

Letter No.- HIL/LHD/EDS/Bagru/177

Date: 16.07.2022

To
The Nodal Officer (PCCF)
Van Bhawan, Doranda, Ranchi, Jharkhand

Subject: Submission of response to the Essential Details sought (EDS) by the Nodal officer in Form A for seeking prior approval of Central Govt. under section 2 of the Forest (Conservation) Act, 1980 for Diversion of Forest land of 7.52 Ha. for Bagru Bauxite Mine at Village-Bagru, Tehsil-Kisko, District-Lohardaga, Jharkhand by M/s Hindalco Industries Ltd. - regarding.

Ref: Proposal no- FP/JH/MIN/155456/2022 dated 22/05/2022 and Essential Details sought (EDS) by the Nodal officer on 14/07/2022

Sir,

With reference to the application submitted (proposal no- FP/JH/MIN/155456/2022, dated 22/05/2022) for seeking prior approval of Central Govt. under section 2 of the Forest (Conservation) Act, 1980 for Diversion of Forest land of of 7.52 Ha. for Bagru Bauxite Mine at Village-Bagru, Tehsil-Kisko, District-Lohardaga, Jharkhand by M/s Hindalco Industries Ltd and subsequent Essential Details sought (EDS) by the Nodal Officer on 14/07/2022, we are submitting requisite documents for your kind perusal and further processing of the forest diversion proposal.

Thanking you,

Yours faithfully,

A handwritten signature in blue ink, followed by the date '16/7/22' written in blue ink.

Basudev Gangopadhyay

Sr. GM (Planning, Environment and Compliance)

Authorized representative

M/s Hindalco Industries Ltd

Enclosure: EDS reply dated 14/07/2022 with enclosures.

Proposal number (FP/JH/MIN/155456/2022)

EDS Reply Dated 14/07/2022

S.N	Point Number	Remarks, Nodal officer	Compliance
1.	C.iv	Uploaded PDF file is not opening. Needs to be re-uploaded.	There was a technical error in uploading PDF at C.iv. The same has been re-uploaded and copy of the same has been enclosed herewith the letter for your kind consideration.
2.	G.	CB Analysis is not uploaded. Since the proposed area involves forest land which falls in hills, as per Table – A, Sl. no. – 4 of MoEF&CC guidelines dated 01.08.2017, for all proposals involving forest land more than 20 ha in plains and 5 ha in hills including roads, building, schools, dispensaries, mining activities, electric lines, Railways, etc, the CB Analysis is required. Upload CB Analysis as prescribed in MoEF&CC guidelines dated 01.08.2017.	The CB analysis as prescribed in MoEF&CC guidelines dated 01.08.2017 has uploaded in the proposal . The copy of the same has also been enclosed herewith the letter for your kind consideration.

**Forest Diversion Proposal (7.69 Ha) for Bagru Bauxite Mine at Village-Bagru, Tehsil-Kisko, District-Lohardaga, Jharkhand by M/s Hindalco Industries Ltd.
(Proposal number: FP/JH/MIN/155456/2022)**



COST BENEFIT ANALYSIS

Prevailing Rates of NPV

As per revision of rates of NPV applicable for different class/category of forests issued by MoEF&CC File No. 5-3/2011-FC (Vol-I) dated 06.01.2022, the following NPV have been prescribed for levying NPV in lieu of diversion of Forest land.

Forest type group: Tropical dry deciduous forest

Table: Rates of NPV values

NPV (in ₹/Ha.)			
Eco-Value class	Very Dense	Dense	Open
Class I	1595790	1436670	1116900
Class II	1595790	1436670	1116900
Class III	1357110	1228590	957780
Class IV	957780	861390	670140
Class V	1436670	1292850	1005210
Class VI	1516230	1372410	1069470

For the proposed project the Eco value class of forest is **class III i.e. Tropicallly Dry Deciduous Forest** and falls under **dense forest category**.

In view of the same, NPV amount of **₹12,28,590 per Ha.** Shall be considered for the project.

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A. ESTIMATION OF COST OF FOREST DIVERSION

SN	Parameters	Remarks	Cost (₹)
1	Ecosystem services losses due to proposed forest diversion	Economic value of loss of eco-system services due to diversion of forest- NPV amount calculated as Rs. 12,28,590 per Ha for 7.52 Ha of proposed forest land for diversion	92,38,997
2	Loss of animal husbandry productivity, including loss of fodder	There is no significant animal husbandry productivity or loss of folder. However, 10% of NPV cost has been considered.	9,23,900
3	Cost of Human Settlement	No displacement of population is anticipated for the project. Hence no cost to be earmarked.	Not applicable
4	Loss of public facilities and administrative infrastructure (roads, buildings, schools, dispensaries, electric lines, railway lines etc.) on forest land or which would require forest land, if these facilities were diverted due to the project	No public facilities to be affected by project.	Not applicable
5	Possession value of the forest land diverted.	30% of environment cost (NPV) due to loss of forest or circle rate of adjoining area in the district should be added as a cost component as possession value of forest land whichever is maximum.	27,71,700
6	Cost of suffering of oustees.	No person to be displaced or resettled.	Not applicable
7	Habitat fragmentation cost.	Habitat Fragmentation cost as per MoEF&CC guidelines to be taken as 50% of NPV applicable as a thumb rule.	46,19,500
8	Compensatory afforestation and soil moisture conservation cost	CA rates as per Govt of Jharkhand including Plantation and Maintenance for 5 years (Rs. 96,775 per Ha.)	4,83,875
TOTAL(A)			₹ 1,80,37,972

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B. BENEFIT OF FOREST DIVERSION

1. Increase in productivity attribute to the specific project

Minerals	Estimated Reserve (tones)	Rate per ton (₹)	Total revenue (₹)
Bauxite	887,000	2,959.37	2,62,49,58,088
Kaoline	12,67,000	570	72,21,90,000
Total			3,34,71,48,088

2. Benefits to economy due to specific project

Minerals	Royalty Amount (₹)	DMF (₹)	NMET (₹)	Covid Cess (₹)	Total revenue(₹)
Bauxite	24,60,89,821	7,38,26,946	49,21,796	1,77,40,000	34,25,78,563
Kaoline	5,77,75,200	1,73,32,560	11,55,504	0	7,62,63,264
Total					41,88,41,827

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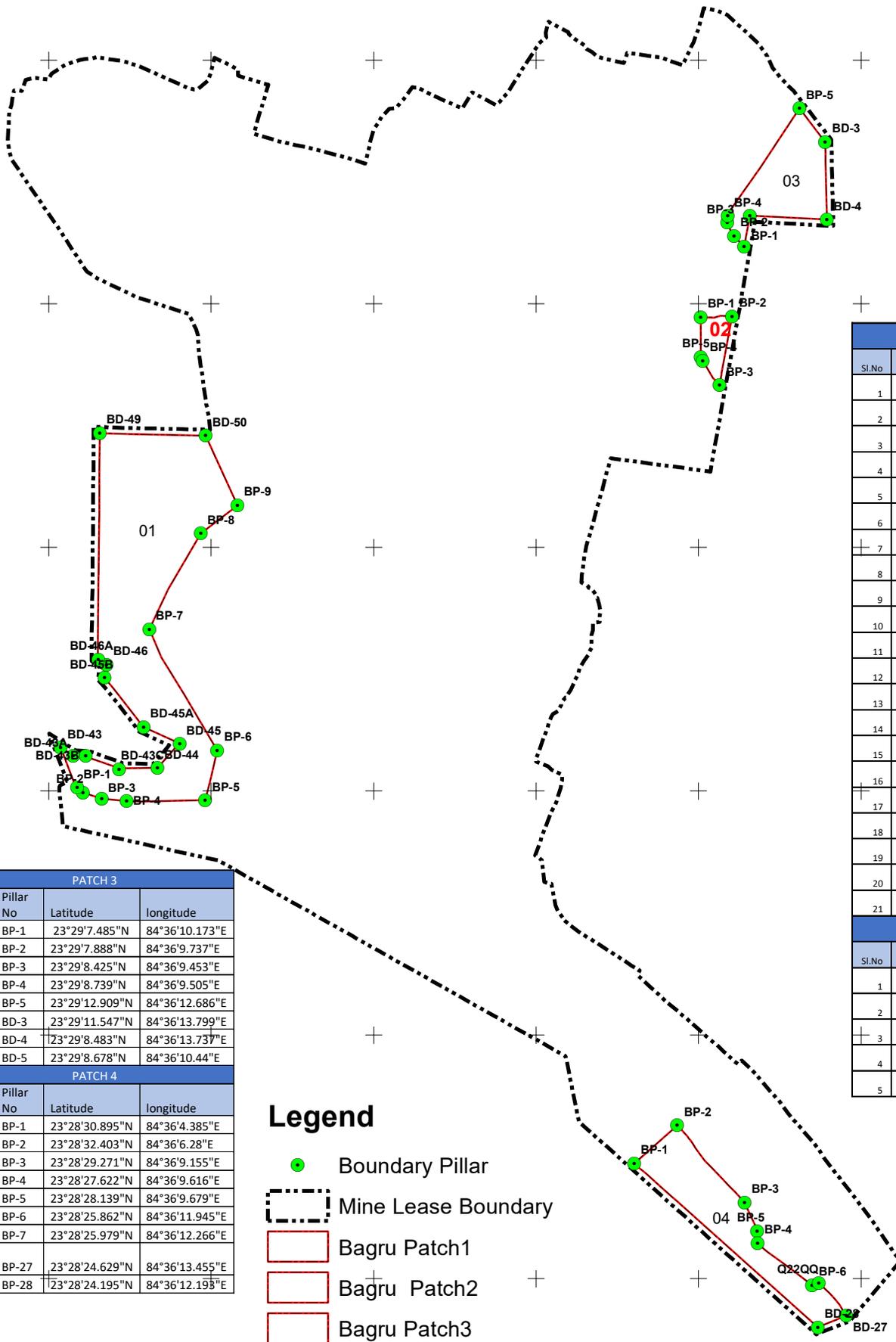
3	No. of population benefited due to specific project	<ul style="list-style-type: none"> • Direct: Nil • Indirect: 76800 Mandays • Employment generated on non – forest land in afforestation programme • Locality people will have income opportunity in various ancillary work & other activities
4	Economic benefits due to direct and indirect employment due to the project	Direct- Nil Indirect: 76800*₹443 per manday= ₹ 3,40,22,400
5	Economic benefits due to compensatory afforestation	Land for compensatory afforestation =7.69 Ha. 1.Current NPV value of Land= 7.69 x ₹9,57,780 (NPV for Open forest) = ₹ 73,65,328 /- Future NPV value of land= 7.69 x ₹12,28,590 (NPV for Dense forest)= ₹94,47,857/- <u>Hence additional economic uplift to the forest = ₹ 20,82,529/-</u> 2.Economic value of carbon storage¹ Change in economic value of carbon storage @ (Rs.2,70,040 - Rs.95,721)/Ha= ₹1,74,319/Ha for 60 years Thus, economic value for 50 years for 7.69 Ha of CA land = ₹11,17,094/- Total: ₹ 31,99,623
TOTAL(B)		₹ 3,80,32,11,938

Cost to benefit ratio = (₹ 1,80,37,972)/(₹ 3,80,32,11,938)

i.e. 1:211

¹ Revision of rates of NPV applicable for different class/category of forests, IIFM 2014

DGPS Map of Mine Lease of Bagru Bauxite Mines, Jharkhand



PATCH 1			
Sl.No	Pillar No	Latitude	longitude
1	BP-1	23°28'46.518"N	84°35'40.681"E
2	BP-2	23°28'46.312"N	84°35'40.892"E
3	BP-3	23°28'46.042"N	84°35'41.755"E
4	BP-4	23°28'45.917"N	84°35'42.82"E
5	BP-5	23°28'45.872"N	84°35'46.225"E
6	BP-6	23°28'47.83"N	84°35'46.821"E
7	BP-7	23°28'52.758"N	84°35'44.002"E
8	BP-8	23°28'56.547"N	84°35'46.333"E
9	BP-9	23°28'57.597"N	84°35'47.92"E
10	BD-43	23°28'48.087"N	84°35'40.035"E
11	BD-43A	23°28'47.772"N	84°35'40.557"E
12	BD-43B	23°28'47.783"N	84°35'41.105"E
13	BD-43C	23°28'47.173"N	84°35'42.523"E
14	BD-44	23°28'47.206"N	84°35'44.193"E
15	BD-45	23°28'48.158"N	84°35'45.171"E
16	BD-45A	23°28'48.881"N	84°35'43.63"E
17	BD-45B	23°28'50.829"N	84°35'41.991"E
18	BD-46	23°28'51.37"N	84°35'42.089"E
19	BD-46A	23°28'51.606"N	84°35'41.743"E
20	BD-49	23°29'0.658"N	84°35'42.08"E
21	BD-50	23°29'0.421"N	84°35'46.626"E

PATCH 2			
Sl.No	Pillar No	Latitude	longitude
1	BP-1	23°29'4.695"N	84°36'8.251"E
2	BP-2	23°29'4.641"N	84°36'9.542"E
3	BP-3	23°29'1.937"N	84°36'8.926"E
4	BP-4	23°29'2.931"N	84°36'8.229"E
5	BP-5	23°29'3.1"N	84°36'8.156"E

PATCH 3			
Sl.No	Pillar No	Latitude	longitude
1	BP-1	23°29'7.485"N	84°36'10.173"E
2	BP-2	23°29'7.888"N	84°36'9.737"E
3	BP-3	23°29'8.425"N	84°36'9.453"E
4	BP-4	23°29'8.739"N	84°36'9.505"E
5	BP-5	23°29'12.909"N	84°36'12.686"E
6	BD-3	23°29'11.547"N	84°36'13.799"E
7	BD-4	23°29'8.483"N	84°36'13.737"E
8	BD-5	23°29'8.678"N	84°36'10.44"E

PATCH 4			
Sl.No	Pillar No	Latitude	longitude
1	BP-1	23°28'30.895"N	84°36'4.385"E
2	BP-2	23°28'32.403"N	84°36'6.28"E
3	BP-3	23°28'29.271"N	84°36'9.155"E
4	BP-4	23°28'27.622"N	84°36'9.616"E
5	BP-5	23°28'28.139"N	84°36'9.679"E
6	BP-6	23°28'25.862"N	84°36'11.945"E
7	BP-7	23°28'25.979"N	84°36'12.266"E
8	BP-27	23°28'24.629"N	84°36'13.455"E
9	BP-28	23°28'24.195"N	84°36'12.193"E

Legend

- Boundary Pillar
- Mine Lease Boundary
- Bagru Patch1
- Bagru Patch2
- Bagru Patch3
- Bagru Patch4

Sl.No	Patch No	Plot No	Area (ha)
1	Patch-1	80 & 116	4.84
2	Patch-2	151	0.22
3	Patch-3	211	1.03
4	Patch-4	29	1.43