

Site Inspection Report of Banhardi Coal Block Project of M/s Patratu
Vidyut Utpadan Nigam Ltd.

FCA proposal No: FP/JH/MIN/147316/2021

Date of Site Inspection: 11.12.2023 & 15.12.2023

Proposed Forest area for diversion: 515.32 Ha (Notified Forest: 497.02 Ha, Deemed Forest (GMJJ): 18.3 Ha)

Total area: 1467.42 Ha; Non-Forest area: 952.10 Ha

Mineable Reserve (Geological Report): 270.81 MT

Area proposed for diversion:

The site inspection has been done by the undersigned along with Range Forest Officer, Forester and Forest guards of Latehar & Chandwa Forest Range and representatives of M/s Patratu Vidyut Utpadan Nigam Ltd. (Jibandendu Mohapatra DGM (Banhardi), PVUNL & Subodh John Purti, Sr. Manager (Banhardi), PVUNL).

The land proposed for diversion by the User Agency is as follows:

Location	Plot No. (Notified PF: CS plots, GMJJ: RS plots)	NF Area (in Ha)	Deemed Forest (GMJJ) Area (in Ha)	Total Forest Area (in Ha)	Legal Status (PF/RF)
Banhardi	NF: CS plots- 3, 4, 5, 11, 16, 184, 185, 198, 740, 741. GMJJ: RS plots- 27p, 45, 50, 63.	177.3	5.31	182.61	PF
Bari	NF: CS plots- 1, 2, 4, 5, 6, 9, 35, 62, 91, 93, 114, 116, 187, 771, 1281, 1283, 1303, 1310, 1311, 1312, 1313, 1314. GMJJ: RS plots- 74p, 136p, 140, 141, 138, 153p, 196p, 246, 255, 491.	247.68	12.04	259.72	PF
Barwadih	NF: CS plots- NIL GMJJ: RS plots- NIL	0	0	0	PF
Rampur	NF: CS plots- NIL GMJJ: RS plots- NIL	0	0	0	PF
Surli	NF: CS plots- 58, 296, 305. GMJJ: RS plots- NIL	8.62	0	8.62	PF
Tota	NF: CS plots- 2, 144. GMJJ: RS plots- NIL	6.0	0	6.0	PF
Ate	NF: CS plots- 24. GMJJ: RS plots- NIL	1.21	0	1.21	PF
Jagaldaga	NF: CS plots- 590, 592, 594. GMJJ: RS plots- NIL	8.36	0	8.36	PF
Sabano	NF: CS plots- 621, 624, 850, 880, 910, 911. GMJJ: RS plots- 2016, 2020, 2021, 2028.	47.85	0.95	48.8	PF
	Total Area:	497.02	18.30	515.32	

Four mega coal projects (Upcoming mines at Chakla-12 km & Rajbar-0.5 km; and operational mines at Sikni-0.2 km & Tubed-5.5 km) are very close to this proposed mining site. Therefore it is very important to consider the complete landscape and cumulative impact of these mining operations at every step of decision making and planning.



Fig-01: Location of Coal Blocks coming up near Banhardi CB.

No portion of the applied area falls under any National Park, Wild Life Sanctuary, Tiger Reserve or notified Eco-Sensitive Zone (ESZ) of any National park /wild life Sanctuary. Approximate distance from nearby National Park, Sanctuaries and ESZ are: Palamu WLS at 18 km, Betla NP at 32.5 km, Lawalong WLS at 24 km and Mahuadanr Wolf Sanctuary at 50 km, ESZ of PWLS-BNP-MWS-PTR at 15.5 km, ESZ of Lawalong WS at 17.5 km.

Referred points are detailed as below –

- *Whether any protected archaeological/heritage site/defence establishment or any other important monument is located in the area. If so, the details there of with NOC from competent authority, if required. – No.*
- *Whether the requirement of forest land as proposed by the user agency in col. 2 of Part-I is unavoidable and barest minimum for the project. If no, recommended area item-wise with details alternatives examined. – Yes.*
- *Whether forms part of National Park, Wildlife Sanctuary, Eco Sensitive Zone (ESZ), Biosphere Reserve, Tiger Reserve, Elephant Corridor, etc. (If so, the details of the area and comments of the Chief Wildlife Warden to be annexed) – No.*
- *Whether any rare/endangered/unique species of flora and fauna found in the area - if so details thereof – Yes. Elephas maximus indicus (Elephant).*
- *Whether any work in violation of the Act has been carried out (Yes/No). If yes, details of the same including period of work done, action taken on erring officials, whether work is violation is still in progress. – No*

Site visit:-

The proposed Banhardi Coal Block is situated in the villages of Banhardi, Bari, Barwadih, Rampur, Surli, Tota, Ate, Jagaldaga & Sabano on forest and non-forest areas of Latehar & Chandwa forest ranges of Latehar Forest Division. It is a part of significant landscape in terms of ecological and hydrological functions, an important habitat and part of migratory route for wildlife (including wild elephants). Besides, it is an ecologically significant watershed that is interlaced with numerous streams, rivulets and nalas (like Nawatoli nala) that form a part of catchment area of Auranga River. Thus, the landscape is important from the Water Security perspective as well. Total area of the project is 1467.42 Ha (515.32 Ha of Forest land and 952.1 Ha of Non-Forest land).

Component wise breakup			
Sl.	Component	Forest Land (in Ha)	Non-Forest Land (in Ha)
1	Excavation area	96.51	630.73
2	OB Dump (Temporary) & Garland Drain	352.1	90.58
3	Road	0.99	9.22
4	Road Diversion	0	5.58
5	Infrastructure, Settling Pond & Stack Yard	3.1	33.24
6	Safety Zone	7.85	5.6
7	Top Soil Stack Yard	0	12.24
8	Underground Mining	54.77	164.91
Total		515.32	952.10

PVUNL has informed that the forest land of 352.1 Ha which is to be used for temporary OB dump & garland drain area will be further used for mining in future once the OB dump will be used in filling up the mined out area. Detailed survey and exploration for 1049.00 ha out of 1467.42 ha area of mining lease area is already completed and further detailed exploration of remaining 418.42 ha area is ongoing. Out of total 1467.42 ha of mining lease area, 515.32 ha is forest land for which PVUNL is applying for forest diversion proposal. The proposed forest area is unavoidable and barest minimum.

The forest area of proposed mining site is very rich in terms of floral and faunal biodiversity with an ecologically significant gene-pool. Therefore a sincere effort is needed to preserve the germplasm of the area by conducting a thorough biodiversity and ethno botanical study.

The proposed mining site has patches of dense Tropical Dry Deciduous forest with average vegetative density of **0.5 to 0.6** and **Eco class III**. The area is dominated by *Shorea robusta* (Sal) and its associate species. Predominant tree species recorded are *Madhuca longifolia* (Mahua), *Butea monosperma* (Palas), *Achyranthes aspera* (Chirchiri), *Terminalia tomentosa* (Asan), *Acacia catechu* (Khair), *Diospyros melanoxylon roxb.* (Kend), *Tectona grandis* (Sagwan), *Ficus religiosa* (Pipal), *Terminalia bellirica* (Bahera), *Albizia lebbbeck* (Siris) etc. Many of these species also contribute to forest based livelihood activities from NTFP collection and its value addition as well as Lac cultivation for indigenous local communities.

Fauna present in and around the proposed area are *Elephas maximus indicus* (Elephant), *Hyaena hyaena* (Hyena), *Herpestidae* (Mongoose), *Macaca mulata* (Rhesus macaque), *Felis chaus* (Wild cat), *Canis aureus* (Jackal), *Sus scrofa* (Wild boar), *Semnopithecus entellus* (Common Langur), *Muntiacus Muntjak* (Barking deer) etc. Presence of invertebrates, avifauna and herpetofauna in and around the proposed forest area indicates species richness and biodiversity.

Herds of elephants roam in and around the proposed area for diversion. Incidents of Human-Animal conflicts are likely to increase further with more fragmentation and loss of habitat due to open cast mining projects in and around the area (four mega projects nearby). Therefore it is very much required to prepare and implement a plan for minimising losses due to such incidents of human-animal conflict in and around the area collectively by forest department and User Agency in cooperation with locals. Also for detailed list of rare/endangered/unique species of flora and fauna, a comprehensive biodiversity and ethno botanical study by specialised agency and thereafter implementation of species specific conservation plan, as required, is strongly recommended.

The proposed area is a part of the catchment area of Nawatoli nala and other rivulets (tributary of Auranga River). Consideration in regard of *Water Security, Ecological Restoration and Post-Reclamation* of the area is needed in regard of water regime of the whole catchment area because with the advent of open cast mining operation in the area many streams arising from the adjoining hills and forests will be compromised in entirety and entire fragile ecosystem can get adversely affected by water crisis a few years down the line. Hence, a **Comprehensive Catchment Area**

Treatment Plan must be prepared and implemented to mitigate the adverse impacts of open cast mining.

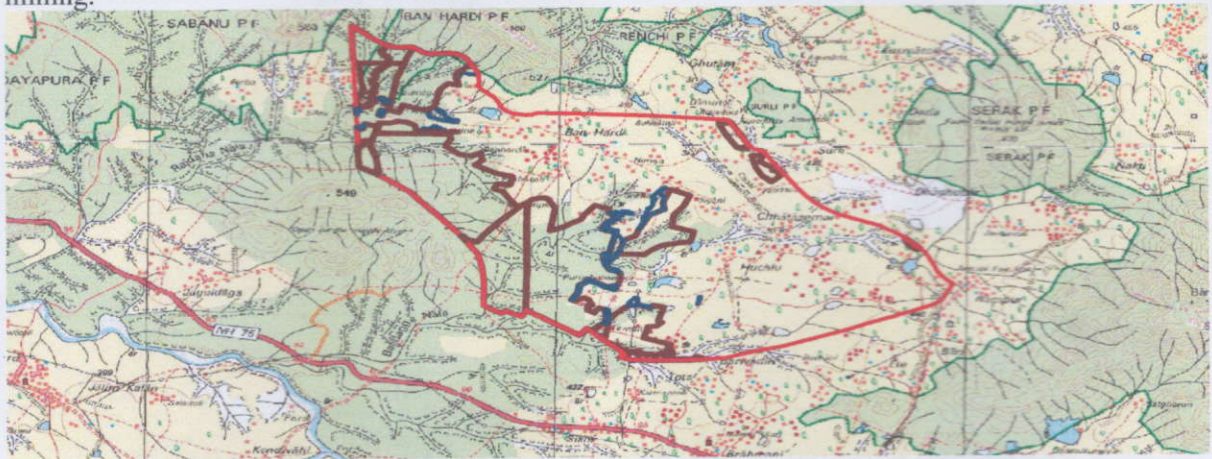


Fig-02: Location of Banhardi CB on Toposheet (showing forest and water bodies in the area).

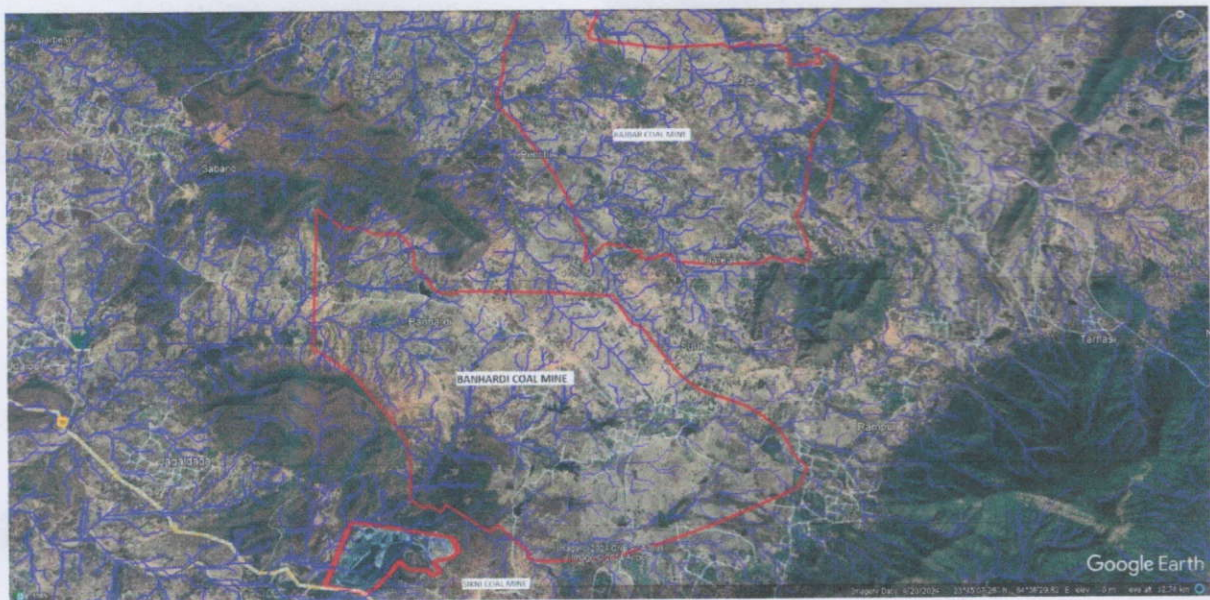


Fig-03: Rivers/streams in and around Banhardi coal block area.

The area proposed for diversion is also prone to soil erosion. Open cast mining and associated activities would involve activities like breaking of land and removal of earth, specially the top soil, in the area and beyond. Thus the entire landscape will become further vulnerable to soil erosion and degradation. Therefore, a **Comprehensive Soil and Moisture Conservation Plan** should be prepared and implemented treating the entire landscape to ensure that the detrimental impact of open cast coal mining on the adjacent vast expanse of forest shall be minimised.

Total area of coal block is 1467.42 Ha out of which 515.32 Ha is forest land. According to tree enumeration a total of 114229 trees will be removed from the forest area. It is therefore very important to mitigate the impact of not only the removal of trees and change in land use over such a vast area but also the resultant change in complete landscape and loss of biodiversity from the area.

The proposed project of coal mining is recommended keeping in mind the larger public interest and energy security, provided the above concerns get adequately addressed.

31/6/24
Divisional Forest Officer
Latehar Forest Division

Raushan Kumar
IFS
Divisional Forest Officer
Latehar Forest Division, Latehar