Welcome
to
State Expert Appraisal Committee (SEAC)
Odisha State (MoEF &CC)
Presentation on Environmental Clearance (EC)

for

The Proposed Netrabandha Pahar Iron Ore Block for Total Excavation of 2.680 MTPA (2.0 MTPA (ROM)+ OB 0.680) along with 2x100 TPH Mobile Crusher in Mine Lease Area of 139.223 ha

located at Baladihi Village, Koira Tehsil, Sundargarh District, Odisha

of

M/s Bhushan Power & Steel Limited (BPSL)

Project Proponent

M/s Bhushan Power & Steel Limited,
F.Block, 1st Floor,
International Trade Tower,
Nehru Place, New Delhi-11019

Environment Consultant

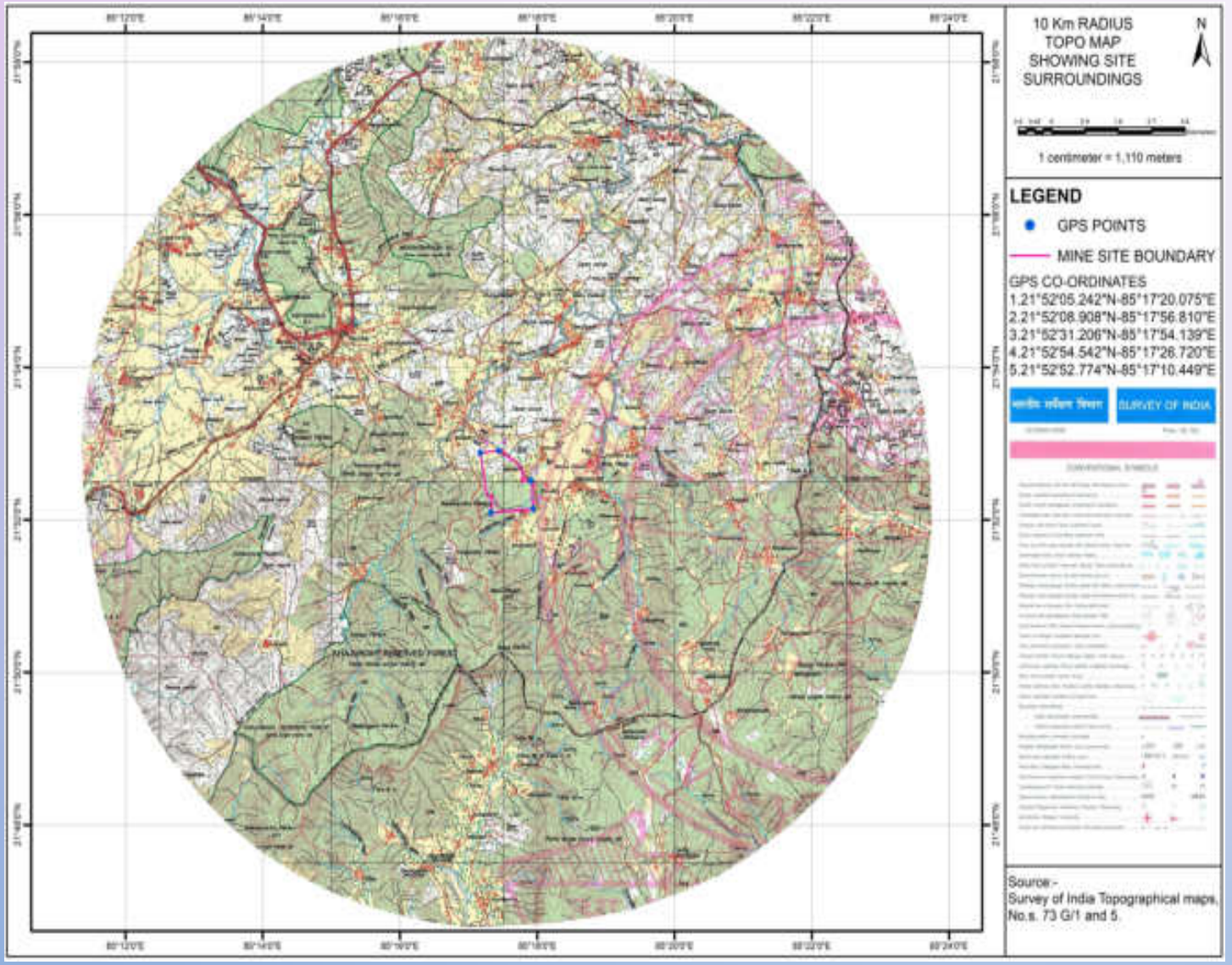
Vimta Labs Limited
142, IDA, Phase-II, Cherlapally,
Hyderabad–500 051,Telangana State
QCI-NABET S.No 142, as on 18th April 2022
(NABL/ISO 17025 Certified Laboratory,
Recognized by MoEF&CC, New Delhi)

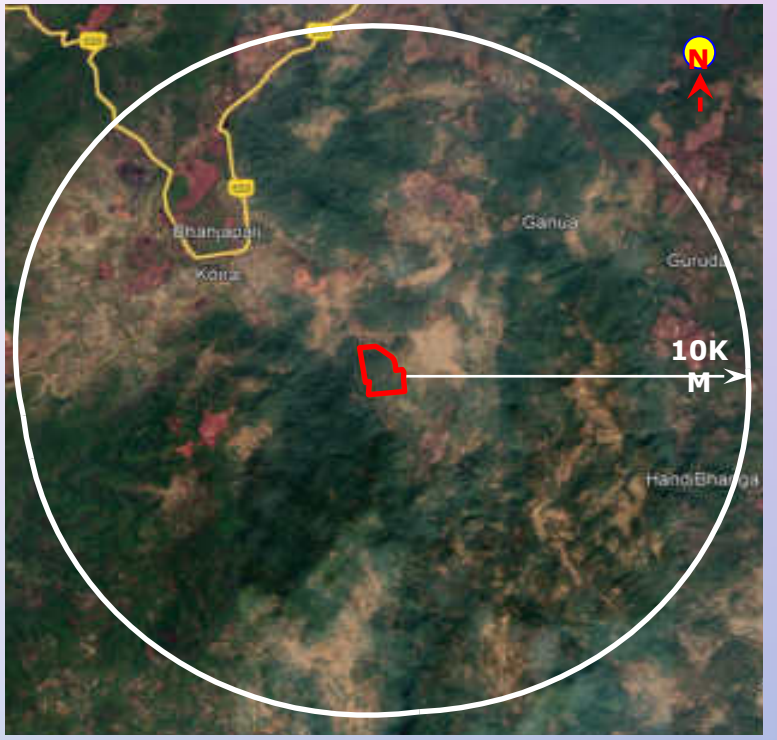
Background & Statutory Clearances

Category of the Project	With respect to the MoEF & CC vide no Notification No. S.0. 1886 (E) Dated 20th April, 2022, the Mine Lease Area of Netrabandha Pahar Iron Ore Block is 139.223 ha and the project falls under Category-B (≤ 250 ha in respect of major minerals other than Coal).
Terms of Reference (ToR) for Preparation of Draft EIA/EMP Report for conducting the Public Hearing	TOR was issued by MoEF&CC vide letter F.No.IA-J-11015/51/2021-IA.II(M) dated 04th August 2021. [33rd Meeting of the EAC (Non-Coal Mining) held on 13th-16th July 2021].
Baseline Monitoring Studies	Post-Monsoon Season (from 1st October-2021 to 31st December-2021)
Public Hearing and Its Proceedings	Public Hearing was completed on 27th April 2022 as per the EIA Notification,2006 Organized by the SPCB – Odisha and its Proceedings with Action Plan and Budget was included the in the Final EIA Report
Appraisal for Environmental Clearance (EC)	Online EC application in Form-2 was uploaded and submitted through online in Parivesh Portal to SEAC (Odisha State), MoEF & CC.
Statutory Clearances	
Letter of Intent (LOI) *(Letter No.5283/SM.IV(Misc.) SM- 52/2017/SM)*	24.06.2017
Corrigendum in Letter of Intent (LOI) *(Letter no. IV(Misc.) SM-52/2017/6285/SM)*	27.07.2017
Mining Plan and Progressive Mine Closure Plan *(IBM vide Letter No: MP/FM/13-ORI/BHU/2017-18)*	18.10.2017
Forest Clearance (FC)	Fresh Forest Clearance under FC Act,1980 for diversion of 112.621 ha of forest land has also been applied vide Proposal No. FP/OR/MIN/26965/2017 dated 05.07.2017. Application under Section 2 (ii) has been forwarded from RCCF to PCCF vide Memo No. 1611/3F (Misc)-783/2021 Dated 18-05-2022
Site Specific Wild Life Conservation Plan	Pending at DFO, Bonai. Vide letter no. BSPL/MINING/56
Ground Water withdrawal Permission	Fresh CGWA Application for withdrawal of 4 KLD is applied vide application. no. 21-4/3719/OR/MIN/2022 Dt 24/05/2022.

Mine Lease Area Photographs

Study Area Map & Google Image – 10 km Radius



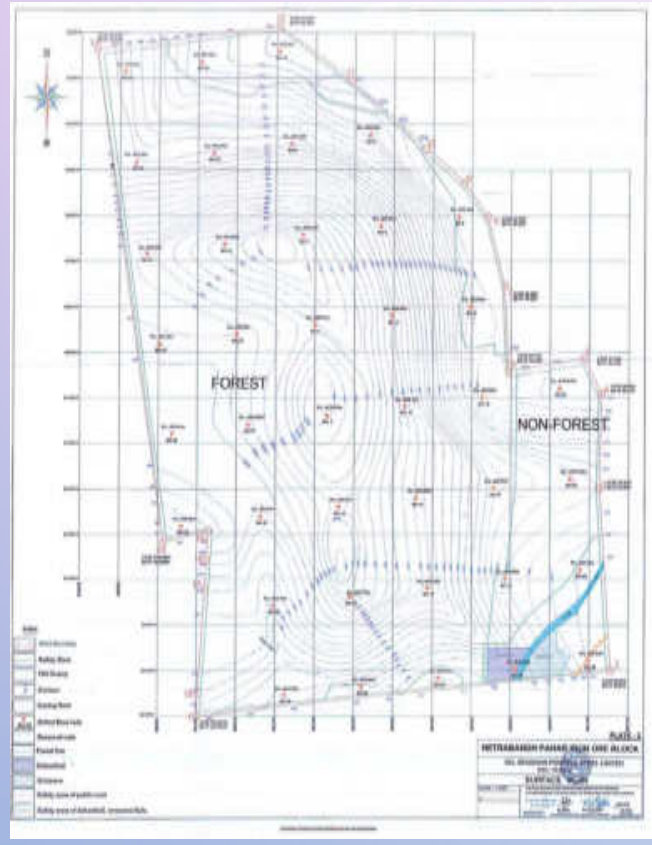


73 G/1, 73 G/5 (1:50,000)
618-678 m above Mean Sea Level (MSL)

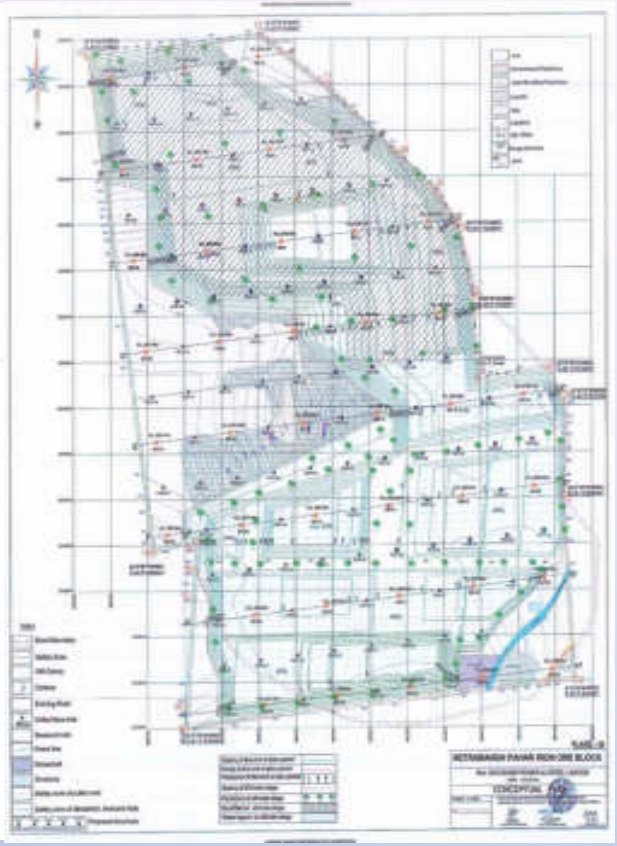
- Land use of ML Area - Forest: 112.621 ha and Non-Forest: 26.602 ha;
- Two Seasonal Nalas are passing in ML area Khajurdihi Seasonal Nala is passing through the Southern side and other one at Norther side of ML Area. Porhadihi Nala (0.3 km, SSE) and Teherei Nala (0.7 km, NW)
- are the nearest water bodies;
- Baladihi and Biradihi Villages are adjacent to the ML Area in NE and E direction;
- NH-215 passes at 4.7 km NW of the project site;
- Nearest major Railway Station is Nayagarh RS 14.2 km, E;
- 11 RFs identified within 15 km Radius from the ML Area;
- No National parks/Wildlife sanctuaries within the 10 km Radius of the ML Area;
- Karo - Karampada Elephant Corridor is located at about 13.31 km from the ML Area in NNW direction
- Inter State boundary of Jharkhand - Odisha is at 15.1 km, NNW.
- ML Area falls under Seismic Zone-II as per IS: 1893 (Part1): 2002

Surface Plan & Conceptual Plan

Surface Plan



Conceptual Plan



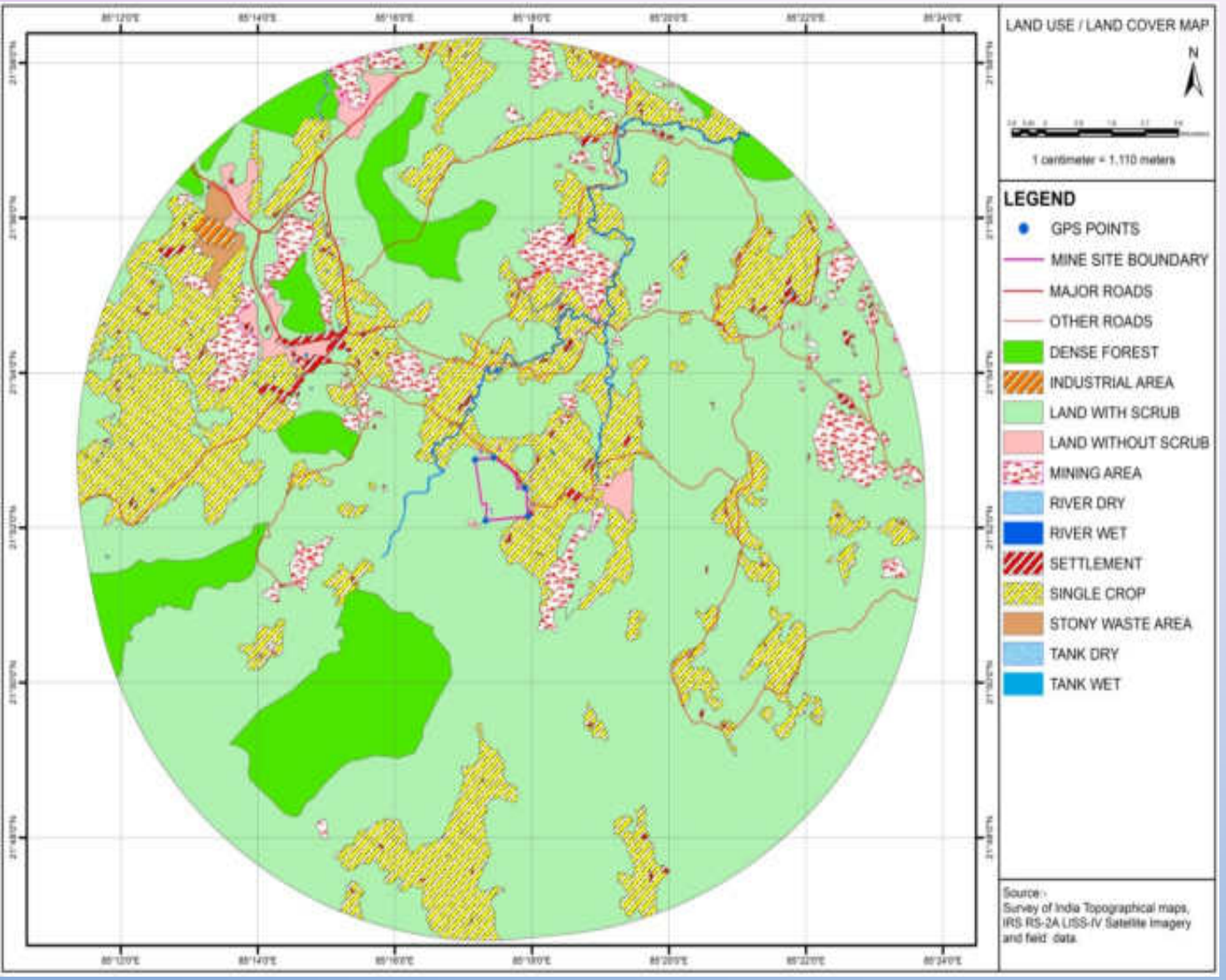
Proposed Land Use area at the end of Plan Period

Particulars	Proposed at the end of plan period	At Ultimate stage
Area under mining	25.704	102.010 (45.632 ha shall be backfilled and planted, 17.370 ha shall be reclaimed by bench plantation and handed over to the forest authority. Rent 39.008 ha shall be converted into water lagoon (616 m RL))
Storage of Top soil	0.500	Nil (Use in plantation)
Dump	9.607	Nil (All the waste shall be utilized in backfilling)
Infrastructure (Workshop, admin building)	1.817	Will be handed over to local authorities
Mine Road	2.306	2.306 ha (To be utilized by local people)
Mineral storage S,G, stack	2.154	Nil (Blending with high grade and removed)
Plantation on safety zone	1.00	3.783 ha (To be utilized for plantation)
Water harvesting	0.066	0.066 ha (To be utilized by local people)
Ore Stack	1.835	Nil (To be utilized and sold out)
Plant area (Crusher, screening, ore stack, ore shorting)	Nil	
Total	44.989	108.165

- Allotted mining block has an area 139.223 ha.
- Land schedule certified by Tahsildar, Koira & Deputy Director of Mines, Koira vide Lr.No.359 dated: 08.02.2022 and subsequently vetted by M/s ORSAC, total lease area includes Forest: 112.621 ha and Non-Forest: 26.602 ha.
- Application for diversion of 112.621 ha of forest area under Sec 2(ii) vide proposal no. FD/OR/MIN/26965/2017, dated:05.072017 and Sec 2(iii) is submitted to DFO, Bonai and Nodal Officer BBSR vide proposal no. 146896/2021, State serial no. OR-073/2021 dated: 13.09.2021.

Govt land							Pvt land						
Gochar	Road	Habitation	Worship Place	Grave Yard	Nala	DLC land (Forest)	Gharabari	Agriculture	Non Agriculture	RF	PRF	Revenue Forest	Total
7.587	0.763	3.873	0.732	0.599	0.44	44.743	0.645	9.996	1.967	0	48.346	19.532	139.223
							12.608						

Land Use Study Based on Satellite Imagery – 10 km Radius



Sr.No.	Land Use	Area (Sq. Km)	Percentage (%)
Built-up Land/Other Development			
A	Settlement	6.878	1.9
B	Industrial area	2.534	0.7
	Sub-total		
Water Bodies			
C	Tank / river etc.	11.222	3.1
Forest			
D	Dense forest	26.788	7.4
Crop Land			
E	Single crop	61.178	16.9
Wastelands			
F	Land with scrub	219.734	60.7
G	Land without scrub	8.326	2.3
H	Sheet waste Area	3.982	1.1
I	Mining Area	21.358	5.9
Total		362	100

Observations

- **Built-up-land: The total built-up-land constitutes 2.6% of total study area.**
- **Forest Land: 7.4% of land is occupied by dense forest land**
- **Agricultural land: The part of the study area is occupied by agricultural land which constitutes about 16.9%.**
- **Waste Land: 70% of land is waste land**
- **Water Body: 3.1% of land is covered by water bodies.**

Salient features of the Project

Description	Particulars
Mine lease area	139.223 ha
Type of mine	Open cast iron mine
Method of mining	Mechanized open cast by drilling & blasting and excavation and haulage by shovel & dumper combination
Rated capacity	Total excavation: 2.680 MTPA (2.0 MTPA-ROM + 0.680 MTPA-Overburden) Mobile crusher- 2 x 100 TPH
Expected life of mine	33 years
Production MT (from 2021-22 to 2024-2025)	Maximum 8 Million Tonnes (ROM) as per approved mine plan
Average stripping ratio (ROM: Waste) (t/m^3)	1:0.08 (as per mining plan)
Mineable reserves	64.577 million tonnes
Average no. of working days	300
Number of shifts	3 shifts (8 hrs / shift)
Man power	Total employment generation (direct and indirect) will be of 235 persons. 57 will be direct employment.
Bench height & width	6 m Height and Width 10 m

Description	Particulars
Ultimate depth	634 m RL (plan period)
Waste (till life of mine)	10.50 million m3 of over burden and 14.172 million ton of subgrade ore
Ultimate pit slope	< 45 degree
Power requirement	Total power requirement for the proposed project is 2.5 MW which will be sourced from WESCO
Water requirement	Total water requirement for the proposed project is about 167 KLD which will be met from Teherai Nala, Ground water and Rainwater. Fresh CGWA Application for withdrawal of 4 KLD is applied vide application. no. 21-4/3719/OR/MIN/2022 Dt 24/05/2022.
Project Cost	Rs. 205 Crores
CSR Cost	Rs.2.2 Crores (for 3 years)
EMP cost	Capital cost-Rs.9.5 crores, Recurring cost-Rs.2.75 crores

Proposed Mining

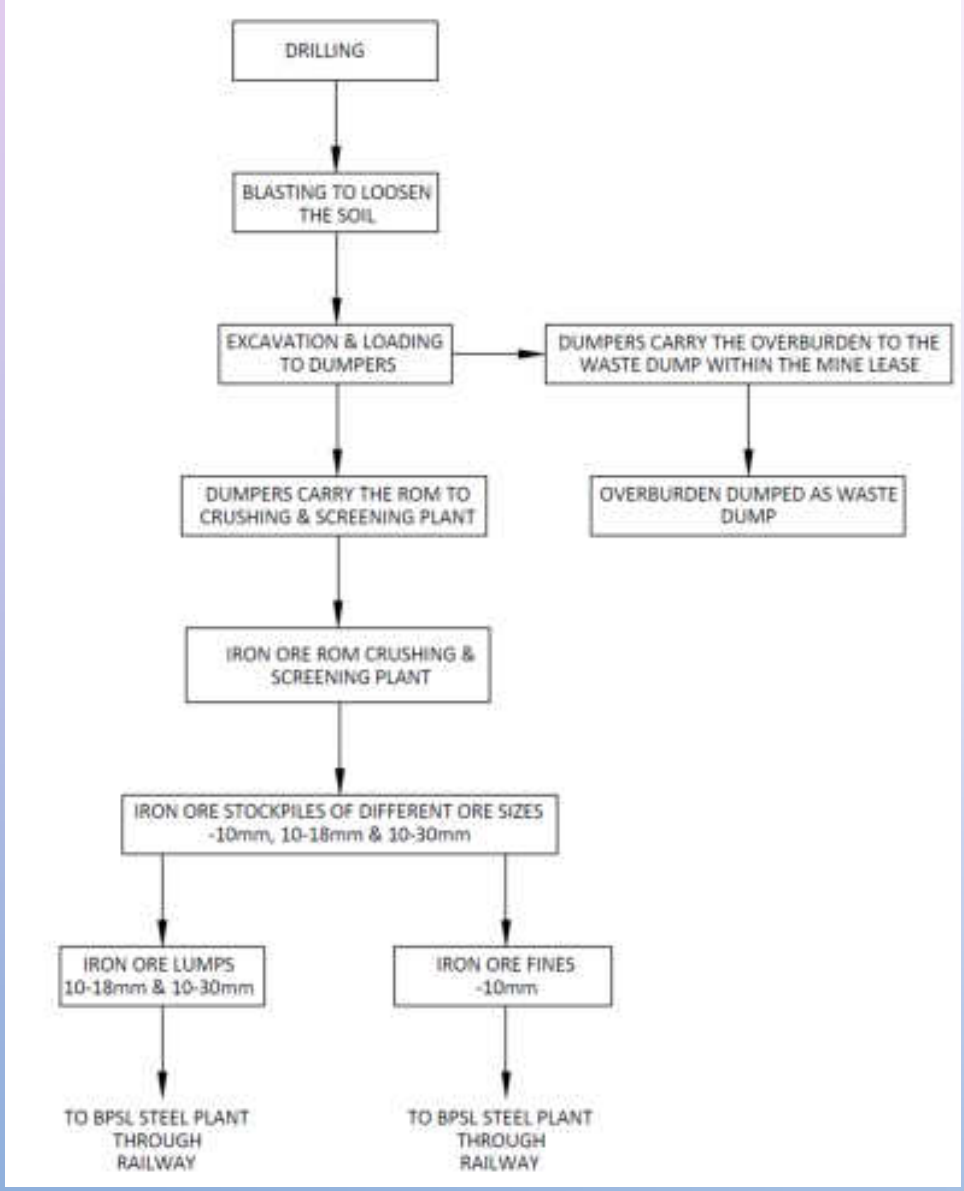
Year-wise Break-up of Total Excavation

Year	Name of Pit	Total Tentative Excavation (in M^3)	Top Soil (in M^3)	OB/SB/IB (in M^3)	ROM (in M^3)			Total ROM (in MT)	ROM /Waste Ratio (in MT)
					Ore (in M^3) 1cum=3.3MT	Sub grade Ore (in M^3) 1cum=3.3 MT	Mineral reject (in M^3) 1cum=2.7 MT		
1	2	3	4	5	6	7	8	9	10
1st Year	N-Pit	223888.56	-	66610.71	115720.44	10101.84	31455.57	500143.56	1:0.13
	S-Pit	78851.65	-	-	31355.18	31726.14	15770.33	250748.25	1:0.00
	Sub-Total	**302740.19**	**0**	**66610.71**	**147075.6**	**41827.98**	**47225.90**	**750891.84**	**1:0.09**
2nd Year	N-Pit	254073.21	-	18002.76	142476.05	46380.31	47214.09	750704.03	1:0.02
	S-Pit	161357.61	-	3872.58	88888.90	37099.12	31497.01	500802.40	1:0.01
	Sub-Total	**415430.82**	**0**	**21875.34**	**231364.95**	**83479.43**	**78711.10**	**1251506.43**	**1:0.02**
3rd Year	N-Pit	514337.49	-	121228.30	293054.30	21433.06	78621.84	1250087.26	1:0.10
	S-Pit	263838.60	-	27770.72	176687.55	12166.75	47213.58	750695.86	1:0.04
	Sub-Total	**778176.09**	**0**	**148999.02**	**469741.85**	**33599.81**	**125835.4**	**2000783.1**	**1:0.07**
4th Year	N-Pit	490711.96	-	97578.88	266413.34	48093.12	78626.62	1250163.19	1:0.08
	S-Pit	310688.22	1308.00	73482.54	142397.62	46320.53	47179.54	750154.62	1:0.10
	Sub-Total	**801400.18**	**1308.00**	**171061.42**	**408810.96**	**94413.65**	**125806.15**	**2000317.82**	**1:0.09**
5th Year	N-Pit	520243.56	-	126890.20	286586.61	28096.08	78670.67	1250863.68	1:0.10
	S-Pit	363785.97	393.00	127345.66	135939.85	52898.00	47209.46	750630.45	1:0.17
	Sub-Total	**884029.53**	**393.00**	**254235.86**	**422526.46**	**80994.08**	**125880.13**	**2001494.13**	**1:0.13**
Grand Total		**3181776.81**	**1701.00**	**662782.35**	**1679519.82**	**334314.95**	**503458.68**	**8004993.32**	**1:0.08**

List of Proposed Equipment

Sr. No	HEMM Requirement	No's	Size	Make	Model
1	Shovel	5	1.3 m^3	L&T Komatsu	Komatsu PC 300
2	Loaders	3	1.7 m^3	BEML	BE 200-1
3	Wagon drill	4	110 mm	Atlas Copco	LM-100 (Drill) XAH 210 (Compressor)
4	Dumper	17	25 MT	Tata Hyva	Hyva 1500
5	Rock Breakers	1	-	Atlas Copco	MB 1500
6	Dozer	1	-	Cater Pillar	D-80 A12
7	Mobile crusher plant	2	100 TPH	Power screen/Voltas	SR1000
8	Water tanker	5	12000	Tata	Tata 1210
9	Staff Vehicles	5	-	Mahindra & Co	Bolero
10	Utility vehicles	3	-	Mahindra & Co	Camper
11	Ambulance	1	-	Mahindra & Co	-

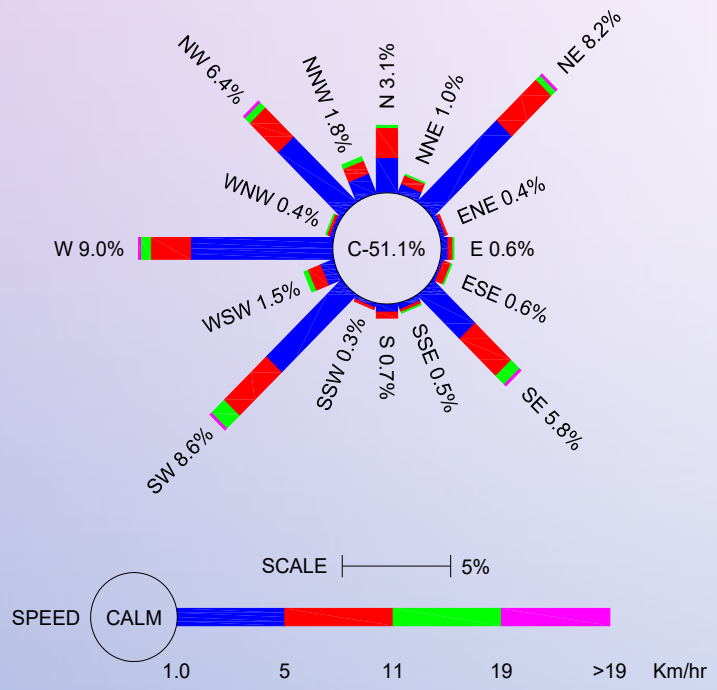
Proposed Method of ROM and Mineral Reject Processing



Process Flow Block Diagram

- Mineral processing units inform of mobile crushing and screening plants will be deployed in the block.
- ROM produced during the excavation from the pits will be fed to the mobile screening units for size segregation.
- Oversized material from screen grizzly will be fed to the mobile crushing unit of 100 TPH capacity.
- ROM (-200 mm) raised from the quarry is being feed to the 4 no's of screening plant to be deployed for getting the iron fines -10mm +2mm, calibrated lump ore +10mm -30mm and +30mm -80mm lumps after screening.
- Grizzly oversize which is +80mm size boulders are segregated at the initial stage. Mobile screening plants will be of 150 TPH capacity which goes for higher output based upon type of feed, nature of material and weather condition in the mines.
- Oversized products of grizzly during screening i.e., +80mm boulders and +30 mm -80mm lumps generated are fed to mobile crusher units to get 10-30 mm crushed CLO and fines.
- Average percentage of fines produced in the screening plant is assumed as 70% of the feed.
- Fines generated during production period will be stacked separately around the screening plant by the help of pay loaders.

Meteorology



Site Specific Wind Rose for the Study Period (Post-monsoon)

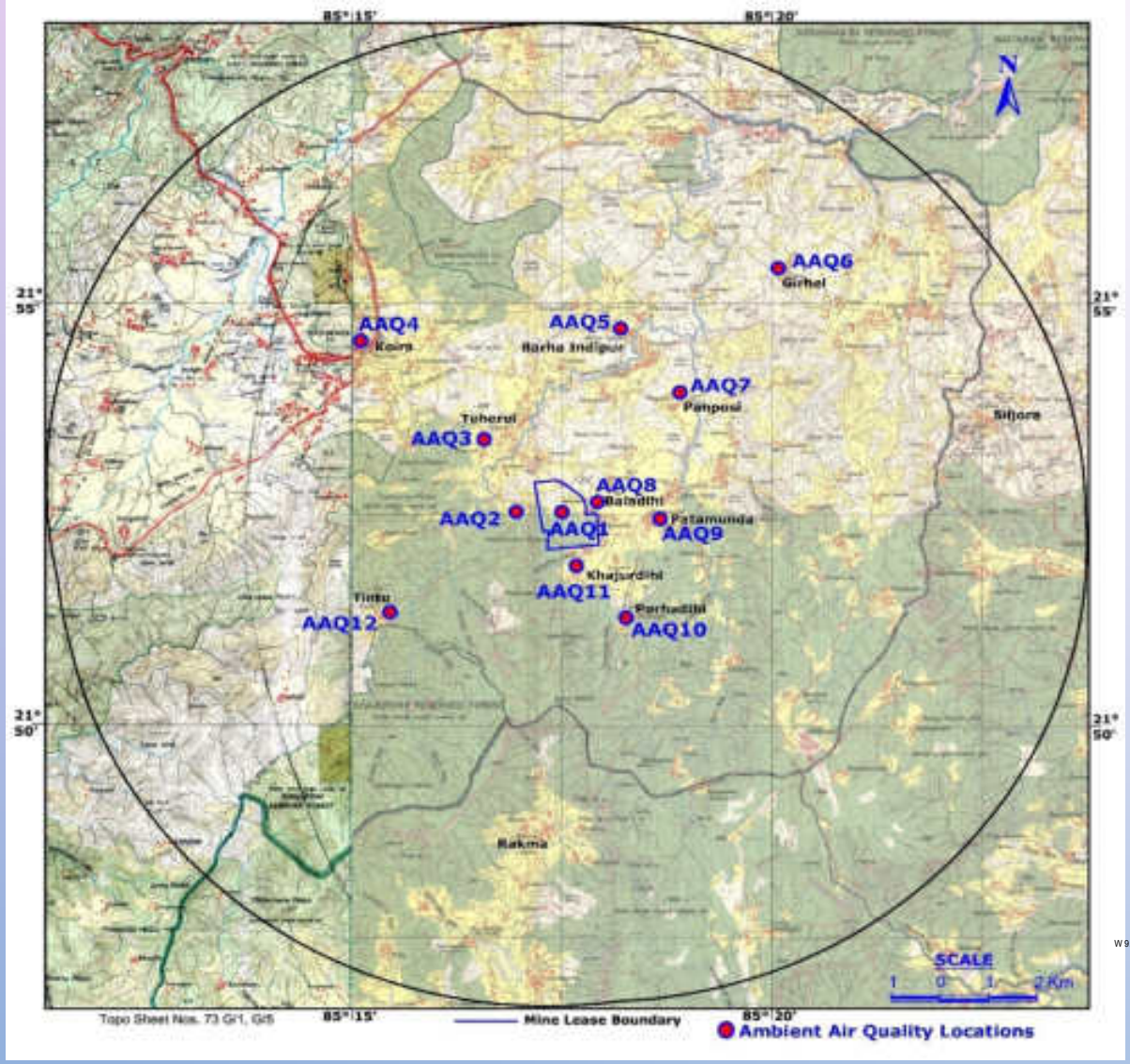
Predominant winds are mostly from W (9.0%) direction followed by SW (8.6%) and NE (8.2%) direction

Photograph Showing Meteorological Station Near MI Area (Patmunda Village)

Month	Temperature (°C)		Relative Humidity (%)		Atmospheric Pressure (mb)		Rainfall (mm)
	Min	Max	Min	Max	Min	Max	
October 2021	22.7	31.6	66	68	955.1	957.8	54.1
November 2021	18.4	26.8	59	64	958.6	961.4	7.9
December 2021	7.0	30.6	63	66	956.1	959.2	22.9
Range	7.0-31.6		59-68		955.1-961.4		Total: 84.9

Source : Baseline Study

Baseline Environmental Status – Ambient Air Quality



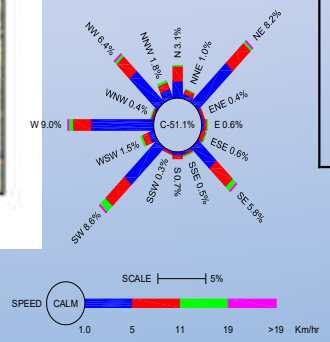
Ambient Air Quality Monitoring Locations

Details of Air Monitoring Locations

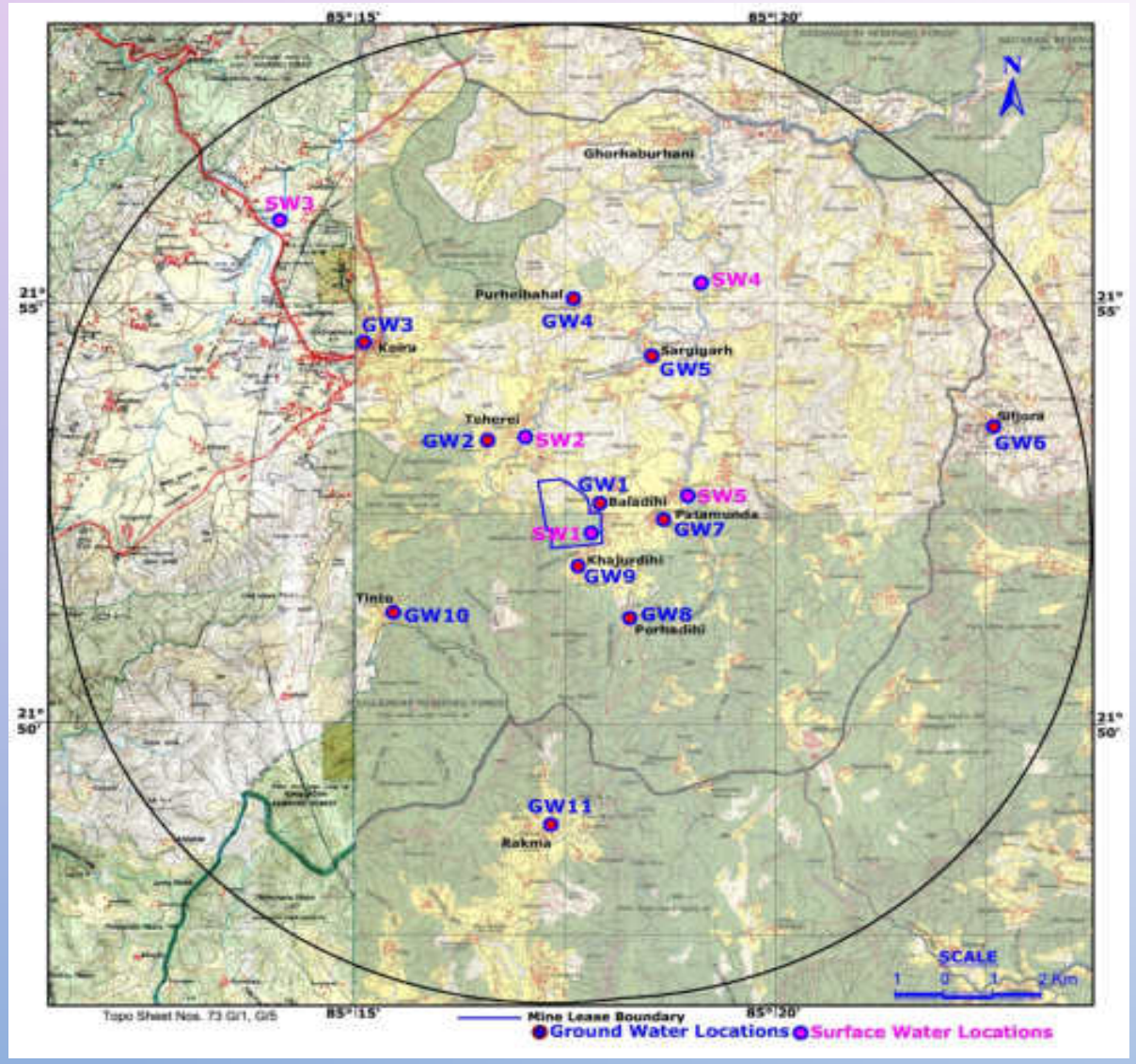
Code	Location	Distance (km)	Direction w.r.t Mine Site	Wind Direction	Environmental Setting
AAQ 1	Mine Site	--	--	-	--
AAQ 2	Near ML Area	0.5	W	Upwind	--
AAQ 3	Teherei	1.4	NW	Crosswind	Residential
AAQ 4	Koira	4.7	NW	Crosswind	Commercial
AAQ 5	Barha Indipur	3.6	N	Crosswind	Residential
AAQ 6	Girhel	6.4	NE	Crosswind	Residential
AAQ 7	Panposi	3.0	NE	Crosswind	Residential
AAQ 8	Baladhi	0.5	E	Downwind	Residential
AAQ 9	Patamunda	1.3	E	Downwind	Residential
AAQ 10	Porhadihi	1.7	SE	Crosswind	Residential
AAQ 11	Khajurdihi	0.5	S	Crosswind	Residential
AAQ12	Tinto	3.6	SW	Crosswind	Residential

Observations

Parameters	NAAQS Limits
PM2.5 – 18.4 – 33.3 µg/m3	60
PM10 – 35.4-71.4 µg/m3	100
SO2 – 8.2-18.3µg/m3	50
NOx – 11.5-28.4µg/m3	40
CO – 212-419µg/m3	2000



Baseline Environmental Status – Water Quality



Water Sampling Locations

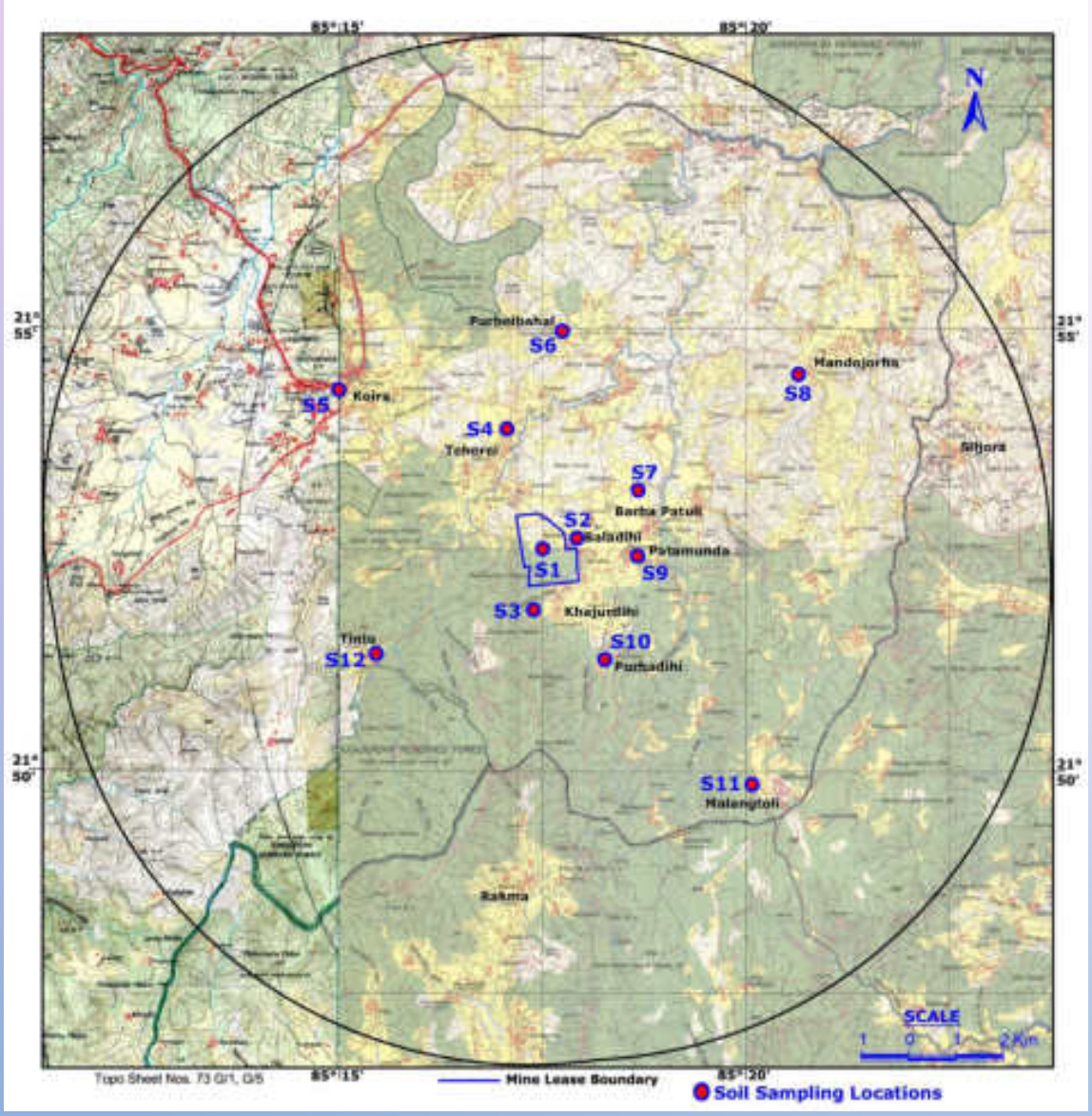
Details of Water Sampling Locations

Code	Location Name	Distance (km)	Direction w.r.t Mine Site
Surface Water			
SW1	Khajurdihi Nala	--	--
SW2	Teherei Nala Near	1.2	NNW
SW3	Karo Nala	7.8	NW
SW4	Kundra/Suna Nadi	4.6	NE
SW5	Suna Nala	1.9	E
Ground Water			
GW1	Baladihi	0.2	E
GW2	Teherei	1.4	NW
GW3	Koira	4.7	NW
GW4	Purheibahal	3.8	N
GW5	Sargigarh	3.3	NNE
GW6	Siljora	8.1	ENE
GW7	Patamunda	1.3	E
GW8	Porhadihi	1.7	SE
GW9	Khajurdihi	0.5	S
GW10	Tinto	3.6	SW
GW11	Rakma	6.1	S

Observations

Surface water (5)	Ground water (11)
pH: 6.79 to 7.64 TDS: 154 to 615 mg/l DO: 5.8 to 6.3 mg/l Chlorides: 19.6 to 25.3 mg/l Sulphates: 18.6 to 21.1 mg/l Total Coliforms : 492 to 652 MPN/100ML	pH: 6.136.55 to 7.92 Total Hardness: 108.4 to180.8 mg/l Chlorides: 23.4 to 70.8 mg/l Fluoride: 0.4 to 0.8 mg/l Nitrates: 3.1 to 7.3 mg/l

Baseline Environmental Status – Soil Quality



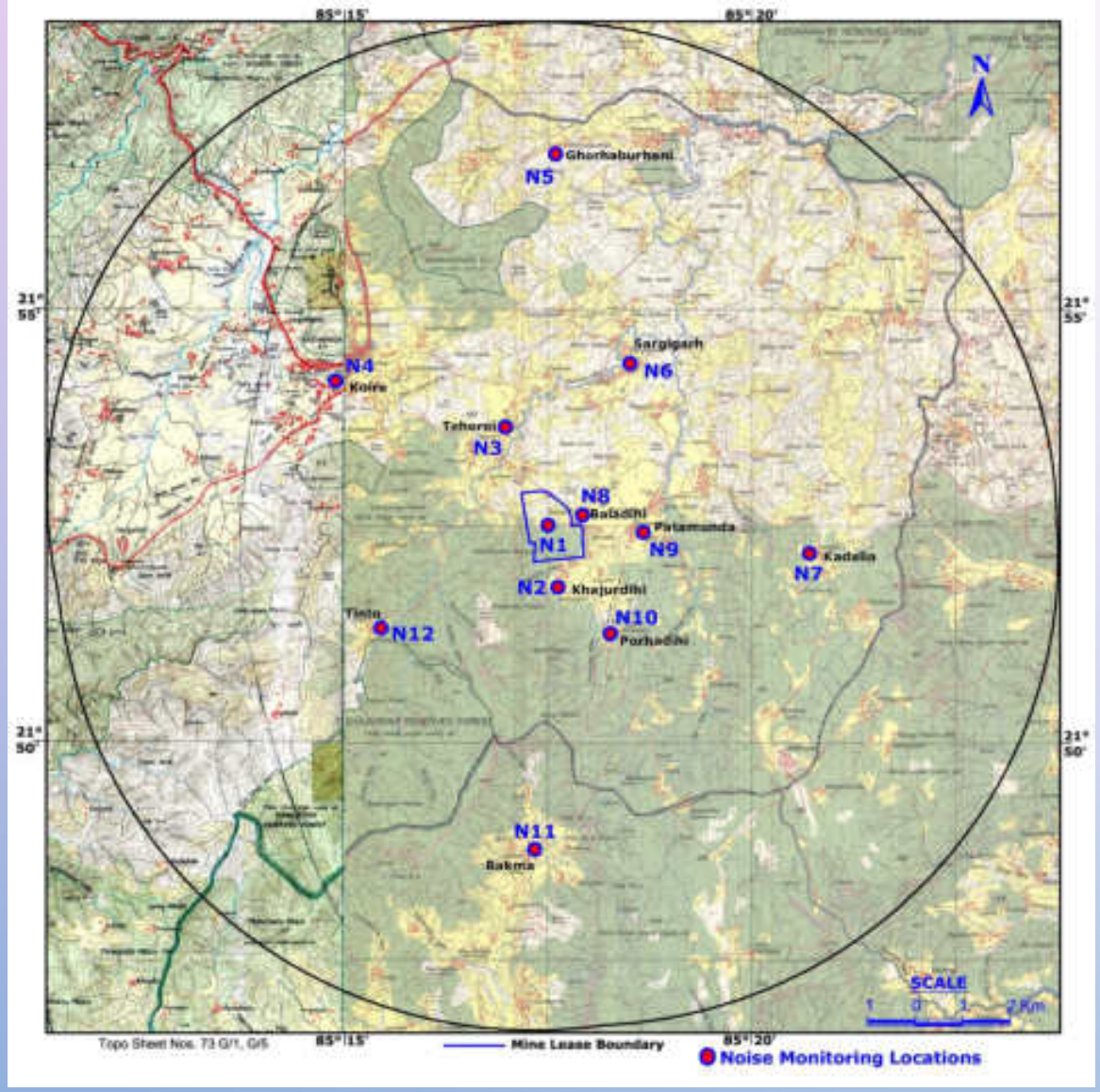
Soil Sampling Locations

Details of Soil Sampling Locations

Code No	Name of the Location	Distance (km)	Direction w.r.t Mine Site	Environment Setting
S1	Mine Site Area	--	--	Forest Area
S2	Baladihi	0.2	E	Agriculture Land
S3	Near Khajurdihi	0.5	S	Forest Area
S4	Teherei	1.4	NNW	Agriculture Land
S5	Koira	4.7	NW	Agriculture Land
S6	purheibahal	3.8	N	Barren land
S7	Barha Patuli	2.0	NE	Agriculture Land
S8	Mandojorha	6.0	ENE	Agriculture Land
S9	Patamunda	1.3	E	Agriculture Land
S10	Porhadihi	1.7	SE	Open Area
S11	Malangtoli	6.0	SE	Agriculture Land
S12	Tinto	3.6	SW	Agriculture Land

- pH value ranges between 5.45 to 7.66 indicating soils are very strongly acidic to slightly alkaline
- EC ranges between 58 to 141 µs/cm and are below the limits to be called as saline and hence the soils are normal for crop growth.
- Samples contain 0.36 to 0.57% organic carbon which ranges as less to medium and 0.62 to 0.98% organic matter. As per crop requirements the soils are average sufficient to sufficient in organic matter content.
- Available nitrogen in the samples ranges between 135.6 to 326.5 kg/ha falls under good to sufficient category.
- Available phosphorus content ranges between 76.8 to 152.6 kg/ha and falls under sufficient to more than sufficient category for crop growth and the available potassium ranges between 89.6 to 215.6 kg/ha and is very less to medium for crop growth.
-
- Also, the concentration of heavy metals like Cr, Pb, Ni, Cd, As, Hg etc. are found to be within normal or permissible limits indicating that there is no heavy metal contamination in the soil.

Baseline Environmental Status – Noise Levels



Noise Monitoring Locations

Details of Noise Monitoring Locations

Code	Location	Average Noise Levels in dB(A)	
		L_{day}	L_{night}
N1	Mine Site	45.9	42.7
N2	Khajurudihi	42.1	38.9
N3	Teherei Open Area	50.5	47.5
N4	Koira Market	60.9	57.7
N5	Ghorhaburhail Open Area	49.3	46.1
N6	Sargigarh School	42.5	39.3
N7	Kadalia Open Area	49.3	46.1
N8	Baladhi Open Area	41.0	37.8
N9	Patamunda Panchayat Office	50.9	47.7
N10	Porhadihi School	42.9	39.7
N11	Rakma School	41.7	38.5
N12	Tinto School	41.9	38.7

Observations

During Day Time – 41.0 to 60.9 dB (A)

During Night Time – 37.8 to 57.7 dB (A)

Baseline Environmental Status – Ecology and Biodiversity

- Primary survey and as per forest department records and review of literature, there are no wildlife sanctuaries, national park, biosphere reserves in the study area.
- Flora : *Shorea robusta*, *Adina Cordifolia*, *Anogeissus latifolia*, *Gardenia recnifera*, *Madhuca longifolia*, *Zizyphus mauritiana*, *Crotalaria hirsuta*, *Xanthium strumarium* are commonly observed.
- Fauna : Common mongoose, langur, jackal, elephant, squirrel, rat, Plain prinia, Common cuckoo, Cattle egret, Parakeet, crow, Indian peacock, Greater coucal, lizards and skinks. Snakes were rarely spotted. Among the frogs, common toad was found as mostly present in human environments.
- Based on the authenticated list of flora and fauna of FRO and other secondary data there are eleven species which belong to Schedule-I, namely Bison, Four horned Antelope, elephant, Leopard cat, Indian Pangolin, Peacock, Indian retel, Flying squirrel, Mouse deer, sloth bear, Rock python and rest of the species belong to Schedule-II, III, IV and V of the Indian Wildlife (Protection) Act, 1972.

Air Quality Impact Assessment (Contd…)

Scenario- 1: Impact due to Netrabandha mine for total excavation of 2.680 MTPA (2.0 MTPA (ROM)+ OB 0.680) (Normative Production – 6666 TPD)

PREDICTED INCREMENTAL GLC's DUE TO THE PROPOSED MINE ACTIVITY (WITHOUT CONTROL MEASURES)

Pollutant	Incremental GLC's ($\mu g/m^3$)	Distance (m)	Direction
PM_{10}	21.7	200	NE
$PM_{2.5}$	6.50	200	NE
NO_x	3.45	30m from the road centerline	
CO	1.49	30m from the road centerline	
SO_2	0.32	30m from the road centerline	

PREDICTED INCREMENTAL GLC's DUE TO THE PROPOSED MINE ACTIVITY (WITH CONTROL MEASURES)

Pollutant	Incremental GLC's ($\mu g/m^3$)	Distance (m)	Direction
PM_{10}	54.2	200	NE
$PM_{2.5}$	16.3	200	NE

Air Quality Impact Assessment (Contd…)

Scenario-2: Impact due to Netrabandha mine for Peak Production capacity of 9375 TPD.

PREDICTED INCREMENTAL GLC's DUE TO THE MINE ACTIVITY (WITHOUT CONTROL MEASURE) – PEAK PRODUCTION

Pollutant	Incremental GLC's ($\mu g/m^3$)	Distance (m)	Direction
PM_{10}	86.7	200	NE
$PM_{2.5}$	26.0	200	NE

PREDICTED INCREMENTAL GLC's DUE TO THE MINE ACTIVITY (WITH CONTROL MEASURE) - PEAK PRODUCTION

Pollutant	Incremental GLC's ($\mu g/m^3$)	Distance (m)	Direction
PM_{10}	34.7	200	NE
$PM_{2.5}$	10.4	200	NE
NO_x	5.18	30m from the road centerline	
CO	2.24	30m from the road centerline	
SO_2	0.47	30m from the road centerline	

Air Quality Impact Assessment (Contd…)

Scenario 3: Cumulative Impact assessment considering Netrabandha Pahar Iron Ore Block with other existing Industry/ mines located within the 10 km study area

LIST OF INDUSTRIES/MINES LOCATED WITHIN THE STUDY AREA

Sr.No	Industry	Capacity	Distance/Direction
1	Proposed Netrabandha Iron Ore Block	2.0 MTPA	-
2	S.N. Mohanty mine	0.12 MTPA	3.8 km, WSW
3	Oraghat Iron Mine	5 MTPA	4.0 km, NNE
4	Sanindpur iron &Bauxite mine	16.5 MTPA	4.5 km, NNE
5	JSW Narayanposhi	10 MTPA	6.2 km, NW
6	JSW Nuagaon	30 MTPA	7.9 km, N
7	Rungta Mine Spong Iron Plant	5*100 TPD	7.9 km, NW
8	JSW Gonua Mine	2.99 MTPA	8.5 km, NE
9	Tata Khandband Mine	8 MTPA	9.0 km, NE
10	JSW Jajang Mine	12.8 MTPA	9.3 km, ESE
11	KJSA Steel & Power	3*100 TPD	9.7 km, N

PREDICTED CUMULATIVE GLC's DUE TO THE ACTIVITY OF PROPOSED NETRABANDHA PAHAR IRON ORE BLOCK AND EXISTING INDUSTRY WITHIN 10 KM RADIUS WITH CONTROL MEASURE

Parameter	Cumulative GLC's µg/m³	Distance km	Direction
PM_{10}	78.7	7.5	NE
$PM_{2.5}$	37.8	7.5	NE
NO_2	27.2	7.2	NE
SO_2	15.3	5.2	N

Traffic Impact Assessment Study

TRANSPORTATION ROUTE MAP (BPSL NETHRABANDHA IRON ORE MINE TO BPSL PLANT)

TRANSPORT OF ORE THROUGH TRUCKS

Loading Point	Destination via Road
Netrabandha Mine (2.0 MTPA)	Koira – Segasahi – Kalta – Rajamunda – Gopapali – Laing – Gariamal – Sundargarh – Kerai – Jharsuguda - BPSL

CALCULATION OF TRUCKS REQUIRED TO TRANSPORT THE ORE

Mode of Transport	Route	Amount of Dispatch (%)	No of trucks/ day	To & Fro
Through Road	Koira – Segasahi – Kalta – Rajamunda – Gopapali – Laing – Gariamal – Sundargarh – Kerai – Jharsuguda - BPSL	100	222	444

PARAMETERS CONSIDERED FOR MODELLING

Note: Bharat Stage-IV

Sr. No.	Parameter	Description
1	No of vehicles per day (for 2 MTPA which will be transported by road to the nearest railway sidings) Considered 300 days (3 shifts; 8 hour each)	222 VPD 444 (to & from)
2	Capacity of truck	30 tonnes
3	**Emission Factors (BS IV)**	
	CO (g/km/hr)	1.5
	NOx (g/km/hr)	3.5
	PM_{10}	0.02
	$PM_{2.5}$	0.012
	HC	0.96

PREDICTED INCREMENTAL CONCENTRATIONS DUE TO ADDITIONAL TRAFFIC

Sr. No.	Parameter	Concentration ($\mu g/m^3$)	Distance from road (m)
1	Carbon Monoxide	5.87	25
2	Oxides of Nitrogen	13.6	25
3	Particulate Matter (PM_{10})	0.94	25
4	Particulate Matter ($PM_{2.5}$)	0.57	25
5	Hydrocarbons	3.77	25

Noise Levels and Ground Vibrations

With the mining operations, due to machinery, drilling and blasting for mine development, excavation, transportation and crushing of ore, it is imperative that noise levels would increase.

Mathematical noise modeling has been carried out and the high noise levels are confined to the mining areas only.

Nearby villages and other community areas are not likely to have any major adverse impact. The mine boundary (at Baladihi) predicted noise level is 52.5 dB(A).

<u>Mitigation Measures</u>

Green cover/proposed green belt all around the mine lease area act as noise barrier and keep the community noise levels with the tolerable limits.

❖***Mitigation Measure to Reduce Ambient Noise Levels***

- **Minimum quantity of detonating fuse will be consumed by using alternatively excel non-electrical initiation system;**
- **The prime movers/diesel engines will be of proper designed and will be properly maintained;**
- **The operators chamber will be safe guarded with proper enclosures to reduce the noise levels;**
- **A thick greenbelt will be provided in phased manner around the periphery of the mine to attenuate noise; and**
- **Trees plantation in and around the lease area will be developed.**

❖***Measures to Protect Workers from High Noise Levels***

- **Provision of protective device like ear muffs/ear plugs;**
- **Provision of sound insulated chamber for the workers deployed on machines producing higher level of noise like bulldozer, drills etc.; and**
- **Reducing the exposure time of workers to the higher noise levels.**

Noise Levels and Ground Vibrations

BASELINE NOISE LEVELS NEARML AREA & SURROUNDINGS VILLAGES

Monitoring Location	Noise Levels dB (A)	
	Day Time (6:00 am to 10.00pm)	Night Time (10:00 pm to 6:00 am)
Netrabandha mine	45.9	42.7
Baladihi	41.0	37.8
Patamunda	50.9	47.7

Cumulative Impact due to all noise generating activities within the ML area

NOISE DISPERSION DUE TO PROPOSED MINING ACTIVITY

Sr. No	Village Name	Predicted level dB(A)
1	Teherei	41.9
2	Baladihi	52.5
3	Patamunda	49.3
4	Parhadihi	48.3
5	Khajurdihi	56.1

Impact on dispersion of Noise due to the stationary sources located within the ML area.

STATIONARY SOURCENOISE DISPERSION ON VILLAGES

Sr. No	Village Name	Predicted level dB(A)
1	Teherei	18
2	Baladihi	33
3	Patamunda	25.5
4	Parhadihi	23.4
5	Khajurdihi	33.7

Impact of Noise dispersion due to the movement of HEMM within the ML area.

IMPACT ON DISPERSION OF NOISE DUE TO MOVEMENT OF HEMM OVER VILLAGES WITHIN ML AREA

Sr. No	Village Name	Predicted level dB(A)
1	Teherei	43.9
2	Baladihi	46.1
3	Patamunda	45.6
4	Parhadihi	45.4
5	Khajurdihi	46.2

Vibration Levels due to Blasting

- Drilling will be done using 150/165 mm diameter drills with 10% sub-grade drilling.
- Blasting will be done by adopting the State of Art technology by using mostly SME (Site Mixed Emulsion Explosives).
- Nonel (non-electric initiation) and electronic detonators are proposed for blasting.
- Blasted material will be excavated by shovel and loaded onto 100 tonne dumpers for transportation of the ore, sub-grade or waste.

Two main factors determine the ground vibration due to blasting:

- Charge weight per delay; and
- Distance from the place of blast.

Fly rock is another possible damage caused by blasting.

There are many factors, which influence the fly rock phenomenon, like long explosive column with low stemming column, high burden, loose material or pebbles near holes and long water columns in the holes.

However, precautions shall be taken to ensure proper blasting patterns so that fly rocks do not go beyond planned safe distance.

As per DGMS circular Peak Particle Velocity (PPV) for frequency range of 8–25 Hz is 10 mm for kutcha brick buildings and 5 mm for sensitive area. PPV will be kept within the safe limit prescribed by DGMS tech circular no. 7 of 1997 dated 02.09.1997.

Impact on Surface and Groundwater Quality

- Drainage system of the ML area is controlled by Teherai nala flowing to the north of the block and its tributaries.
- Khajurdihi nala flowing in the southern part of the area controls the drainage in the southern part.
- Drainage courses in the ML area are seasonal and except Khajurdihi nala in the southern part, others are initial courses and not prominent.
- Khajurdihi nala passing through the southern part of the ML area will not be disturbed and an embankment of at least 2 m below the alluvial soil existing in part of the block and a vegetative corridor of at least 20 m along the nala will ensure control of any seepage from Khajurdihi Nala into mine pits and protection of stream course from the mining activity.

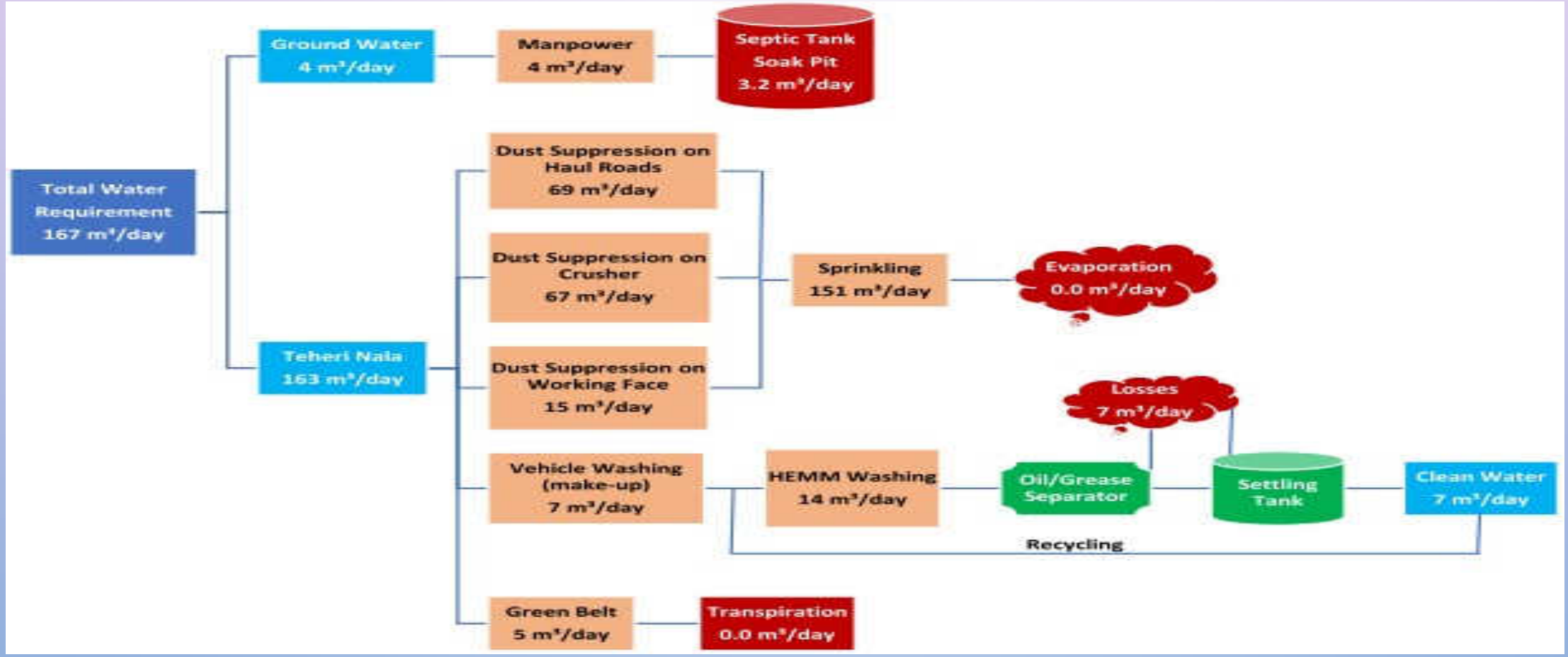
Mitigation Measures

- Stabilization of dumps with plantation;
- Construction of toe wall and garland drains;
- Domestic discharges are treated in septic tanks with soak pits. There will not be any impact on surface water quality because of domestic discharges;
- There is no discharge from the mine and zero discharge will be maintained.

- Present water quality will be monitored quarterly.

Water Management

No process effluent generation from the ML area, however effluent generated from mine workshop will be treated using oil-grease trapper with complete recirculation. Domestic effluents will be treated in septic tanks and soak pits.



PROPOSED WATER BALANCE

Impact on Solid Waste

- During the five year of mining plan period 1166241 m^3 of waste will be generated.
- Alluvial soil capping the rock bed is the loosen OB that exists in some part of the block.
- Thickness of the OB is about 1.0 m.
- This will be removed separately and simultaneously used for plantation.
- Only temporary storage for top soil is proposed.
- Proposed generation of waste will be dumping in waste dump site and in the conceptual stage, which will be used for backfilled in 45.632 ha area within mined out pit.
- Dump stability will be maintained as per the statutory recommendation.

Mitigation Measures

- Stability of waste dumps is ensured to prevent soil erosion. OB management involves two steps one is technical reclamation and another is biological reclamation.

Solid Waste Management

Dump Management

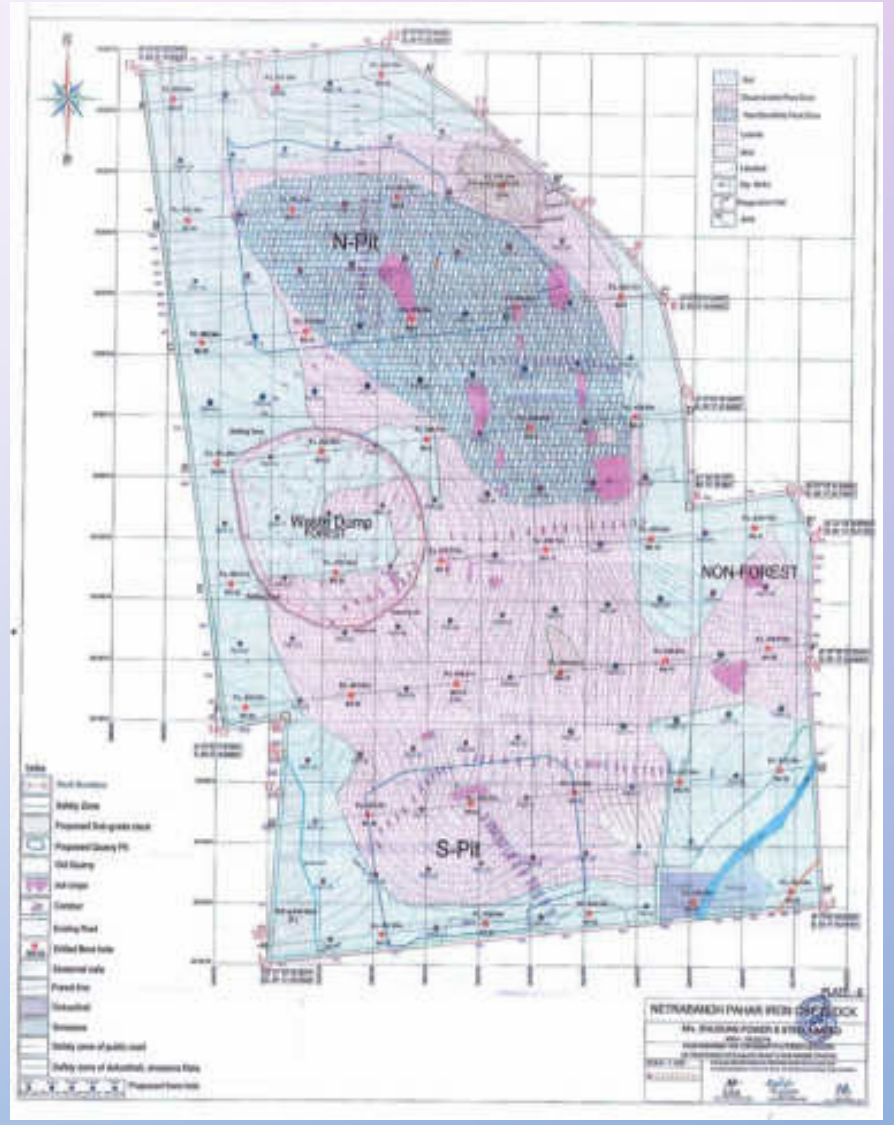
- Waste generated in form of alluvial soil, ferruginous laterite and limonite (both as over burden and intercalated waste). The generation of waste proposed during the plan period is 1432801 m^3 with in situ waste of 1166241 m^3.
- Since, the depth of the ore zone is not very high it is likely that back-filling of excavated area through generated waste is possible.
- Waste material will be dumped in the proposed dump site in the west-central part of the lease area over non-mineralized zone.

DETAILS OF WASTE GENERATION DURING PLAN PERIOD

Year	Waste (m^3)	
	Generation	Storage
1st	113836.60	113836.60
2nd	100586.40	100586.40
3rd	274834.40	274834.40
4th	296867.00	296867.00
5th	380116.00	380116.00
Total	**1166241.00**	**1166241.00**

DETAILS OF PROPOSED DUMPS

Year	Generation of Waste in (m^3)		
	In-situ (A)	Loose (B)	Compact 85% of B
1st	113836.60	142295.75	120951.39
2nd	100586.40	125733	106873.05
3rd	274834.40	343543	292011.55
4th	296867.00	371084.5	315421.83
5th	380116.00	475145	403873.25
Total	**1166241.00**	**1457801.25**	**1239131.06**

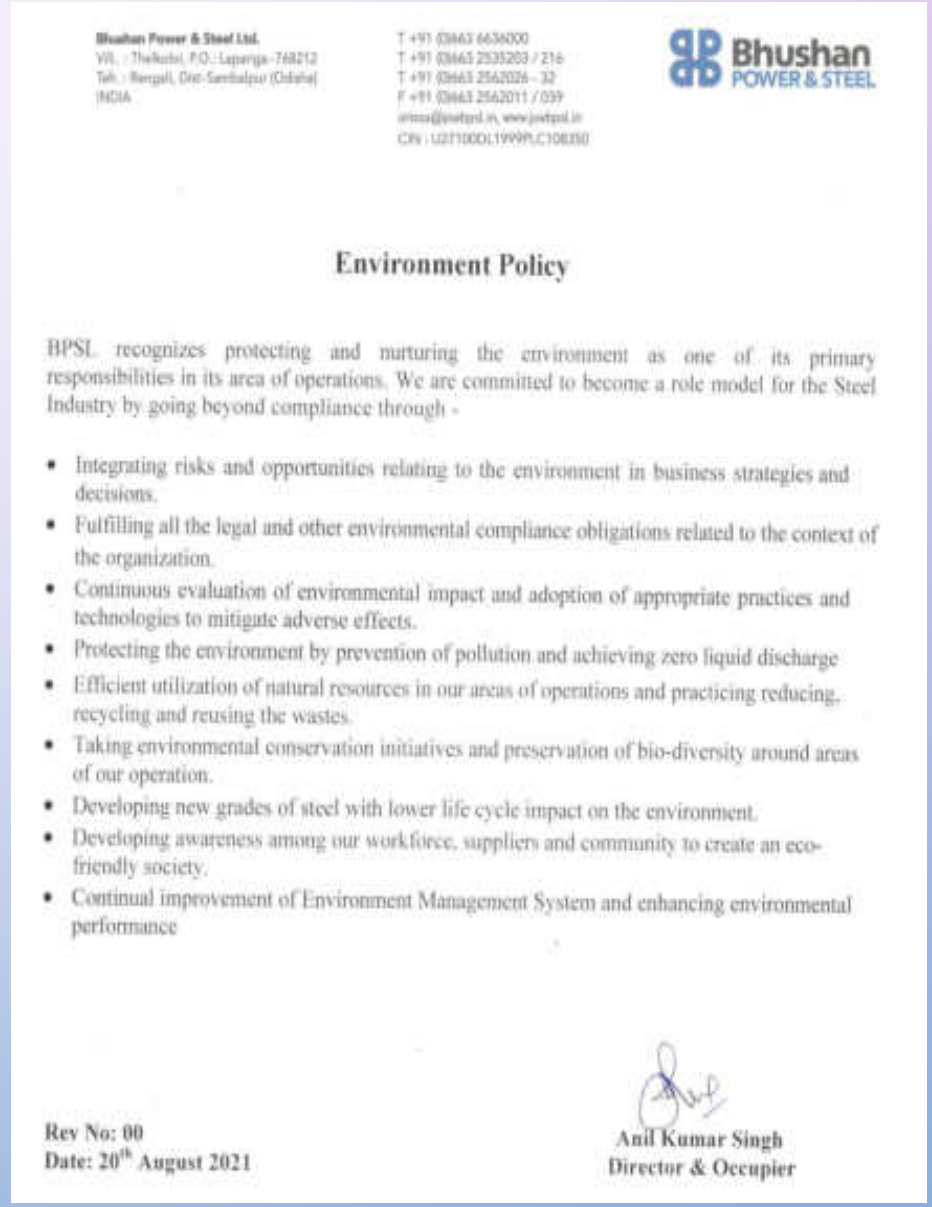


LOCATION OF PROPOSED WASTE DUMPS AND SUBGRADE STACKS

Environmental Protection Measures - Capital Cost & Recurring Cost

BPSL Netrabandha mine has proposed to spend a total of Rs.9.5 Crores towards environmental protection measures during the next 5 years. The details of capital and recurring cost of EMP

Particulars	Proposed Cost in Rs. crores	
	Capital	Recurring
Dust Suppression (Dry Fog System, mobile & fixed haul road water sprinkling system etc.)	1.5	0.25
OB Dump Management (like retaining wall, garland drains, check dams, settling ponds etc)	1.0	0.25
Water & Waste water Management (like ETP/Mechanized Oil Grease Trap system, STP etc)	0.6	0.25
NEERI Compliance (like Concrete Road, Parking Plaza with amenities, Mechanical road sweeper & mechanized wheel washing system etc.)	3.0	0.50
Rainwater harvesting Structures	0.4	0.25
Plantation/Green belt development along with drip irrigation system	1.0	0.25
Environmental Monitoring equipment (CAAQMS etc)	0.5	0.50
Environment Monitoring, Compliance Management, Safety etc.	0.5	0.25
Regional & Site Specific Wildlife Conservation Plan	1.0	0.25
Grand Total	9.5	2.75



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Bhushan POWER & STEEL

Environment Policy

BPSL recognizes protecting and nurturing the environment as one of its primary responsibilities in its area of operations. We are committed to become a role model for the Steel Industry by going beyond compliance through -

- Integrating risks and opportunities relating to the environment in business strategies and decisions.
- Fulfilling all the legal and other environmental compliance obligations related to the context of the organization.
- Continuous evaluation of environmental impact and adoption of appropriate practices and technologies to mitigate adverse effects.
- Protecting the environment by prevention of pollution and achieving zero liquid discharge
- Efficient utilization of natural resources in our areas of operations and practicing reducing, recycling and reusing the wastes.
- Taking environmental conservation initiatives and preservation of bio-diversity around areas of our operation.
- Developing new grades of steel with lower life cycle impact on the environment.
- Developing awareness among our workforce, suppliers and community to create an eco-friendly society.
- Continual improvement of Environment Management System and enhancing environmental performance

Rev No: 00
Date: 20th August 2021

Anil Kumar Singh
Director & Occupier

Greenbelt Development - Stage-wise cumulative plantation

Stage-wise cumulative plantation

Sr. No	Year*	Greenbelt		External dumb		Backfilled area		Others (Undisturbed area)		Total	
		Area (ha)	No. of trees	Area (ha)	No. of trees	Area (ha)	No. of trees	Area (ha)	No. of trees	Area (ha)	No. of trees
1	1st year	-	-	-	-	-	-	0.2905	726	0.2905	726
2	2nd year	-	-	-	-	-	-	0.4552	1138	0.4552	1138
3	3rd year	-	-	-	-	-	-	0.1118	275	0.1118	275
4	4th year	2.0	5000	1	2500	1.432	3580	1.4254	3550	5.8574	14630
5	5th year	2.0	5000	1	2500	2.5	6250	1.5001	3750	7.0001	17500
6	10th year	2.0	5000	1	2500	3	7500	-	-	6	15000
7	15th year	2.0	5000	1	2500	3	7500	-	-	6	15000
8	20th year	2.0	5000	2	5000	3.1	7750	-	-	7.1	17750
9	25th year	2.0	5000	2	5000	3.1	7750	-	-	7.1	17750
10	30th year	2.0	5000	2	5000	4.5	11250	-	-	8.5	21250
11	33rd year	2.0	5000	2	5000	5	12500	-	-	9	22500
12	33-36thyr	1.370	3400	2	5000	6	15000	-	-	9.37	23400
TOTAL		17.37	43400	14.0	35000	31.632	79080	3.783	9458	66.785	166919

- **Around 166919 saplings will be planted at the conceptual period on the dump slopes, backfilling, gap-filling and safety zone.**
- **Species mix: *Shorea robusta, Ficus religiosa, Ficus benghalensis, Bauhinia variegate, Artocarpus heterophyllus, Delonix regia, Madhuca longifolia, Mangifera indica, Syzygium cumini, Terminalia bellerica*.**

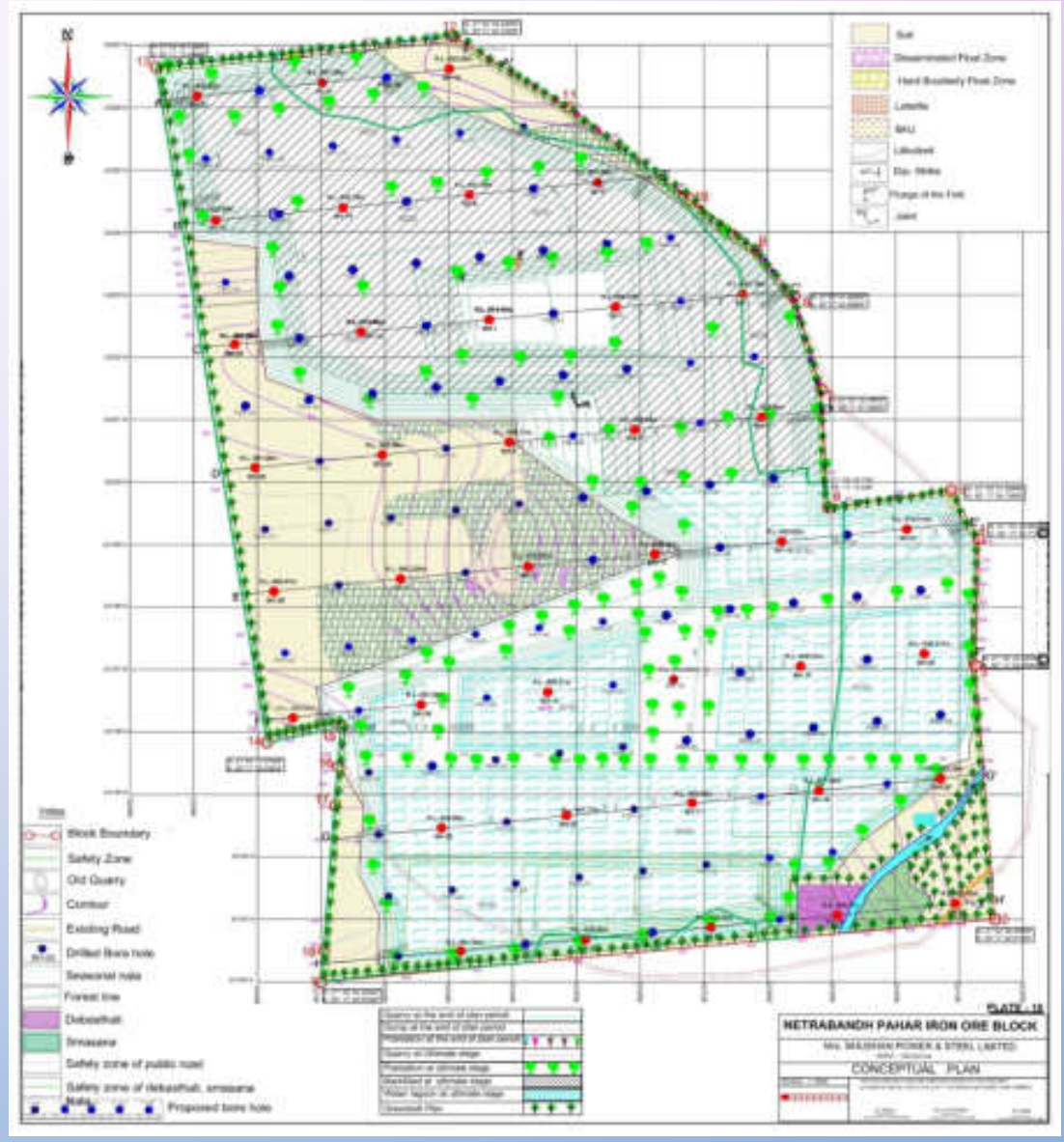
Greenbelt Development – Safety Zone

DETAILS OF SAFETY ZONES FOR GREENBELT DEVELOPMENT

Sr. No	Location	Width m	Length m	Area m²	Area h
of safety zones					
1	Village Road at SE	10	94.117	941.17	0.0941 x 2 (both sides) = 0.1882
2	Village Road at SW	10	51.17	511.7	0.05117 x 2 (both sides) = 0.10234
3	Village Road at W	10	82.35	823.5	0.0823 x 2 (both sides) = 0.1646
4	Village Road at NE	10	145.33	1453.3	0.1453 x 2 (both sides) = 0.2906
5	Block boundary at W	7.5	965.39	724.0425	0.0724
6	Block boundary at S	7.5	95.88	12.225	0.0012
7	Block boundary at E	7.5	15.4	11.55	0.0011
8	Block boundary at NE	7.5	17.9	13.425	0.0013
9	Block boundary at N	7.5	8.1	6.075	0.0006
10	Smasana at its W	7.5	204	153	0.0153
11	Smasana at its E	7.5	12.94	9.705	0.0009
12	Smasana at its S	7.5	21.17	15.88	0.0015
13	Debasthali at its E	7.5	204	153	0.0153
14	Debasthali at its W	7.5	10.588	7.941	0.0007
15	Debasthali at its N	7.5	8.235	6.17625	0.0006
16	Debasthali at its S	7.5	12.94	9.705	0.0009

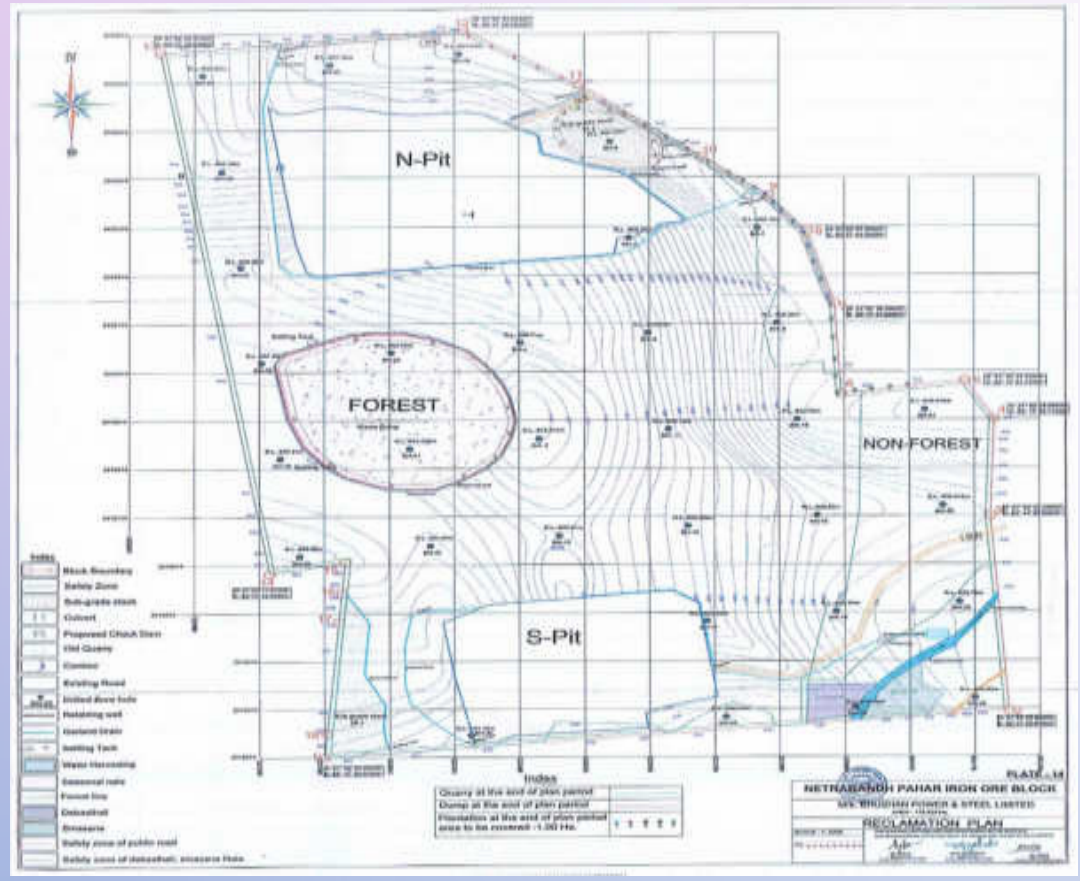
- **Five years greenbelt surface plan and greenbelt/green cover development in OB dump area**

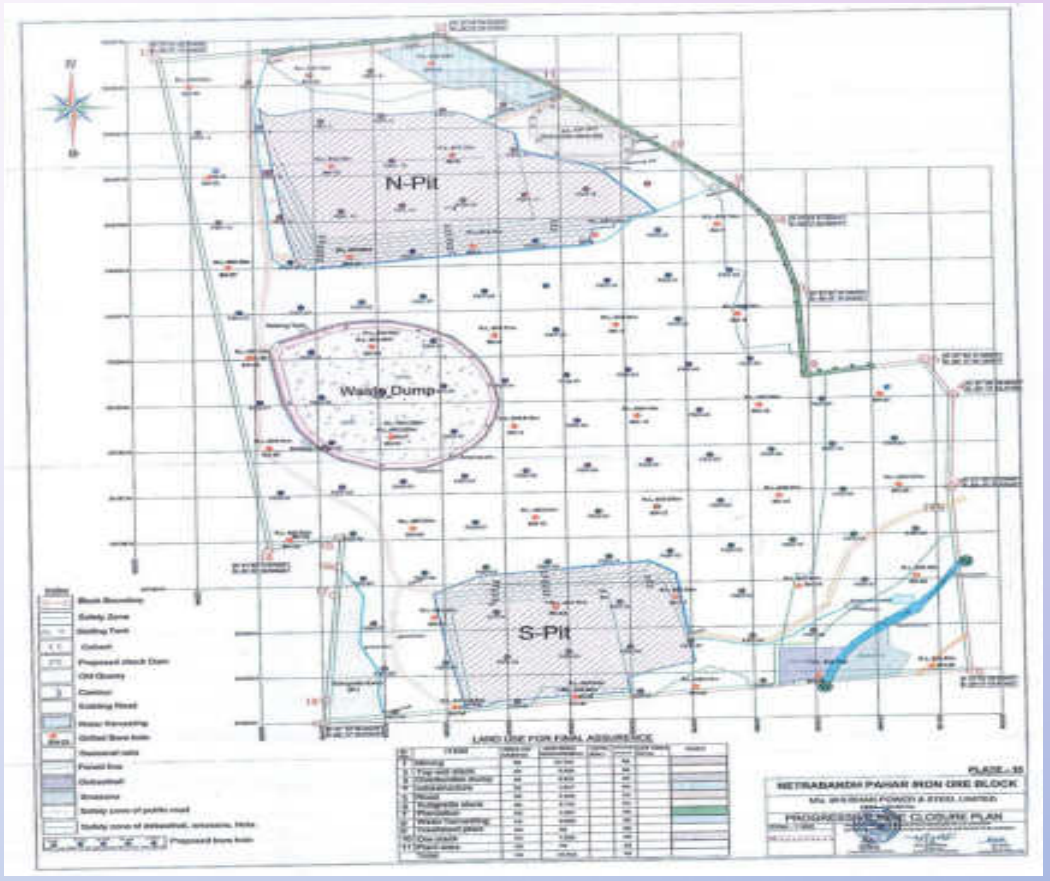
- **Target for survival is >90% and budget for afforestation including development of sapling, plantation and maintenance is expected to be around Rs.350 per sapling. This will be spent from the revenue budget.**



GREENBELT DEVELOPMENT PLAN

Reclamation Plan & Progressive Mine Closure Plan





- At conceptual stage, an area of 45.632 ha shall be reclaimed by backfilling about 105,02,550 m^3 and plantation, an area of 17.370 ha shall bench plantation and an area of 39.008 ha shall be converted into water lagoon.

- Grass seeding will be proposed along the slope of terrace of waste dump and bench slope for preservation of top soil during the process of reclamation and rehabilitation at conceptual period.

Advertisement Published for Public Hearing

STATE POLLUTION CONTROL BOARD, ODISHA
(Department of Forest & Environment, Govt. of Odisha)
Paribesh Bhawan, A/118, Nilakanthanagar, Unit-VIII, Bhubaneswar - 751012

No. 4638 / IND-II-PH-1005 Date 25.03.2022

NOTICE

CAD-3294: It is brought to the notice of all concerned that **M/s Bhushan Steel & Power Ltd.** has proposed to have Environmental Assessment **for Netrabandha Pahar Iron Ore Block with total excavation of 2.680 MTPA (2.0 MTPA ROM. OB - 0.680 MTPA) a long with 2x100 TPH Mobile Crusher over ML area of 139.223 Ha. in Baladihi village under Koira Tehsil of Sundergarh District** to obtain Environmental Clearance from Ministry of Environment, Forest and Climate Change, Govt. of India. The proponent has applied to the State Pollution Control Board, Odisha, Bhubaneswar for a Public Hearing.

By virtue of Ministry of Environment, Forests & Climate Change, Government of India Notification No. S.O. 1533 (E) Dtd. 14.09.2006, the Board has been authorized to conduct environmental public hearing and as such invites suggestions, views, comments and objections on matters relating to environmental aspects of the proposed project from all the persons including bonafide residents, environmental groups and others located at the proposed site / sites of displacement / sites likely to be affected.

For the above purpose, a person will only mean:

A. Any person who is likely to be affected by the grant of Environmental Clearance.
B. Any person who owns his control over the project with respect to which an application has been submitted for environmental clearance.
C. Any association of persons whether incorporated or likely to be affected by the project and / or functioning in the field of environment.
D. Any local authority within any part of whose local limits is within the neighborhood, wherein the project is proposed to be located.

Persons as above who desire to submit their views, comments, objections etc. relevant to the project, may do so in writing within 30 days from the date of publication of this notice addressing the same to the Member Secretary, State Pollution Control Board, Odisha through Registered Post. Besides this, persons interested to submit their views relevant to the proposed mining project in writing or orally may also do so during the public hearing to be conducted **on 27-04-2022 at 10.00 A.M at open ground near Khajuridihi Chowk Baladihi villaged under Koira Tehsil of Sundergarh District. Public Hearing shall be conducted strictly observing guide lines contained in COVID - 19 pandemic restrictions issued by the MoEF&CC, Govt. of India vide OM No.2 2-25-IA.III. dated 09.06.2 021 as well as Govt. of Odisha.**

Persons desirous of participating in the public hearing may go through the Environmental Impact Assessment (EIA) / Environmental Management Plan (EMP) of the said project which will be available at the following offices. Copy of the Executive Summary both in English & Odia is also available in the following offices & the same can also be downloaded from the website **www.ospcboard.org** free of cost.

1. District Collector's Office, **Sundergarh.**
2. District Industries Center, **Sundergarh.**
3. In the office of the Chief Executive Officer, Zilla Parishad, **Sundergarh.**
4. In the Head office of the State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakanthanagar, Unit - VIII, Bhubaneswar - 12.
5. Regional Office, State Pollution Control Board, Odisha, **Rourkela.**
6. Department of Forest & Environment (Environment), Govt. of Odisha, Bhubaneswar

For any further clarification in the matter, the Regional Officer, State Pollution Control Board, **Rourkela** or the Member Secretary, State Pollution Control Board, Odisha at Bhubaneswar may be contacted.

Sd/- MEMBER SECRETARY

OIPR- 08012/11/0315/2122

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CAD-3295

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ADVERTISEMENT DATE- 25.03.2022

Public Hearing Details along with Financial Provisions (Contd…)

Sr. No	Issues Raised by Public	Reply by the Project Proponent/ Action Plan	Financial Provision (Rupees in Lacs)	Unit	Time schedule for implementation		
					1st Year	2nd Year	3rd Year
1	Provision of local employment for youth and priority to Khajurdihi, Baldihi and Sonua for the local villagers as per skill in technical and non-technical jobs.	• BPSL will give direct employment to 57 people, overall employment of 235 people and other indirect activities like transportation, JCB operation, Dumper operation etc., local population will be preferred. • Experience and qualification are required to execute work within the company. • BPSL has also proposed skill development & vocational trainings for self-employment-oriented skill training programs will be organized under women empowerment.	39.00	No. of persons	30	40	50
2	Supply of drinking water facility to village and to every household during summer. And requested mines authority for laying pipeline and deep bore wells towards supply of drinking water.	• BPSL will allocate funds for installing RO Plant in nearby villages with help of local gram panchayats along with maintenance. • Rain water harvesting structure will also be constructed in nearby villages with help of local gram panchayats. • During summer water tanker will be sent to the villages/ BOREWELLS to be installed (solar powered)	15.00 5.00 50.00	No. of plant No. of structures Nos.	1 1 2	Maintenance 1 2	Maintenance Upgrading 1
3	Proper education to the nearby local students and appointment of teachers in local school. For improvement on education, appointment of adequate teachers in adjoining school areas, development towards school infrastructure and education facility, emphasis on education (English medium school) urged mines authority for providing bus for the transportation of college and school going students.	• BPSL has allocated funds to strengthen educational facilities in Govt. school (Bus, teaching & learning materials, Life Skill Educator & Academic Educator) along with provision of scholarships for poor students. • Wi-Fi connections/ mobile tower installations in the nearby villages as per the requirement of the local panchayat.	39.00 21.00	No. of Students No. of Towers	50 -	50 1	50 Upgrading

Public Hearing Details along with Financial Provisions (Contd…)

Sr. No	Issues Raised by Public	Reply by the Project Proponent/ Action Plan	Financial Provision (Rupees in Lacs)	Unit	Time schedule for implementation		
					1st Year	2nd Year	3rd Year
4	Development of Health care facilities in the nearby villages and Koira. Ambulance for villages. Need for improving health care facility like X-ray machine, Pathological tests, etc. in nearby hospital.	• Company has kept provision of mobile ambulance for emergency situation. This facility will be availed to people of nearby villages on on-call basis. • Company has kept the provision of upgrading medical lab equipment & machinery and Renovation of Public Health Centres of nearby villages.	50.00	No. of ambulance No. of Health centres	1 1	Continued Upgrading same centre	Continued Upgrading same centre
5	Requested for maintaining road conditions due to increase in vehicular movement which are evidential between Gonua to Koira road and Kalmanga to Kanusahi road where there is plenty of dust generation and unsafe drive over the roads during the movement of trucks. Road conditions to remain in good condition (Black topped) and local people to be engaged for road cleaning/sweeping so that their earning would be there as well as dust control mechanism would be established.	• The road repair based on the need-based assessment (with convergence) will be taken up in phase wise manner. • Company will use advanced technology for mining & water sprinkling and as a result people will not feel any dust at distance of 100-200 meter.	70.00 10	KM of Road No. of tankers	0.5 1	0.5 Continue	Maintenance Continue
6	Provision for solar street lights	• Solar light facility would be provided in priority areas as per evaluation. • 30 Solar Street lights will be provided @2 for each village.	15.00	No. of Lights	15	10	5

Public Hearing Details along with Financial Provisions (Contd…)

Sr. No	Issues Raised by Public	Reply by the Project Proponent/ Action Plan	Financial Provision (Rupees in Lacs)	Unit	Time schedule for implementation		
					1st Year	2nd Year	3rd Year
7	Demanded for protection & restoration of natural spring/ Nala which are passing through lease area, i.e., Suna Nala and Teherai Nala by construction of dam for restoration of water.	• BPSL will not divert/ disturb and natural nalas in the ML area. • BPSL will construct 4 check dams for the protection and restoration of nalas with proposed management plan. • Check dams, rain water harvesting structures will be constructed by the company as per the progressive mine closure plan (PMCP) of approved mining plan to manage the surface run-off. This will be done on a regular and planned basis.	Considered under EMP cost	No. of Check Dams	1	1	2
8	environmental management & control of air pollution due to plying of heavy vehicles, mitigation of dust problems, improvement of road condition.	• A detailed EMP measures are proposed by BPSL to mitigate the pollution due to plying of heavy vehicles. • Regular water sprinkling will take place twice a day on the haul road for dust suppression through tankers.	Under EMP cost		-	-	-
9	Compensation during elephant menace for destruction of houses	• A detailed site-specific wildlife conservation is prepared and under approval. Based on the conservation plan the activities will be taken up in concern with the forest Dept.,	As per approved Site Specific Wildlife Conservation Plan		..	..	..
10	Peripheral green belt development	• Peripheral plantation will be carried out with support of local community.	35.00	No. of plants	5000	5000	maintenance
11	Women empowerment and SHGs creation to increase earning capabilities.	• BPSL has proposed creation of SHGs and women empowerment in CSR activities,	39.00 (refer sr. no.1)	No. of Women	50	50	50
		TOTAL	349.00				

Public Hearing - Photographs

CSR Initiatives and Requirements (Contd…)

Village (1) – Khajuridihi

Date of Visit : 21st July 2021, 20th Aug. 2021, 23rd Aug 2021

Village information collection

Existing infrastructure Monitoring

PRA & FGD with Community

Need assessment of village

Hand Washing session with children

Requirements ;

- 1 - New boring water supply
- 2 – Renovation of Anganwadi center
- 3 – Construction of New Darbar
- 4 – Repairing of street light
- 5 – Renovation of Temple

Hygiene kit distribution

MHM Session with adolescent girls

Hand Washing session with community

CSR Initiatives and Requirements (Contd…)

Village (2) – Sanua

Date of Visit : 19th Aug. 2021,24th Aug. 2021

PRA & Community meeting

Hand washing with AWC children

Village information collection & Need assessment

Requirements ;

1. 2nos. of solar water tank
2. Renovation of AWC
3. Construction of New Darbar
4. Renovation of pond
5. Community Dustbin installation
6. Khali & Tailoring machine
7. Livelihood training to SHGs

Community Meeting

CSR Initiatives and Requirements (Contd…)

Village (3) – Patamunda

Date of Visit : 20th Aug. 2021,25th Aug. 2021

Household visit

WASH Infrastructure monitoring

Water structure monitoring

Hand washing session community women

Requirements ;

1. 2nos of Water structure
2. Construction of new Darbar
3. Repairing of street light
4. Renovation of water infrastructure

Hygiene Kit Distribution

Village Information collected

CSR Initiatives and Requirements

PROPOSED CSR BUDGET EXPENDITURE

Sr. No	PARTICULARS	Year 1	Year 2	Year 3	Amount in Crores
1	Health care facilities ✓ Infrastructure support to local health sub-centers ✓ Awareness on health issues (Personal hygiene, Sanitation, Covid-19 precautionary measures and Health camps)	0.12	0.12	0.12	0.36
2	Strengthening Primary and Secondary Schools ✓ Providing volunteer teachers at schools ✓ Providing the teaching and learning materials to schools ✓ Establishing libraries at the schools	0.13	0.13	0.13	0.39
3	Wi-Fi connection, desktops and tablets to local schools	0.07	0.07	0.07	0.21
4	Employment based apprenticeship/ Internship to local youth	0.15	0.15	0.15	0.45
5	Livelihoods trainings to local youth, SHGs and Women empowerment	0.12	0.12	0.15	0.39
6	Infrastructure development	0.15	0.15	0.10	0.40
TOTAL		0.74	0.74	0.72	2.20

Request

Request SEAC, Odisha
For issuing the Environmental Clearance (EC)
for
The Proposed Netrabandha Pahar Iron Ore Block for Total Excavation of 2.680 MTPA (2.0 MTPA (ROM)+ OB 0.680) along with 2x100 TPH Mobile Crusher in Mine Lease Area of 139.223 ha located at Baladihi Village, Koira Tehsil, Sundargarh District, Odisha
of
M/s Bhushan Power & Steel Limited (BPSL)

Thank You