



PERCOLATION REPORT

LOCATION:

Heywood Old Road, Middleton

CLIENT:

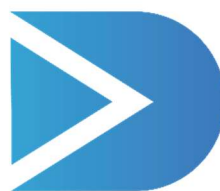
Mr Shirrie

DOCUMENT REF:

25542-PR-001

DATE:

18/09/25



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ENGINEERING

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Revision	Description	Date	Author	Checked
A	First Issue	Sept 25	O Mountain	H Dyson

TESTING REPORT

1.0 TESTING REPORT

The Percolation Testing was carried out on site on 18th September 2025 to establish if infiltration methods were going to be a suitable solution for draining the site.

1 Trial Hole was formed with the following dimensions;

Test Pit 1 1200mm x 350mm x 1100mm deep

The water level drop was monitored and recorded (see test sheets attached).

TEST PIT 1:

For Test 1 (Test Pit 1), water was filled to a depth of 600mm, the water level dropped 600mm after 30 minutes of testing.

For Test 2 (Test Pit 1), water was filled to a depth of 600mm, the water level dropped 600mm after 45 minutes of testing.

For Test 3 (Test Pit 1), water was filled to a depth of 600mm, the water level dropped 600mm after 1 Hour of testing.

Calculation sheet 1 shows that the infiltration rates are high enough and do satisfy BRE 365 requirements. Therefore, Infiltration methods of drainage will be viable for this site and strategy.

APPENDICES

Appendix A – Percolation Test Sheet

METHOD (from BRE Digest 365)

- Excavate a soakage trail pit to the required depth (typically 1.0m - 2.0m deep) using minimum width (0.3m) and length (1.0m). Carefully trim sides and bottom.
- Carefully measure size of pit and note sizes below.
- Fill soakage hole briskly with water (from bowser) to at least three quarters full. Being careful not to wash away the sides. (Note: a 0.3m wide, 1m long, 1.5m deep trench needs at least 350 litres (80 gallons) of water)
- Place straight edge over top of soakage pit and measure (dip) to the top of the water.
- Record time versus dips in table below. Dip every 5 minutes for the first hour and every hour until pit is one quarter full. Repeat test 3 times in total on the same or consecutive days.

DETAILS

Site Location	Heywood Old Road, Middleton
Date of Test	18/09/25
Weather Conditions	Wet – Autumn
Engineer Name	Harry Dyson

SIZE OF PIT 1

Length	Width	Depth
1.20m	0.35m	1.10m

Test 1

RESULTS

[illegible]

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Appendix A

Percolation Test Sheet Pit 1

Test 2

RESULTS

Time (mins)	Dip (mm)	Time (mins)	Dip (mm)
0	600		
5	535		
10	440		
15	390		
20	325		
25	230		
30	195		
35	125		
40	65		
45	0		

Test 3

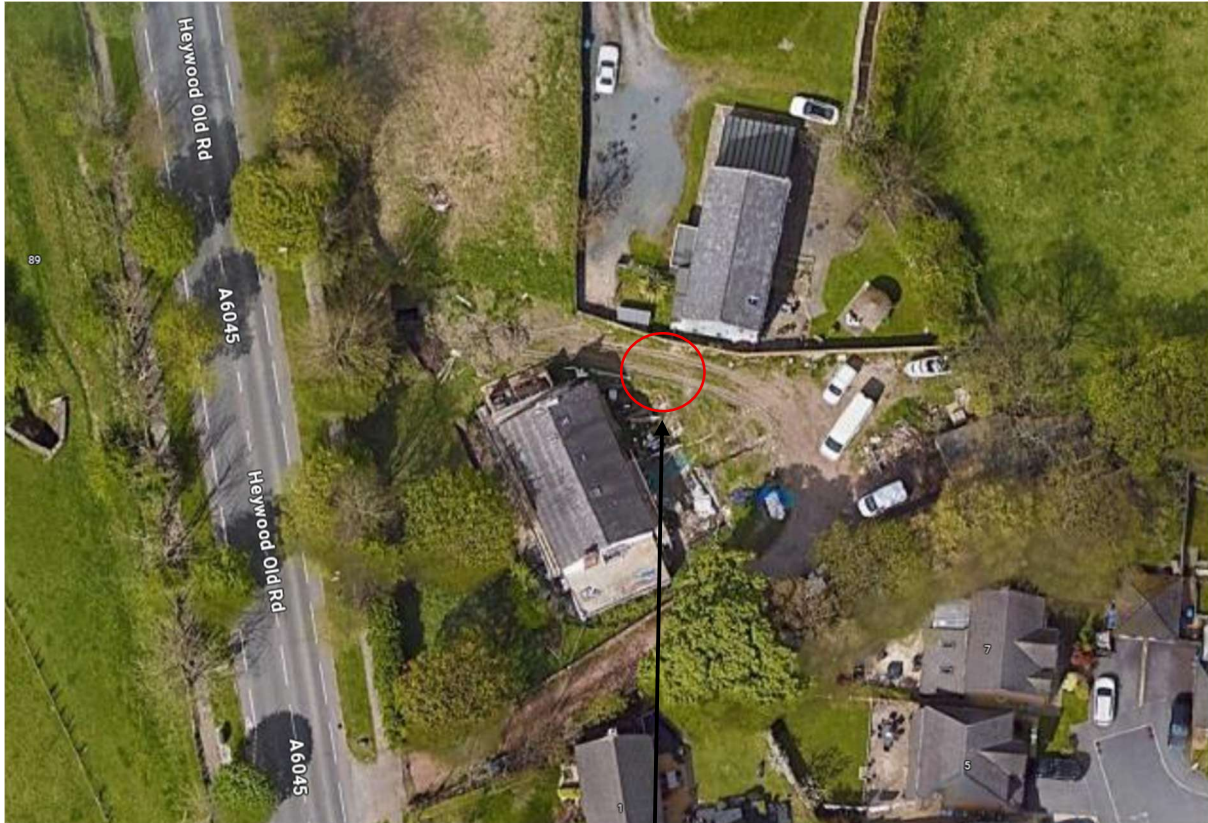
RESULTS

Time (mins)	Dip (mm)	Time (mins)	Dip (mm)
0	600		
5	550		
10	505		
15	450		
20	400		
25	355		
30	305		
35	250		
40	200		
45	55		
50	105		
55	50		
60	0		

Date: 18 September 2025
Ref: 25542/PR/001



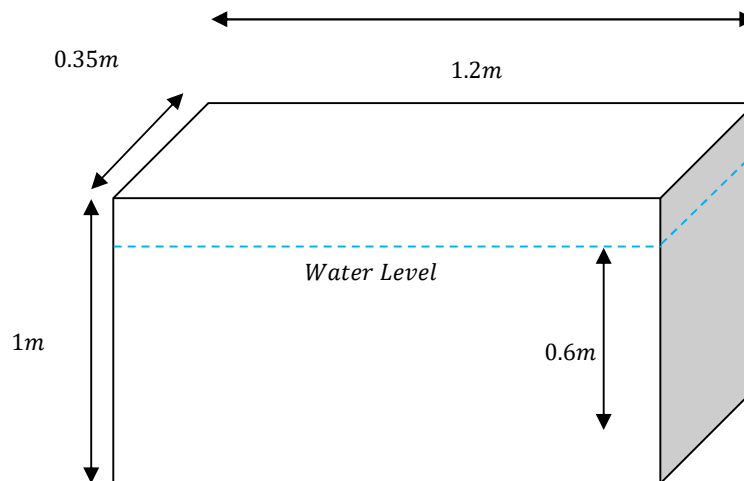
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Test Pit 1 was
formed here.

Project Heywood Old Road, Middleton				Job Ref. 25542	
Section				Sheet no./rev.	
Calc. by OM	Date 18/09/25	Chk'd by HD	Date 18/09/25	App'd by	Date

Test 3, Test Pit 1)



Soil Infiltration rate(ms^{-1}):
$$\frac{V_{(P75-25)}}{t_{(P75-25)} \times a_{(P50)}}$$

V = Effective storage volume between 75 – 25%

$a_{(P50)}$ = Surface area of the pit (50% effective depth) + box area

$t_{(P75-25)}$ = Time for water to fall from 75 – 25%

$$V_{(p75-2)} = (0.6 \times 0.5) \times 1.2 \times 0.35 = 0.126m^3$$

$$a_{(p5)} = 1.2 \times 0.35 + 2((0.6 \times 0.5) \times 1.2) + 2((0.6 \times 0.5) \times 0.35) = 1.35m^2$$

$$t_{(p75-25)} = 3600s$$

Soil Infiltration rate (m/s):

$$\frac{0.126}{3600 \times 1.35} = 2.59 \times 10^{-5}m/s$$

Soil Infiltration rate (m/hr):

$$2.59 \times 10^{-5} \times 3600 = 0.09324 m/hr$$