


Work instruction:	Date Raised
Condition Grading and Serviceability (Including identifying the need for repairs)	18/06/2012

<b>Work Description</b>																				
<b>Identifying condition via CCTV</b>																				
<b>Instruction</b>																				
<p><u>Condition Grading</u></p> <ol style="list-style-type: none"> <li>Refer to W0016.</li> <li>Review your coding and all other relevant site information for the complete length of drain being surveyed prior to assigning the condition grade and serviceability status. Once the particular line has been reviewed complete section 1.6.1 of the project documentation entering the relevant condition (A, B or C) to that particular line number, strictly in accordance with the Drain Repair Book edition 3.</li> <li>Structural Condition Grades for Drains, Laterals and Gullies summary (see table below)</li> </ol> <table border="1"> <thead> <tr> <th>Condition Grade</th><th>Structural Condition</th></tr> </thead> <tbody> <tr> <td><b>A</b></td><td><b>Structurally sound with no leakage evident. Slight cracks/defects permitted.</b></td></tr> <tr> <td><b>B</b></td><td><b>Cracks and/or fractures observed but pipe provides sufficient arching support. Some leakage may be evident.</b></td></tr> <tr> <td><b>C</b></td><td><b>Structurally unsound with insufficient arching support. Total collapse/blockage likely in the future.</b></td></tr> </tbody> </table> <p><u>Drain Serviceability</u></p> <ol style="list-style-type: none"> <li>Determine the serviceability of the drain using all the information gathered during the investigation. Using all the information you have, answer the questions in the table below to determine if the line is serviceable. Answering "Yes" to any question indicates that the line is unserviceable and requires repair work. This assessment to be strictly in accordance with Drain Repair Book edition 3, Section 6.</li> <li> <table border="1"> <tbody> <tr> <td>Is the drain failing to discharge normal household flows to the sewer system, i.e. recurrence of blockage?</td><td>YES/NO</td></tr> <tr> <td>Is there evidence of leakage occurring (infiltration or exfiltration)?</td><td>YES/NO</td></tr> <tr> <td>Is there intermittent storm-water flooding?</td><td>YES/NO</td></tr> <tr> <td>Is existing roots or future root growth likely to lead to continuing blockages?</td><td>YES/NO</td></tr> <tr> <td>Has a leakage test failed (subsidence investigation only)?</td><td>YES/NO</td></tr> <tr> <td>Do defects make the drain unserviceable?</td><td>YES/NO</td></tr> </tbody> </table> </li> <li>Once the assessment of the line has been completed, enter the serviceability results in the additional comments section of the project documentation.</li> </ol>	Condition Grade	Structural Condition	<b>A</b>	<b>Structurally sound with no leakage evident. Slight cracks/defects permitted.</b>	<b>B</b>	<b>Cracks and/or fractures observed but pipe provides sufficient arching support. Some leakage may be evident.</b>	<b>C</b>	<b>Structurally unsound with insufficient arching support. Total collapse/blockage likely in the future.</b>	Is the drain failing to discharge normal household flows to the sewer system, i.e. recurrence of blockage?	YES/NO	Is there evidence of leakage occurring (infiltration or exfiltration)?	YES/NO	Is there intermittent storm-water flooding?	YES/NO	Is existing roots or future root growth likely to lead to continuing blockages?	YES/NO	Has a leakage test failed (subsidence investigation only)?	YES/NO	Do defects make the drain unserviceable?	YES/NO
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#### Identifying the need for repair

1. Having determined the condition and serviceability of the drain, an assessment of the need for any repair work should be made, based on the type of investigation.
2. The reactive and general investigation rules are;
  - drains in condition grade C should be repaired; and
  - unserviceable drains should be repaired.
3. The subsidence investigation rules are;
  - drains in condition grades B and C should be repaired; and
  - unserviceable drains should be repaired (including drains failing a leakage test)

Strictly in accordance with the Drain Repair Book edition 3, Part 1, Section 7.

#### Assessing Causes

Assess the potential causes of the damage to the drain and complete section 1.6.1. of the project documentation.

#### Recommendations for Repair

Complete detailed recommendations as to the repair techniques to be used for the recommended repairs. Strictly in accordance with Section 8 of Part 1 of the Drain Repair Book edition 3.

Record recommendations in project documentation.

In some circumstances Rerounding & Relining may be an option for repair for Pitch Fibre Pipework. In these situations, recommendations should be made for the worst case repair scenario (usually excavation) and a note should be made on the project documentation that the condition of the Pitch Fibre is to be assessed by the Technical Department to consider whether Rerounding & Relining is an option.

#### **Responsibilities**

**Drainage Investigation & site Investigation Engineers**

#### **Key Objectives**

**Grading the condition of the drainage system**

**All in accordance with WRc – The Drain Repair Book – 4<sup>th</sup> Edition, best practice manual for the inspection and repair of domestic and light industrial drains**