Combined Harvesters

Combined rainwater harvesting and stormwater management tailored solutions

3 Mosedale Rd, Croft business park, Bromborough, Wirral. CH62 3QZ
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Soil Infiltration Test Procedure
(In accordance with BRE Digest 365)

Test Pit Dimensions

The infiltration test requires a trial pit (or pits) located in the vicinity of the proposed soakaway. The plan size of the trial pit should be 0.3 - 1.0m wide x 1.0 - 3.0m long. The depth should match the depth of the proposed soakaway – i.e. the total depth from the finished ground level should be equal to the depth to invert of the surface water drain (0.75-1.5m) plus the proposed operating depth of the soakaway (typically another 1m).

For a soakaway to serve a single residential unit, the suggested test pit plan size would be 0.45m wide x 1.5m long (or smaller if practicable to reduce test water volume requirement). The total depth of the test pit from the finished ground level should be 2.0m with an effective soakaway water depth 'De' of 1.0m.

The hole is to be backfilled with 40mm single-size stone with a 160mm diameter perforated plastic pipe set vertically to monitor depths. The top of the stone surround should stop below the existing ground level (0.25-0.5m) with the side slopes battered to a safe and stable angle. Topsoil is to be retained on site for subsequent reinstatement.

Test procedure

The test should be carried out 3 times on the same or consecutive days as follows: Quickly fill the pit with water to at least the effective depth 'De' (1.0m) and log the time and depth at regular intervals while it falls (particularly in the range 75% De to 0.25% De). Allow level to fall to near empty and then repeat the test twice more. The depth should be measured down from GL (cut top of pipe to GL).

If the water drains slowly (for example, morethan 6 hours) this indicates that an efficient soakaway is not possible. This guide time is dependent on the test pit dimensions and further guidance can be given.

N.B. The minimum volume of test water for the suggested dimensions would be in the order of 250 - 300 Litres (55 - 66 gallons) per test.

Information required for analysis - See form ch-per001, 2 sheets

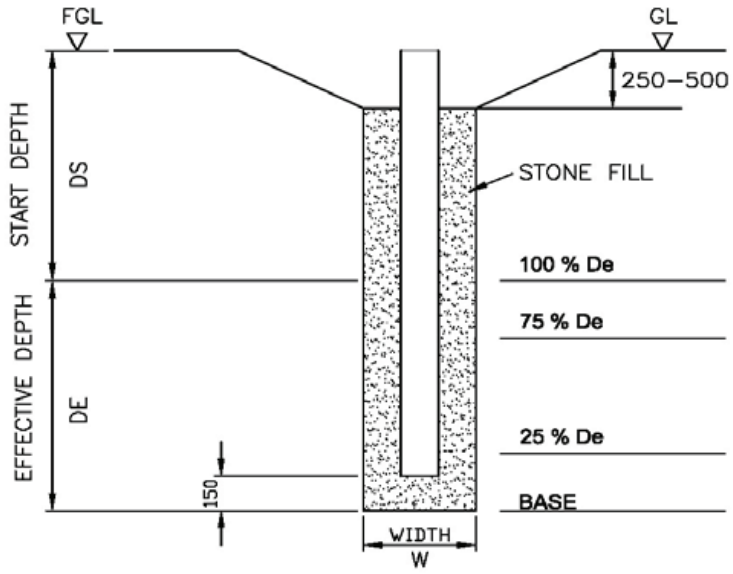
Length, width, depth of test pit

Effective depth

Time / depth log during drop from 75% De to 25% De. (for 3 separate tests).

	Infiltration Test - Pit Dimensions	Test Pit Ref (job no./pit no.)	
		Sheet	1 of
Client:			
Scheme:			
Location			
Prepared by:		date:	
Approved by:		date:	

Test Pit Dimensions



DEPTH – SET GL to 0 and measure down.	
FGL if above GL	
GL	
FGL if below GL	
100% De	
75% De	
25% De	
BASE	

Test Details

			Proposed	Actual	
Length	L	Range 1.0 - 3.0m			m
Width	W	Range 0.3 - 1.0m			m
Depth	Ds	FGL to proposed inlet pipe depth			m
Depth	De	Proposed soakaway depth			m

Pit construction (As Form Ref : soil infiltration)

160 mm OD perforated plastic pipe set in A40 stone surround
base of pipe to be set on 150 mm stone above base of excavation
top of stone to be kept 250-500 mm below ground surface
top of pipe to be set at ground level
Hole to be refilled with topsoil on completion after cutting off pipe to stone level

	Infiltration Test - Data record	Test Pit Ref (job no./pit no.)	
		Sheet	of
Client:			
Scheme:			
Location			
Prepared by:		date:	
Approved by:		date:	

Date:		Depth	Date:		Depth	Date:		Depth
Time	mins		Time	mins		Time	mins	

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