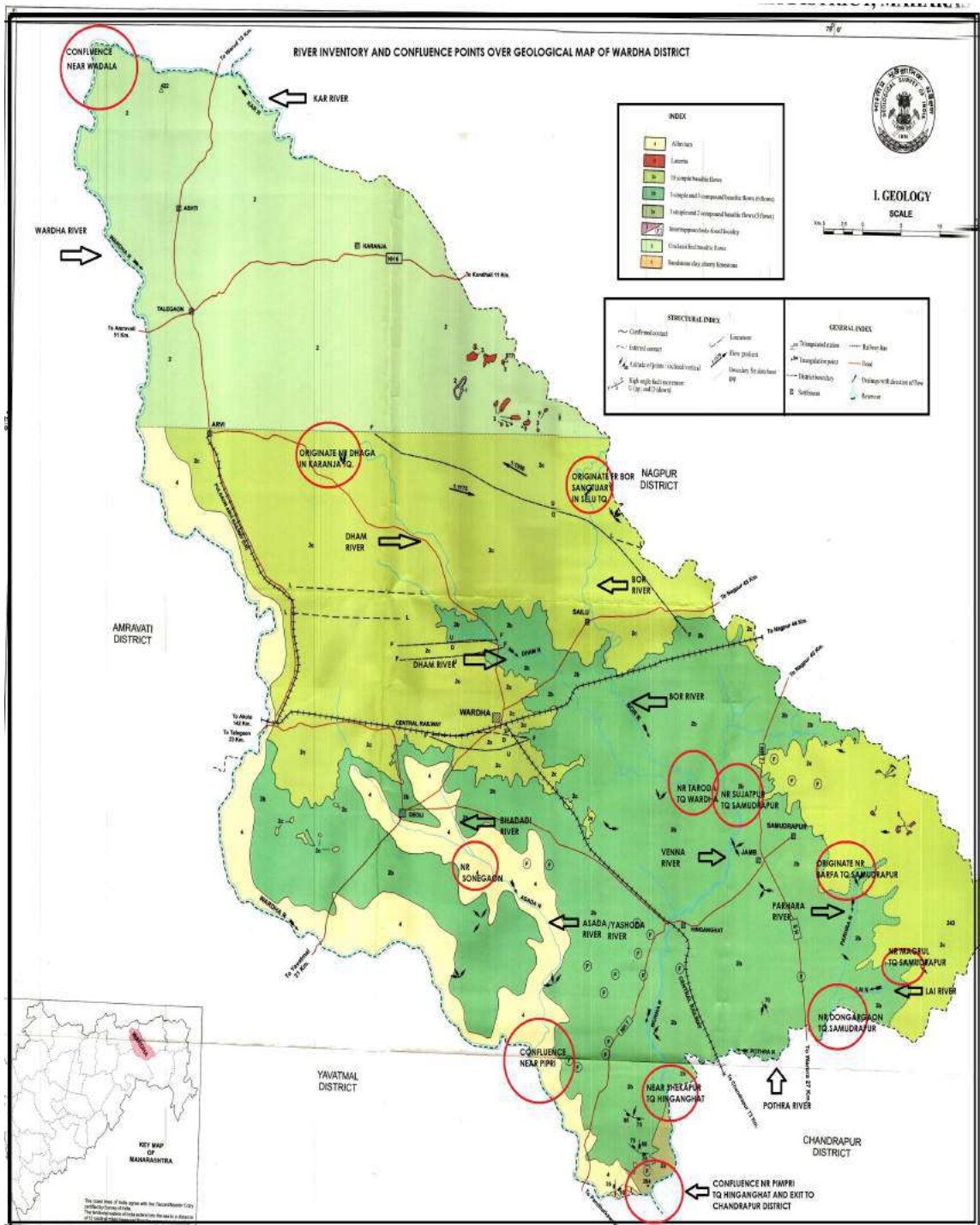
Local geology:

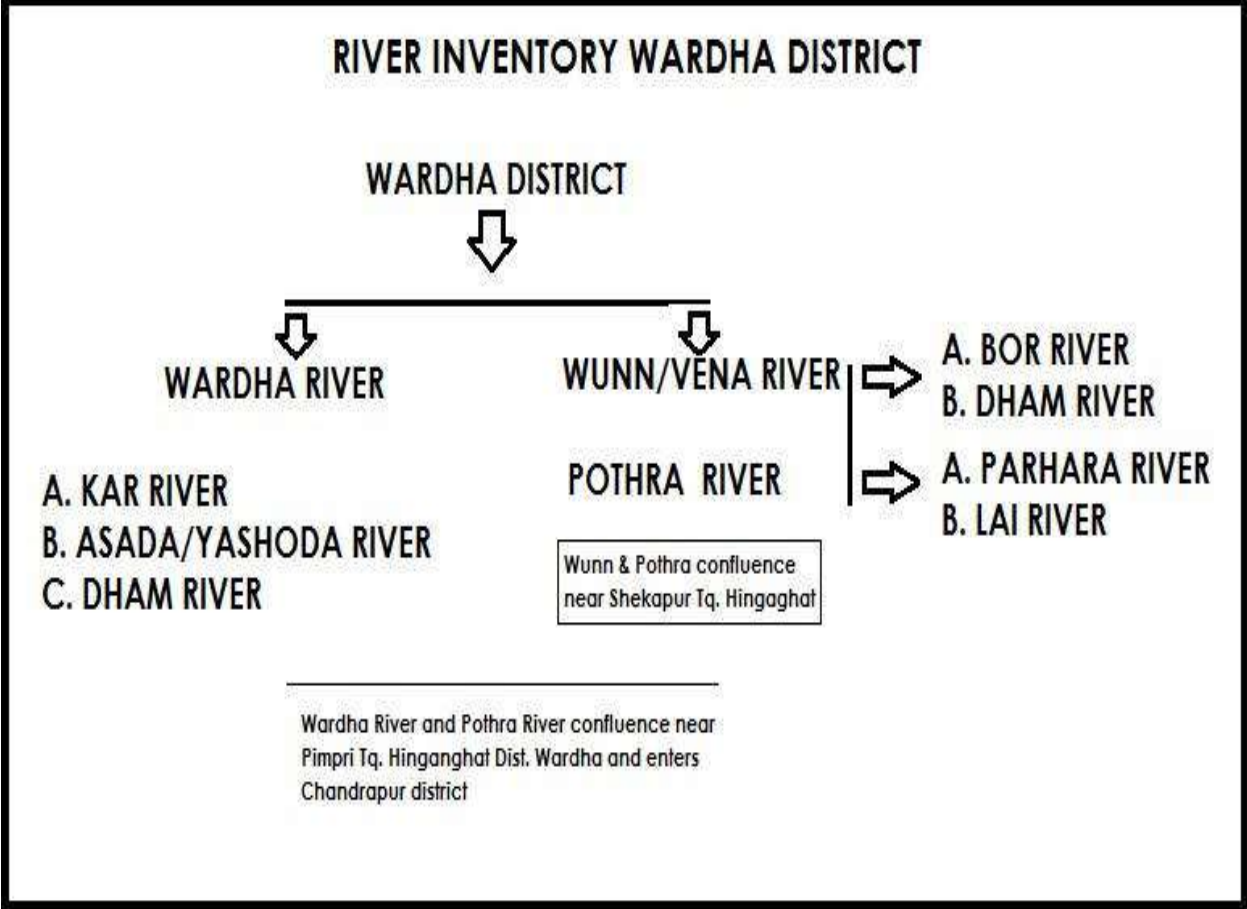
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Menkhat	Samudrapur	Wana	45,46	1.23	350mx35mx0.45m	1948

Approach road available over pandan rd of 490m and then to Menkhat road

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Menkhat	Samudrapur	Wana	45,46	1.23	350mx35mx0.45m	1948

sand ghatwise proposed production is enclosed as annexure - 1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass

Wardha	185153	121057
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(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.760m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.760
Total	1.760

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 38 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Menkhat	Samudrapur	Wana	45,46	1.23	350mx35mx0.45m	1948

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	350 mx 35 m x 0.45 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Nandra Rith	Hinganghat	Wana	55,56,57/A,57/B,58/A,58/B,59,60,64,65,68,69,70,71,72,81,82,83	3.15	900mx35mx0.55m	6122

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

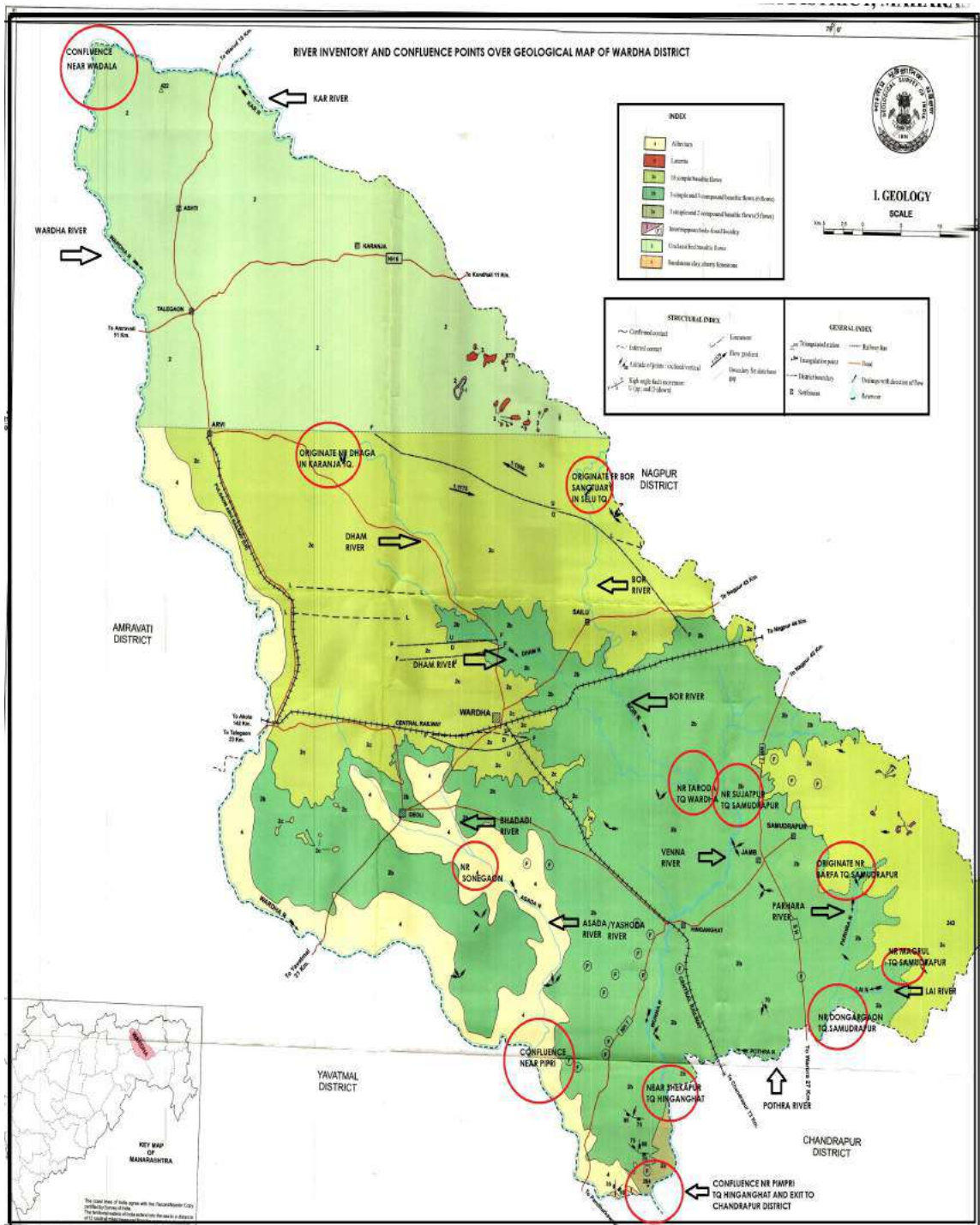
Local geology:

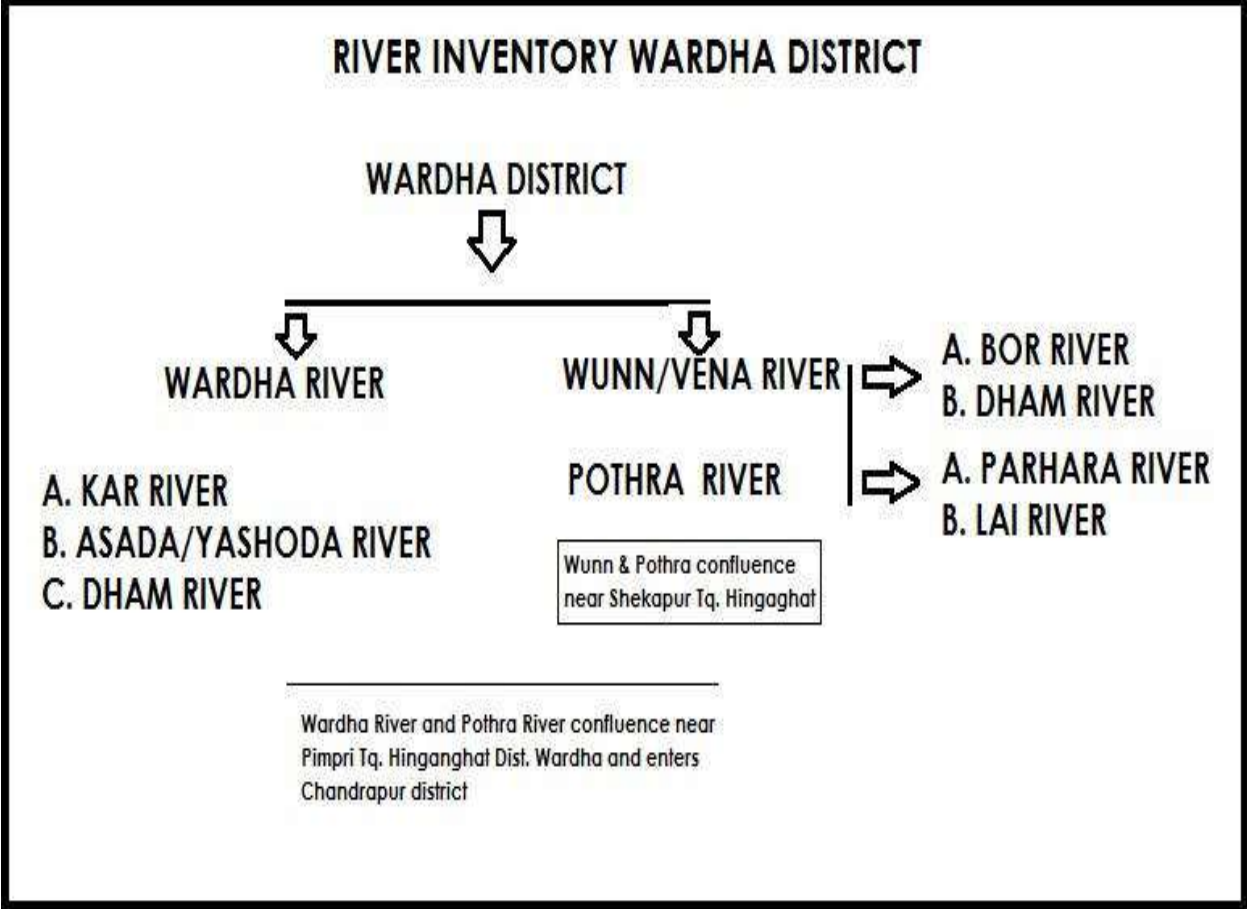
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Nandra Rith	Hinganghat	Wana	55,56,57/A,57/B,58/A,58/B,59,60,64,65,68,69,70,71,72,81,82,83	3.15	900mx35mx0.55m	6122

Approach road available over pandan rd of 1 Km connecting Nandra- Dhanora rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Nandra Rith	Hinganghat	Wana	55,56,57/A,57/B,58/A,58/B,59,60,64,65,68,69,70,71,72,81,82,83	3.15	900mx35mx0.55m	6122

sand ghatwise proposed production is enclosed as annexure - 1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.960m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.960
Total	1.960

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 48 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one

year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .

vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Nandra Rith	Hinganghat	Wana	55,56,57/A,57/B,58/A,58/B,59,60,64,65,68,69,70,71,72,81,82,83	3.15	900mx35mx0.55m	6122

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	900 mx 35 m x0.55 m

ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Pardi	Samudrapur	Wana	217	1.34	560mx24mx1.00m	4749

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhoni and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

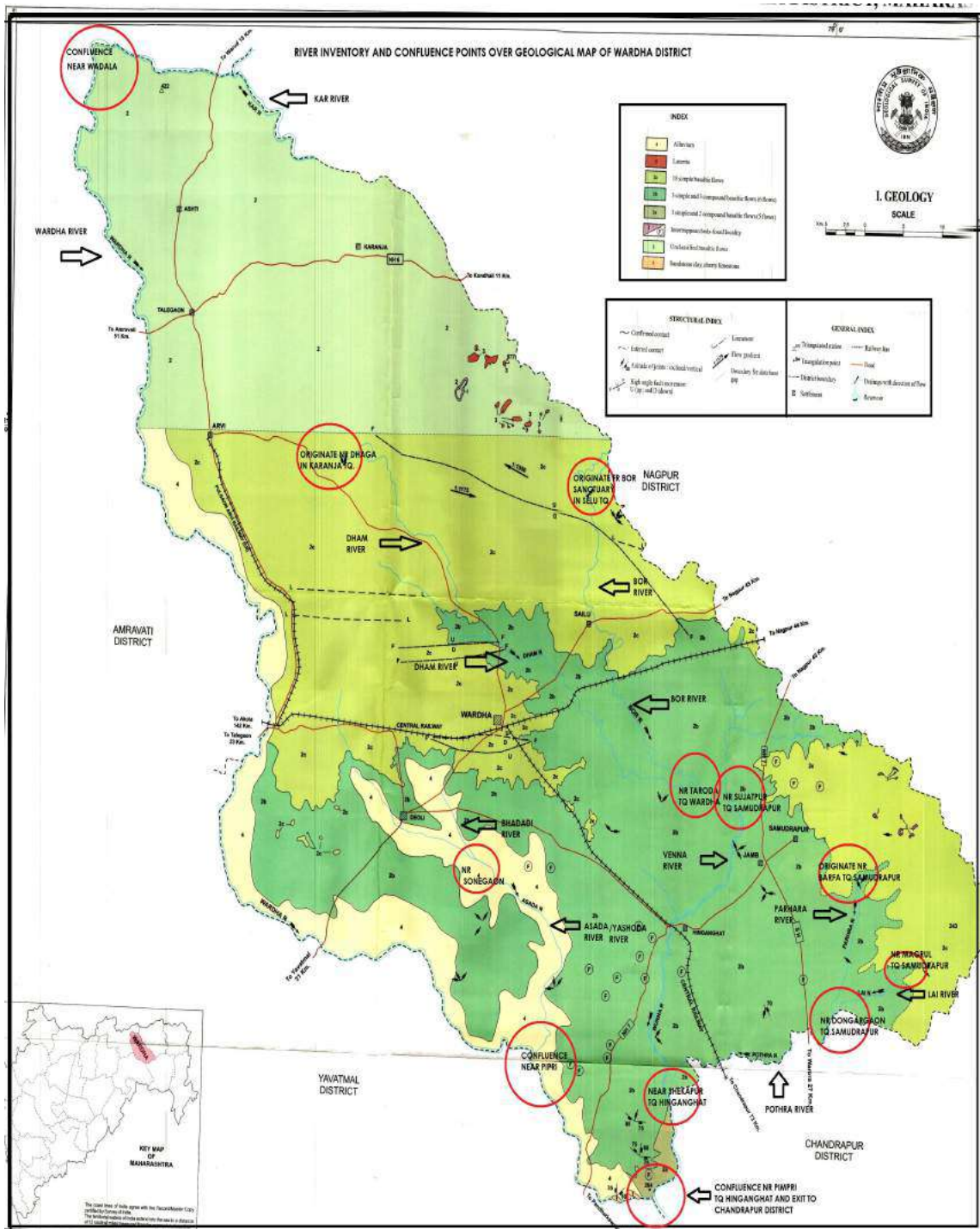
Local geology:

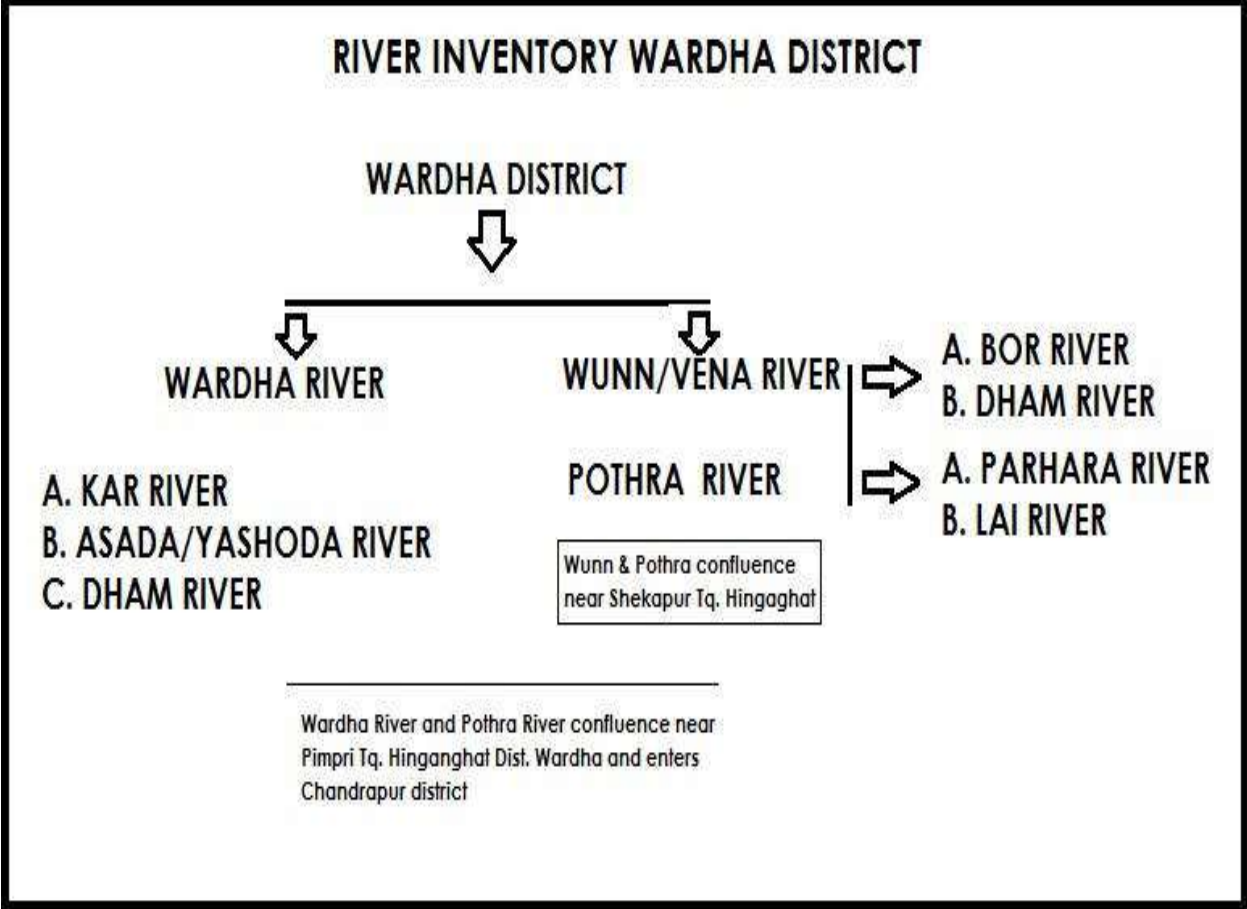
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Pardi	Samudrapur	Wana	217	1.34	560mx24mx1.00m	4749

Approach road available over pandan rd of 0.70 Km connecting Pardi - Isabpur rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

**iv) Magnitude of operation:
Proposed production**

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Pardi	Samudrapur	Wana	217	1.34	560mx24mx1.00m	4749

sand ghatwise proposed production is enclosed as annexure -1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.960m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.960
Total	1.960

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 48 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an

environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.

- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Pardi	Samudrapur	Wana	217	1.34	560mx24mx1.00m	4749

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	560 mx 24 m x 1.00 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Saikheda	Arvi	Wardha	24,25,26,27,28,29	2.00	800mx25mx0.50m	3933

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

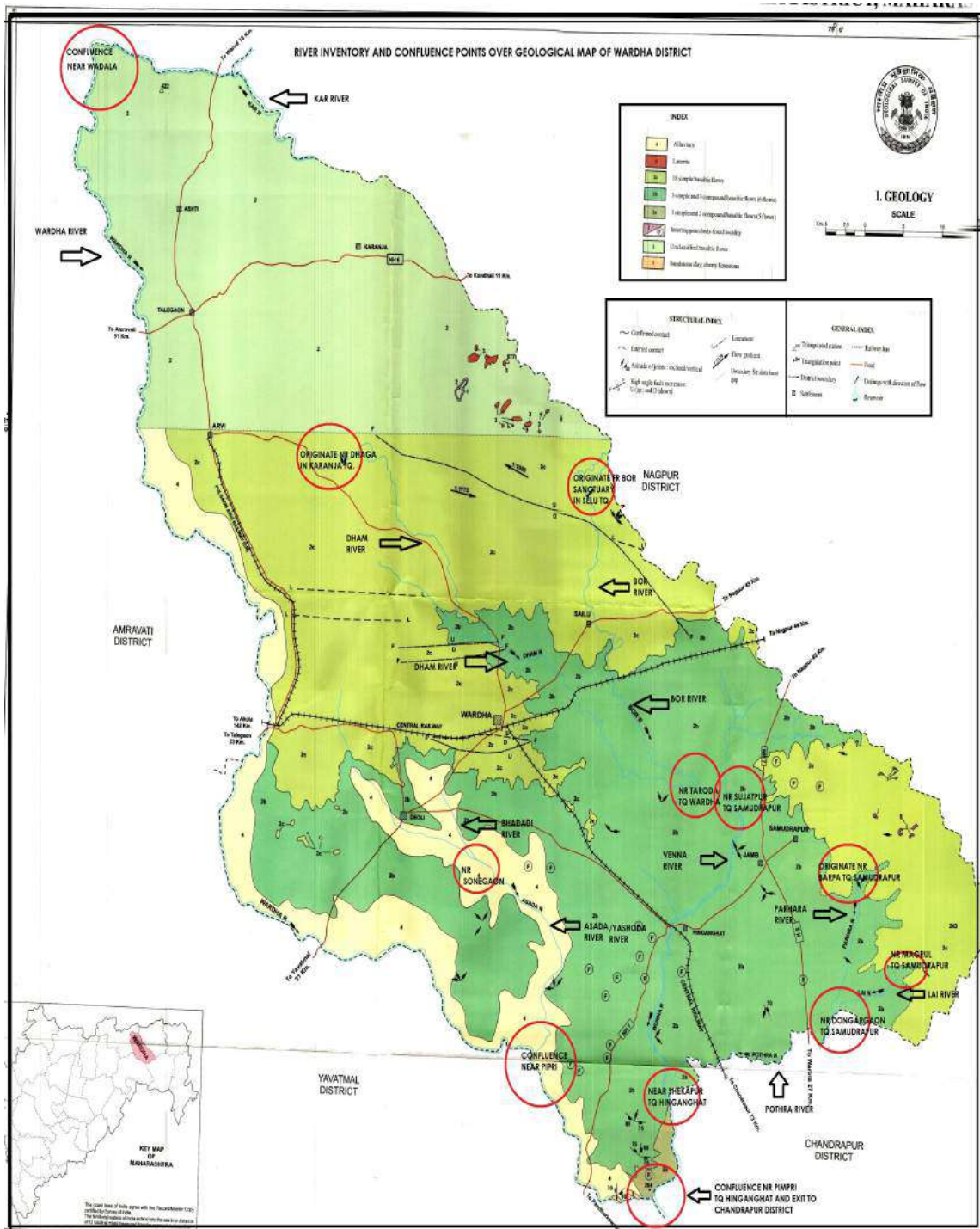
Local geology:

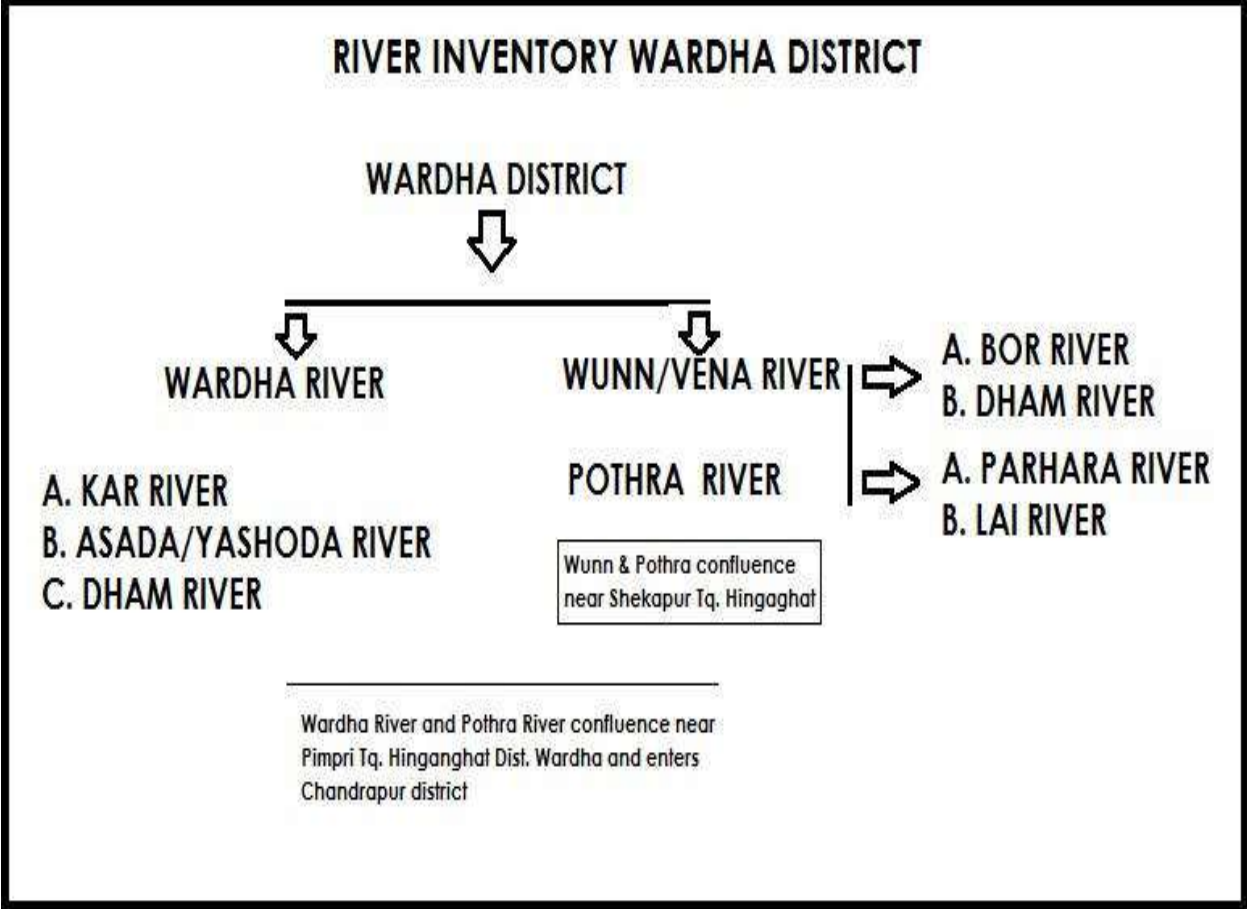
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Saikheda	Arvi	Wardha	24,25,26,27,28,29	2.00	800mx25mx0.50m	3933

Approach road available over pandan rd of 670m connecting Saikheda- Hiwara rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Saikheda	Arvi	Wardha	24,25,26,27,28,29	2.00	800mx25mx0.50m	3933

sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.760m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.760
Total	1.760

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 38 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Saikheda	Arvi	Wardha	24,25,26,27,28,29	2.00	800mx25mx0.50m	3933

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	800 mx 25 m x 0.50 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Salfal	Arvi	Wardha	7,8,9/1,14,15,16	1.00	500mx20mx0.40m	1413

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhoni and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

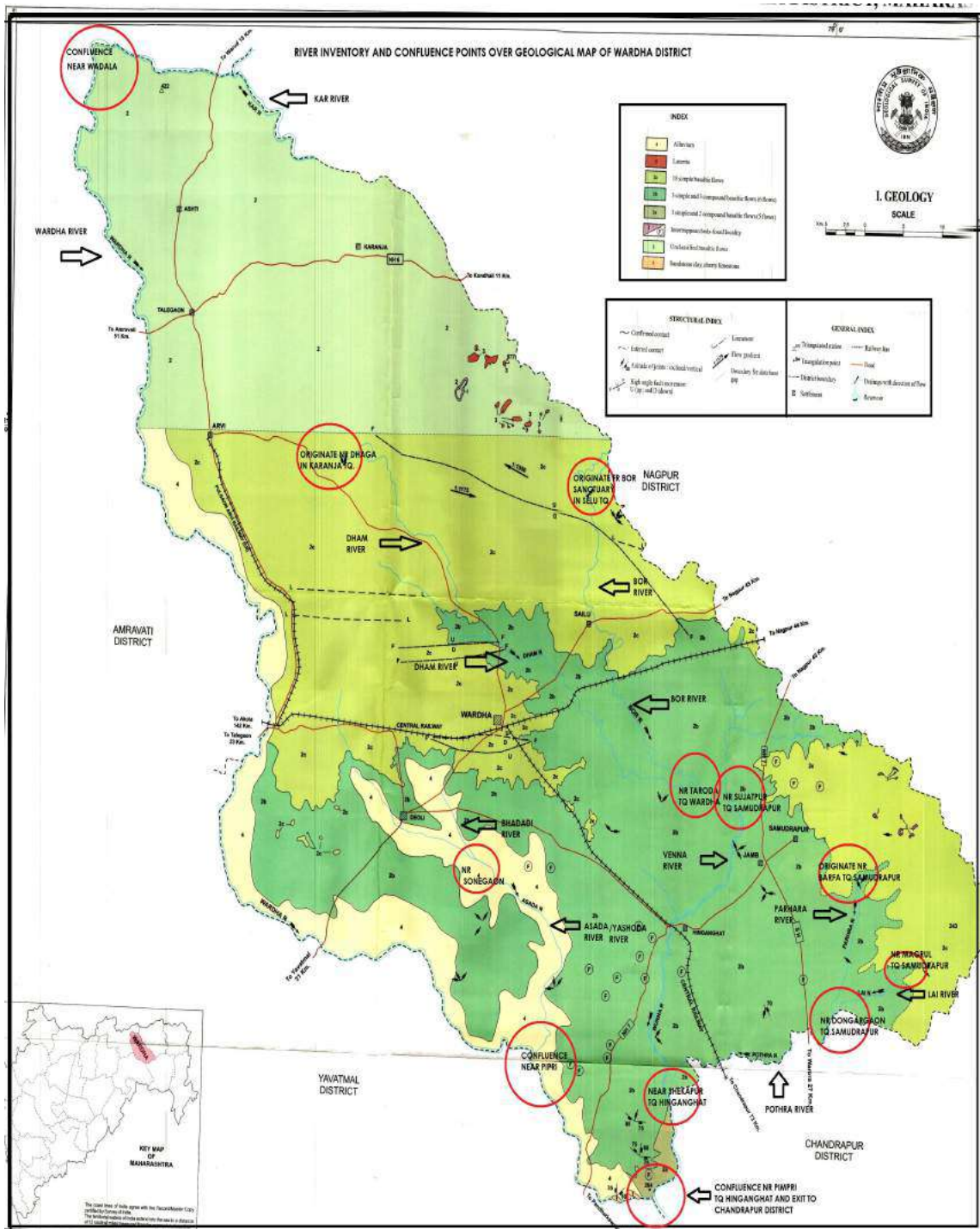
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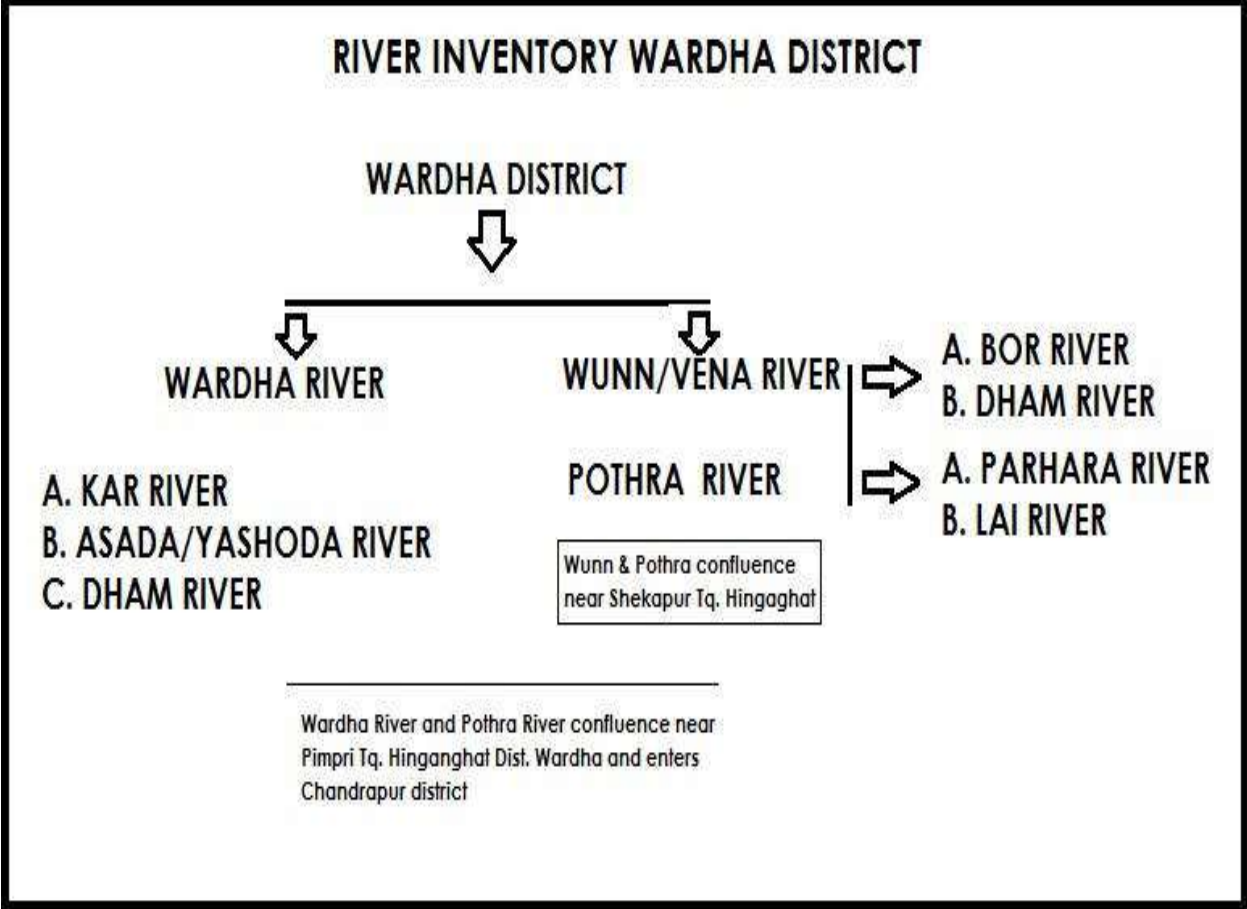
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Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





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District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Salfal	Arvi	Wardha	7,8,9/1,14,15,16	1.00	500mx20mx0.40m	1413

Approach road available over pandan rd of 1Km connecting Salfal village road and then to Pulgaon Arvi rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Salfal	Arvi	Wardha	7,8,9/1,14,15,16	1.00	500mx20mx0.40m	1413

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Salfal	Arvi	Wardha	7,8,9/1,14,15,16	1.00	500mx20mx0.40m	1413

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	500 mx 20 m x 0.40 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sawangi Rith	Hinganghat	Wardha	84,95	1.05	350mx30mx0.50m	1855

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

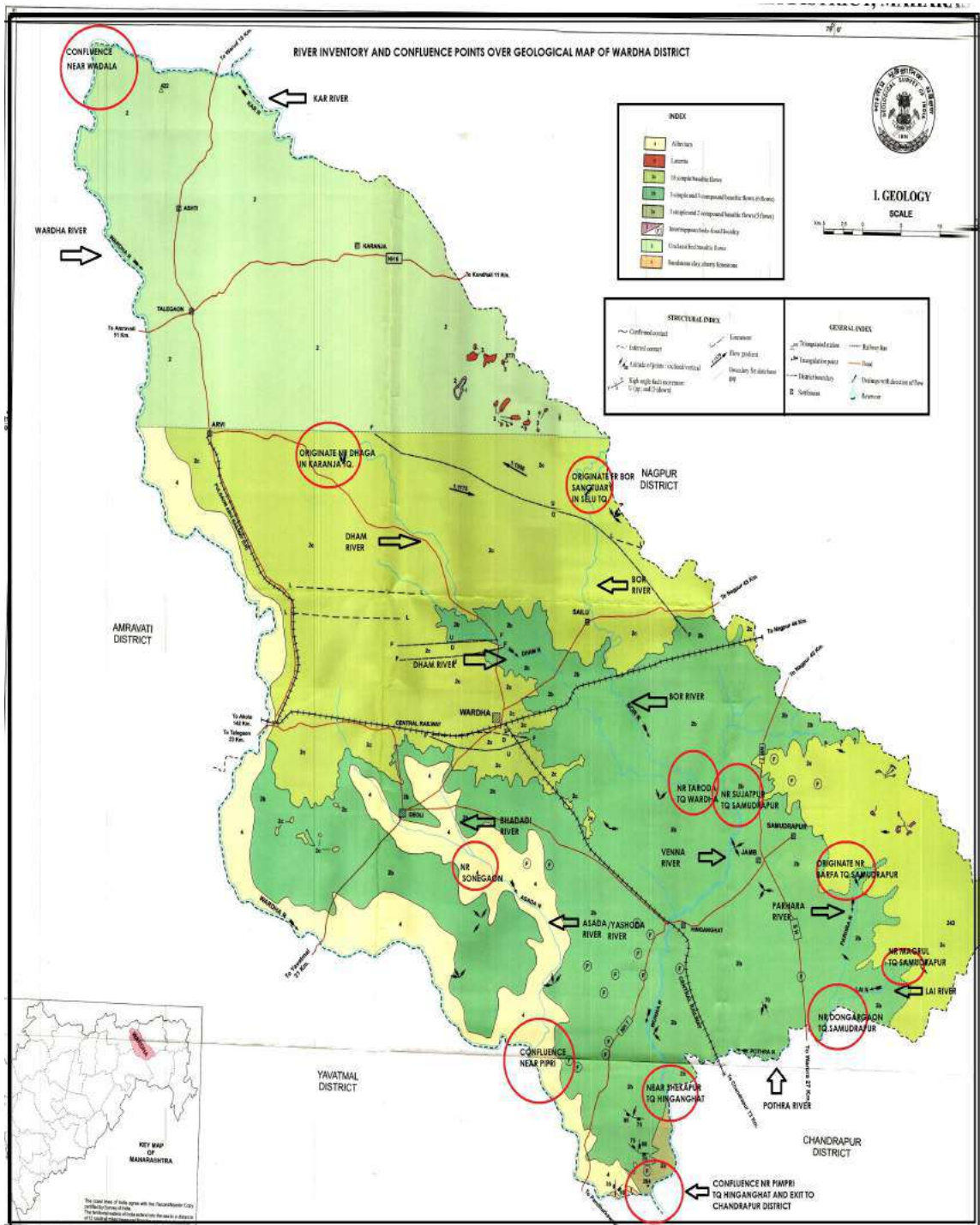
Local geology:

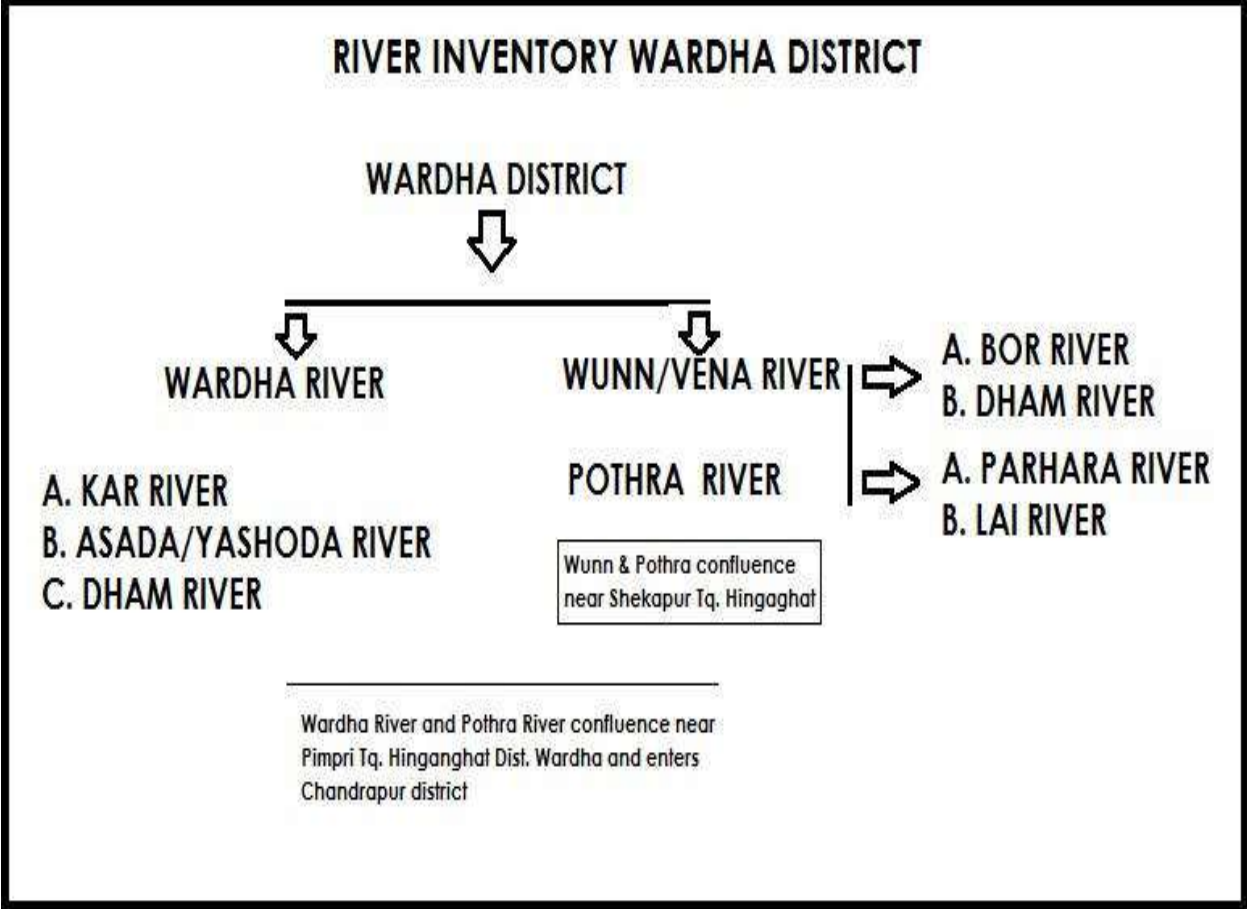
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sawangi Rith	Hinganghat	Wardha	84,95	1.05	350mx30mx0.50m	1855

Approach road connect to 730m to Sawangi rd

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sawangi Rith	Hinganghat	Wardha	84,95	1.05	350mx30mx0.50m	1855

sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

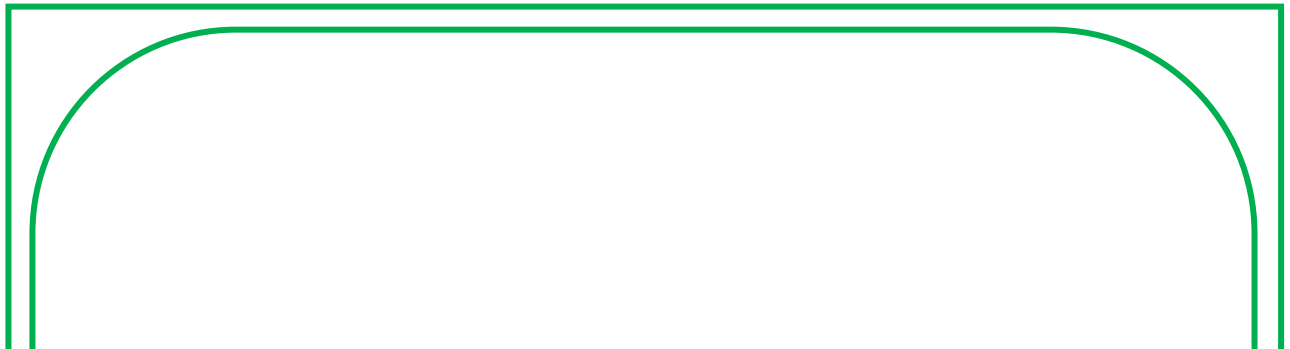
Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sawangi Rith	Hinganghat	Wardha	84,95	1.05	350mx30mx0.50m	1855

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	350 mx 30 m x0.50 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Seva 2	Samudrapur	Wana	85,86,87,88/2	1.38	460mx30mx0.70m	3413

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

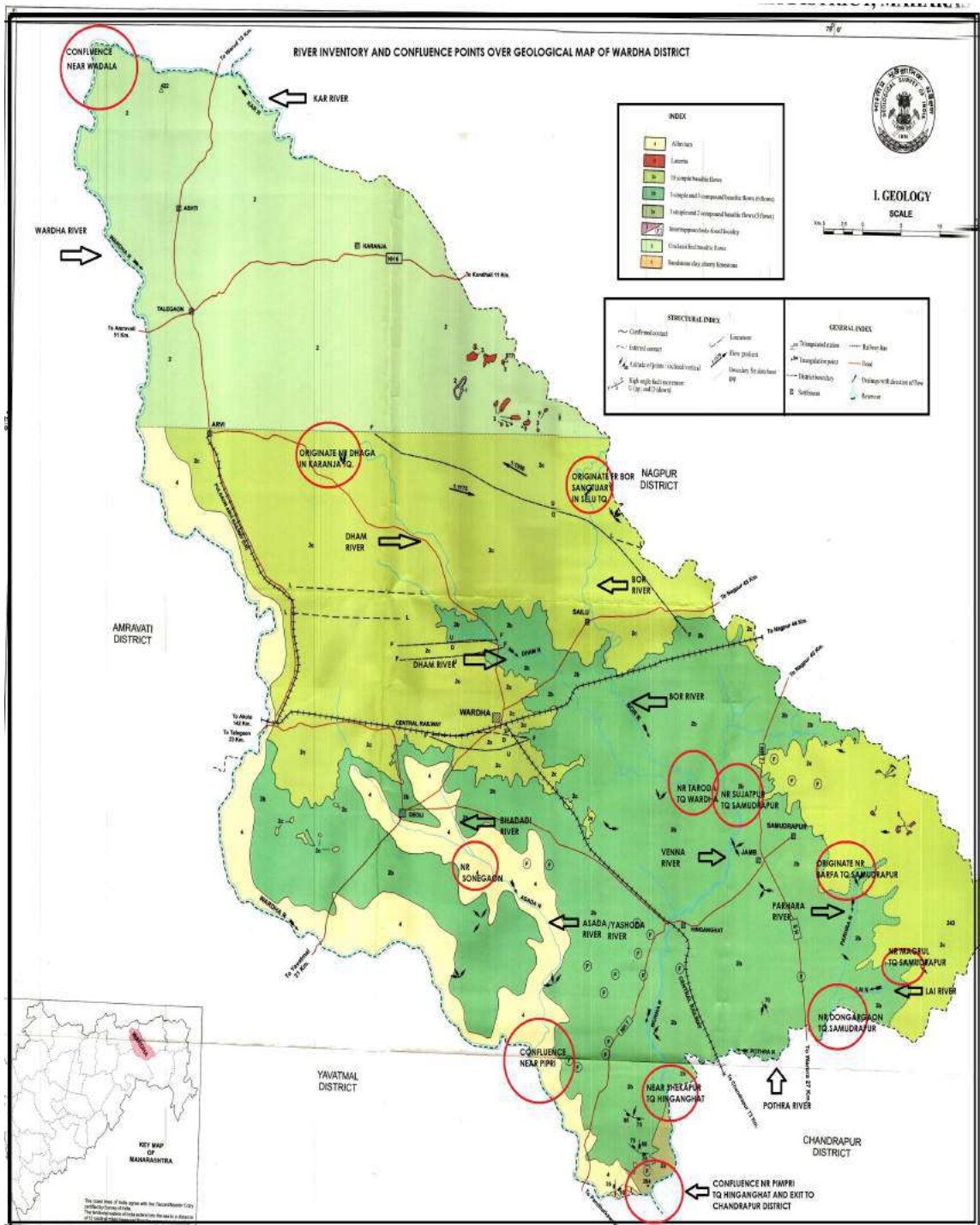
Local geology:

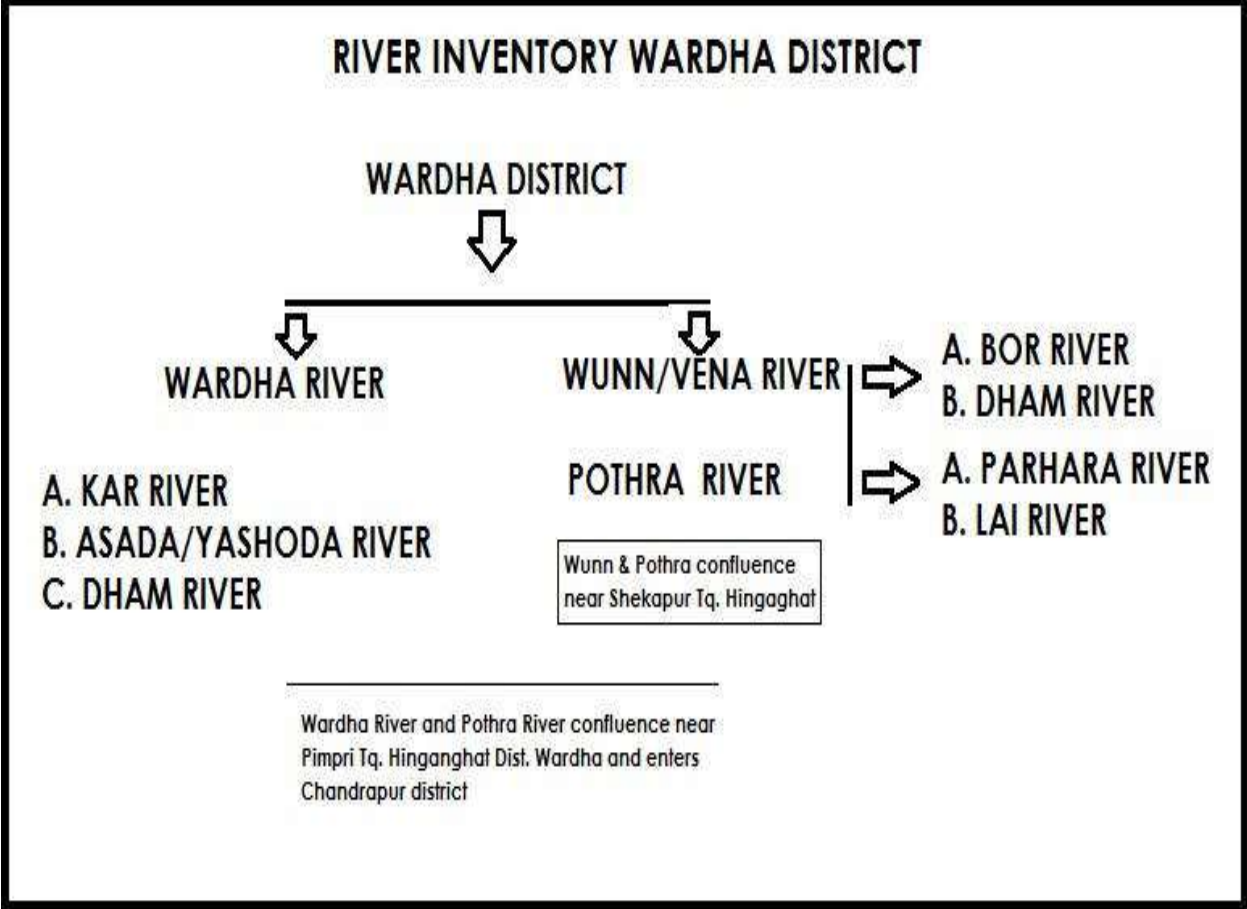
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Seva 2	Samudrapur	Wana	85,86,87,88/2	1.38	460mx30mx0.70m	3413

Approach road available over pandan rd of 370m and then to Seva road

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Seva 2	Samudrapur	Wana	85,86,87,88/2	1.38	460mx30mx0.70m	3413

sand ghatwise proposed production is enclosed as annexure - 1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass

Wardha	185153	121057
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(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.760m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.760
Total	1.760

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 38 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Seva 2	Samudrapur	Wana	85,86,87,88/2	1.38	460mx30mx0.70m	3413

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	460 mx 30 m x 0.70 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shekapur Bai	Hinganghat	Wana	200,209,210	1.60	400mx40mx0.60m	3392

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

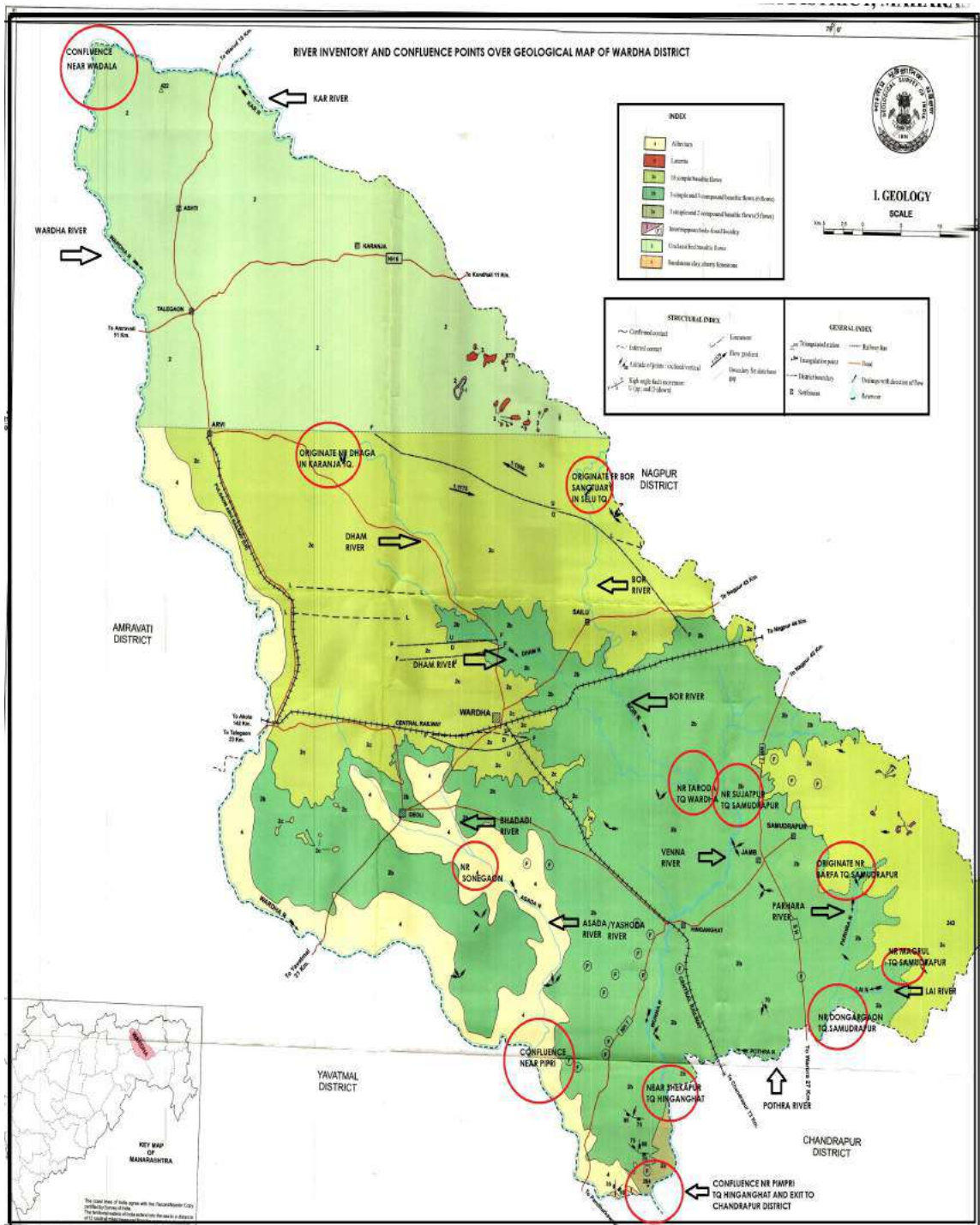
Local geology:

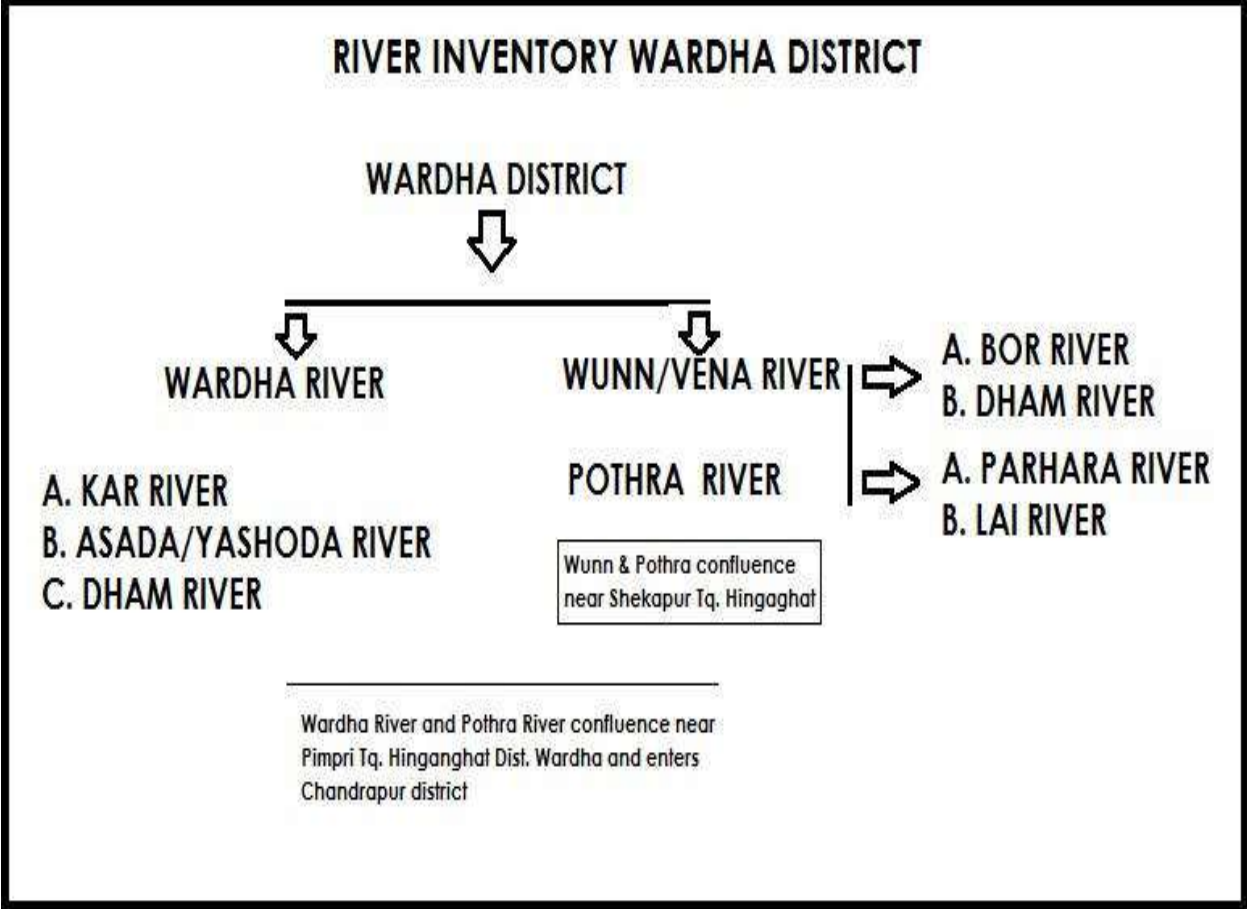
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shekapur Bai	Hinganghat	Wana	200,209,210	1.60	400mx40mx0.60m	3392

Approach road available over pandan rd of 0.83 Km connecting Bori - Bambarda rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shekapur Bai	Hinganghat	Wana	200,209,210	1.60	400mx40mx0.60m	3392

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shekapur Bai	Hinganghat	Wana	200,209,210	1.60	400mx40mx0.60m	3392

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	400 mx 40 m x0.60 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129,128 ,69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22,23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345,861,348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shivni 1	Samudrapur	Wana	68,69,128,129,130,361	1.05	420mx25mx0.40m	1484

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhoni and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

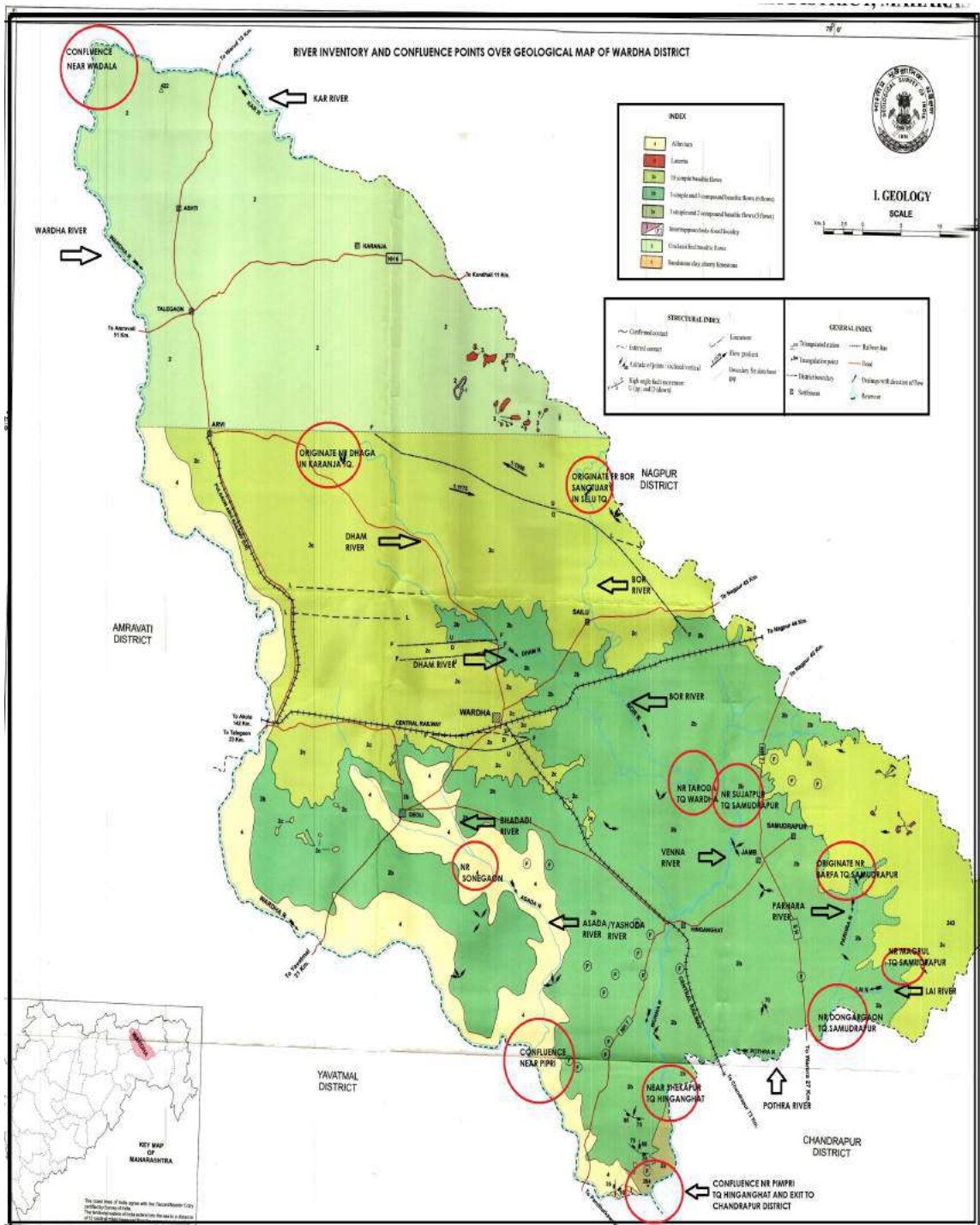
Local geology:

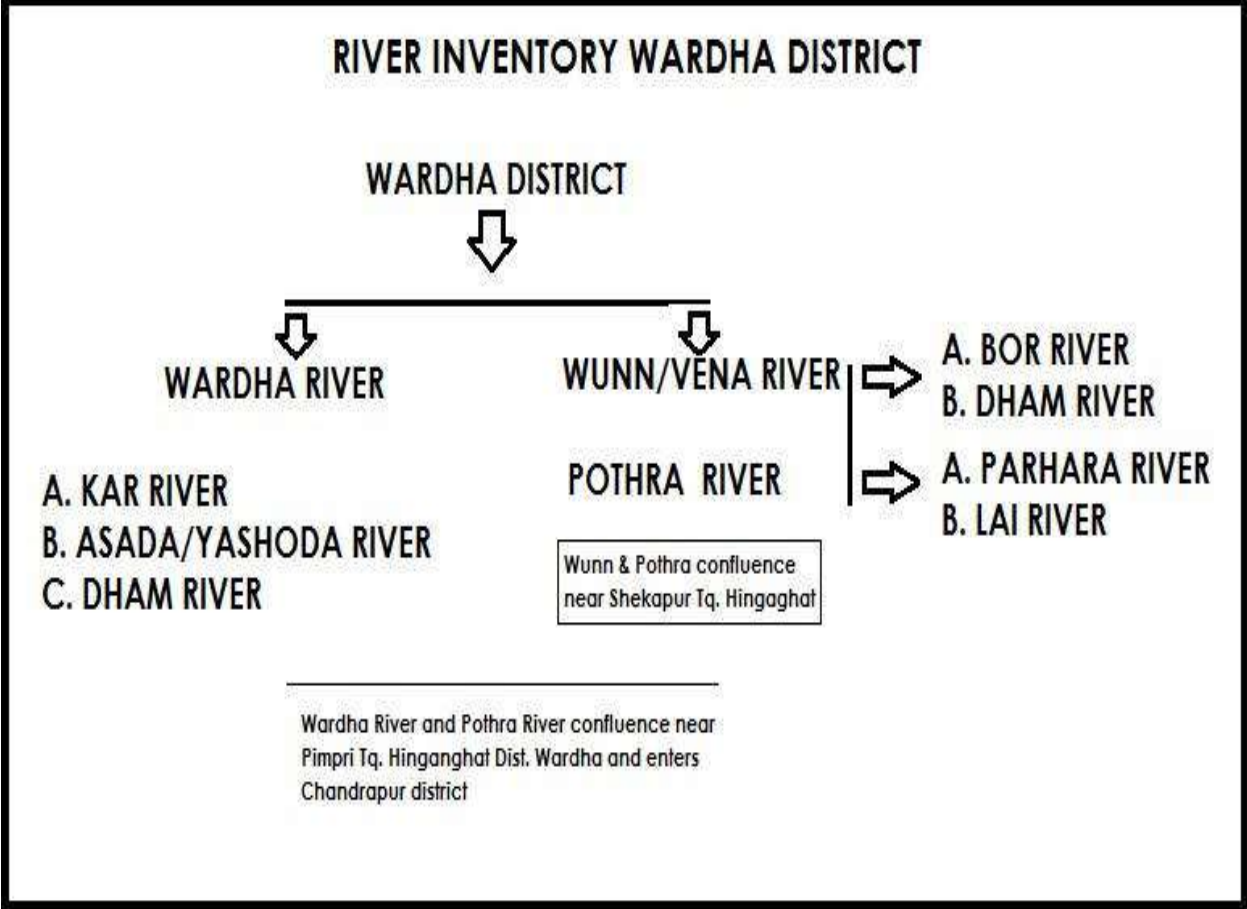
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shivni 1	Samudrapur	Wana	68,69,128,129,130,361	1.05	420mx25mx0.40m	1484

Approach road available over pandan rd of 250m and then to Shivni Rd

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shivni 1	Samudrapur	Wana	68,69,128,129,130,361	1.05	420mx25mx0.40m	1484

sand ghatwise proposed production is enclosed as annexure - 1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shivni 1	Samudrapur	Wana	68,69,128,129,130,361	1.05	420mx25mx0.40m	1484

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	420 mx 25 m x 0.40 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shivni 2	Samudrapur	Wana	22,23	1.75	500mx35mx0.40m	2473

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly

recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

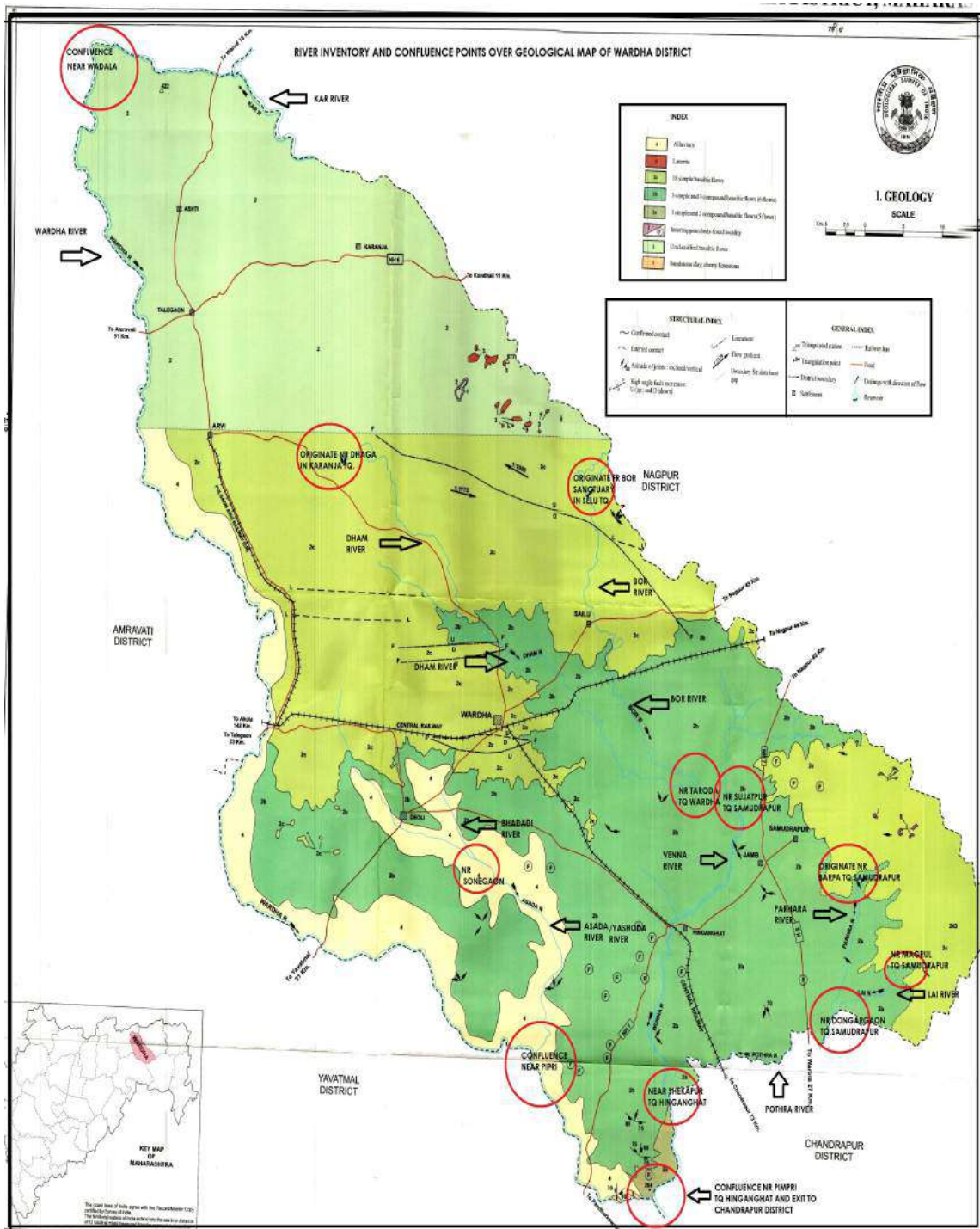
Local geology:

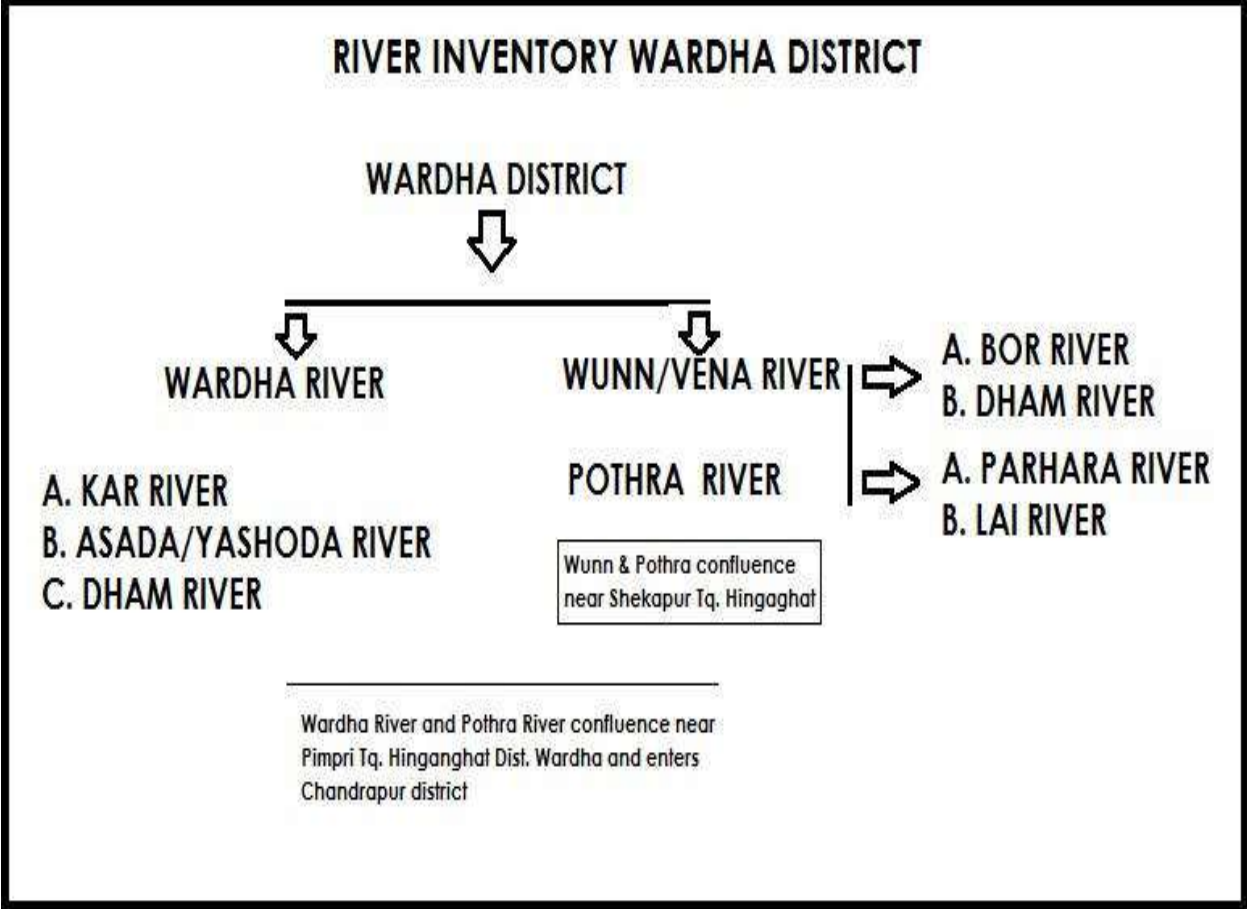
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about Rs 50.46 Crores through auction of these sand ghats. Production cost is around Rs 4168.00 per Brass. Average selling rate is Rs 5700/brass. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shivni 2	Samudrapur	Wana	22,23	1.75	500mx35mx0.40m	2473

Approach road available over pandan rd of 250m and then to Shivni Rd

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shivni 2	Samudrapur	Wana	22,23	1.75	500mx35mx0.40m	2473

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one

year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .

vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Shivni 2	Samudrapur	Wana	22,23	1.75	500mx35mx0.40m	2473

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	500 mx 35 m x 0.40 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129,128 ,69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22,23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345,861,348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sonegaon(Dho)	Hinganghat	Wana	50,58,59/1,59/2	2.47	548mx45mx0.40m	3486

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly

recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms into an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river draining through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

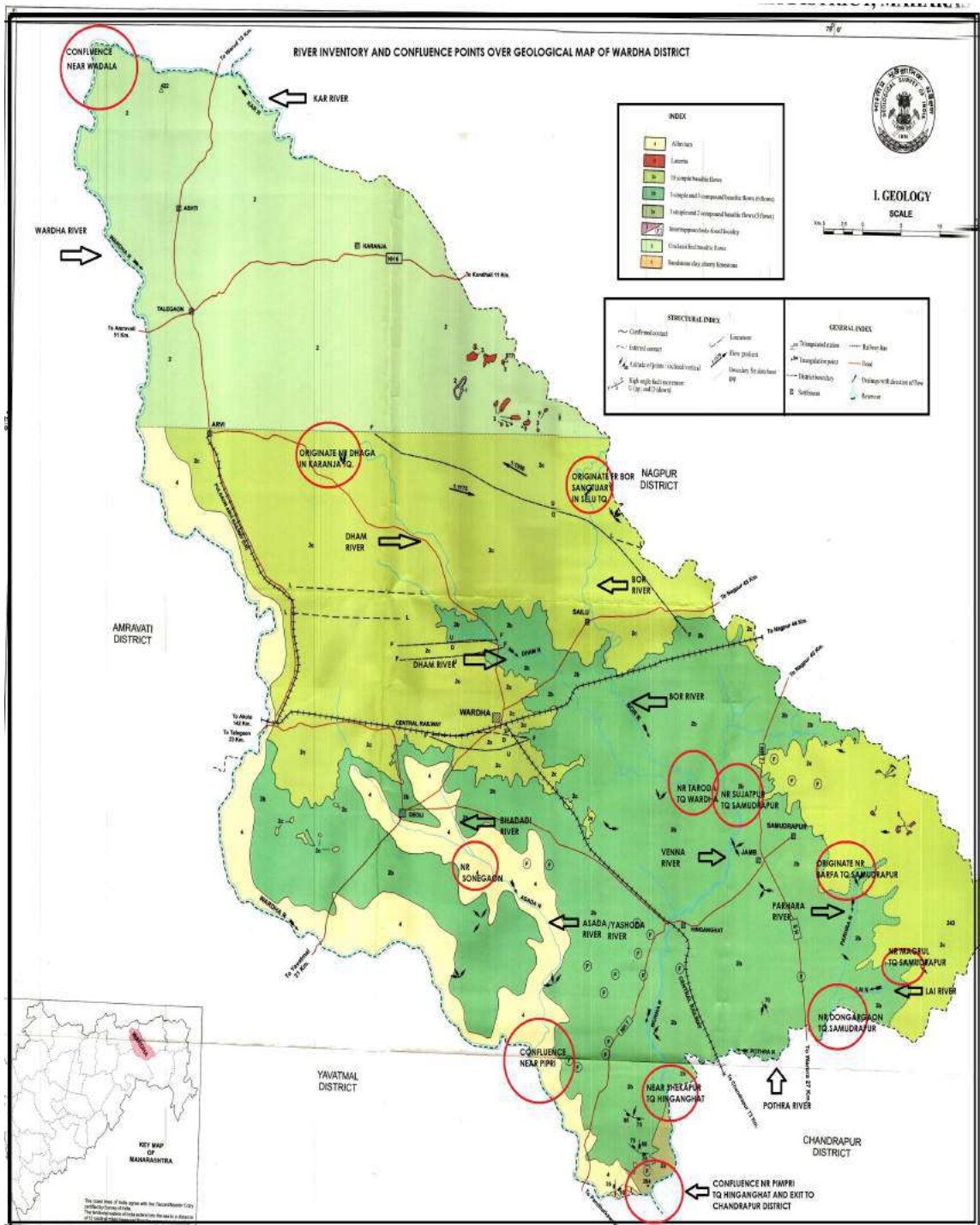
Local geology:

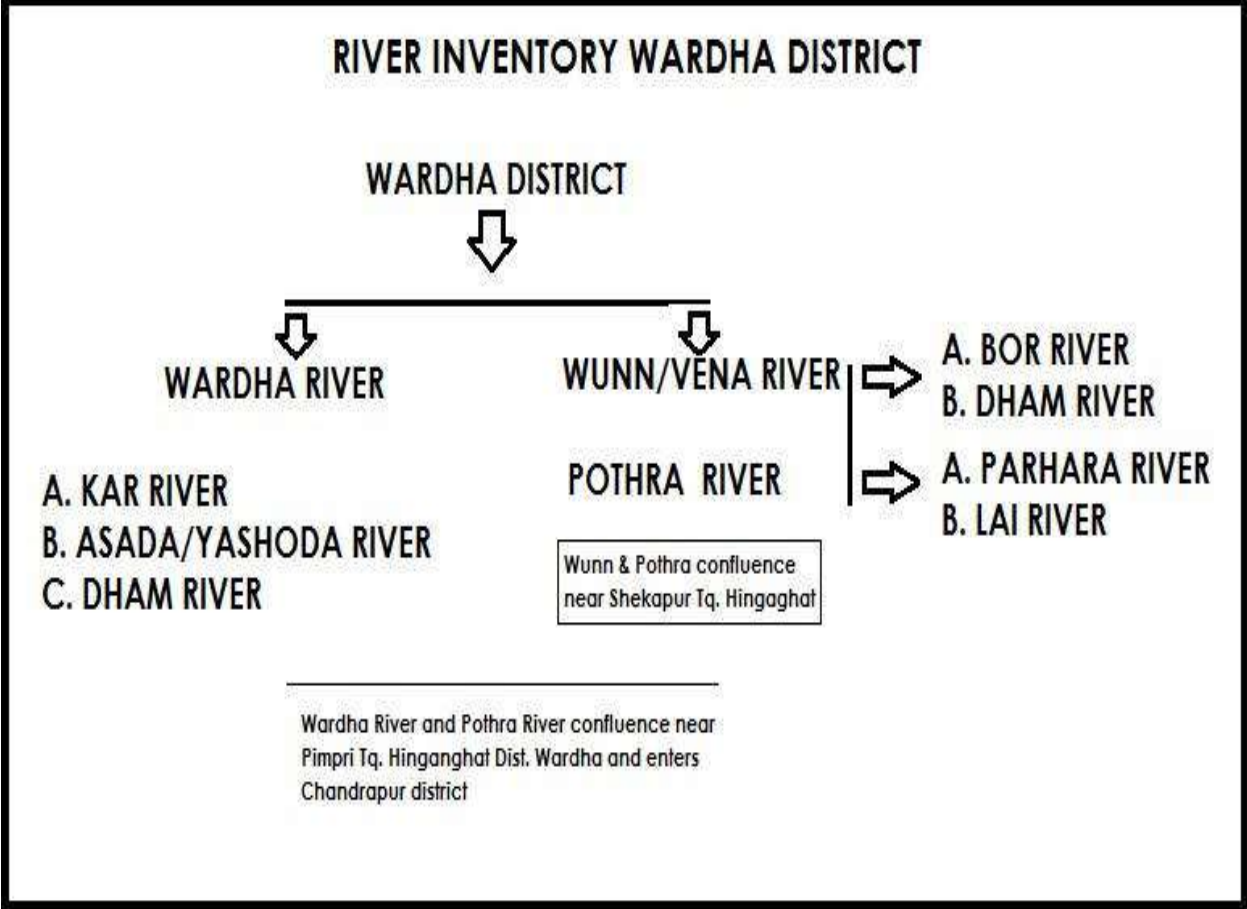
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sonegaon(Dho)	Hinganghat	Wana	50,58,59/1,59/2	2.47	548mx45mx0.40m	3486

Sonegaon Dhobe road connect at 280m

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sonegaon(Dho)	Hinganghat	Wana	50,58,59/1,59/2	2.47	548mx45mx0.40m	3486

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.760m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.760
Total	1.760

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 38 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as

monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.

v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .

vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sonegaon(Dho)	Hinganghat	Wana	50,58,59/1,59/2	2.47	548mx45mx0.40m	3486

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	548 m x 45 m x 0.40 m

ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sonegaon Bai	Deoli	Yashoda	79,80,103,105,106,107,126,127,128,129	1.20	500mx24mx0.50m	2120

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

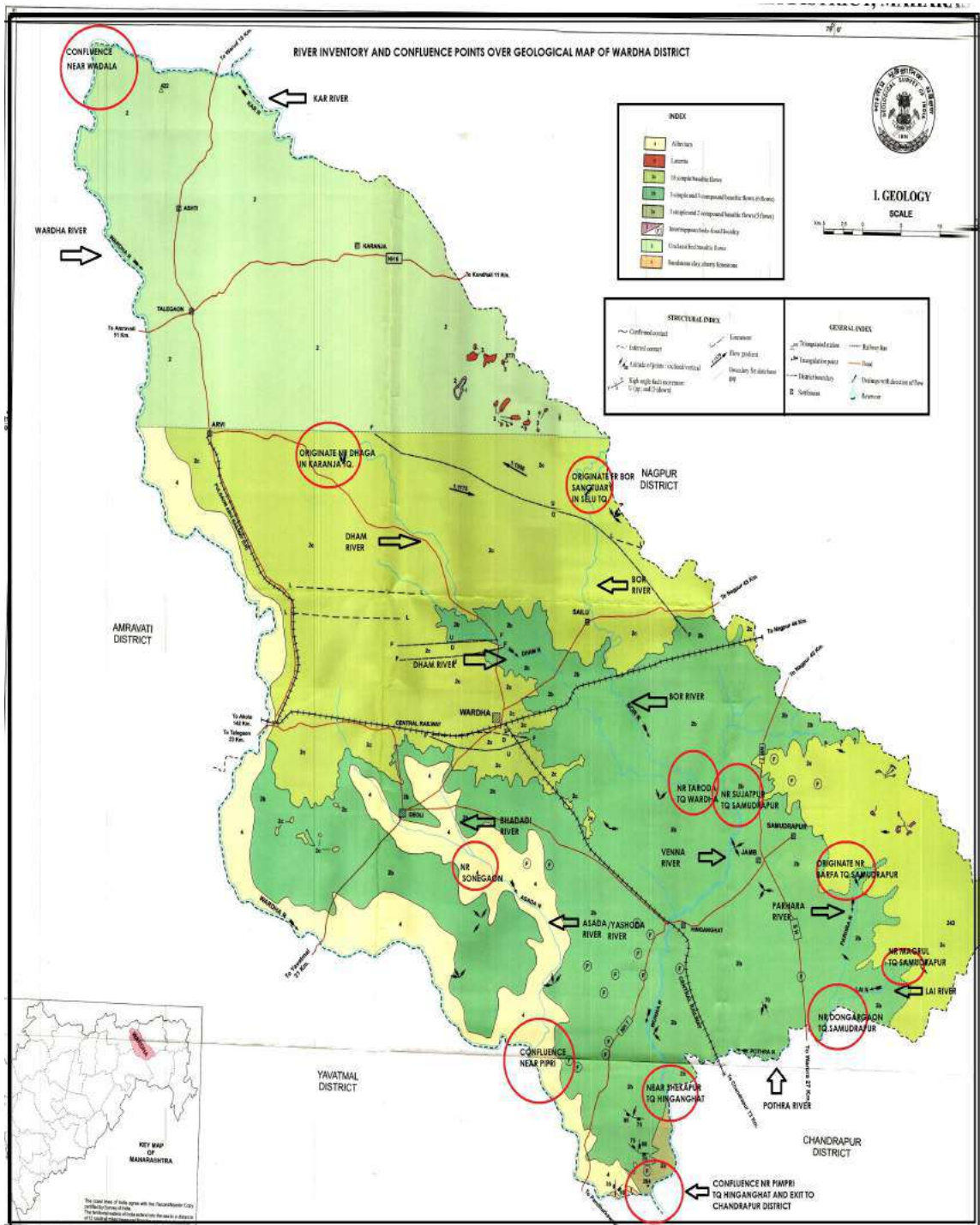
Local geology:

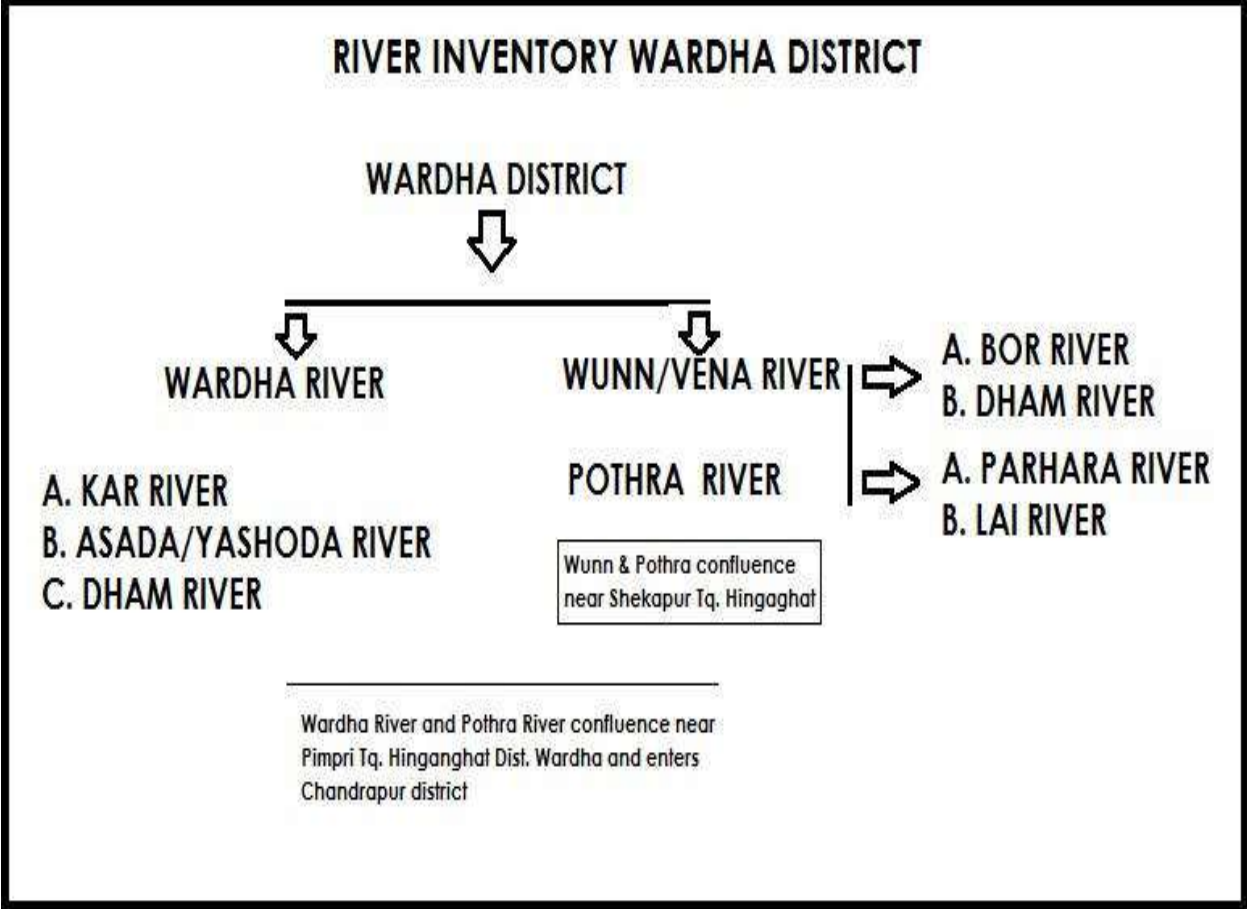
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sonegaon Bai	Deoli	Yashoda	79,80,103,105,106,107,126,127,128,129	1.20	500mx24mx0.50m	2120

Approach road available over pandan rd of 0.08 Km connecting Itala village rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sonegaon Bai	Deoli	Yashoda	79,80,103,105,106,107,126,127,128,129	1.20	500mx24mx0.50m	2120

sand ghatwise proposed production is enclosed as annexure - 1
Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Sonegaon Bai	Deoli	Yashoda	79,80,103,105,106,107,126,127,128,129	1.20	500mx24mx0.50m	2120

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	500 mx 24 m x 0.50 m

ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
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18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Takli(Darne)	Deoli	Yashoda	31,32,33,34,35,36	1.02	320mx32mx0.50m	1809

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

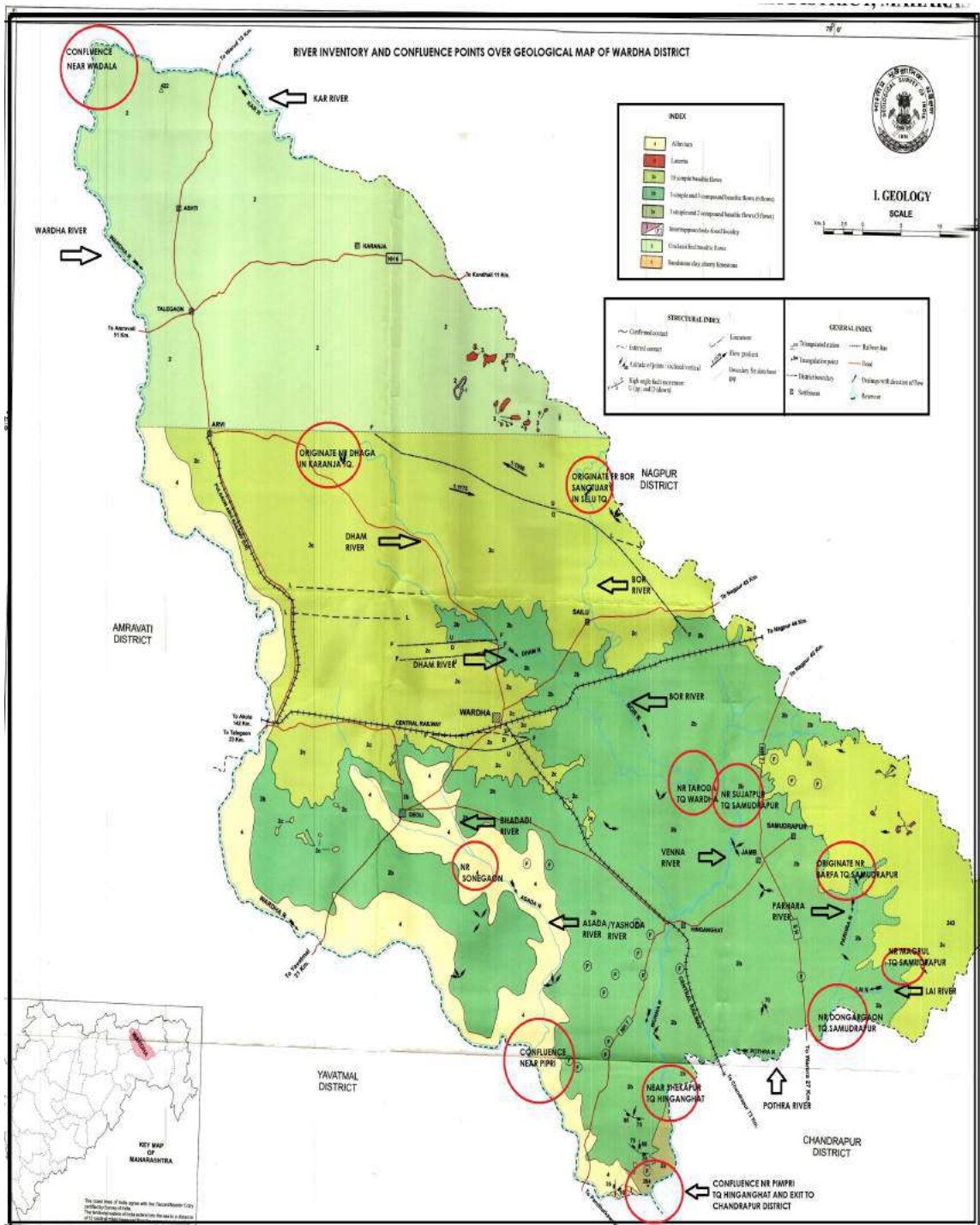
Local geology:

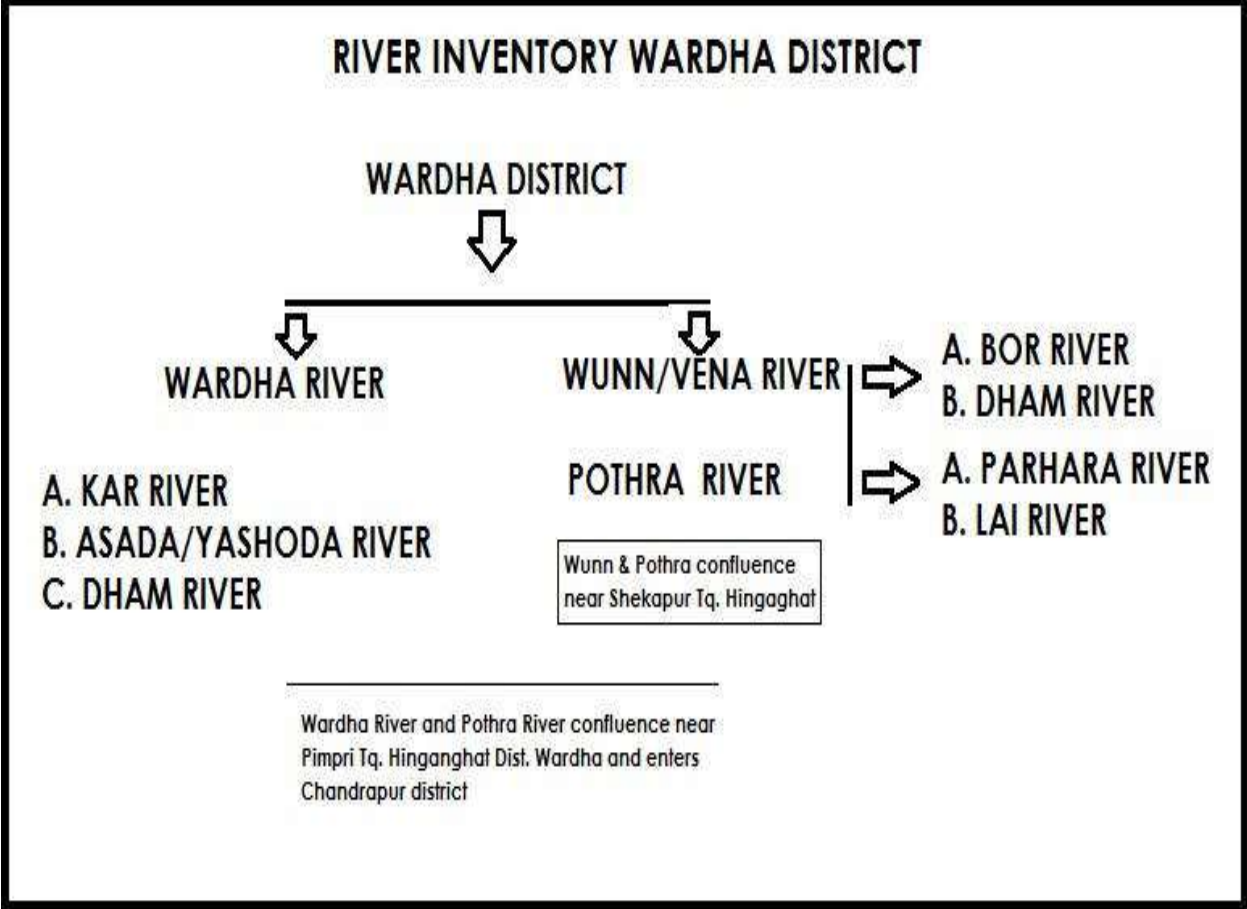
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Takli(Darne)	Deoli	Yashoda	31,32,33,34,35,36	1.02	320mx32mx0.50m	1809

Approach road available over pandan rd of 0.86 Km connecting Takali village rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Takli(Darne)	Deoli	Yashoda	31,32,33,34,35,36	1.02	320mx32mx0.50m	1809

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 28 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one

year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .

vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Takli(Darne)	Deoli	Yashoda	31,32,33,34,35,36	1.02	320mx32mx0.50m	1809

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	320 mx 32 m x 0.50 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Takli Chana -1	Deoli	Yashoda	11,14,297,34	1.23	350mx35mx0.40m	1731

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

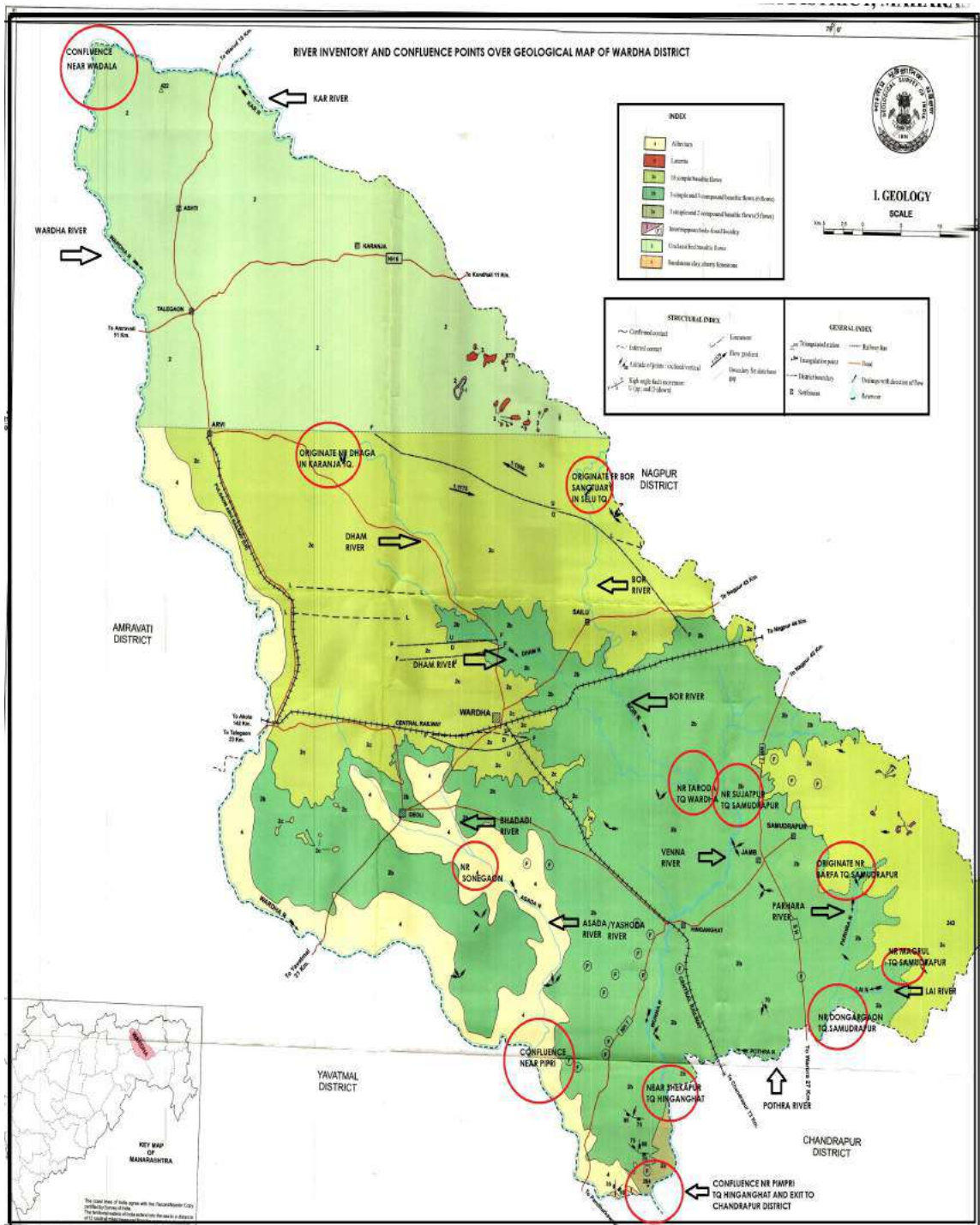
Local geology:

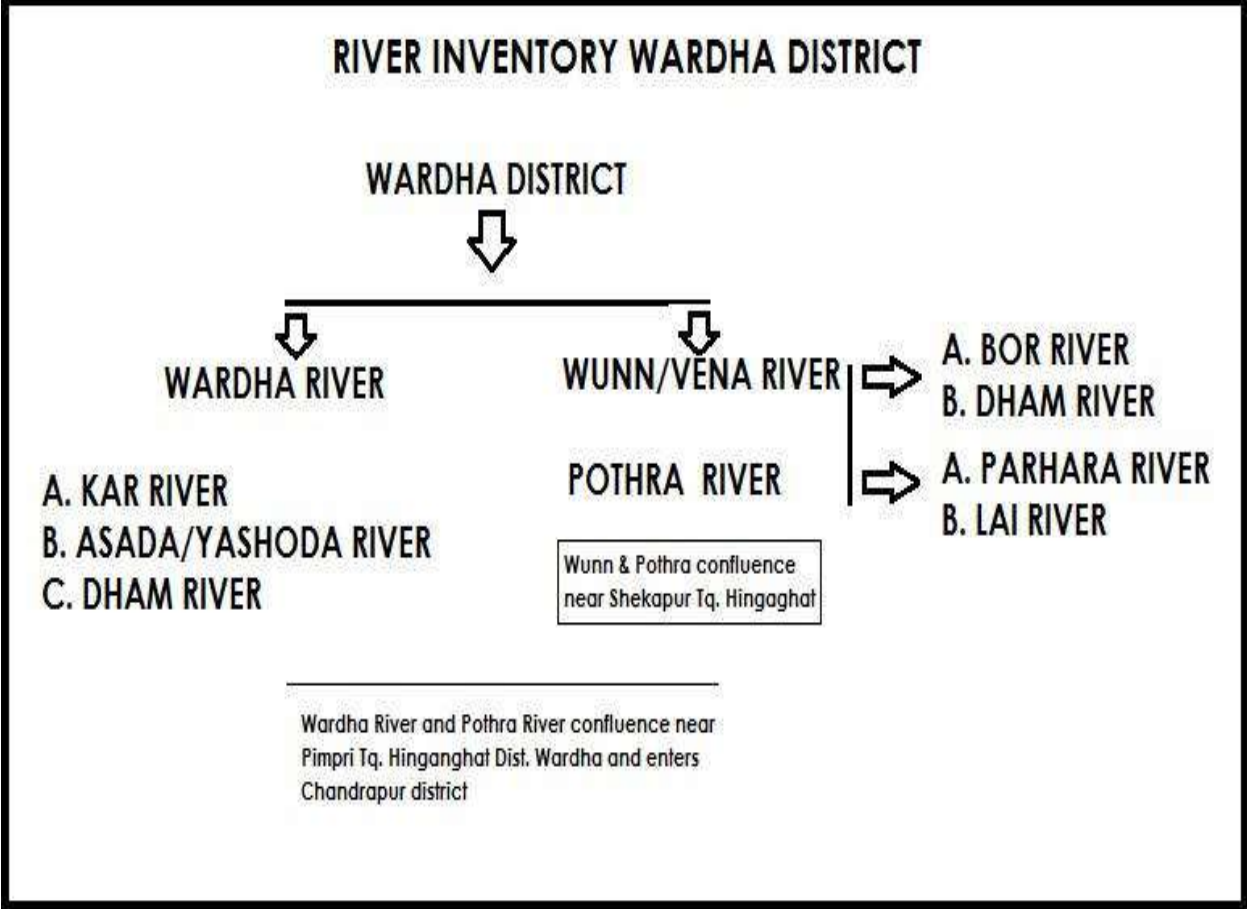
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Takli Chana -1	Deoli	Yashoda	11,14,297,34	1.23	350mx35mx0.40m	1731

Approach road available over pandan rd of 1 Km connecting Serul - Waigaon rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation:

Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Takli Chana -1	Deoli	Yashoda	11,14,297,34	1.23	350mx35mx0.40m	1731

sand ghatwise proposed production is enclosed as annexure - 1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Takli Chana -1	Deoli	Yashoda	11,14,297,34	1.23	350mx35mx0.40m	1731

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	350 mx 35 m x 0.40 m

ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Tamba-1	Deoli	Wardha	36,37,45,46,47,48,57,58	1.23	350mx35mx0.50m	2164

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

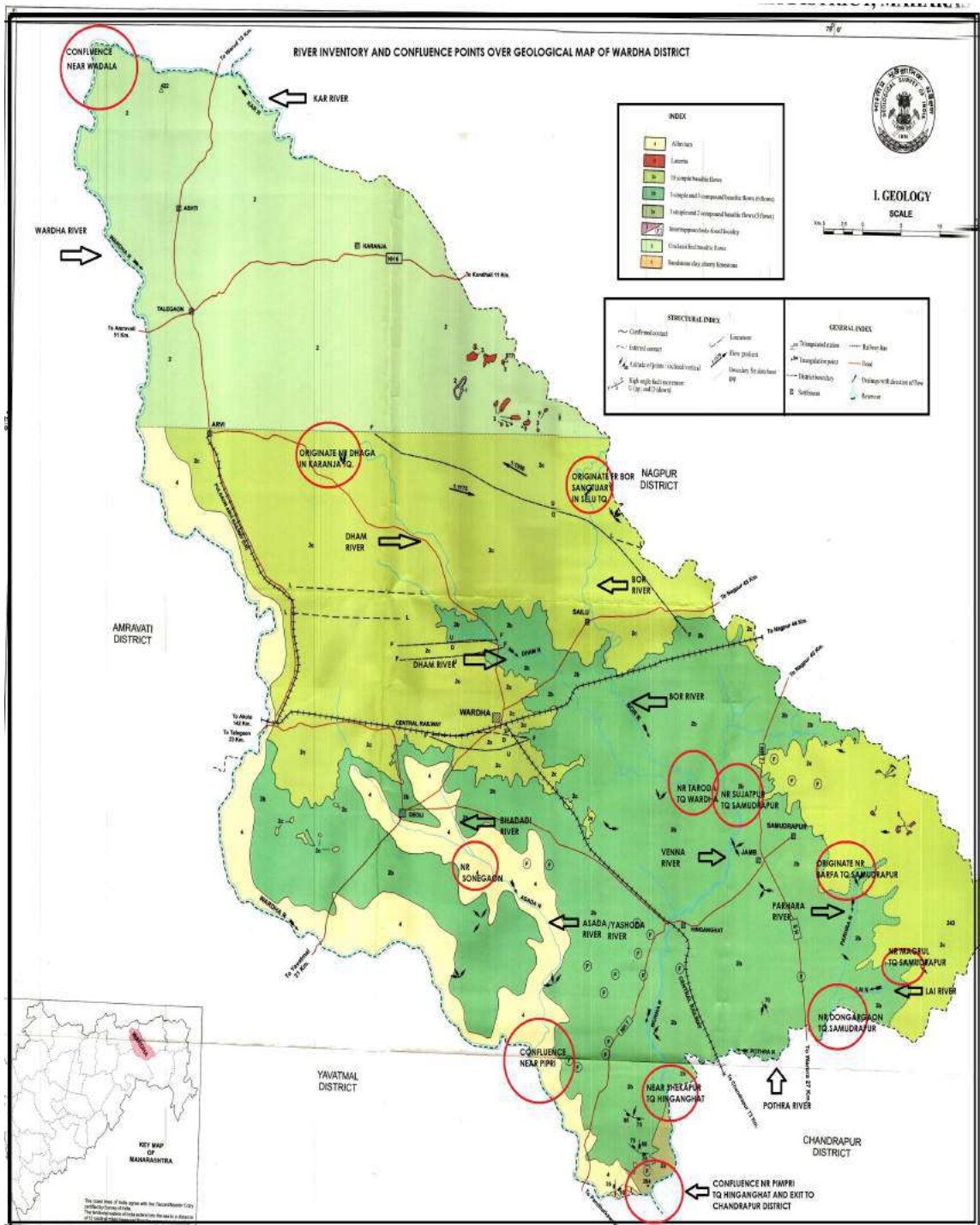
Local geology:

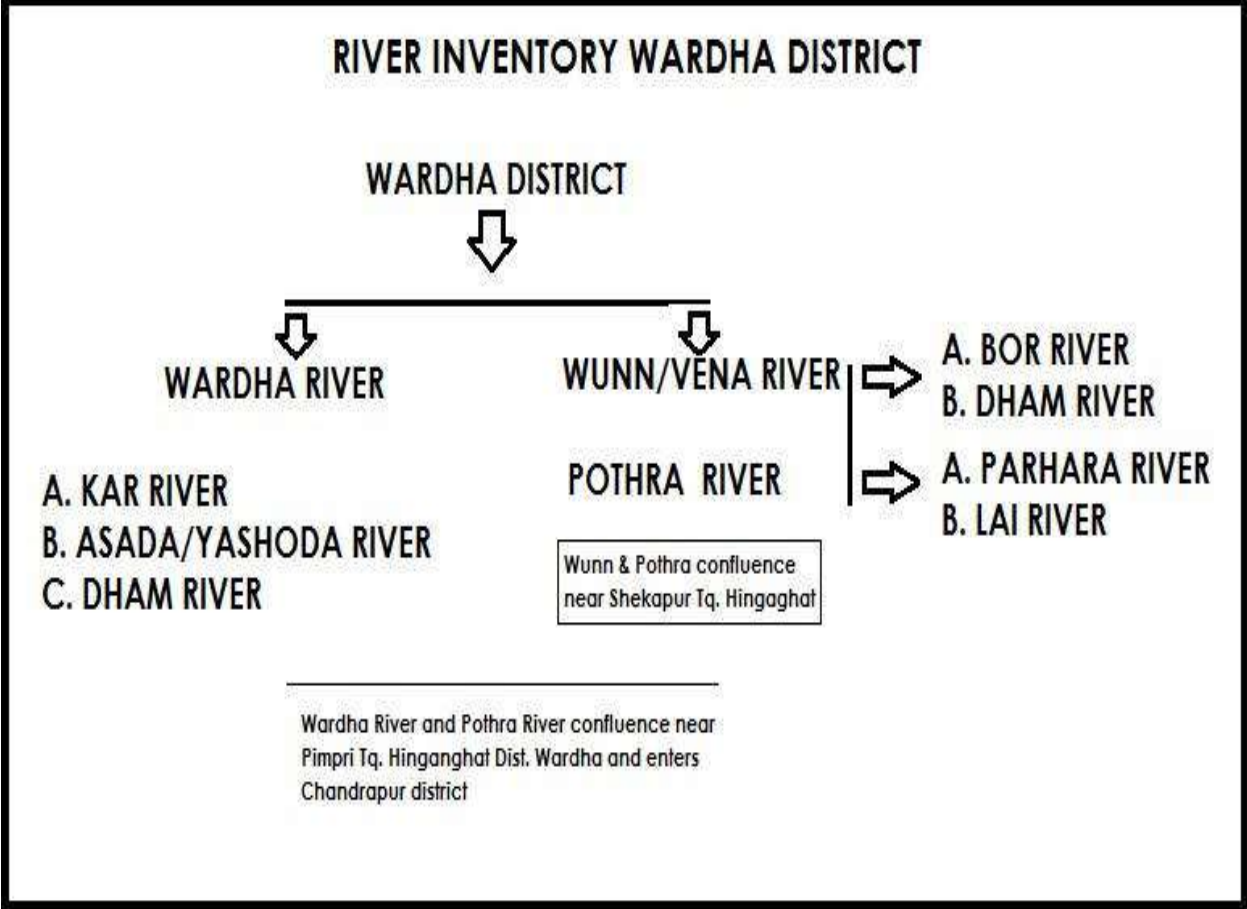
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Tamba-1	Deoli	Wardha	36,37,45,46,47,48,57,58	1.23	350mx35mx0.50m	2164

Approach road available over pandan rd of 730m connecting Tembha Sawangi rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Tamba-1	Deoli	Wardha	36,37,45,46,47,48,57,58	1.23	350mx35mx0.50m	2164

**sand ghatwise proposed production is enclosed as annexure - 1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Tamba-1	Deoli	Wardha	36,37,45,46,47,48,57,58	1.23	350mx35mx0.50m	2164

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	350 mx 35 m x 0.50 m

ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्वी	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	257, उमरा- 259, 258, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	दिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Tembha Pardi	Hinganghat	Wana	Tembha 154,155,156,160,161,162,187,188,189,198 ,Pardi-82,83,85,97,98,111,113	– 4.00	800mx50mx0.50m	7067

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly

recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

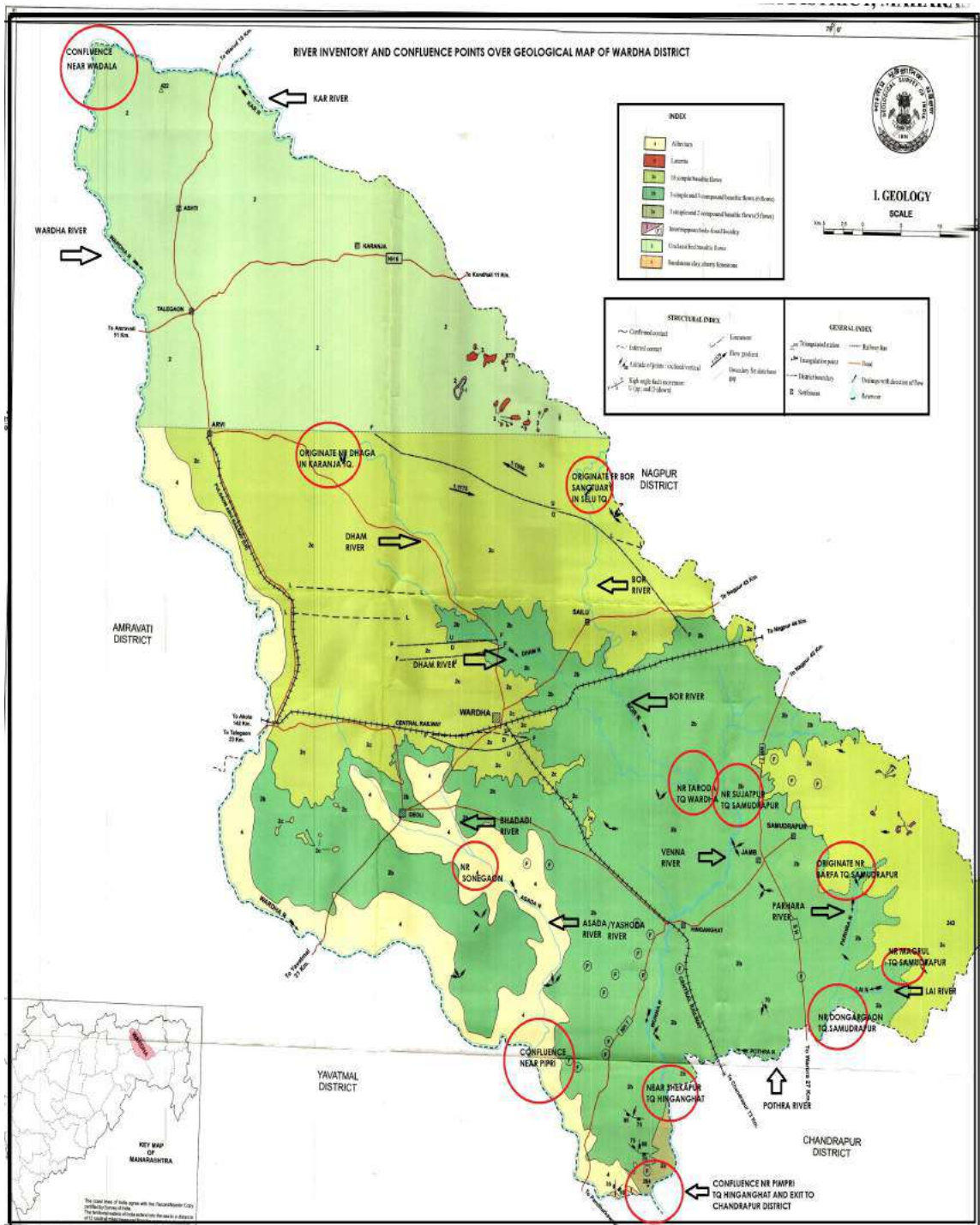
Local geology:

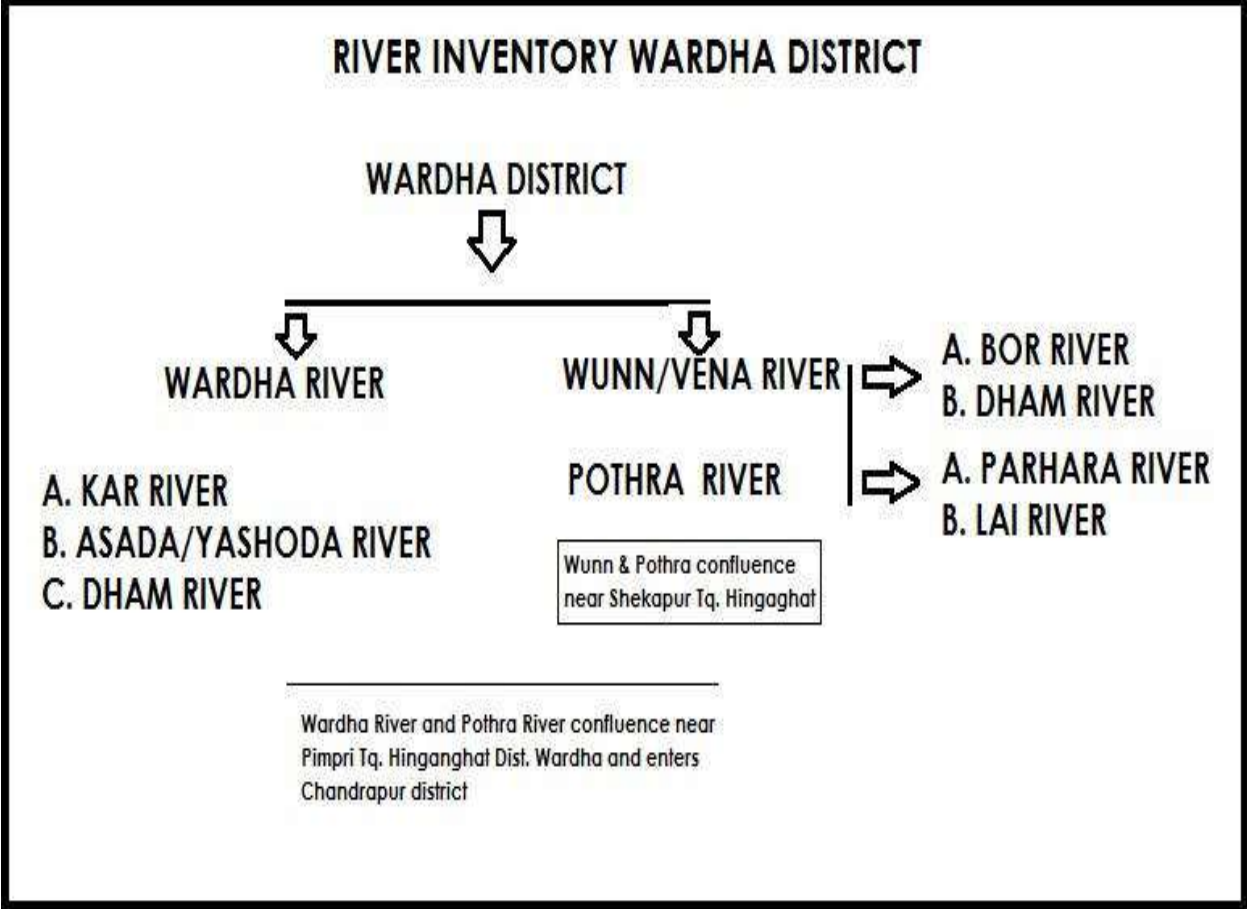
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Tembha Pardi	Hinganghat	Wana	Tembha - 154,155,156,160,161,162,187,188,189,198 ,Pardi-82,83,85,97,98,111,113	4.00	800mx50mx0.50m	7067

Approach road available over pandan rd of 1.0 Km connecting NH7 Hyderabad - Nagpur rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Tembha Pardi	Hinganghat	Wana	Tembha - 154,155,156,160,161,162,187,188,189,198 ,Pardi-82,83,85,97,98,111,113	4.00	800mx50mx0.50m	7067

sand ghatwise proposed production is enclosed as annexure -1

Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.960m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.960
Total	1.960

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

- i) Connectivity – All the sand ghats are well connected by roads.
- ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 48 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one

year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .

vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Tembha Pardi	Hinganghat	Wana	Tembha - 154,155,156,160,161,162,187,188,189,198 ,Pardi-82,83,85,97,98,111,113	4.00	800mx50mx0.50m	7067

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	800 mx 50 m x0.50 m

ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
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Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Umra – Aurangpur (Rith)	Samudrapur	Wana	Umra 13,14 Aurangpur – 1,5,7,9,11	1.26	505mx25mx0.50m	2231

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the

south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

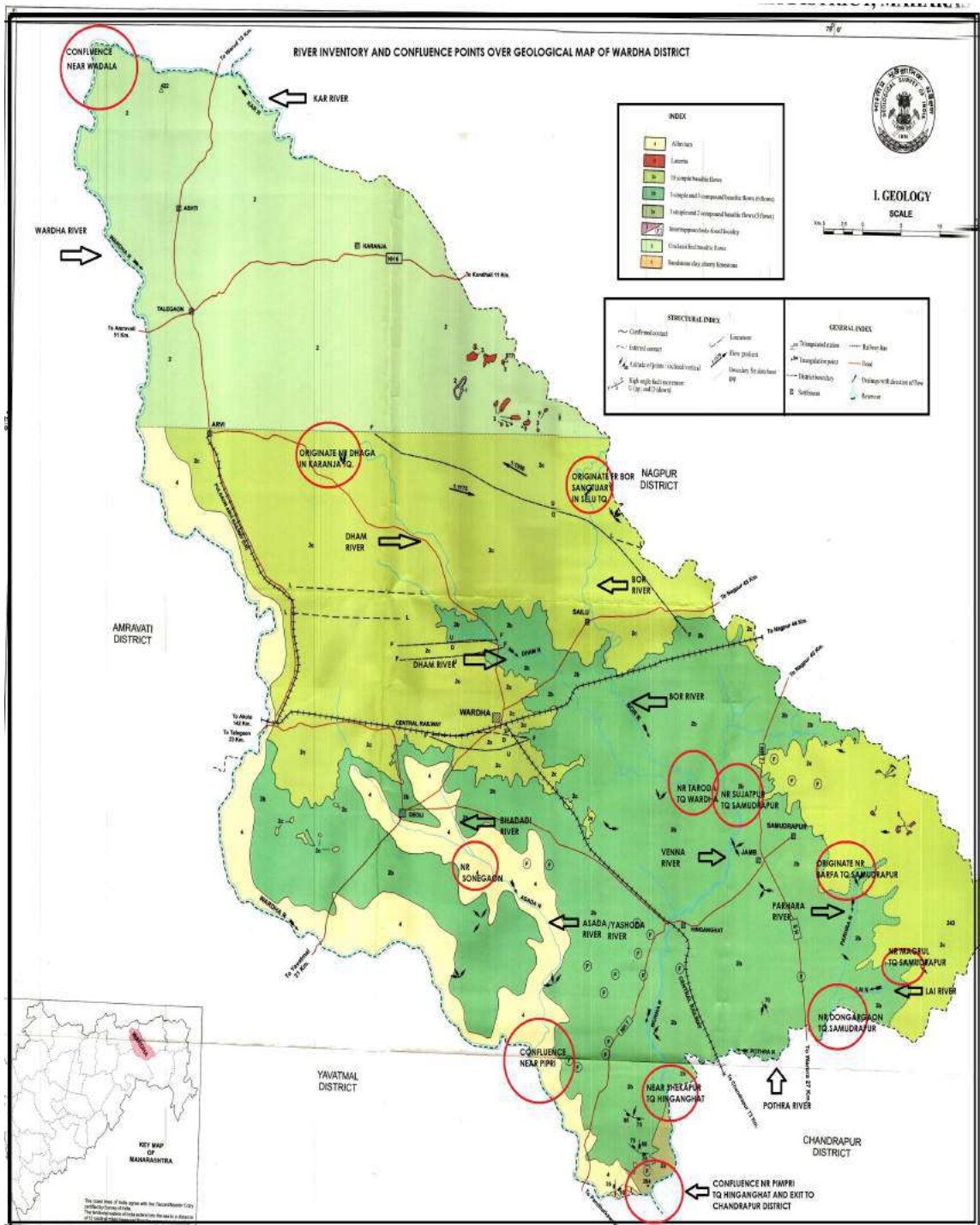
Local geology:

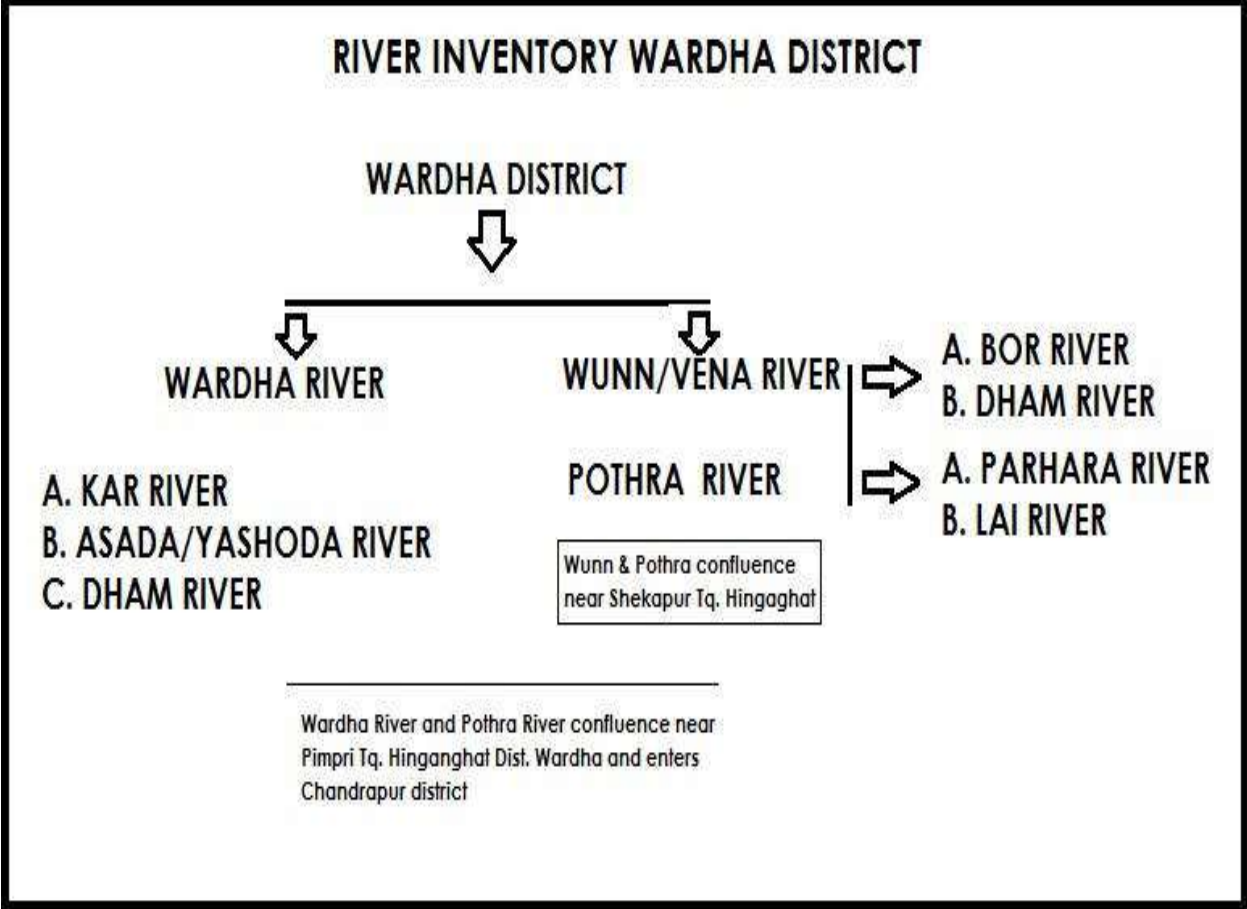
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Umra – Aurangpur (Rith)	Samudrapur	Wana	Umra 13,14 Aurangpur – 1,5,7,9,11	1.26	505mx25mx0.50m	2231

Approach road available over pandan rd of 0.72 Km connecting Aurangpur - Chakur rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

**iv) Magnitude of operation:
Proposed production**

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Umra – Aurangpur (Rith)	Samudrapur	Wana	Umra 13,14 Aurangpur – 1,5,7,9,11	1.26	505mx25mx0.50m	2231

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.560m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m³/day
Dust suppression/ Plantation	1.0
Domestic Use	0.560
Total	1.560

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..l

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. **About 28 souls will** be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.

- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Umra – Aurangpur (Rith)	Samudrapur	Wana	Umra 13,14 Aurangpur – 1,5,7,9,11	1.26	505mx25mx0.50m	2231

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	505 mx 25 m x 0.50 m

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ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129,128 ,69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22,23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345,861,348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Waksur	Samudrapur	Wana	95,101/1,102,117,118,119	1.50	500mx30mx1.00m	5300

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

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contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

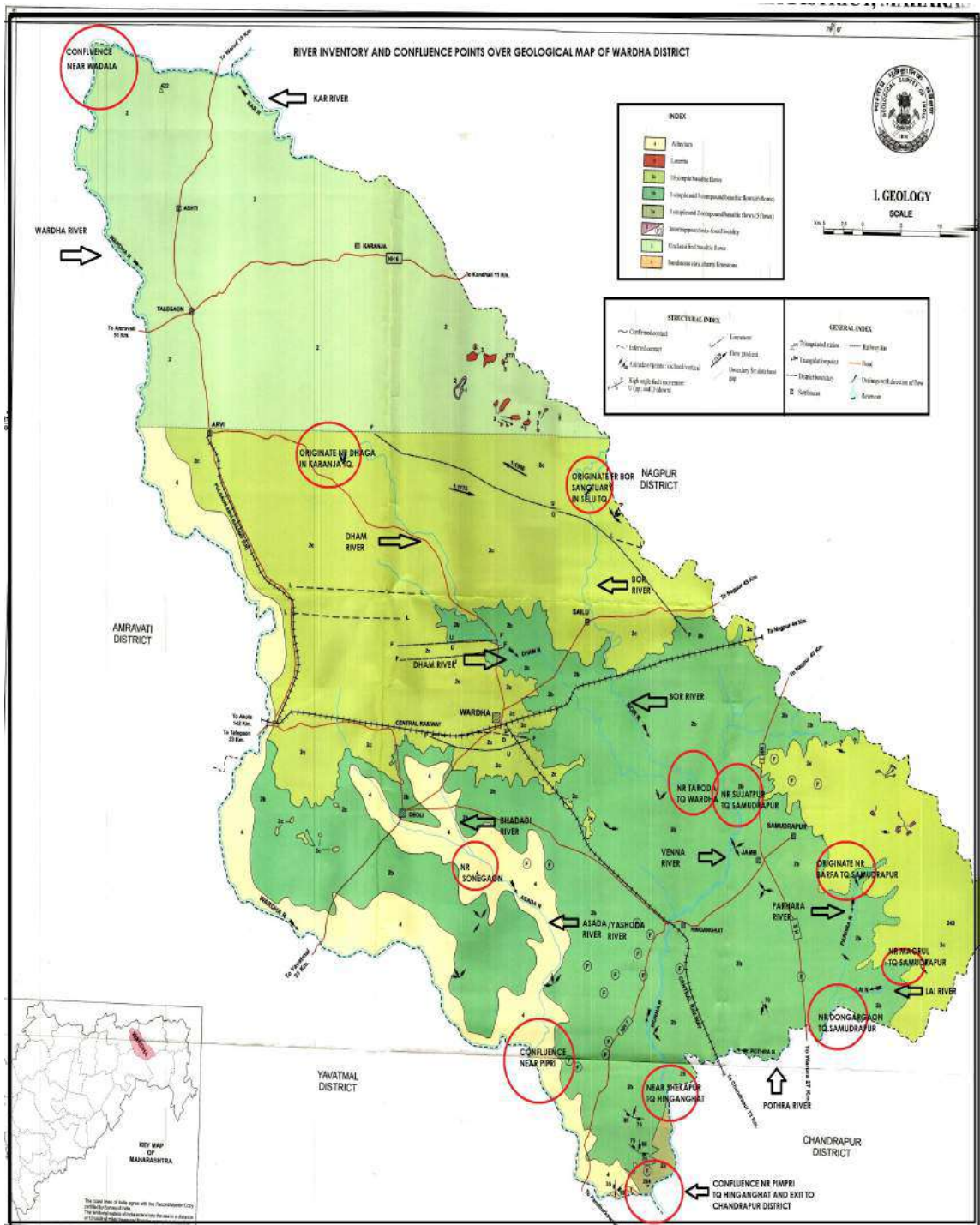
Local geology:

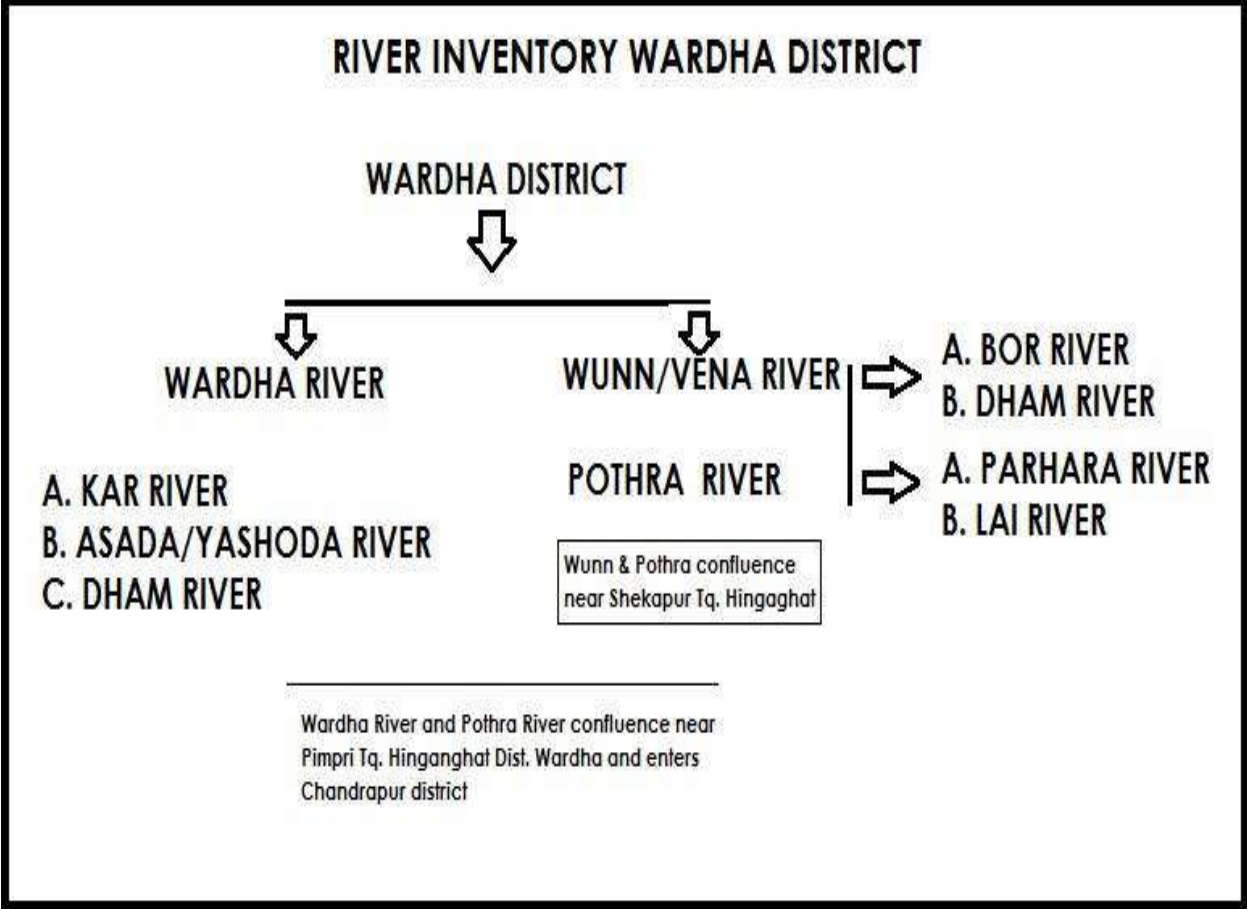
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha, Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Waksur	Samudrapur	Wana	95,101/1,102,117,118,119	1.50	500mx30mx1.00m	5300

Approach road available over pandan rd of 0.34 Km connecting Waksur Kandhali rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Waksur	Samudrapur	Wana	95,101/1,102,117,118,119	1.50	500mx30mx1.00m	5300

sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.960m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.960
Total	1.960

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 48 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Waksur	Samudrapur	Wana	95,101/1,102,117,118,119	1.50	500mx30mx1.00m	5300

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	500 mx 30 m x1.00 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000

PREFEASIBILITY REPORT
PRIOR ENVIRONMENTAL CLEARANCE

Project
Sand Scooping/Mining Proposals at Wardha district

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Yeli	Hinganghat	Wana	73,74,75,76,77,81,82,92,93,94	2.45	700mx35mx0.70m	6060

Proponent

District Mining Officer
Wardha Collector Office,
Wardha

Consultant

Enviro Techno Consult Private Limited
68, Mahakali Nagar-2
Near Manewada Square
Nagpur 440 024 (MS)

NOVEMBER 2021

Pre-feasibility Report

Executive Summary

- Collector Wardha vide his right to auction Sand as a minor mineral intends to auction the Sand in Wardha district.
- District Collector/Additional District Collector appointed District Mining Officer-Wardha as a project Proponent at carry out administrative procedure for preparation of Mining Plan and grant of environmental clearance being Revenue Officer of the district.
- Project Proponent proposed to auction 39 nos. of Sand Ghats below 5 ha area and identified for preparation of mining plan and for grant of Environmental Clearance.
- Mining Plans are prepared by Recognized Qualified Person and approved by Directorate of Geology & Mining Govt. of Maharashtra.
- About 121057 brass sand is proposed to auction from 39 nos. of proposed sand ghat listed at Annexure-1
- Proposed sites are located at the river bank of Wardha, Vana & Yashoda Lease 66.02 ha comprises of river bed of Wardha, Vana & Yashoda rivers for sand scooping proposed in 39 Sand Ghats.

Physiography :

Geography of Wardha district can be physiographically divided into three distinct units. These are- the uplands of the north and north east with Talegaon plateau; the narrow Arvi plains to the west of the first unit, and, the Wardha - Hinganghat plains. The northern and eastern hilly part of the district is a part of the Satpura spur which projects southwards. This hilly part slopes on three sides - west, south and north - to merge in to the Wardha valley. This descent to the south is through a series of terraces, at least three of which are distinctly recognisable - one at 500m, another at 400m and the third at 200 - 350m

contour levels. The gradient is much steeper on the western slopes and the northern slopes.

The Arvi plains are a narrow, north to south elongated strip, about 70 kms long and 6 to 8 kms wide along the western boundary of the Arvi sub division.

The area is physiographically divided in two parts, the north and north eastern parts forming into a hilly spur projecting south and south eastwards from the Satpuras. While the southern part forms in to an undulating plain with average elevation ranging between 300 and 500 metre above mean sea level (m amsl) The general slope is southwards and gentle towards Wardha River, but tends to become steeper in the northern uplands. The entire district is mainly drained by Wardha River and its tributaries viz., Yashoda, Wunna and Bakli.

Wardha is the main river drainig through Wardha district. Wardha rise on southern slope of Satpura range in Betul district of Madhya Pradesh and flows through central part of Vidarbha region. Total length of Wardha river is 455 Km which generally flows in North South direction after its source from Madhyapradesh. Drainage area is more than 46000 sq km and joins Wainganga river. The coinjoined stream of Wardha –Wainganga forms Pranhita. Wainganga rise in Madhyapradesh and has southerly course of 295Km before joins Wardha river.

Penganga is its principal tributary in the west draining most of Buldana & Yavatmal plateau.

Yashoda is a sub river of Wardha River originates on 357 meter height of Satpura hills. It flows to north-west and reaches at Allipur of Hinganghat Tehsil. Later it converts into south- flowing and joins Wardha River near Takli village. The Yashoda basin is located in the south-west of the Wardha district. The Yashoda River has its two major tributaries, the Bhadai River and the Punsoda River.

The geology of Wardha district basically consists of Deccan Trap lava flows with some patches of Gondwana formations, Lametas and alluvium along the major

river courses. This lava flows in the entire area of the district and has a depth of 400 metres. The sedimentary rocks of the Gondwana Super Group are seen to occur as inlayers in the eastern extremity of the district. A small patch of Lametas occur in the east - southeast part of the district. The Deccan Traps cover about 95 percent of the area and comprise rocks of basaltic composition. The alluvial deposits are restricted to the banks of the Wardha River and its tributaries thickness is reported to be 15 to 20 M. The various landforms in the district are of three types: Structural, Denudational and Fluvial. Dissected Basaltic Plateau (Highly, Moderately or Slightly Dissected) is a major geomorphic unit characterised by flat topped hills, terraced features. Denudational hills comprise Gondwana group of rocks and occur as low relief hills east of Samudrapur. Alluvial plains along the river Wardha and its tributaries are gently sloping. All the rivers of the district originate from the various mountain peaks of the Satpura hill range from the northern side. The Wardha is the most important river in the district. It rises in the Multai plateau of the Satpura mountain ranges and flows all along the northern and western boundaries of the district. The other important river in the district is the Vena River, which flows from adjoining Nagpur district to the Hinganghat tahsil to merge with the Wardha River at village Sawangi. Yashoda river, Venna and Bakli are the main tributaries of the Wardha River. Other rivers in the district are Pothra, Bor river, Dhom and Kar, which remain generally dry during the summer but turn into furious torrents during the rainy season and pose a threat of flood to the nearby villages. Bor and Dham rivers originate from the Arvi Tahasil and merge with the Vena River at Mandgaon of Samudrapur Tahasil, whereas the river Yashoda originates from Arvi, also flows in Deoli Tahasil and further merges into the Wardha River. There is no major dam in the district.

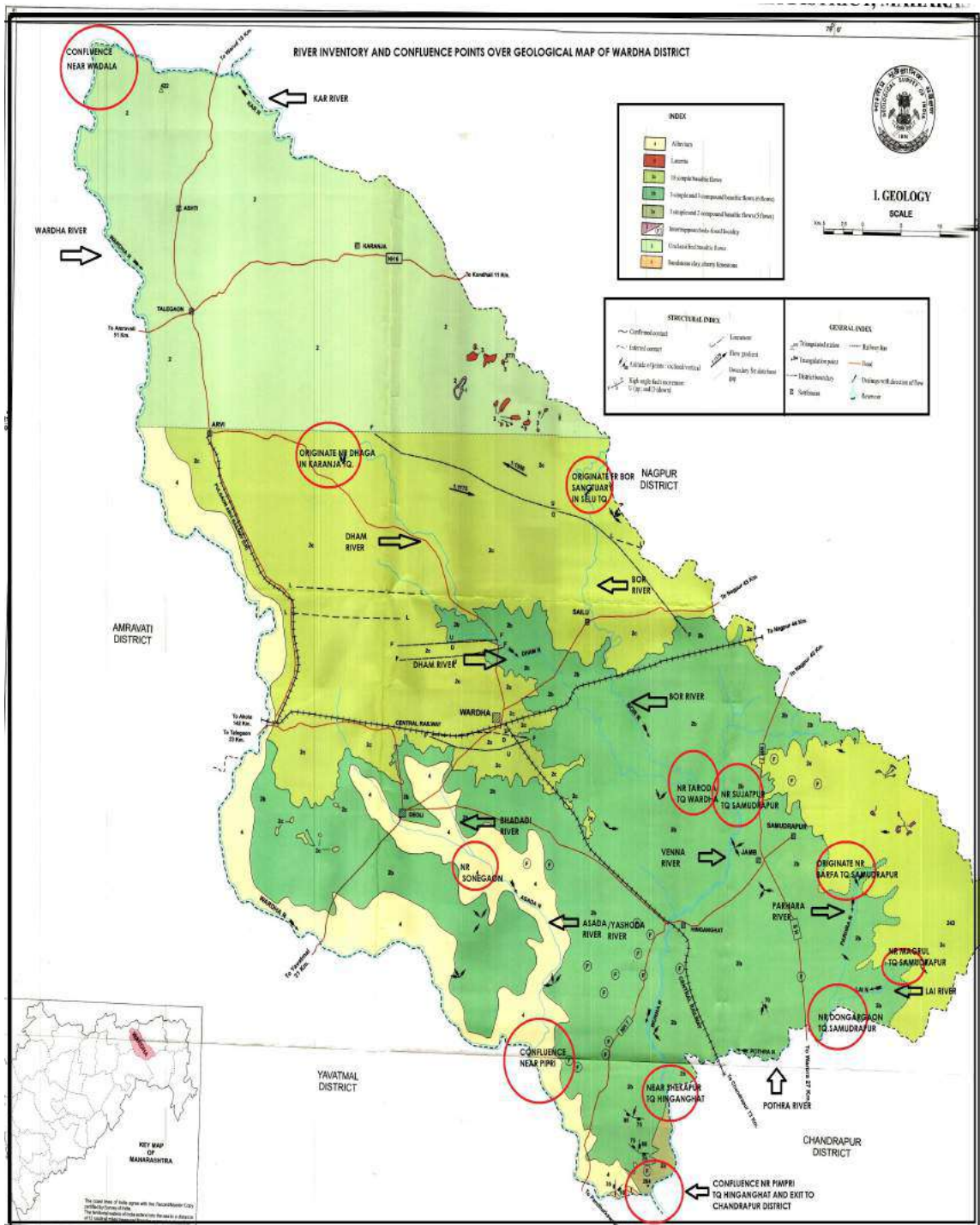
Local geology:

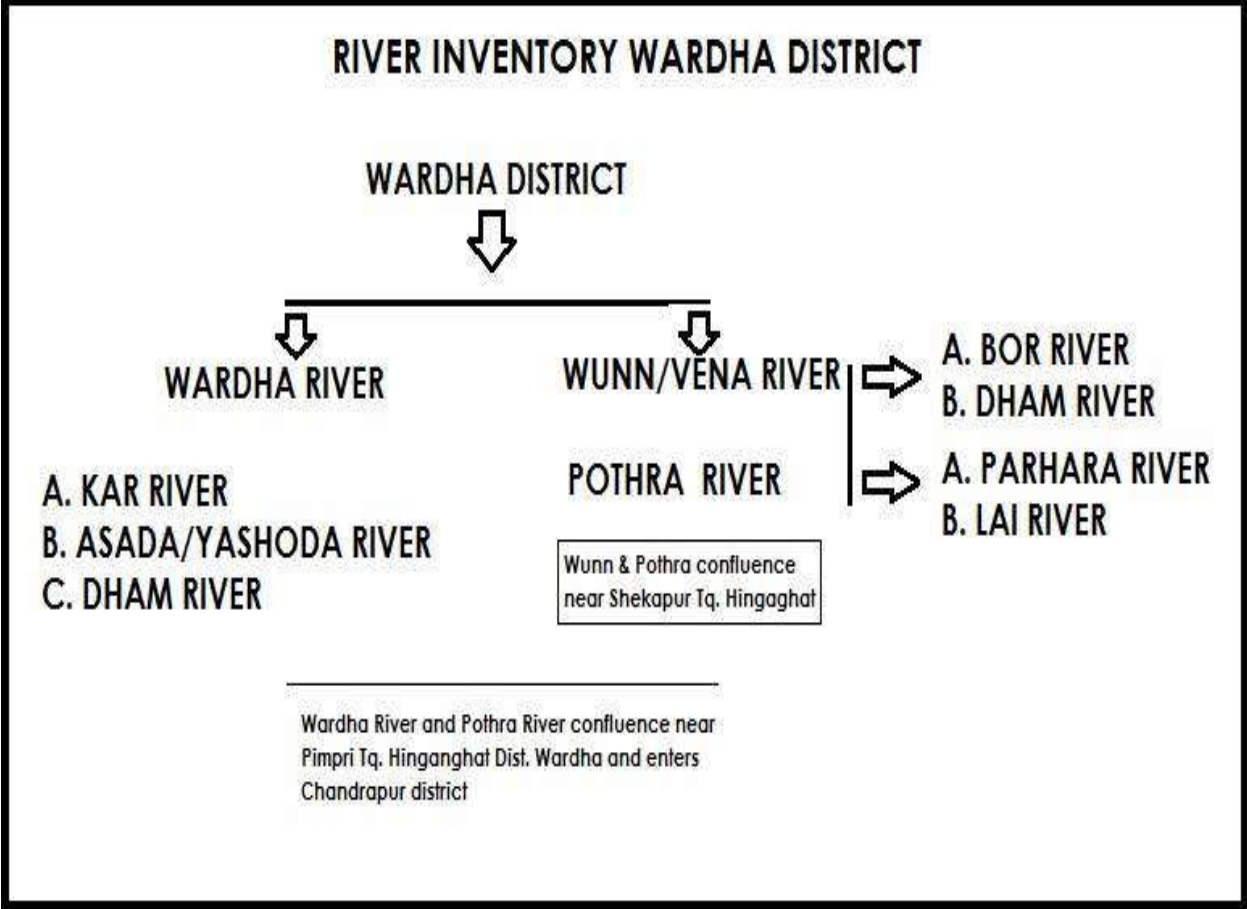
Applied area for sand extraction is covered by dark basalt and which has been derived/ transported from black basalt of surrounding flat and well filled area. The sand of the applied area is found to be underlain by dark basalt of the river bed. Deccan Trap Basalt represents a thick pile of nearly horizontal flows, within these thick piles seven flows have been deciphered down to a depth of 120 m. The porosity and permeability has been found to change in an individual flow, from flow to flow and from place to place.

Details of Exploration

The proposed sand mining ghat is demarcated on the ground by Revenue authorities/GSDA authorities with reference to boundary pillars/village maps. The sand is at a depth of 2.40m-2.80m m near the banks. The surface plan is prepared on the specified scale.

The exploration of sand is carried out by Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per sand auction policy dated 3.09.2019 using probing rods for delineating the depth of sand at above sand ghat.





Wardha district is merged between Wardha & Vena-Pothra River Basin and a part of Wardha-Vena Watershed.

LOCATION OF LEASE

All 37 Sand Ghats are located over Wardha, Vena & Yashoda river bed. All Sand Ghats are exposed .

Introduction of the project/ background information

District Collector, Wardha proposes to auction 39 nos. of Sand ghats in Wardha,Vena & Pothra river basin for scooping of Sand by manual method. All the Sand Ghats are identified Taluka Level Technical Committee comprising Tahsiladar as Chairman, GSDA representative, representative of M.P.C.B., Geologist of Directorate of Geology and Mining, Govt. of Maharashtra and others as per Sand Mining Guidelines of Maharashtra State dated 03 September 2019 & amendments thereof. The details of sand reaches with their mining capacities are annexed at Annexure-1. All proposed sand ghats are situated in about 35 villages.

i) Brief description of project

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.40m to 0.80 (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

iii) Need for the project:

District is expected to collect revenue of about **Rs 50.46 Crores** through auction of these sand ghats. Production cost is around **Rs 4168.00 per Brass**. Average selling rate is **Rs 5700/brass**. Mining is being carried out for times immemorial and has not adversely affected any environmental constituents. Thus this project

is economically viable. Again it is very important ecologically to scoop river bed sand to maintain river flow pattern, flood levels and agricultural land along river bed.

3. Project description:

i) This mining project is an independent project and not an interlinked project.

ii) Location:

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Yeli	Hinganghat	Wana	73,74,75,76,77,81,82,92,93,94	2.45	700mx35mx0.70m	6060

Approach road available over pandan rd of 0.80 Km connecting Yeli – Bambarda rd.

iii) Alternate sites:

Being mining activity and good sand deposition at annexed 37 sites. No alternate site is proposed.

iv) Magnitude of operation: Proposed production

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Yeli	Hinganghat	Wana	73,74,75,76,77,81,82,92,93,94	2.45	700mx35mx0.70m	6060

**sand ghatwise proposed production is enclosed as annexure -1
Demand & Supply**

Name of Tahsil	Total Sand Demand of District in Brass	Total Sand Available in District in Brass
Wardha	185153	121057

(v) Project description-mining details:

Mining of sand deposits in the subject lease area is proposed to be worked by opencast manual method. Mining activity is restricted only in summer season, no mining activity is done during monsoon season. The operations involved in mining Building Grade sand are scooping the sand using spades and mortar pans & loading it onto the hired tractors/trucks manually. The depth of the working will be upto 0.8m (max) the sand will be scooped keeping 2m sand at bed each time and 20m away from the river bank. As such there is no sub grade Building Grade Sand from this mine as all the excavated mineral is having ready market. So stacking of the sub grade mineral is not proposed. The entire deposits shall be excavated

(vi) Raw material, marketing and transport of ore:

All sand ghats will be auctioned and successful bidder will be responsible for carrying mining operations as per environmental terms and conditions, approved mining method as per approved mining plan and other terms and conditions.

(vii) Resource optimization, recycle, reuse:

Sand is replenishable mineral.

(viii) Water and energy requirement:

It is a manual mining proposal using spade & Ghamelas. No energy is required being permitted for day time only. Water for drinking purpose will be sourced from RO contractors on site.

Requirement of Water for Dust Suppression & Domestic Purposes

Total water requirement for various activities during sand scooping is estimated as 1.960m³/day per sand ghat. The water will be required for dust suppression, plantation, domestic use. The activity-wise break up of the total water requirement is given below:

Purpose	Qty Required m ³ /day
Dust suppression/ Plantation	1.0
Domestic Use	0.960
Total	1.960

Water will be sourced from Grampanchayat Borewells on payment per liter cost basis or from water tanker suppliers. Drinking water will be provided from RO water suppliers.

(ix) Quantity of wastes & scheme for management:

No waste will be generated.

(x) Schematic representations:

It is a proposal of opencast manual sand mining from river bed. Mining plan is approved by competent authority.

4. Site analysis:

i) Connectivity – All the sand ghats are well connected by roads.

ii) Land use, form & ownership:

Land use shows that agriculture is predominant. Cotton, Sugarcane are main crop.

iii) Topography

Sand Ghat is a exposed river bed with sand deposition varying from 2.0m to 3.0m.

Existing land use pattern

Existing Sand Ghat is a river bed having 2.0 m to 3.0 m of sand .

There are a number of sand ghats along the river.

Presently, there is no infrastructure within the river bed nor are proposed..I

Social structure of the area is given below.

There are about 35 villages where sand ghats are proposed. About 48 souls will be required per sand ghat for carrying direct sand scooping and allied operations. Total direct employment generation will be 1370.

Most villages have been provided with water supply from hand pump or well or are covered under rural water supply scheme. Electricity is available. Medical facilities exist in the form of primary, health centers.

5. Planning Brief

This project is for manual scooping of Sand from exposed river bed it is imperative to follow the plan so as to be able to extract sand in an environmental compatible manner. There are no residential areas over the lease and also not proposed. The sand ghats will be replenished every year as monsoon follows.. The maximum period awarded for scooping of sand is one year as per approved mining plan which is approved by District level technical Committee depending on the reserves available.

Infrastructure requirements in this project would need i) Temporary site office 20m away from river bank, store etc.

6. Proposed infrastructure

i) There would not be any residential colony or commercial roads. R&R is not involved. It is a proposal of river bed mining.

7. R & R Plan

R & R *per se* is not involved.

8. Project Schedule & Cost Estimates:

Refer Annexure-1 for upset price decided by district authorities.

Project schedule :

Sand ghat : Scooping of sand by manual methods for one year from the date of allotment of sand ghat as per sand mining policy of State Government.

9. Analysis of proposal (final recommendations)

Description of the project included in items 1-8 above indicates the following :

- i) It is proposed to scoop sand manually from river bed.
- ii) Manual sand mining without hampering the present environmental quality of the area.
- iii) Initiation of mining will ensure regular income to local people.
- iv) This sand ghat will cater the requirement of sand of the area for government and private civil works.
- v) Revenue generation of **Rs 50.46Cr.** will be added advantage to Government .
- vi) Sand ghats with less than 1000 brass are planned to cater local demand for governmental gharkul and other schemes. In all such cases

Environmental Management Plan will be implemented by District authority.

Proposed Production :

Sr. No.	Name of Sand Ghat	Tahsil	Name of River	Nearest Gut No.	Area in Ha	Area in cum.	Available Sand in Brass
						LxBxD (m ³)	
1	Yeli	Hinganghat	Wana	73,74,75,76,77,81,82,92,93,94	2.45	700mx35mx0.70m	6060

Mining :

Mining of sand is proposed manually using spade/shovel up to the permitted depth as per allotment letter and approval of mining plan.

Year wise Production Plan:Period	Area x Depth (cu.m.)
Up to one year from the date of allotment of sand ghat or up to scooping of Allotted/Permitted quantity mined out, whichever is earlier excluding monsoon period on 10 June to 30 th September.	700 mx 35 m x0.70 m



ANNEXURES

Annexure -1 : Details of Sand Ghat

अ.क्र.	तालुका	रेतीघाटाचे नाव	नदी / नाल्याचे नाव	रेतीघाटाचे लगतचे प्रस्तावित सर्वे नंबर/गट नंबर	प्राप्त प्रस्तावानुसार रेती उत्खननाची प्रस्तावीत खोली (मी.)	लांबी (मी.)	रुंदी (मी.)	रेतीघाटाचे क्षेत्र (हे.आर)	चालु वर्षी सन 2021-22 करीता उपलब्ध रेतीसाठा (ब्रास)
1	2	3	4	5	7	8	9	10	11
1	देवळी	आपटी-1	वर्धा नदी	6	0.50	278	38	1.06	1866
2	देवळी	तांबा-1	वर्धा नदी	36, 37, 45, 46, 47, 48, 57, 58	0.50	350	35	1.23	2164
3	देवळी	हिवरा का.-1	वर्धा नदी	27 ते 32 पर्यंत	0.70	500	30	1.50	3710
4	देवळी	टाकळी चना-1	वर्धा नदी	14, 11, 297, 34	0.40	500	30	1.50	2120
5	देवळी	सोनेगांव बाई	वर्धा नदी	103, 105, 80, 79, 106, 107, 126, 127, 128, 129	0.50	500	24	1.20	2120
6	देवळी	टाकळी (दरणे)	वर्धा नदी	31, 32, 33, 34, 35, 36	0.50	320	32	1.02	1809
7	आर्ची	दिघी-वडगाव	वर्धा नदी	दिघी-112, 113, वडगाव-124/4, 125, 126, 132	0.50	500	30	1.50	2650

8	आर्वी	सायखेडा	वर्धा नदी	24, 25, 26, 27, 28, 29	0.50	800	25	2.00	3534
9	आर्वी	सालफळ	वर्धा नदी	16, 15, 14, 9/1, 8, 7	0.40	500	20	1.00	1413
10	समुद्रपूर	शिवणी-1	वणा नदी	130, 361, 129, 128, 69, 68	0.40	420	25	1.05	1484
11	समुद्रपूर	शिवणी-2	वणा नदी	22, 23	0.40	500	35	1.75	2473
12	समुद्रपूर	सेवा-2	वणा नदी	85, 86, 87, 88/2	0.70	460	30	1.38	3413
13	समुद्रपूर	चाकुर	वणा नदी	15/1, 15/2, 13/1, 13/2, 8, 6, 200, 199, 198, 197	0.45	500	25	1.25	1988
14	समुद्रपूर	मनगाव	वणा नदी	7, 8, 10 अंशतः	0.35	400	45	1.80	2226
15	समुद्रपूर	मेनखात	वणा नदी	45, 46	0.45	350	35	1.23	1948
16	समुद्रपूर	मांडगाव-1	वणा नदी	219, 220	0.50	500	50	2.50	4417
17	समुद्रपूर	मांडगाव-2	वणा नदी	286, 287, 288, 298, 344, 345, 861, 348 अंशतः	0.40	600	50	3.00	4240
18	समुद्रपूर	उमरा+औरंगपूर (रिठ)	वणा नदी	उमरा- 13, 14, औरंगपूर- 1, 5, 7, 9, 11	0.50	505	25	1.26	2231
19	समुद्रपूर	पारडी	वणा नदी	217	1.00	560	24	1.34	4749
20	समुद्रपूर	औरंगपूर(रिठ)+उमरा	वणा नदी	उमरा- 259, 258, 257, औरंगपूर- 18, 21, 22	0.50	490	25	1.23	2164

21	समुद्रपूर	बरबडी	वणा नदी	116/2/अ, 116/2/ब, 147, 148, 149	0.40	400	25	1.00	1413
22	समुद्रपूर	वाकसुर	वणा नदी	101/1, 95, 102, 117, 118, 119,	1.00	500	30	1.50	5300
23	हिंगणघाट	बोरगाव दा.	वणा नदी	14, 15, 16, 18, 19, 20, 238	0.80	400	25	1.00	2827
24	हिंगणघाट	चिकमोह	वणा नदी	109, 129, 130, 131, 228, 149, 150, 152, 153.	0.50	900	40	3.60	6360
25	हिंगणघाट	टेंभा + पारडी	वणा नदी	टेंभा 154, 155, 156, 160, 161, 162, 188, 187, 189, 198 पारडी 82, 83, 85, 97, 98, 111, 113	0.50	800	50	4.00	7067
26	हिंगणघाट	चिंचोली बु,	वणा नदी	48/1, 48/2, 48/3	0.50	400	35	1.40	2473
27	हिंगणघाट	खारडी-भारडी	वणा नदी	खारडी - 1, 2, 3, 12/3, भारडी - 2, 3, 4, 5, 6, 7	0.50	800	35	2.80	4947
28	हिंगणघाट	काजळसरा	पोथरा नदी	270, 273, 274, 269	0.50	420	25	1.05	1855
29	हिंगणघाट	गणेशपूर + बोरखेडी	वणा नदी	गणेशपूर-48, 49, 52, 54, 56, 57, बोरखेडी -23, 24, 28, 29, 30, 31	0.50	900	20	1.80	3180
30	हिंगणघाट	भगवा-1	यशोदा नदी	13, 14, 15 अंशतः	0.50	350	30	1.05	1855
31	हिंगणघाट	भगवा-2	यशोदा नदी	121,122, 123/2 अंशतः	0.50	350	30	1.05	1855
32	हिंगणघाट	शेकापूर बाई	वणा नदी	210, 206, 205, 204, 203, 202, 201	0.60	400	40	1.60	3392

33	हिंगणघाट	येळी	वणा नदी	73/1, 73/2, 74/1, 74/2, 75/1, 75/2, 76/1, 76/2, 77, 81, 82, 92/1, 92/2, 93/1, 93/2, 94/1, 94/2	0.70	700	35	2.45	6060
34	हिंगणघाट	नांदरा रिठ	वणा नदी	81, 82, 83, 72, 71, 70, 69, 68, 65, 64, 60, 59, 58/अ, 58/ब, 57/अ, 57/ब, 56, 55	0.55	900	35	3.15	6122
35	हिंगणघाट	सावंगी रीठ	वर्धा नदी	84, 95	0.50	350	30	1.05	1855
36	हिंगणघाट	धोची	वर्धा नदी	125/अ/1, 127, 128, 135, 172/1, 173/1, 174/अ, 130/1, 129/1, 136, 168, 169/1, 170/1	0.50	290	40	1.16	2049
37	हिंगणघाट	हिवरा	वर्धा नदी	18, 20	0.45	500	50	2.50	3975
38	हिंगणघाट	ढिवरी पिपरी	वना नदी	9, 156, 155, 154, 153, 151, 10	0.40	400	40	1.60	2261
39	हिंगणघाट	सोनेगांव (धो.)	वणा नदी	50, 58, 59/1, 59/2	0.40	548	45	2.47	3486

Annexure -2 Demand & Supply for district

Information on demand and supply of district

Name of District	Total Sand Demand of District in Brass	Total Sand Available in district in Brass
Wardha	1,85,153	121057

Name of Tahsil	Total Sand Demand of Tahsil in Brass	Total Sand Available in Tahsil in Brass
Wardha	53,888	—
Selu	43,364	—
Deoli	14,581	13790
Arvi	44,718	7597
Ashti	4,567	----
Karanja	4,567	—
Hinganghat	14,903	61622
Samudrapur	4,567	38048

On going Government civil/ infrastructural works in the district

Name of Govt. Yojana	Details of Work	Approx. qty of sand required in brass
Gharkul	PMAY, Ramai, Gharkul etc. Works.	2,510
Irrigation Projects	Canal, Barrages, PMSY works etc.	13,855
NHAI	—	—
MSRDC	-----	1,16,208
PWD	Govt. Buildings, Roads etc.	22,680
Railway	New Railway Projects	30,000