

S104 SuDS Technical Appraisal Form: Infiltration viability

Version 1 (Sept 21)

This document will be used to assess infiltration viability for an adoptable solution. The assessment of the specific infiltration component will be subject to review once the viability stage is accepted

Proposed Section 104 Development at
UU Reference -

Infiltration System

For full design requirements, please refer to **Chapter 13** of CIRIA C753.

Infiltration viability assessment	Submitted	TBC	Acceptable	Designer Tick where information has been provided
<ul style="list-style-type: none"> Geo Technical report submitted & acceptable See comment 1 below for further information 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Completed CIRIA SuDS checklist & acceptable See C753 The SuDS Manual Appendix B: Infiltration Check List 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Simple Index Approach (SIA) Assessment / Mitigation Indices for Water Quality acceptable See comment 2 for further information 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Have ground stability issues been considered and the location of the infiltration solution viable? See comment 3 for further information 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Does the infiltration report meet the requirements for assessment under CIRIA? See comment 4 & 5 for further information 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is infiltration for adoption under S104 viable?			<input type="checkbox"/>	

Comment	Supporting Guidance
1	<p>Standard of Report</p> <p>A report to support an infiltration solution should be prepared by competent person(s), the report submitted must consider the following and it's expected that summaries are provided for each section:</p> <ul style="list-style-type: none"> Pollution Ground stability Infiltration <p>The signatories of the report must ensure that all assessments of land condition have been carried out in accordance with applicable current standards and guidelines by or under the direction of a suitably qualified competent person, who is a) a chartered member of an appropriate professional body (such as the Institution of Civil Engineers, the Geological Society of London or the Royal Institution of Chartered Surveyors) with relevant experience of investigating contaminated sites or b) a Specialist in Land Condition (SiLC) with appropriate geo-environmental experience</p>
2	<p>Pollution report</p> <p>The report should have the pollution mitigation figures provided using the 'pollution hazard Indices for different Land use classifications' from Table 26.2 within the CIRIA guidance. The SuDS selected must mitigate the pollution hazard indices, which can be determined from table 26.3 & 26.4</p> <p>Any infiltration system must protect ground water, if a development falls in a ground water protection zone, we will inform you at the earliest opportunity, however there is likely to be a lengthy lead in time as the scheme must be assessed by a Geo Environmental Engineer to ensure that the scheme doesn't compromise ground water. We expect as a minimum, that a desk study (preliminary risk assessment) be provided in accordance with the framework in Environment Agency publication "Model Procedures for the Management of Land Contamination" (ref: CLR11), which sets out whether the land maybe affected by contamination.</p> <p>See Chapter 26 of CIRIA C753</p>
3	<p>Ground stability report</p> <p>It is expected that a report will be provided regarding ground stability. It will be unlikely that an infiltration solution will be possible if the report suggests any of the following geo hazards apply:</p> <ul style="list-style-type: none"> Washing away of fines from soils Dissolution of minerals leading to the formation of voids. wetting of soils swelling clay <p>(all could cause substantial settlement or collapse)</p> <p>The location of the infiltration system must:</p> <ul style="list-style-type: none"> Ensure that infiltration does not significantly affect the stability of adjacent ground and slopes Ensure that infiltration does not affect the stability of adjacent foundations or surfaces <p>See Section 25.2.3 of CIRIA C753</p>

4	<p><u>Infiltration report summary</u></p> <p>It's good practice to provide a summary of the report highlighting the following information:</p> <ul style="list-style-type: none">• The time of year the tests were carried out, as this can affect the ground water level and seasonal variations must be taken into account as per the CIRIA guidance Section 25.2.2 of CIRIA C753• The standard to which the bore hole data has been determined being BS EN ISO 22282-2:2012, BS EN ISO 14688-1:2002• The method and standards of the infiltration testing in line with Bettes 1996, BRE 1991 <p>See Chapter 25 of CIRIA C753</p>
5	<p><u>Infiltration data requirements</u></p> <ul style="list-style-type: none">• The report must have copies of the trail pit data carried out at least three times• Any Trail pits must drain down to less the 25% full• Bore hole data which list the material categories as per the relevant standard• Infiltration rates must be provided in m/s or m/h• A location plan of the Bore hole data and the depths provided in mAOD• The testing must be in location of the proposed system and be at the Invert of the system (as site levels could change)• Ground water level should be stated and needs to be at least 1m below the invert of the proposed system.• The results must not be averaged the worse result should be show as the infiltration rate <p>See Chapter 25 of CIRIA C753</p>