

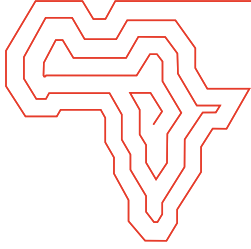


# RFI: Reinstatement of signalling on the Coalline

Briefing Session  
29 February 2024

# Agenda

RFI: Reinstatement of signalling on the Coalline



1. Attendance
2. Introduction and background
3. Purpose of this RFI
4. Scope of the RFI
5. Site visits to signalling installations on the Coalline: 4 to 8 March 2024
6. Important timelines
7. Contact details of TFR personnel
8. General
9. Closure



# RFI: Reinstatement of signalling on the Coalline



## Introduction and background

- The signalling system on the Coalline has been installed and commissioned during the early nineteen eighties. It comprises predominantly of Spoorplan Mk1B electro-mechanical interlockings with lineside colour light signalling.
- Track vacancy detection is achieved by track circuits and/or axle counters systems.
- Over the past number of years incidents of vandalism and theft of rail infrastructure have increased significantly with the associated negative impact on volume throughput with a drastic reduction in coal exports. Coal exports peaked at around 77Mtpa in the 2017/18 financial year and had since dropped to under 50Mtpa in the 2022/23 financial year.
- This reduction in Coal exports is not only due to vandalism and theft, however vandalism and theft had a significant contribution to reduced volume throughput.

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## **Introduction and background (continued)**

- With a non-functional train authorisation system, a fallback system is normally introduced to enable train movements, however at a reduced throughput. Such a fallback system is hugely dependent on manual procedures being followed by employees and are therefore prone to human error.
- In the short term it is therefore important to restore / reinstate the signalling system to address potential safety risks and eliminate / reduce the probability of human error with a positive impact on volume throughput.



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## **Purpose of this RFI**

The purpose of this document is to obtain adequate information from appropriate role players with regards to proposals/approaches to reinstate the current signalling system (significantly less vulnerable to theft / vandalism) on the Coalline based on the current condition of the train authorisation system (i.e. colourlight signalling).



# RFI: Reinstatement of signalling on the Coalline

## **Scope of this RFI**

- Assessment activity
- Proposals to reinstate

## **Assessment**

- Desktop study of current TFR signalling information and Infra data on the Coalline (indicating the impact on train control)
- Technical assessment of the signalling system and associated assets e.g., protection / target hardening measures / security fencing / etc. (e.g. detailed site visits to signalling installations on the section Blackhill – Ogies - Richards Bay).



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## Scope of this RFI (continued)

### Proposals to reinstate (Short-term)

- Maintenance/retrofit approach of existing system (Blackhill – Ogies - Richards Bay) with a short-term focus
- Proposed design alterations/retrofits of existing systems (Blackhill – Ogies - Richards Bay) with a short-term focus that must have a positive impact on train control in the next 6 – 12 months.
- Proposed rationalisation of signalling layouts (Blackhill - Ogies - Richards Bay) that will be implementable in the next 6 – 12 months.
- Proposed target hardening measures/improvements to significantly reduce the vulnerability of the signalling system to theft and vandalism
- Design criteria/cost estimates/timelines of retrofits and re-engineering of the current system to keep it functional for the next 3 to 5 years.
- **Priority order**: The proposal must address the proposed actions in a priority order as indicated in Table 1 below. These priorities (i.e., Priority P1, P2 & P3) must be addressed and costed separately should a decision be made to postpone the initiatives linked to a lower priority item. The balance of initiatives linked to items not included in this priority list, must also be addressed separately.



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## Scope of this RFI (continued)

Priority	Depot		
	Richards Bay	Vryheid	Ermelo
P1	Richards Bay North	Piet Retief	Maviristad
	Elubana	Kemp	Boschmansfontein
	Idondotha	Wildrand	Ogies
	Emakwezini - Idondotha	Iswepe	Blackhill
	Emakwezini	Panbult	
	Umunywana - Emakwezini	Ngwempisi	
	Isangoyana	Sheepmoor	
	Umunywana		
P2			Hamelfontein
			Blinkpan
			Koornfontein
			Vandyksdrif
			Pullenshope - Rietkuil A
			Meerlus
P3	Richards Bay Junction	Vryheid	Ermelo
	Richards Bay South	Moolman-Confidence	
	Enqolothi	Moolman	
	Ilangakazi	Mkondo	

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## Richards Bay Depot





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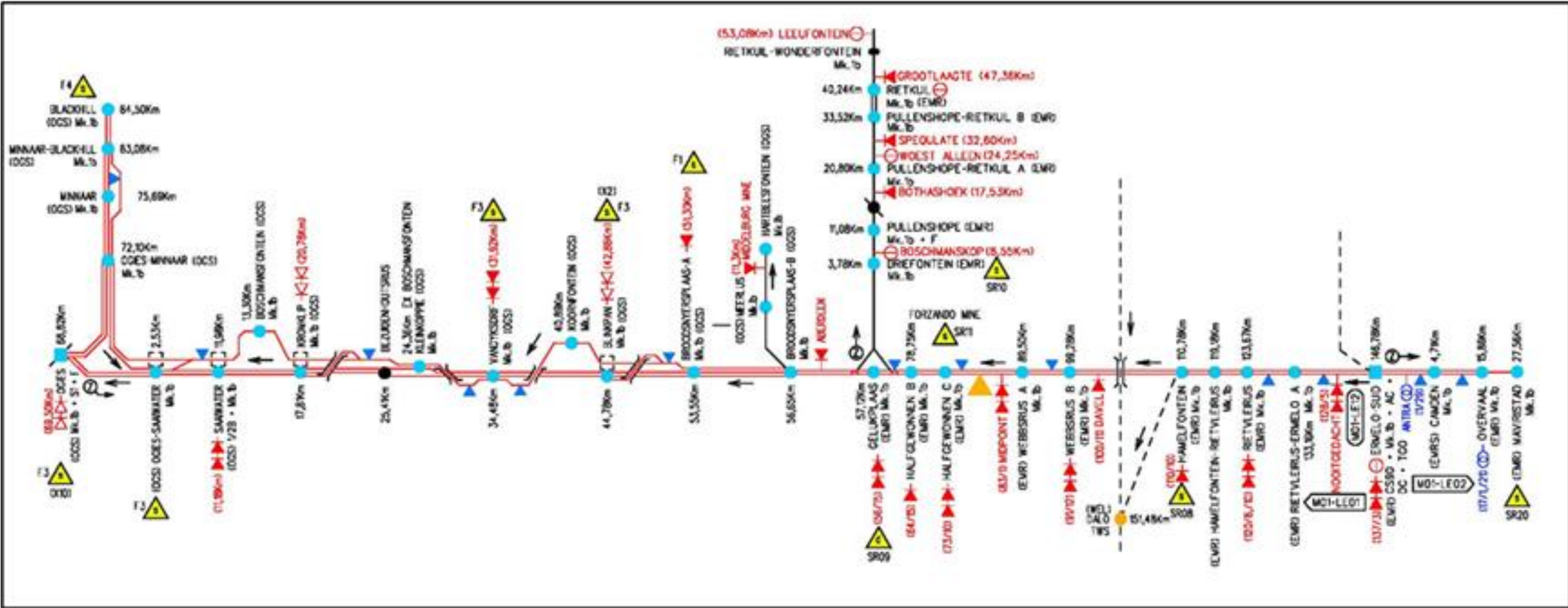
## Vryheid Depot





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## Ermelo Depot



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## **Agenda (continued)**

5. Site visits to signalling installations on the Coalline: 4 to 8 March 2024
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Thank you

