

Table B.6 Infiltration assessment checklist

Requirements	
Site ID	Gedlings Road, Knowsley
Asset ID	
Infiltration component location	Please refer to Exploratory Hole Location Plan reference: GRK-BWB-ZZ-XX-DR-YE-0002_EHLP (Part of Appendix 3 of the Sustainable Drainage Statement)
Infiltration component type	Below ground geo-cellular infiltration tank

Infiltration capacity	Details	Acceptable submission?	Further requirements
Confirm that infiltration test results have been provided, along with trial pit records with soil/rock descriptions of the materials in which the test has been completed in accordance with BS EN ISO 14688-1:2002+A1:2013 or BS EN ISO 14689-1:2003	Infiltration test results have been provided along with trial pit records in accordance with the relevant standards	Yes	No further requirements
Confirm that the infiltration tests have been undertaken at the location, depth and with a head of water that replicates the proposed design.	Three machine excavated trial pits (SA01 to SA03 inclusive) have been carried out to a maximum depth of 2.50m below ground level (bgl). Adequate to replicate the proposed SuDs design.	Yes	No further requirements
Confirm that infiltration tests state which stratum the results are appropriate to and any limitations in the test. For example, has the infiltration rate been estimated by assuming water only infiltrates into one particular stratum such as a discrete layer of limestone?	The site geology is indicated to comprise of Sandstone with an associated superficial 'Secondary A' aquifer, designated by the EA to be permeable layers capable of supporting water.	Yes	No further requirements
Confirm that the infiltration tests follow BRE (1991) or Bettess (1996) as far as is relevant to the design. If not, state what variations have been made to the test and why	Infiltration test results have been provided along with trial pit records in accordance with the	Yes	No further requirements
Confirm that the head of water in the infiltration test falls to less than 25% of the initial head of water. (Note: if this does not occur the results should not be extrapolated – the results should state "Infiltration test cannot be determined.")	Confirmed through appropriate testing.	Yes	No further requirements

Infiltration capacity	Details	Acceptable submission?	Further requirements
Confirm that account has been taken of the soil descriptions and an assessment of the likely impact of water on the soil and long-term infiltration rate has been included (eg high initial infiltration rates in dry mudstone may not be representative of long-term values when soaking water has caused weathering)	Confirm that account has been taken of soil descriptions and	Yes	No further requirements
Confirm what measures are necessary to prevent construction activities (especially compaction) changing the infiltration characteristics	Monitoring and limiting of heavy vehicle movements around site.	Yes	No further requirements
Confirm that the test infiltration capacity is likely to be representative of the wider ground mass (eg the test has not been undertaken in a limited extent of sand within a mass of clay)	Testing has been undertaken in the appropriate locations proximate to the location of the infiltration features.	Yes	No further requirements
Groundwater levels			
Confirm that evidence has been provided of groundwater levels and seasonal variations (eg via relevant groundwater records or on-site monitoring in wells)	Groundwater was encountered at two of the three locations (SA01) and (SA03) with damp arising noted at 2m bgl and 2.4m bgl respectively.	Yes	Confirmation of seasonal groundwater levels
Confirm that the maximum likely groundwater levels are >1 m below the base of the infiltration device	The maximum likely groundwater levels are indicated to be below the base of the infiltration features proposed.	Yes	Confirmation of seasonal groundwater levels
Ground stability			
Confirm that it has been demonstrated that infiltration will not cause significant risk of instability (eg retaining walls, slopes, solution features or loosely consolidated fill) or movement that could adversely affect any nearby buildings or other structures. Where infiltration is proposed closer than 5 m to the foundations of buildings or structures that this assessment should be approved by a suitably qualified professional such as a registered ground engineering adviser. The BGS Infiltration SuDS Map is a useful source of information. Some local authorities have solifluction maps	Infiltration is not considered to cause significant risk to the nearby buildings/structures or cause significant instability to retaining walls or slopes. Appropriate vegetation (grasses and shrubs) should be planted within the infiltration basin to enable stability of slope. Details are to be confirmed subject to detailed design.	Yes	No further requirements
Confirm that an assessment has been taken of the potential for subsidence due to infiltration	Slope stability will be considered as part of the detailed proposals.	Yes	No further requirements

Infiltration capacity	Details	Acceptable submission?	Further requirements
Ground contamination			
Confirm that an assessment of the potential for deterioration in groundwater quality due to infiltration, such as due to mobilisation of contamination, has been undertaken. Note: this assessment should be undertaken by a qualified geo-environmental engineer or similarly qualified person, and may require a site investigation with contamination testing. The BGS Infiltration SuDS Map can provide useful preliminary information	An assessment of the potential groundwater quality due to infiltration. No visual or olfactory evidence of contamination was identified during the ground investigation.	Yes	No further requirements
Confirm that a suitable treatment train has been provided before the runoff reaches the soil (to reduce risks of groundwater contamination to an acceptable level) – see National SuDS Standards and this manual	Suitable treatment has been provided as part of the sustainable drainage strategy in the form of the following features: • Infiltration Basin • Oil Separator • Infiltration Tanks Additional ancillary SuDS features could be included at detailed design.	Yes	No further requirements
Flood risk			
Confirm that an assessment has been undertaken of the potential effect of infiltration on groundwater levels local to any infiltration component and the potential wider impact of multiple infiltration components within the site, with respect to groundwater flood risk	Please refer to BWB FRA reference: GRK-BWB-ZZ-XX-RP-YE-0001_FRA for further details on Groundwater source.	Yes	No further requirements
Confirm that an assessment has been undertaken of the risk of springs developing in layered geology/steep topography due to the proposed infiltration	N/A	N/A	N/A
Confirm that details of overflows or additional discharge points if total infiltration cannot be relied on for all return period events have been provided	In the event that the capacity of the attenuation is exceeded, flood water will pool within the car parking areas and remain within the site.	Yes	No further requirements
Combined sewer risk			
Confirm that an assessment has been undertaken of the risk of groundwater leakage into any local combined sewers	N/A	N/A	N/A