

DEVELOPMENT AND APPROVAL OF ENGINEERING WAIVERS

1. Introduction

The Department of Planning, Transport and Infrastructure (DPTI), Public Transport Services (PTS), owns, operates and maintains the Adelaide Metropolitan Passenger Rail Network (AMPRN). This procedure forms part of the Engineering Management System used to ensure safety and customer service levels are efficiently and effectively supported.

Waiving rail engineering standards may occasionally be justified. However this cannot be done without subjecting such action to an equivalent level of risk and safety scrutiny as the decision to adopt rail engineering standards in the first place. Waivers can only be granted using a documented management process as described in Section 8.0.

Note: This document supersedes “*PTS-MS-10-EG-PRC-00000032 Development and Approval of Engineering Waivers (KNet#5021922)*”.

2. Purpose

The purpose of this document is to describe how Public Transport Services (PTS) develops and approves waivers where an authorised rail engineering standard is proposed not to be met.

3. Scope

This document applies to engineering waivers to be used in designing, constructing, maintaining and decommissioning any assets used on or in connection with the AMPRN rail infrastructure, rolling stock or supporting systems.

Typical uses of this document include, but are not limited to:

- The generation of engineering waivers for non compliance with rail engineering standards;
- Considering, and where appropriate, granting approval to waive rail engineering standards;
- Issuing waivers;
- Updating the waivers register

4. Related Documents

The following documents support or are related to this document:

DOCUMENT NAME	DOCUMENT NUMBER
Australian Standard 4292.1 Railway Safety Management Part 1 General Requirements	AS 4292.1
Design Lifecycle Management Procedure (KNet#4901291)	PTS-MU-10-EG-PRC-00000023
Development and Approval of Rail Engineering Standards (KNet#7734442)	FR-AM-GE-804
Engineering Waiver Form template	5717951
Waiver Register	5444545

5. References

- *Rail Safety National Law(South Australia) Act 2012*
- AS4292.1:Railway Safety Management - General Principles

6. Definitions

TERM	DEFINITION
Functional Groups	Various disciplines within Public Transport Services i.e. Track and Civil, Signals and Communications, Electrical Engineering, Rolling Stock Engineering, Rail Operations, Maintenance etc.
KNet	DPTI/PTS Electronic Record and Document Management System
Safety Validation	The process defined in AS 4292.1 and expanded in the requirements of this document and performed by the Safety Validator(s).
Rail Engineering Standard	An authorized document that describes the rail engineering characteristics, properties or qualities of an item of infrastructure or equipment. It is intended to underpin customer and user expectations that the infrastructure or equipment will be safe, reliable and fit-for-purpose.
Urgent Waiver Process	An adaptation of the usual approval process for engineering waivers to enable faster decision making about whether the requirements of an authorised rail engineering standard can be waived.
Waive	To decide not to require a level of performance normally enforced.
Waiver	The authorised record of a decision not to require a level of performance or conformance that is normally enforced.

7. Abbreviations

ABBREVIATION	MEANING
AMPRN	Adelaide Metropolitan Passenger Rail Network
AS/NZS	Australian Standard/New Zealand Standard
DPTI	Department of Planning, Transport and Infrastructure
ISO	International Standards Organisation
PTS	Public Transport Services

8. Roles and Responsibilities

8.1. Proponent

The proponent is responsible for recommending the waiver by completion of the Engineering Waiver Form (Appendix 1). By completion of the engineering waiver form the proponent is completing the risk analysis and issues register defining the safety risk and impacts of the waiver. The engineering waiver form template (*KNet Number # 5717951*) can be accessed via the PTS Asset Management website. The document number for the engineering waiver will be issued by the PTS Asset Management Group.

8.2. Engineering Waiver Manager

The Engineering Waiver Manager is to be nominated by name within the engineering waiver form and is responsible and accountable for ensuring that all impacts and actions required that arise from an approval of the waiver are completed. These include, but are not limited to, transfer of residual risks to another project entity or operational function, updating any necessary design models, documentation and/or drawings, conduct of training and/or inductions, and the completion of and submission of records.

The Engineering Waiver Manager may be the Proponent.

8.3. Engineering / Safety Validator

The engineering/safety validators are responsible for performing the engineering and safety validation under AS 4292.1: *Railway Safety Management - General Principles*.

The approval of the engineering/safety validators may be obtained by remote means (phone or email) for urgent waivers.

Engineering/safety validators will normally be the Functional Group Managers or engineers.

8.4. Functional Group Manager

The relevant Functional Group Manager is responsible for approving engineering waivers. In some cases approval may be required from more than one Functional Group Manager.

8.5. Rail Engineering Manager

The Rail Engineering Manager is responsible for ensuring that:

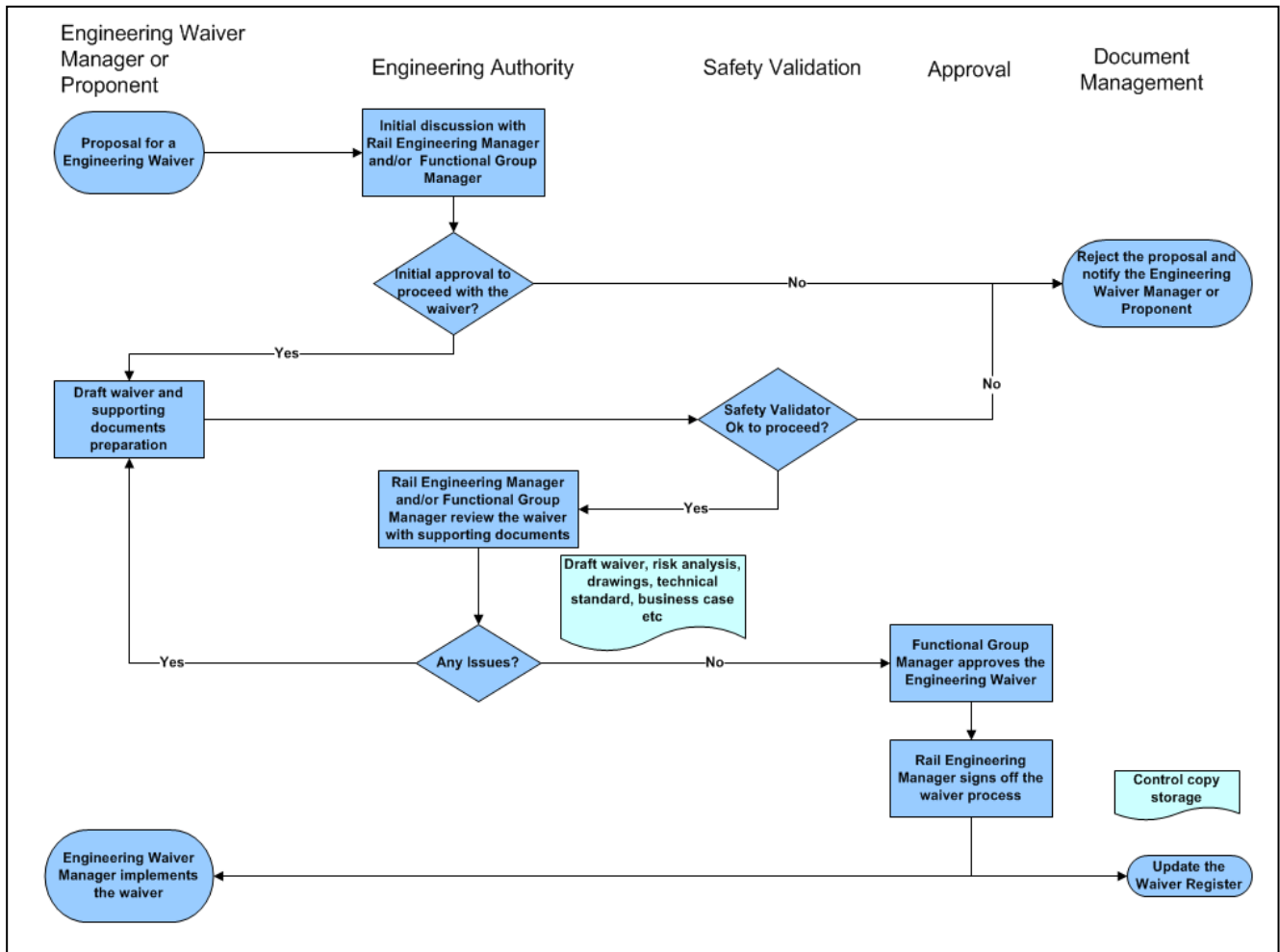
- The Proponent and Engineering Waiver Manager have completed the engineering waiver form;
- The Proponent and Engineering Waiver Manager have the authority to raise and progress the waiver;
- The Engineering/Safety validators are competent to perform the function of engineering and safety validation required under *AS4292.1:Railway Safety Management - General Principles*;
- The relevant Functional Group Manager has approved the waiver before giving final sign off.

The approval of the Functional Group Manager and the Rail Engineering Manager may be obtained by remote means (phone or email) for urgent waivers.

9. Engineering Waiver Process

9.1. Process Overview For Engineering Waivers

The generic process for development and approval of a waiver is shown in Figure 1. *Figure 1: Generic Process for Engineering Waivers*



9.2. General Approach

The necessity to waive the rail engineering standard should be identified during the early stage of any project i.e. in the design or pre-construction stage. This general approach will provide sufficient time to do the risk assessment and allow reviewers to review the waiver and supporting documents in a timely manner.

9.3. Important Warning

The urgency of a contract schedule or the costs of rectification of non-compliant work are not in themselves reasons for waiving a rail engineering standard.

A request for a waiver indicates that an earlier design, procurement or construction quality assurance process has failed. Caution is required to be sure the failure is not compounding and allowing an unsafe situation to arise.

9.4. Documentation of waivers

Engineering waivers are to be recorded in the project or functional area design records. A signed hard copy and electronic KNet link is to be provided to the Rail Engineering Manager, for entry into the waiver register. The waiver register (KNet number # 5444545) can be accessed through the PTS Asset Management website.

The physical outcome of a waiver is to be included in the “as built” rail engineering data provided by the Contractor to PTS as part of the Design Stage Review process described in *PTS-MU-10-EG-PRC-00000023 Design Lifecycle Management Procedure (KNet#4901291)*.

APPENDIX 1 ENGINEERING WAIVER FORM

Engineering Waiver Form

SAMPLE ONLY

(There is an example of a completed Engineering Waiver Form in Appendix 2)

Waiver Form Number	Waiver Title
<i>PTS asset management group will issue the number</i>	

Rail Engineering Standard to be Waived	
Description of Required Waiver	
Justification for Waiver	

Stakeholders to be Consulted	
Waiver Impacts on AMPRN	
Risk to the AMPRN due to Waiver	
Risk Assessment and Mitigation	

Records Required				
Folder Name (KNet)				
Document type	KNet Number	Document type	KNet Number	
Rail Engineering Waiver Form <input type="checkbox"/>		Business Case <input type="checkbox"/>		
Risk Assessment <input type="checkbox"/>		Impact Statement <input type="checkbox"/>		
Issues List <input type="checkbox"/>		Reference Drawings <input type="checkbox"/>		

Other – (insert name) <input type="checkbox"/>			
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Authority	Name (s)	Signature(s)	Date
Proponent			
Engineering Waiver Manager			
Engineering / Safety Validator			
Functional Group Manager			
Rail Engineering Manager			

APPENDIX 2 ENGINEERING WAIVER FORM

(EXAMPLE)

EXAMPLE ONLY

Waiver Form Number	Waiver Title
TC2-DOC-NNNNNN <i>PTS asset management group will issue the number</i>	Include the title of the waiver e.g. Structural clearance requirement is not complying due to the site restriction
Rail Engineering Standard to be Waived	Include the full title and number of the rail engineering standard to be waived e.g.CP-TS-955 Structural Clearances
Description of Required Waiver	<i>This box is used to describe the waiver e.g. To waive the existing TransAdelaide Code of Practice element CP-TS-955 Structural Clearances Clause 1.2, 3.1,4.5 etc</i> This box is also used to include the background of the waiver, project context, summary of work to be performed on AMPRN assets, details of the new work or modification to an existing AMPRN asset etc
Justification for Waiver	<i>Explain why the waiver is justified using safety, economic, productivity etc benefits, e.g.</i> Particular site prevents the ability to provide enough structural clearances
Stakeholders to be consulted	Please include the names and title of the stakeholders to be consulted for the engineering waiver.
Waiver Impacts on AMPRN	Please include the possible impacts of the engineering waiver on the AMPRN e.g. <ul style="list-style-type: none"> • Non compliance structure • More maintenance etc
Risk to the AMPRN due to waiver	Please include the possible risk as a result of waiving the rail engineering standard on the AMPRN e.g. <ul style="list-style-type: none"> • Train derailment • Train collision • Personal Injury • Damage to the infrastructure etc
Risk Assessment and Mitigation	Please include the risk assessment and mitigation measures to mitigate the above mention risks on the AMPRN e.g.

	<ul style="list-style-type: none"> • Revised Maintenance Inspection Regime • Higher Inspection Frequency • Train Speed Restriction etc
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Records Required

Folder Name (KNet)		1111111		
Document type	KNet Number	Document type	KNet Number	
Rail Engineering Waiver Form	X 2222222	Business Case	X	5555555
Risk Assessment	X 3333333	Impact Statement	X	6666666
Issues List	X 4444444	Reference Drawing	X	7777777 etc
Other – (insert name) <input type="checkbox"/>	n/a			

Authority	Name (s)	Signature(s)	Date
Proponent	Ida Design	<i>Ida Design</i>	12 th June 2009
Engineering Waiver Manager	Joe Citizen	<i>Joe Citizen</i>	12 th June 2009
Engineering / Safety Validator	Verity Clever	<i>Verity Clever</i>	14 th June 2009
Functional Group Manager	Mick Mechanical	<i>Mick Mechanical</i>	14 th June 2009
Rail Engineering Manager	Chuck d'Chief	<i>Chuck d'Chief</i>	15 th June 2009