



भारत 2023 INDIA

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**CENTRAL COALFIELDS LIMITED**  
*(A Subsidiary of Coal India Limited)*  
 (A Miniratna Category-I Company)  
**OFFICE OF THE PROJECT OFFICER**  
**MAGADH OCP, MAGADH-SANGHAMITRA**  
**AREA, AVANTIKA, VILL-KUNDI, PO-**  
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## DETAILED NOTE FOR MAGADH RAILWAY SIDING

### 1. Introduction

Central Coalfields Limited (CCL) has planned for construction of Magadh Railway Siding at CCL's command area i.e., Magadh-Sanghamitra Area (M-S Area) to dispatch coal to different power plants from the Magadh Open Cast Project by introduction of 'Rapid Loading System' (RLS) through SILO loading arrangement. The take-off point of the siding line is proposed to be taken off at 480 m away from the center line of Bukru station towards shivpur which is located on Tori-Shivpur section of Dhanbad Division of East Central Railway. The Constriction of Railway Siding is proposed in two phases.

#### 1.1 Phase-I of Magadh Railway Siding

The Magadh OCP is located in a green field area and at present the coal is evacuated OCP through Rail and Road mode. The coal production of 20.0 MTY from Magadh OCP is proposed, out of which 10.0 MTY of coal to be linked to Tandwa STPS of NTPC, located at a distance of about 10 Km from the mine site and rest coal (about 10.0 MTY) will be linked for other consumer through rail network. Hence, for the transportation of coal from this mine have been envisaged with two MGR off-take of coal with rapid loadout system along with coal handling plant.

One off-take system is proposed by Tandwa STPS through pipe conveyor to be constructed and commissioned by NTPC, will be a dedicated and cost will be borne by NTPC.

The siding would take-off near Bukru station of the Proposed Arterial (Tori-Shivpur-Hazaribagh) Railway Siding at a distance of about 28 Km from Tori Station. The length of the proposed alignment taking off from Bukuru station of main Arterial railway siding line to the Magadh OCP is about 08 Km, which includes link portion and yard portion with MGR bulb from proposed Bukru Railway station to Magadh OCP.

An emergency provision will be made to inter-link both MGR systems so that loading of rakes will be made by both silos & RLS to any consumer wagons for loading and despatching of coal from this project.

Development of Rail Infrastructure for Magadh OCP (20 MTPA), Jharkhand. The DPR & Plan has been approved by CCL & Railways dated 06.03.2017. The layout of the loading terminal has been planned in the form of bulb avoiding coal bearing area. After taking off at Bukru, the alignment as 'empty line' will cross the Bukru-Shivpur line through a rail flyover and will traverse almost parallel to the 'loaded line' from where the layout will be formed as bulb to effect unidirectional movement. For simultaneous handling of number of rakes at a time, two separate bulbs in the form

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of 'outer bulb' and 'inner bulb' have been proposed with two independent loading SILOS. The outer bulb takes-off at before loading and joins after post loading line.

#### **Silent Feature**

- i. Two bulbs, each consists of two sets of pre-loading & post-loading lines, i.e.; four preloading lines and four post-loading lines of respectively;
- ii. 5 Nos. of weighbridges, one for weighment of empty rakes during admission to the pre-loading lines and four weighbridges ahead of each Loading chute, for weighment of loaded wagons simultaneously during the time of loading;
- iii. Two Nos of SILOs at the middle point of pre & post loading lines, each provided with two telescopic loading chute.
- iv. A Long Haul loop in PH-I in post bulb portion along the main load dispatch line.

### **1.2 Phase-II of Magadh Railway Siding**

CCL has envisaged commissioning of a number of Greenfield and expansion projects, both opencast and underground, during XI Plan with state-of-the-art technologies. Under the same Magadh OCP Expansion has been proposed for Nominal production capacity of 51 MTY and Peak Capacity of 70 MTY.

Development of additional Rail Infrastructure for Magadh OCP (51 MTPA) in Phase-II, Jharkhand has been envisaged for dispatch of additional coal from Magadh OCP in their expansion Plan. DPR of Magadh Railway Siding phase-II was approved on 14.03.2022.

#### **Silent Feature**

- i. For simultaneous loading of rakes, additional 1 no. of SILO-3 has been proposed.
- ii. One Bulb consists of 2 nos of pre-loading and 2 nos of post-loading lines with 2 nos of stabling/holding Line with provision of Long Haul are proposed.
- iii. 3 Nos. of in-Motion weighbridges, 01 for weighment of empty rakes during admission to the pre-loading lines and 02 weighbridges ahead of each Loading chute, for weighment of loaded wagons simultaneously during the time of loading;

### **1.3 Magadh Railway Siding (Phase-I and Phase-II) Combined**

- i. 03 Bulb consists of 06 nos of pre-loading and 06 nos of post-loading lines with provision 03 Nos of Long Haul Loop are proposed.
- ii. 03 Nos of SILOs (4000 Tons capacity) at the middle point of pre & post loading lines, each provided with two telescopic loading chute.
- iii. 8 Nos. of 140 T in-Motion weighbridges, 02 for weighment of empty rakes during admission to the pre-loading lines and 06 weighbridges ahead of each Loading chute, for weighment of loaded wagons simultaneously during the time of loading;

### **1.4 Sequence of operation with Box/N wagons**

Empty rake would be brought by railway LOCO, for loading the rake, from terminal station i.e. Tori. Wagons would be placed on the receiving line below SILO. Rake would remain attached to

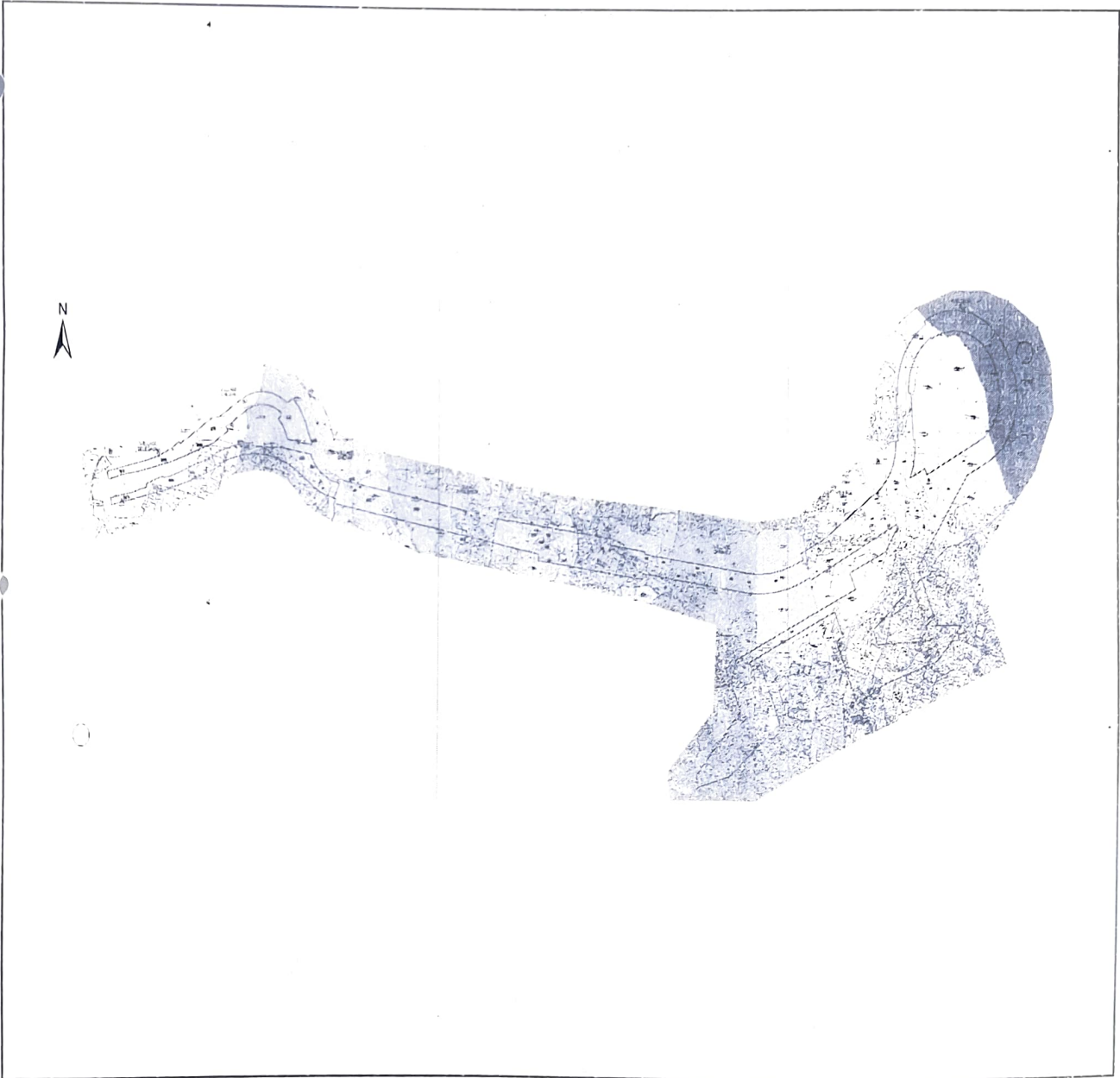
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the pilot and halt an hour / two hours for getting the wagons loaded as per the rake size. After loading the wagons, the pilot would move through MGR bulb for achieving quick turn round and avoiding reversal of the locomotive and would take the rake to Tori.

Daily requirement of Box/N wagons and no. of trains are as below for other consumer:

Daily volume of loading in tonne	Daily requirement of No. of Box/N wagons	Daily No. of trains to be run	
		In single unit of 58 Box/N rake	In long unit of 116 Box/N rake
110000	1740	30	15

1.5 Layout Plan of Magadh Railway Siding



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## 2. Capital Requirement:-

The total estimated expenditure cost for Railway siding is Rs 40210.00 Lakhs (Appendix A.5 of Approved DPR of 51 MTY Magadh OCP.

Sl No.	Particulars	Capital Requirement in Lakhs
1	Preliminary Work	50.00
2	Civil Engineering Cost including link & Yard portion and bridges(25.50 Kms appox)	31200.00
3	Signalling control and Telecommunication	1600.00
4	Electrical Engineering	4680.00
5	EMP meaures	780.00
6	Contingency (including Lightning, approach road, drain, rail-weigh bridge etc. )	1900.00
TOTAL		40210.00

## 3. Land Requirement:-

Land required for Magadh Railway Siding has been acquired by S.O No -870(E), 1384 Block A, 1224 (E) Block A and 2098(E) under CBA Act 1957. Land Schedule for Magadh Railway Siding has been authenticated from DFO Latehar, (Notified Forest land in Latehar disatrict) and CO Balumath, CO Bariatu and CO Tandwa. Details of land required and authenticated are mentioned below in Table:

District	Thana	Village	Notified Forest Land (Ha)	GMJJ Land (Ha)	Total Forest Land (Ha)	GMK Land (Ha)	GMA Land (Ha)	Tenancy (Ha)	Total Non-Forest Land (Ha)	Total Area (Ha)
Latehar	Balumath	Ara	28.05	13.4	41.45	17.45	8.63	41.19	67.27	108.72
		Chamatu	15.62	1.27	16.89	3.69	0.58	21.82	26.09	42.98
		Chetar	8.86	5.17	14.03	1.13	0.06	7.18	8.37	22.4
		Seregara	17.02	0	17.02	0	0	0.06	0.06	17.08
	Bariyatu	Phulbasia	0.08	13.27	13.35	9.55	0.34	18.54	28.43	41.78
		Chedra/C harra	1.54	0	1.54	0	0	0	0	1.54
Chatra	Tandwa	Kundi	10.28	0	10.28	0	0	0	0	10.28
		Kurlonga	6.73	0	6.73	0	0	0	0	6.73
	Total Area		88.18	33.11	121.29	31.82	9.61	88.79	130.22	251.51

## 4. No of Persons to be benefited:-

Sl	Nature of Employment	No of Persons
1	Permanent/Direct Employment	300
2	Indirect Employment (Number)	450
	No. of Person-Days	4725000

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