

Land at Aberthaw Road - PERCOLATION TEST CARRIED OUT 26th May 20

Test in conjunction with Drainage Statement for Planning Application for domestic development.

The test pit was dug in a location toward the front of the site where an initial proposal for soakaway/attenuation could be located, under a proposed flat car parking area.

The sloping bank was reduced to a working flat area, level with the adjacent pavement (roughly proposed formation level of car parking). Within this area, the test pit was then excavated. The soil evident in the pit was damp but no leeching water. There was no standing water in the bottom of the pit at full excavation depth (from existing site level to base of pit approx. 2m).

The weeks preceding the test had seen a normal degree of rainfall with no rainfall in preceding week (last rain 21st May), the weather for the tests was fine and warm. The time of year for carrying out the test was ideal for this purpose, not in a dry season which, which could skew the results, but in a season following a fair degree of rainfall. No groundwater level was encountered, and it is not suspected that ground water will affect the 1m depth of soil below an infiltration system if installed.

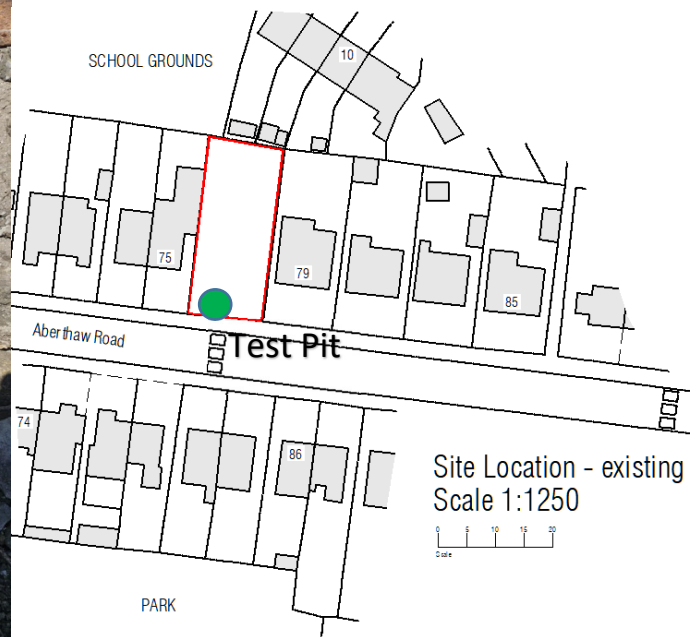
The soil in this pit was all a silty/clay friable consistency with elements of layered harder mudstone at lower level which broke up with minimal force. No water table was evident during the dig/testing.

The pit was filled with water from a barrel of 200 litres. This volume should have been enough to fill the pit to the 800mm mark. The fill of 1.5 min duration, however, reached a depth of only 410mm as water was immediately infiltrating rapidly into the ground. It took only 7-8 minutes for the remaining (105 litres) water to leave the pit from the initial pour.

The test was repeated twice within the following hour with practically identical results. The water in the pits had fully dispersed leaving only wet mud. Some soil from the sides of the pit fell away following each test.

Results of the test are shown on attached sheet.

As it stands on the basis of this initial test pit, the very free -draining nature of the ground would be consistent with effective use of soakaway/attenuation design if proposed.



Start of test pit dig.

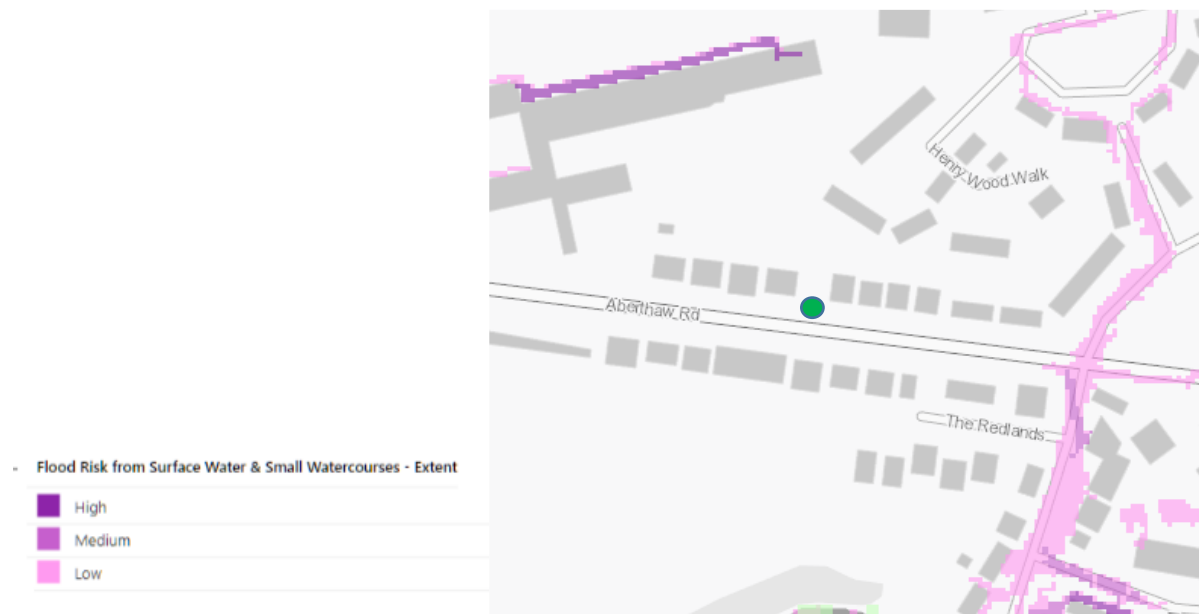


Dig material from pit. Compacted layers of sandy clay. Loose and friable once dug.



Location of test. Toward front of site generally where location of soakaway attenuation/car parking proposed. Slope dug out. Top of pit generally level with footpath. Test pit excavated down from footpath level.

Flood Map – Site has low risk from surface water and small watercourses.



Test Pit. 0.8m x 0.32m x 1.1m (L x W x D)

Measuring gauge, metric surveying staff. Filling tank 200 litre barrels.

Test 1 -10:58am



Test 1 -Prior to fill.



Test 1 -During fill (200 litres).



Test 1 - Max fill point 410mm fill.



Test 1 - 11:04am when empty.

Test 2 -11:13am



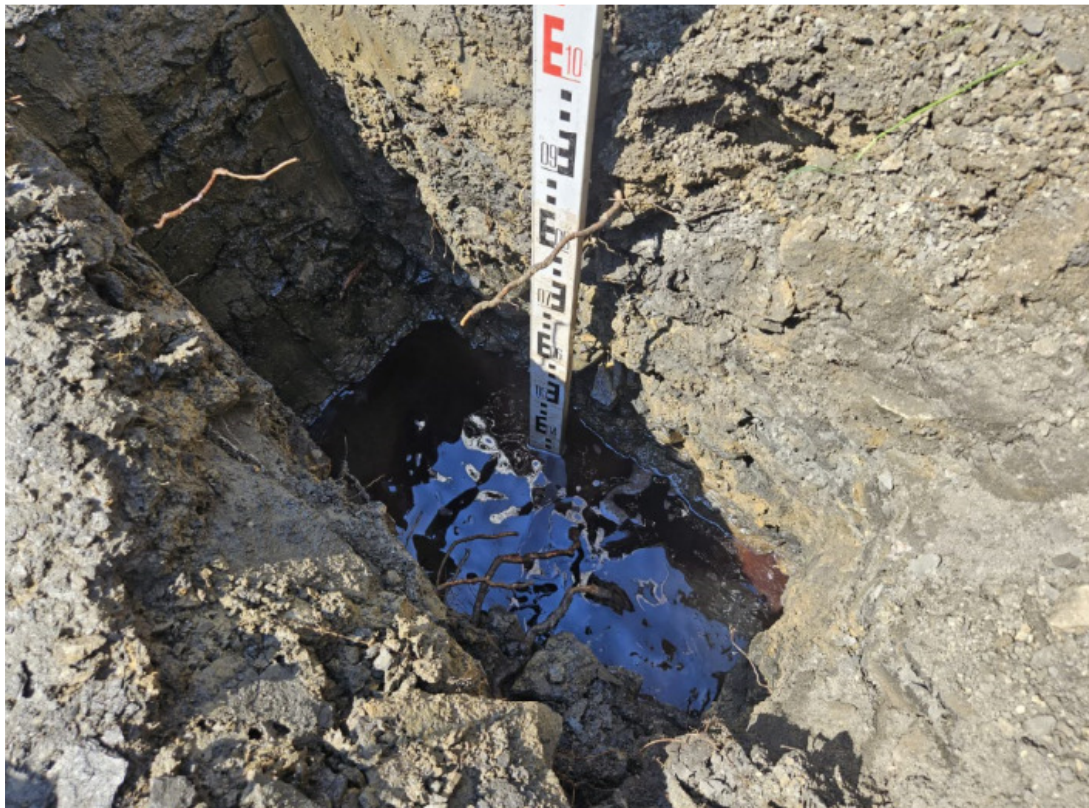
Test 2 – Location, prior to fill.



Test 2 – Prior to fill.



Test 2 – Pit prior to fill.



Test 2 – 360mm depth 11:16am.



Test 2 - 11:21am when empty.

Test 3 -11:36am



Test 3 – Fill 11:36am (410mm).



Test 3 – 240mm 11:40am.



Test 3 – Pit empty 11:45am

Aberthaw Road Plot (77?)
 Test carried out 26th May 2026. No rainfall for 2 weeks previous. Pleasant sunny weather during testing.

Pit 1
 Fill No. 1

	depth	minutes
time	10.58	410
time	11.05	0
time		
time		
time		
time		
time		
time		

26th April 2026
 0 1.5 min for 200 litre fill
 7.5 pit drained to empty.

Pit 1
 Fill No. 2

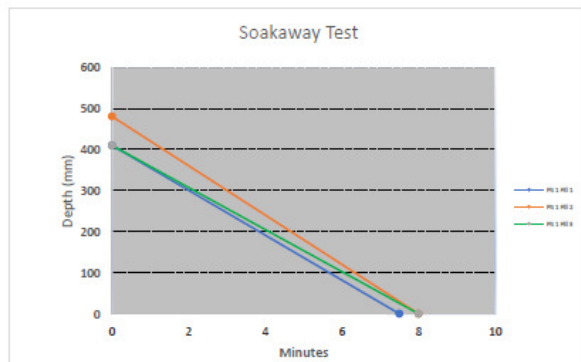
	depth	minutes
time	11.13	480
time	11.21	0
time		
time		
time		
time		

26th April 2026
 0 1 min for 200 litre fill
 8 pit drained to empty.

Pit 1
 Fill No. 3

	depth	minutes
time	11.36	410
time	11.45	0
time		
time		
time		
time		

26th April 2026
 0 1.5 min for 200 litre fill
 8 pit drained to empty.



Average Infiltration Coefficient **0.000332**

Fill 1

	length	width	depth
Pit Size	0.8	0.32	1.1
Effective storage depth			0.45
Depth of water at 75%			0.337
Depth of water at 25%			0.112
Volume outflowing between 25% and 75% effective storage depth			0.0576 m3
Mean surface area of outflow, 50% effective storage depth.		0.76 m2	0.36
			0.144
			0.256
Time for outflow between 75% and 25%	75%	25%	
	1.25	4.75	3.5 min

Soil Infiltration Rate

$$\frac{0.0576}{0.76 \times 3.5} = \text{Infiltration Coefficient} = 0.000380902 \text{ m/s}$$

Fill 2

	length	width	depth
Pit Size	0.8	0.32	1.1
Effective storage depth			0.45
Depth of water at 75%			0.337
Depth of water at 25%			0.112
Volume outflowing between 25% and 75% effective storage depth			0.0576 m3
Mean surface area of outflow, 50% effective storage depth.		0.76 m2	0.36
			0.144
			0.256
Time for outflow between 75% and 25%	75%	25%	
	2.25	6	3.75 min

Soil Infiltration Rate

$$\frac{0.0576}{0.76 \times 3.75} = \text{Infiltration Coefficient} = 0.000336842$$

Fill 3

	length	width	depth
Pit Size	0.8	0.32	1.1
Effective storage depth			0.45
Depth of water at 75%			0.337
Depth of water at 25%			0.112
Volume outflowing between 25% and 75% effective storage depth			0.0576 m3
Mean surface area of outflow, 50% effective storage depth.		0.76 m2	0.36
			0.144
			0.256
Time for outflow between 75% and 25%	75%	25%	
	1.5	5.75	4.25 min

Soil Infiltration Rate

$$\frac{0.0576}{0.76 \times 4.25} = \text{Infiltration Coefficient} = 0.000297214$$