

Reference	NR/L3/CIV/005/2D
Issue	1
Publication date	4 th December 2010
Compliance date	5 th March 2011

Railway Drainage Systems Manual

Part 2D: Remediation

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Contents

1	Purpose	3
2	Scope	3
3	Assessment of existing Drainage Systems generally	3
4	Drainage assessment	4
4.1	General requirements	4
4.2	Serviceability	4
4.3	Structural	4
4.4	Hydraulic	5
4.5	Environmental	5
5	Site investigation	6
6	Assessing the capacity of an existing Drainage System	7
7	Remedial measures	8
7.1	Options	8
7.2	Remediation	9

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1 Purpose

The purpose of this Part of the Manual is to provide guidance on assessing the capacity of existing Drainage Systems, and on the Remediation of such Systems.

2 Scope

This Part of the Manual applies to an existing Drainage System:

- when capacity problems have been identified;
- where there is a risk that inadequate capacity could unduly affect the safety or performance of the railway;
- when identifying the location and nature of inadequate drain components and, from this, determining necessary remedial work.

This Part provides guidance on assessing a Drainage System and on the options arising from such an assessment. The most appropriate option will depend upon the local conditions and so will vary from site to site. In addition, the options are not mutually exclusive and the solution might involve a combination of options.

This Part may also be used when assessing the condition and efficiency of an existing Drainage System as part of an assessment of the performance of a trackbed treatment.

This Part of the Manual does not cover Maintenance - this is covered in Part **3B**.

3 Assessment of existing Drainage Systems generally

An assessment of a Drainage System might be necessary when an Inspection or an Incident indicates that the capacity of the System might be insufficient.

To assess capacity, the characteristics of a Drainage System have to be known, including:

- design requirements;
- details of the Catchment;
- details of the drainage components - such as sizes, lengths and materials;
- the existing condition of the system - such as the presence of sediment and the condition of pipes and Ditches;
- water levels in the receiving body of water.

Where available, drawings of the Drainage System should be used but full information might not be available and data might need to be collected by carrying