



Transport  
for NSW

## Reference material

# Interface Agreement between Signal Engineering and Bridges & Structures Engineering

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Authorised by: Chief Engineer Rail, Asset Standards Authority  
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# **Interface Agreement**

**between**

**Signal Engineering**

**and**

**Bridges & Structures Engineering**

**Version**

**Approved**

**Date**

**30 August 2005**

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## 1 INTRODUCTION

This interface document identifies the interfaces between Bridges & Structures and Signal Engineering and the responsibilities at those interfaces.

The purpose is to establish clear accountabilities and ensure safety issues are well controlled.

## 2 SECTION RESPONSIBILITIES

Bridges & Structures Engineering is responsible for the design and standards for structures and non-track civil infrastructure.

Signal Engineering is responsible for the design and standards for signalling systems.

Both groups exist within the Engineering Division of RailCorp. Where a group is identified as 'Major responsibility' that group is the primary approval for the technical integrity of that item.

## 3 INTERFACES

### 3.1 General

Interfaces between the sections are considered only when an output or requirement from one section directly impacts on the designs of the other.

These interfaces can occur in two general areas, standards and projects (designs).

### 3.2 Standards

If a new standard or amended standard impacts the other section, it must be approved by both.

Once a standard is approved, its use may occur without reference back to the other section, providing the standard is applicable and complied with.

### 3.3 Projects

Individual projects may require direct liaison where the design solution for the scope of the work may impact the other. The result should be a sign off on the arrangements by both groups.

### 3.4 Specific Interfaces

- 3.4.1 Level Crossings
- 3.4.2 Signalling Structures
- 3.4.3 Signal sighting affected by structures
- 3.4.4 Attachment of signalling to other structures
- 3.4.5 Construction methodology
- 3.4.6 ULX and formation disturbance

## 4 LEVEL CROSSINGS

ITEM	BRIDGES & STRUCTURES RESPONSIBILITY	SIGNAL RESPONSIBILITY
Pavement	Major responsibility	Advice on track insulation suitability
Lights, booms and foundations	Advice on structural integrity	Major responsibility
Site plan	Major responsibility including road furniture	Details of warning light positioning and block joint positioning
Configuration of Level Crossing with no active warning equipment	Major responsibility	Nil
Road Configuration	Major responsibility	Provide input to ensure warning devices are effective
Active Warning System	Nil	Major responsibility

## 5 SIGNALLING STRUCTURES

This item includes all items owned by the signalling discipline, or are provided solely for signalling but which are structures:

ITEM	BRIDGES & STRUCTURES RESPONSIBILITY	SIGNAL RESPONSIBILITY
Signal Posts and Foundation Designs	Advice on structural integrity	Major responsibility
Signal Bridges	Major responsibility	Advice on location and signal head fitment
Equipment Cupboards	Nil	Major responsibility
Cable Bridges	Major responsibility	Advice on location and cable requirements
Cable troughing	Advice on suitability of location	Major responsibility

**6 SIGNAL SIGHTING AFFECTED BY STRUCTURES**

ITEM	BRIDGES & STRUCTURES RESPONSIBILITY	SIGNAL RESPONSIBILITY
Any civil structure being located close to the corridor with an impact on signal sighting	Major responsibility	Advice on signal sighting requirements
New signal being located close to a civil structure which may affect signal sighting	Nil	Major responsibility

**7 ATTACHMENT OF SIGNALLING INFRASTRUCTURE TO STRUCTURES**

(eg signals attached to concrete bridges or parapets, cable ducts attached to bridges).

ITEM	BRIDGES & STRUCTURES RESPONSIBILITY	SIGNAL RESPONSIBILITY
Structural Integrity	Major responsibility	Advice on requirements

**8 CONSTRUCTION METHODOLOGY**

ITEM	BRIDGES & STRUCTURES RESPONSIBILITY	SIGNAL RESPONSIBILITY
Process of construction of new structures	Major responsibility to establish methodology and advice	Major responsibility to ensure methodology does not impact signalling integrity

**9 ULX AND FORMATION DISTURBANCE**

ITEM	BRIDGES & STRUCTURES RESPONSIBILITY	SIGNAL RESPONSIBILITY
Standards for underline crossings and cable routes	Major Responsibility for the standard which specifies: <ul style="list-style-type: none"> <li>• Depth below rail</li> <li>• Construction methodology (jacking/boring)</li> <li>• Concrete encasement</li> <li>• Electrolysis/corrosion protection</li> <li>• Location of markers</li> </ul>	Compliance with B & S standard in determining signals requirements.

## 10 GUARD RAILS

ITEM	BRIDGES & STRUCTURES RESPONSIBILITY	SIGNAL RESPONSIBILITY
Provision of Rail Guards	Advice to Signals of provision of guard rails where the guard rails exceed 50m in length	Advice on guard rail insulation requirements. Provision of bonding requirements.

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