

Procedure for Alterations to Signalling & Associated Systems

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Document to be reviewed every 3 years

Document History

REV	Date	Amended By	Reviewer	Authoriser	Details of Amendment
1.00	12/11/1999	Signal Systems Manager	Control & Communications Systems Manager	Projects Director	New Document Created
1.01	18/01/2001	Signal Systems Manager	Control & Communications Systems Manager	Projects Director	Amended for WestNet Rail
1.02	29/08/2003	Signal Systems Manager	Control & Communications Systems Manager	General Manager	Revised to reflect current practice
1.03	22/03/2006	Signal Manager Projects & Standards	Control & Communications Systems Manager	General Manager	Duplicated requirements from other procedures removed & updated to current practice & WestNet Rail organisation
2.00	30/09/2015	Signal Manager Projects & Standards	Manager Control & Communications Systems	Chief Executive Officer	General review & update to Brookfield Rail standard format

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1. PURPOSE

1.1. Policy

All changes to Brookfield Rail's signalling and associated systems shall use the procedure set out in this document. This applies to all Brookfield Rail personnel, consultants, contractors and external parties, to ensure that safety and functional requirements are met or exceeded.

1.2. Objective

The objective of this document is to define a procedure for the control of alterations to Brookfield Rail's signalling & associated systems, which is to be followed by all personnel engaged in carrying out such alterations.

Alterations to such systems must be carefully and formally managed in order that their configuration at any given time is faithfully recorded for the purposes of maintenance, fault finding and future alterations.

2. SCOPE

This procedure applies to all personnel who are responsible for changes to signalling or associated systems on the Brookfield Rail network, including all Brookfield Rail personnel, consultants, contractors and external parties who undertake changes to those systems.

The procedure applies to any modification of or addition to existing, and provision of new, safety-critical signalling systems and active level crossing warning systems, including any alterations to software. It also applies to related infrastructure such as control systems, telecommunications links and power supplies, where these have a bearing on the overall integrity and/or reliability of the signalling system or affect signalling records. However the control of alterations or additions to Brookfield Rail telecommunications systems is generally excluded, as this is covered by Brookfield Rail telecommunications procedures.

This procedure covers the process for authorisation and control of alterations, specifically to ensure that the permanent status of the signalling system, and any works being undertaken on it, at any given time is known. Details of the signal design process to be followed by those carrying out such alterations are given in W110-600-001 – Signal Design.

This procedure covers all permanent alterations to the signalling system, whether planned or unplanned. In this context permanent encompasses any temporary stageworks required to implement a final design.

This procedure does not cover temporary alterations or disconnections required for short-term works or tests, unless specifically requested by the Signal Maintenance Manager. The Signal Maintenance Manager is responsible for the control and management of such works, under maintenance procedures.

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3. DISTRIBUTION LIST

Copy No.	Copy Holder
1	Signal Manager Projects and Standards
2	Senior Signal Project Engineer
3	Signal Project Engineer
4	Project Manager Level Crossings
5	Signal Maintenance Manager
6	Regional Signal Superintendent Central
7	Regional Signal Superintendent East
8	Regional Signal Superintendent South
9	Regional Signal Superintendent West

4. REFERENCES

W110-600-001: Procedure for Signalling Design.

5. DEFINITIONS

Definitions for specific terms used herein are given in Brookfield Rail procedure W110-600-001, except where a term is used only in this document or with a specific meaning in this document, in which case it is listed below.

Alteration to Signalling: Any change or addition to an existing, or provision of a new, signalling or associated system or active level crossing warning system, which affects the documented record of that system, i.e. is not an exact like for like replacement. For example the replacement of one type of searchlight signal with another, or changing a cable to one with a different core diameter.

Planned Alteration: An alteration to signalling that is planned and designed in advance. This includes any unplanned modifications to designs that arise during construction, testing or commissioning, the control of which is to be managed as set out in W110-600-001. Planned alterations may be major works, involving changes to the operational railway and/or renewal or upgrade of signalling installations, or minor works such as the upgrade of an individual piece of signalling equipment or the correction of an existing design fault.

Unplanned Alteration: An alteration to signalling that is unplanned, due to the failure of a piece of equipment that cannot be readily replaced on a like-for-like basis within operational time constraints. This includes the identification, rectification and documentation of signalling record anomalies.

6. RESPONSIBILITIES

6.1. Introduction

The Signal Manager Projects & Standards is responsible for the standards applicable to, and the overall control & management of, all alterations to Brookfield Rail's signalling systems. Any alterations required to these systems are required to be: -

- a) Authorised in advance by the Signal Manager Projects & Standards, where these are planned, or;
- b) Notified to the Signal Manager Projects & Standards, normally within 20 working days, where these are unplanned.

6.2. Planned Alterations

6.2.1. Major Works

Major works may only be carried out when authorised in advance by the Signal Manager Projects & Standards, such authority being recorded on a Signalling Infrastructure Change Permit (SICP), which shall be uniquely identified.

Persons or organisations wishing to carry out major works must be in possession of an authorised SICP prior to undertaking any formal design changes to Brookfield Rail's signalling installations. This does not preclude the drafting of designs for development purposes but such designs must not be carried out on the current master records.

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6.2.2. Minor Works

Minor works may only be carried out when authorised in advance by the Signal Manager Projects & Standards, such authority being recorded on a register of minor works.

6.3. Unplanned Alterations

Unplanned alterations are only to be undertaken where essential for safety or operational reasons. Alterations may only be carried out where authorised by the Signal Maintenance Manager, Senior Signal Superintendent or the Regional Signal Superintendent of the area involved.

Details of any unplanned alteration are to be forwarded to the Signal Manager Projects & Standards for review and recording as soon as possible after the alteration has been carried out.

The Signal Manager Projects & Standards is responsible for logging the alteration onto a central database and ensuring that the signalling records are updated in line with the alterations and maintenance copies issued.

6.4. Alterations to Telecommunications Systems

The Communications Systems Manager is responsible for any alterations or additions to Brookfield Rail telecommunications systems. The Communications Systems Manager shall notify the Signal Manager Projects & Standards of any planned or unplanned telecommunications works that may permanently affect any Brookfield Rail signalling system.

The Signal Manager Projects & Standards will authorise any signalling system change required, or arrange for the updating of the signalling records where this is the only action required. The Signal Manager Projects & Standards is responsible for ensuring that all required signalling works are carried out at the same time as the telecommunications works, and to the same requirements as set out for planned signalling works in this procedure.

7. ACTIONS

7.1. Planned Alterations – Major Works

7.1.1. Initiation

Where the need to alter a Brookfield Rail signalling system is identified the person or organisation in charge of the proposed change shall complete Part A of a Signalling Infrastructure Change Permit (SICP), giving the details of and reasons for the proposed change, and the expected impact upon train operations. The details identified must include all the signalling sub-systems that are expected to require alteration.

An example of an SICP is shown in Appendix A. For complex works the SICP may require supporting diagrams of signalling and/or scale signalling plans marked up to depict the proposed changes.

Completed applications shall be submitted to the Signal Manager Projects & Standards. The Signal Manager Projects & Standards may also directly produce an SICP for Brookfield Rail projects, whether implemented internally or contracted out.

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7.1.2. Approval

The Signal Manager Projects & Standards shall review the proposal and complete Part B of the SICP. If an impact on train operations is identified the Signal Manager Projects & Standards shall consult with the Network Operations Manager to gain operations approval, which shall be denoted by the Network Operations Manager's signature on the SICP and any accompanying diagrams.

If the Signal Manager Projects & Standards considers the proposed alterations to be justified, technically sound and not conflicting with another current project affecting the same infrastructure, then the permit will be allocated the next number in a unique sequence of an SICP database, and signed to denote authorisation of the proposal. A copy shall then be returned to the originating person or organisation, the original SICP being retained by the Signal Manager Projects & Standards.

The Signal Manager Projects & Standards shall then record that the project is active in the SICP database, recording details of the originator and affected systems.

In cases where the Signal Manager Projects & Standards has produced the SICP a senior signal engineer or manager shall review and approve the SICP for signalling instead of the Signal Manager Projects & Standards, to ensure that an independent technical review of the proposal is carried out.

7.1.3. Rejection

If the proposal is not approved, then the Signal Manager Projects & Standards shall endorse Part B of the form to this effect, giving reasons for the rejection of the proposal. A copy shall then be returned to the originating person or organisation, the original SICP being retained by the Signal Manager Projects & Standards.

The originating person or organisation shall then review the reasons for rejection and decide whether to revise and resubmit the application, or otherwise not proceed with the application.

7.1.4. Implementation

Once the originating person or organisation receives the copy of the completed SICP, then the design of the proposed alterations may proceed. Such design, and all the ensuing activities up to commissioning and issue of as-built records, shall be carried out in accordance with Brookfield Rail procedure W110-600-001.

7.1.5. Completion

Upon commissioning of the alterations the originating person or organisation shall issue a copy of the commissioning documentation and as-built diagrams to the Signal Manager Projects & Standards, who will arrange for the Brookfield Rail records to be updated and revised record copies issued.

The Signal Manager Projects & Standards shall complete part C of the SICP to formally close the alteration and free the affected systems for subsequent alteration.

The Signal Manager Projects & Standards shall then record that the project is completed in the SICP database, recording details of the commissioning date and issue of records.

7.1.6. Non Completion

In the event of an authorised alteration not going ahead, either fully or in part, then the originating person or organisation shall provide a written report to the Signal Manager Projects & Standards detailing: -

- a) Alterations that have been commissioned, and;
- b) Alterations that have not been commissioned, and;
- c) Any preparatory installation/construction works that have been carried out on the infrastructure, and;
- d) The status of the signalling master records used.

The originating person or organisation shall then agree with the Signal Manager Projects & Standards the actions required to close down the alteration in a safe, operationally acceptable and recorded state.

7.2. Planned Alterations – Minor Works

The design of minor works, and all the ensuing activities up to commissioning and issue of as-built records, shall be carried out in accordance with Brookfield Rail procedure W110-600-001. Minor works shall normally only be carried out by Brookfield Rail's signal projects group.

Once the revised records are issued the Signal Manager Projects & Standards shall record that the alteration is complete in the minor works database, recording details of the issue of records.

7.3. Unplanned Alterations

7.3.1. Initiation

Where the need to alter a Brookfield Rail's signalling system due to a fault is identified, and no approved design is available before the system needs to be returned to service, then this procedure shall be followed.

Wherever possible the person proposing the change shall first contact the relevant Regional Signal Superintendent for authority to carry out the change, but in any case shall seek such authority at the earliest possible opportunity.

7.3.2. Implementation

The proposed alteration must be set out on a marked up copy of the signalling records, or on a separate drawing(s) or modification sheets, and once commissioned it must be recorded on a records update certificate. Wherever possible the alteration must be reviewed by another person prior to installation, but in any case must be approved by the relevant Regional Signal Superintendent at the earliest possible opportunity, who shall endorse the records update certificate to this effect.

Once installed, tested and commissioned a copy of the alteration shall be left on site for maintenance and faulting purposes, the alteration and the records update certificate being issued to the relevant Regional Signal Superintendent. The Regional Signal Superintendent shall forward a copy of the alteration and the records update certificate to the Signal Manager Projects and Standards.

7.3.3. Approval

The Signal Manager Projects & Standards shall review the alteration and, if approved, shall arrange for the Brookfield Rail records to be updated and revised record copies issued.

If the Signal Manager Projects & Standards does not approve of the alteration then he/she shall consult with the Signal Maintenance Manager, agree how the issue is to be resolved and ensure that the agreed actions are carried out. Once complete, where an alteration still results, the Signal Manager Projects & Standards shall arrange for the Brookfield Rail records to be updated and revised record copies issued.

In either case the Signal Manager Projects & Standards shall record the alteration on an unplanned alterations database, recording details of the originator and affected system(s).

The Signal Manager Projects & Standards shall also check the planned alterations databases to establish whether the unplanned alteration may affect any planned alterations. Where this applies the Signal Manager Projects & Standards shall consult with the originating person or organisation of the planned alteration(s) to establish whether there are any impacts arising from the unplanned alteration and, if so, how these are to be resolved.

7.3.4. Completion

Once the revised records are issued the Signal Manager Projects & Standards shall record that the alteration is complete in the unplanned alterations database, recording details of the issue of records.

7.4. Record Updates

Any records anomalies identified shall be recorded and updated by following the same process as unplanned alterations. In such cases the records update certificate shall be endorsed as being for a records update only.

8. DOCUMENTATION

Standard Brookfield Rail formats for the SICP form, Minor Works Commissioning Certificate and Records Update Certificate are shown in Appendices A to C. Blank forms/certificates are available from the Brookfield Rail intranet or by request from the Signal Manager Projects and Standards.

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Appendices

Appendix A – Signalling Infrastructure Change Permit

Brookfield Rail		Signalling Infrastructure Change Permit (SICP)		SICP No:	
Part A: Change Request – Originator to Complete					
Project Name:		<Insert Project Name>			
Request by:	<Requested By>	Company:	<Requesting Company>		
Contact Nos.:	Tele: <Telephone>	Email:	<email>		
	Mob: <Mobile>	Fax:	<Fax>		
Proposed Project Start Date:				Proposed Commissioning Date:	
Brief Description of Proposed Change:					
Reason for Proposed Change:					
Systems Affected:					
Expected Impact Upon Train Operations:					
Supporting Documentation (if any):					
Signature:				Date:	

Brookfield Rail	Signalling Infrastructure Change Permit (SICP)	SICP No:
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Part B: Change Authority – Brookfield Rail to Complete

Review for Signal Engineering:		
Reviewed by: ,	Signed:	Date:
Impact on Train Operations – Network Operations Manager’s Approval required: <SMPS to Complete>		
Approval Comments by Network Operations Manager (if required):		
Approved by:	Signed:	Date:
Decision – Project is Authorised or Rejected:		<SMPS to Complete>
SICP Unique Reference Allocated if Authorised:		15/000
Where Project Authorised, Any Comments/Qualifications:		
Where Project Rejected, Reasons for Rejection:		
Completed by: , Signal Manager Projects and Standards	Signed:	Date:

Part C: Change Completion – Brookfield Rail to Complete

Final Commissioning Date: _____		
Commissioning Documentation and As-Built Records Received: _____		
Record Copies Issued and SICP Database Updated: _____		
Confirmed by: , Signal Manager Projects and Standards	Signed:	Date:

Appendix B – Minor Works Commissioning Certificate

	Minor Works Commissioning Certificate	Ref No:
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Title of Work:			
Date of Work:		Region:	
Location of Work:			

Design Details (of Drawing Nos and/or Modification Sheets attached):	
<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	

Production & Review Details:				
Activity	Name	Title	Signature	Date
Produced by:				
Reviewed by:				
Approved by:				

Testing & Commissioning Details:	
<p>I hereby certify that the design listed above was fully tested in accordance with Brookfield Rail procedures and signalling principles and found to be correct.</p> <p>The signalling was commissioned and restored to traffic at hours on</p>	
<i>Name:</i>	<i>Title:</i>
<i>Signature:</i>	<i>Date:</i>

Comments:
<p>.....</p> <p>.....</p> <p>.....</p>

The following unique identification number has been allocated: MW.....

Signed: Signal Manager Projects & Standards Date:

Appendix C – Records Update Certificate

Records Update Certificate	Ref No:
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Type of Work:	Modification / Records Update * (* - Delete as Applicable)		
Date of Work:		Region:	
Location of Work:			

Production & Review Details:				
	Name	Position	Signature	Date
Produced by:				
Reviewed by:				

Design Details (of Drawing Nos and/or Modification Sheets attached):
.....
.....
.....
.....

Regional Signal Superintendent Approval:			
Name	Title	Signature	Date
	RSS		

Comments:
.....
.....
.....

Signal Manager Projects & Standards Review:
The modification/records update has been reviewed and the records updated. Review Comments (if any):
.....
.....
.....
The following unique identification number has been allocated: UP.....

Signed:	Signal Manager Projects & Standards	Date:
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