



**Government of South Australia**

Department of Planning,  
Transport and Infrastructure

## **PUBLIC TRANSPORT SERVICES**

### **DESIGN DECISION RECORDS PROCEDURE**

**PTS-MU-10-EG-PRC-00000016**





## Document Control

### DOCUMENT STATUS

<b>Document Owner: Director Asset Management</b>			
Action	Name and Position	Signature	Date
Prepared By:	Kuldeep Zala Rail Engineer		31/08/2012
Reviewed By:	Keith Charlton Rail Engineering Manager		31/8/2012
Approved By:	Rob Taverner, Director Asset Management		31/8/2012
<b>Risk Category : Low</b>			
<b>Document Review Schedule:</b> This document is due for review as required			

### DOCUMENT AMENDMENT RECORD

Rev	Change Description	Date	Prepared	Reviewed	Authorised
0	Initial Issue	13 July 2010	Doug Gillott	Gary Hutchinson	Rob Taverner
1	Minor changes in various sections	31 Aug 2012	Kuldeep Zala	Keith Charlton	Rob Taverner



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## 1.0 INTRODUCTION AND CONTEXT

### 1.1 INTRODUCTION

In delivering new or modified assets to the AMPRN the progression of a project through the design process requires that decisions be made to ensure that the project meets time, cost, safety and quality objectives.

The majority of design decisions for a project are made as a routine part of the development of the design. They are not 'single subject' in nature and do not require investigation of alternatives or a specific risk assessment. These decisions do not require individual approval and are normally collated and documented as part of the Design Development Report (DDR) for the project.

Design decisions that are to be recorded under this procedure are normally those that have a significant impact on project objectives and require investigation and a risk assessment prior to approval.

Design Decisions that involve any non-compliance with a standard or code are to be addressed by the raising of a waiver in accordance with PTS-MS-10-EG-PRC-000032 'Approval of Technical Standards and Waivers Procedure'.

Where there is uncertainty as to which of the above categories a Design Decision belongs and whether it should be recorded using this procedure advice should be sought from the Rail Engineering Manager, Asset Management.

### 1.2 PURPOSE

The purpose of this procedure is to provide a method and consistent format for the recording of design decisions made in the course of the development and delivery of projects within Public Transport Services (PTS) and to provide a **preferred** design decision process.

### 1.3 SCOPE

This procedure applies to all projects introducing new or modified assets to the Adelaide Metropolitan Passenger Rail Network (AMPRN).

### 1.4 ACRONYMS

Acronyms	Meaning
AMPRN	Adelaide Metropolitan Passenger Rail Network
DPTI	Department of Planning, Transport, and Infrastructure
DDR	Design Development Report
PEMP	Project Engineering Management Plan
PTS	Public Transport Services



## 1.5 REFERENCE DOCUMENTS

Reference shall be made to DPTI and PTS plans, procedures and standards referenced in contract documents including the following listed PTS standards and procedures:

Doc Number	Description
PTS-MU-10-EG-PLN-00000017	Systems Engineering Management Plan
PTS-MS-10-EG-PRC-00000032	Approval of Technical Standards and Waiver Procedure
PTS-MU-05-DC-PRC-00000008	Procedure for Numbering and Development of Drawings and Documents



## 2.0 DESIGN DECISION RECORDS

PTS project teams shall maintain records of the design decisions made during the course of delivering rail projects.

### 2.1 DESIGN DECISION RATIONALE

The purpose of design decision records is to place under document control a permanent record of the information, assumptions, calculations, methods and risk assessments used to support a project design decision.

The design decision recording system will:

- Prevent the loss of PTS corporate knowledge;
- Provide background and justification for taking a particular decision
- Provide a source of reference material;
- Assist in the standardisation of subsystems, processes and actions;
- Facilitate analysis of decisions at a later date thereby assisting “lessons learnt”;
- Form basis for future changes in standard or procedure;
- Meet design traceability obligations; and
- Inform cost reduction efforts.

### 2.2 DESIGN DECISION RECORD GUIDELINES

- A design decision record should not require more than a few weeks work. Records extending over many months are to be exceptions rather than the norm. Generally a logical break can be found where one decision record can be signed off and if needed a new record raised.
- Design decision records should be “single subject”.
- Design decision records are to record the design analysis leading to decisions. The analysis should include statements outlining the designer’s assumptions and reasoning at key points of the process.
- Design decision records are to be succinct.
- Design decision records can be hand written or typed depending on the format of the material being included in the record.
- Design decision records should contain copies of reference material, including manufacturer’s data sheets, catalogue pages, sales information, test reports, contact details and similar to assist later understanding.

### 2.3 PREFERRED FORMAT FOR DESIGN DECISION RECORDS

Design decision records are to follow the layout in Appendix A. A word template for Appendix A can be found on the Engineering Management System Intranet site.



## **2.4 NUMBERING OF DESIGN DECISION RECORDS**

Design decision records are to be numbered in accordance with PTS-MU-05-DC-PRC-0000008 Procedure for Numbering and Development of Drawings and Documents.

Contact the appropriate project Document Controller for allocation of a number.

## **2.5 APPROVAL OF DESIGN DECISION RECORDS**

Design decision records are approved using the signature block on the cover sheet. In all cases the record author must sign. Subsequent signatures for checking and final approval will be decided in accordance with the Project Engineering Management Plan (PEMP) directives on design delegation within the project.

## **2.6 CLOSURE OF DESIGN DECISION RECORDS**

Design decision records are “open” as soon as they are raised and registered with the project document controller. It is preferred that design decision records are processed quickly (weeks, not months), and are “closed” by the design decision record approval process. Design decision records should be closed prior to design reviews, establishment of baselines, major test programs or similar milestones. The maximum period any design decision record can remain open is six months.

APPENDIX A - DESIGN DECISION RECORD PREFERRED FORMAT



**Government of South Australia**

Department of Planning,  
Transport and Infrastructure

**SAMPLE ONLY**

**DEPARTMENT OF PLANNING, TRANSPORT, AND  
INFRASTRUCTURE**

**PUBLIC TRANSPORT SERVICES**

**XXXXXX PROJECT**

TITLE: XX

**General Information**

ENGINEER: Date: \_\_ /\_\_ /\_\_

REVIEWED: Date: \_\_ /\_\_ /\_\_

APPROVED: Date: \_\_ /\_\_ /\_\_



The Design Decision Record should address the following elements:

**1. Introduction and Background**

Provides a description of the circumstances that have given rise to the need for the decision. It can also include a brief summary of the project and its scope.

**2. Design Description**

Explains the design issues and constraints associated with the decision.

**3. Design Decision Inputs**

Explains the justification for the particular design decision and may also include standards or evidence relevant to the decision.

**4. Design Responsibilities**

Details the relevant engineering and management authorities that have been involved in the design decision process.

**5. Design Non conformances**

Details any non conformances or residual risk associated with the design decision.

**6. Special Operational and Maintenance Conditions**

Details any special operational or maintenance practices that need to be adopted as a result of the particular design decision.

**7. Relevant documentation**

All relevant documentation i.e. any drawings, test results, risk assessment workshop outcomes, technical details, manuals, special operational or maintenance documentation must be included with the design decision record.

DPTI Adelaide Metropolitan Passenger Rail Network	Design Decision Record No:
Xxxxxxx Project	Sheet of