

Infiltration Testing For:

56 Swansea Road,
Merthyr Tydfil,
CF48 1HR

Prepared for: Lutra Consultancy

REF: 56 Swansea Road #802

DATE: 14.07.2025



GibbsGeoTechnical

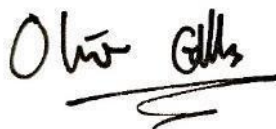
Document Control

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Client	Lutra Consultancy
Ref:	56 Swansea Road #802

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1 Introduction

1.1 Brief

Gibbs Geotechnical has been instructed by Lutra Consultancy (the Client) to undertake 1x soil infiltration test to BRE365 standard at 56 Swansea Road, Merthyr Tydfil, CF48 1HR.

National Grid Reference: SO026068 – Easting 302692, Northing 206898

Latitude, Longitude: 51.752290 , -3.411070



Figure 1 - Site location

One BRE365 infiltration test has been proposed to determine the local geology and permeation rates on site. This BRE365 test pit is to be 0.5x1.0x1.0m minimum and tested a maximum of 3 times or as many as possible in the 6hr timeframe allowed. Refer to **Appendix A – Site Test Plans**

1.2 Site Investigations

The tests were performed by Gabriel Usher (of Gibbs Geotechnical) on the 10th of July 2025. Refer to **Appendix B – Site photos**

2 Site findings

The following tests were performed to the best of the ability of those involved, subject to site constraints and weather conditions. The test pit was successfully excavated to 1.25m depth in the location on **Appendix A**, with no groundwater encountered on site.

2.1 British Geological Records

Local searches from the British Geological Survey (BGS) online records show the site to have the following superficial soils and bedrock:

Bedrock: South Wales Lower Coal Measures Formation - Mudstone, siltstone and sandstone. Sedimentary bedrock formed between 319 and 318 million years ago during the Carboniferous period.

Superficial soils Till, Devensian - Diamicton. Sedimentary superficial deposit formed between 116 and 11.8 thousand years ago during the Quaternary period.

Refer to **Appendix C** for BGS records <http://mapapps.bgs.ac.uk/geologyofbritain3d/>

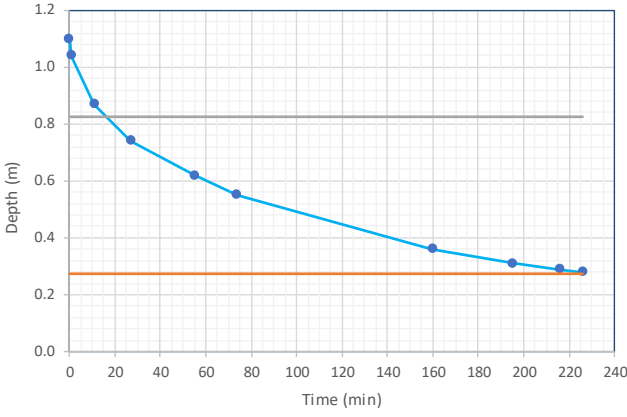
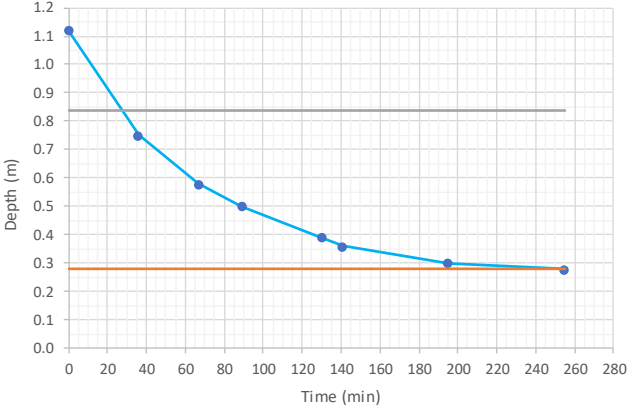
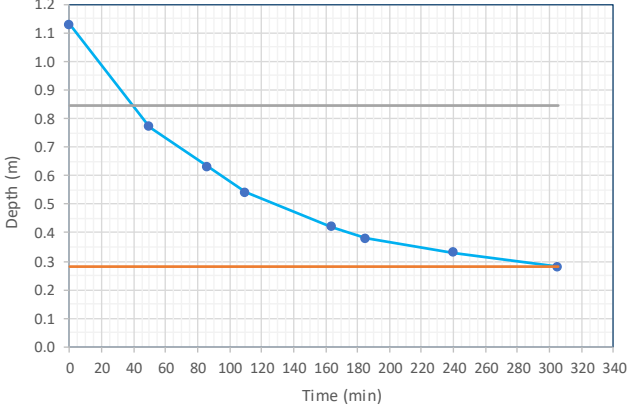
2.2 Trial pit soil conditions

Soils encountered were logged at the following approximate depths:

Pit 1

Topsoil:	0-0.3m	- Coal spoil/till
Superficial soils:	0.3-1.25m	- Coal spoil/clay

3 Results

Soakaway Test Results - BRE 365 Digest standards				Site:	56 Swansea Road
				Client:	Lutra Consultancy
Trial Pit	1	Date:	10/07/2025	 GibbsGeoTechnical	
		Performed by:	Gabriel Usher (of Gibbs Geotechnical)		
Dimensions	(m)	Weather:	Sunny		
Width	1	Topsoil:	Coal spoil/till		
Length	0.5	Superficial soil:	Coal spoil/clay		
Effective depth	1.25	Comments:			
Total depth of hole	1.25				
Test No.	Time (min)	Depth (m)			
1	0	1.10	Time 75% = 15		
	1	1.04	Time 25% = 226		
	11	0.87	Area = 0.5		
	27	0.74	Vp 75% = 0.825		
	55	0.62	Vp 25% = 0.275		
	74	0.55			
	160	0.36			
	195	0.31			
	216	0.29			
	226	0.28			
			Vp75-25 = 0.275 m		
			As50 = 2.375 m ²		
			tp75-25 = 12660 s		
			f = 9.15E-06 m/s		
Test No.	Time (min)	Depth (m)			
2	0	1.12	Time 75% = 27		
	36	0.75	Time 25% = 255		
	67	0.58	Area = 0.5		
	89	0.50	Vp 75% = 0.84		
	130	0.39	Vp 25% = 0.28		
	141	0.36			
	195	0.30			
	255	0.28			
			Vp75-25 = 0.28 m		
			As50 = 2.375 m ²		
			tp75-25 = 13680 s		
			f = 8.62E-06 m/s		
Test No.	Time (min)	Depth (m)			
3	0	1.13	Time 75% = 40		
	50	0.77	Time 25% = 305		
	86	0.63	Area = 0.5		
	110	0.54	Vp 75% = 0.8475		
	164	0.42	Vp 25% = 0.2825		
	185	0.38			
	240	0.33			
	305	0.28			
			Vp75-25 = 0.2825 m		
			As50 = 2.375 m ²		
			tp75-25 = 15900 s		
			f = 7.48E-06 m/s		

4 Conclusions

The tests which could be performed in the timeframe allowed found infiltration results of:

Test Pit 1: $7.48\text{E-}06\text{m/s}$

5 APPENDIX A: Site Test Plans



Figure 1- Test pit location plan

6 APPENDIX B: Site Photos



Figure 2 - Test pit 1 during excavation



Figure 3 - Test pit 1 strata



Figure 4 - Test pit 1 after filling



Figure 5 - Test pit 1 remediation

(More pictures available upon request)

7 APPENDIX C: BGS Records

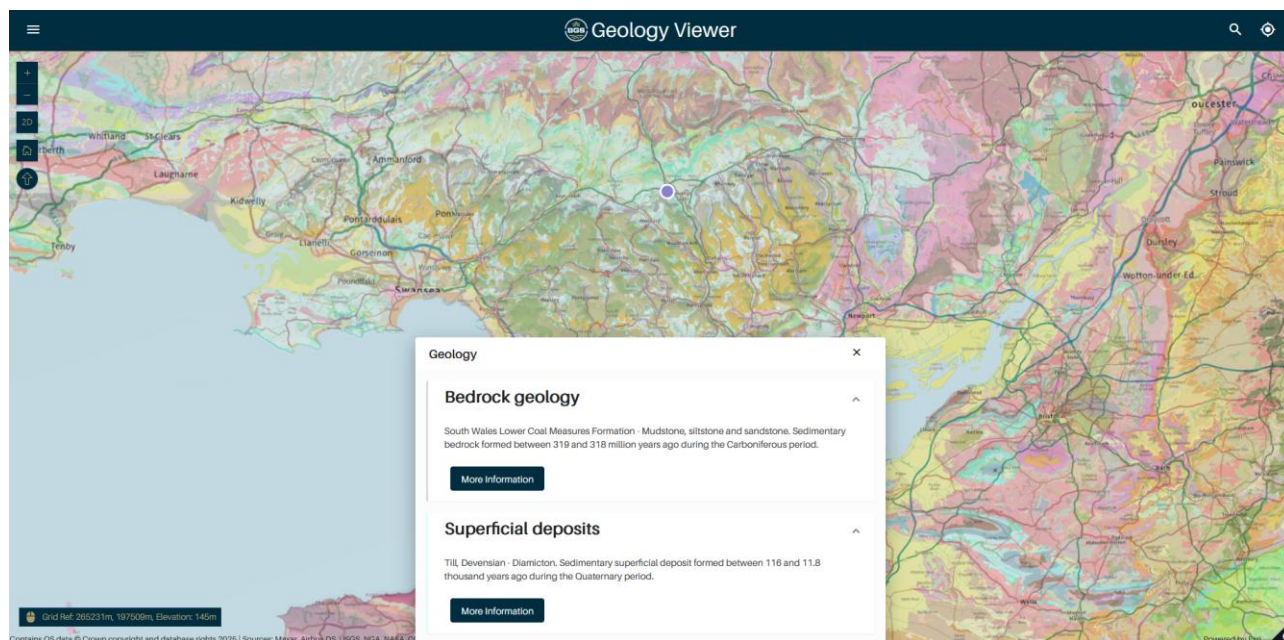


Figure 7 - Royal Geological survey records of the site