

Our Ref: 14979-SA

Your Ref:

Contact: Elliot Sampson

23rd November 2023

Monmouthshire Housing
Nant Y Pia House,
Mamhilad Technology Park,
Mamhilad,
Monmouthshire
NP4 0JJ
For the attn. of Simon Jenkins

Dear Simon

SOAKAWAY TESTING: ST ARVANS

1.0 Introduction

Monmouthshire Housing is proposing the building of new residential dwellings at land adjacent to Piercefield pub, A466, St Arvans, NP16 6DN and associated storm water drainage.

TFW Group Ltd (Terra Firma) have been commissioned by Monmouthshire Housing to undertake soakaway testing at the site to aid in the design of the project's sustainable urban drainage scheme.

1.1 Limitations and Exceptions of Investigation

Monmouthshire Housing have requested that in-situ soakaway testing be performed at the site.

The report has been conducted and this report has been prepared for the sole internal reliance of Monmouthshire Housing and its design and construction team. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Terra Firma. If an unauthorised third party comes into possession of this report, they rely on it at their peril and the authors owe them no duty of care and skill.

The report represents the findings and opinions of experienced geotechnical and geoenvironmental consultants. Terra Firma does not provide legal advice and the advice of lawyers may also be required. The subsurface geological profiles, any contamination and other plots are generalised by necessity and have been based on the information found at the locations of the exploratory holes and depths sampled and tested.

2.0 Site Work

Site investigation works were undertaken between the 20th and 22nd of November 2023 and comprised the excavation of thirteen trial pits for soakaway testing.

The fieldworks were supervised by Terra Firma on a full time basis, who also logged the trial pits to the requirements of BS5930.

Trial pits referenced TP01, TP01A, TP01B, TP02, TP02A, TP02B, TP03, TP03A TP04, TP04A, TP05, TP05A and TP06 (**Annex A**), were formed using a JCB 3CX excavator with a 0.60m wide bucket.

Soakaway tests were carried out in all trial pits in general accordance with BRE DG 365:2016. The excavation sides were squared using the excavator bucket and dimensions recorded within the test section. The trial pits were partially filled with clean water using a dedicated bowser with a 75mm diameter outlet and the fall in level recorded against time. The results are presented in **Annex B**.

On completion all trial pits were backfilled with materials arisings compacted in layers using the excavator bucket. The ground surface was reinstated to accommodate future settlement of backfilled materials.

The trial pit locations are shown on **Drawing 01**.

3.0 Ground Conditions

The ground conditions encountered by the exploratory holes can in general be summarised as shown in **Table 3.1**.

Table 3.1 Summary of Typical Ground Conditions

Depth (m)			Thickness (m)	Stratum
0.00	-	0.50-0.70	0.50/0.70	Reddish brown slightly gravelly sandy silty CLAY.
0.50-0.70	-	1.80-2.30	1.30/1.80	Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY
1.80-2.30	-	>3.00	>0.70	Reddish brown mottled brown slightly sandy gravelly silty CLAY with low cobble and boulder content.

Possible bedrock was encountered within TP01B, TP03, TP04, TP05 and TP06.

4.0 Soakaway Test Results

During the site investigation 13 soakaway tests were undertaken in general accordance with BRE DG 365:2016, where applicable. **Table 4.1** summarises the results.

Table 4.1 Summary of Soakaway Results

Trial Pit	Depth Range of Test (m)	Infiltration Rate (ms ⁻¹)
TP01	1.50-2.00	Too little water take to calculate infiltration rate.
TP01A	0.20-0.70	8.16x10 ⁻⁰⁶

TP01B	2.20-2.70	Unable to calculate due to pit collapse, backfilled and dug TP06 nearby
TP02	1.40-1.90	Too little water take to calculate infiltration rate.
TP02A	0.20-0.70	1.50×10^{-05}
TP02B	2.50-3.00	3.73×10^{-04}
TP03	1.20-1.70	6.67×10^{-04}
TP03A	0.50-1.00	1.11×10^{-05}
TP04	1.30-1.80	2.40×10^{-04}
TP04A	0.30-0.80	1.21×10^{-05}
TP05	2.00-2.50	4.52×10^{-04}
TP05A	0.25-0.75	7.72×10^{-06}
TP06	1.90-2.40	6.32×10^{-05}

Soakaway calculation sheets are presented in **Annex B** for reference.

We trust that the above is to your satisfaction, however, if you have any queries or require any further information please do not hesitate to contact us.

Yours sincerely

for: TFW Group Ltd (Terra Firma)



Mr E. Sampson

enc.

Annex A – Trial Pit Logs

Annex B – Soakaway Results

Drawing 01 – Test Locations

ANNEX A
Trial Pit Logs

Trial Pit Log

Trial Pit No:
TP01
Sheet 1 of 1

Project Name: St Arvans

Project No:
14979

Co-ords: 351843.81 - 196228.61
Level: 104.34

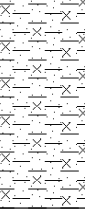
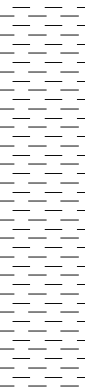
Date:
20/11/2023

Location: St Arvans

Dimensions: 2.30
Depth 2.00

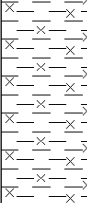
Scale:
1:25
Logged:
ES

Client: Monmouthshire Housing

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.70	103.64		Reddish brown slightly gravelly sandy silty CLAY. Gravel is angular and subangular fine to coarse of limestone	
							Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone	1
				2.00	102.34		End of Pit at 2.000m	2
								3
								4
								5

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated to perform infiltration test. 4] Trial pit backfilled with arisings on completion of test.

 Tel: 02920 735354 info@terrafirmawales.co.uk www.terrafirmawales.co.uk Geotechnical & Geoenvironmental Specialists				Trial Pit Log			Trial Pit No: TP01A Sheet 1 of 1		
Project Name: St Arvans				Project No: 14979		Co-ords: 351848.57 - 196237.89 Level: 104.63		Date: 20/11/2023	
Location: St Arvans				Dimensions: 1.70 0.60 0.70			Scale: 1:25		
Client: Monmouthshire Housing							Logged: ES		
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
				0.70	103.93		Reddish brown slightly gravelly slightly sandy silty CLAY. Gravel is angular and subangular fine to coarse of limestone		
							End of Pit at 0.700m		
							1		
							2		
							3		
							4		
							5		
Stability: Stable									
Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated to perform infiltration test. 4] Trial pit backfilled with arisings on completion of test.									

Trial Pit Log

Trial Pit No:
TP01B
Sheet 1 of 1

Project Name: St Arvans

Project No:
14979

Co-ords: 351846.44 - 196233.79
Level: 104.55

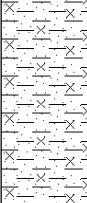
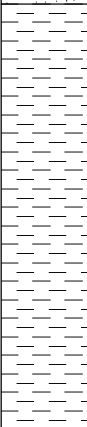
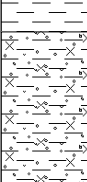
Date:
20/11/2023

Location: St Arvans

Dimensions: 2.30
Depth 2.70

Scale:
1:25
Logged:
ES

Client: Monmouthshire Housing

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.70	103.85		Reddish brown slightly gravelly sandy silty CLAY. Gravel is angular and subangular fine to coarse of limestone	
							Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone	1
				2.20	102.35		Reddish brown mottled brown slightly sandy gravelly silty CLAY with low cobble and boulder content. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone. Cobbles and boulders are angular and subangular of limestone.	2
				2.70	101.85		End of Pit at 2.700m	3
								4
								5

Stability: Unstable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated to perform infiltration test. 4] Trial pit backfilled with arisings on completion of test.

Trial Pit Log

Trial Pit No:
TP02
Sheet 1 of 1

Project Name: St Arvans

Project No:
14979

Co-ords: 351858.66 - 196273.47
Level: 105.30

Date:
20/11/2023

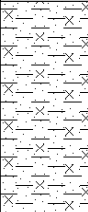
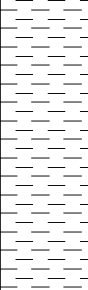
Location: St Arvans

Diagram of a rectangular box with dimensions: Depth 1.90, Width 1.90, and Height 0.60.

Scale:
1:25

Logged:
ES

Client: Monmouthshire Housing

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.70	104.60		Reddish brown slightly gravelly sandy silty CLAY. Gravel is angular and subangular fine to coarse of limestone	1
							Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone	
				1.90 2.00	103.40 103.30		Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone	
						End of Pit at 1.900m		2
							4	
							5	

Stability:	Stable
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Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated to perform infiltration test. 4] Trial pit backfilled with arisings on completion of test.



Geotechnical & Geoenvironmental Specialists

Sheet 1 of 1

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Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated to perform infiltration test. 4] Trial pit backfilled with arisings on completion of test.

Trial Pit Log

Trial Pit No:
TP02B
Sheet 1 of 1

Project Name: St Arvans

Project No:
14979

Co-ords: 351855.85 - 196271.88
Level: 105.56

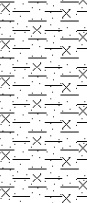
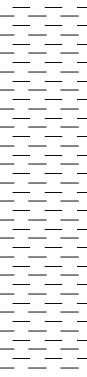
Date:
20/11/2023

Location: St Arvans

Dimensions: 2.50
Depth 3.00

Scale:
1:25
Logged:
ES

Client: Monmouthshire Housing

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.70	104.86		Reddish brown slightly gravelly sandy silty CLAY. Gravel is angular and subangular fine to coarse of limestone	
							Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone	1
				2.30	103.26		Reddish brown mottled brown slightly sandy gravelly silty CLAY with low cobble and boulder content. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone. Cobbles and boulders are angular and subangular of limestone.	2
				3.00	102.56		End of Pit at 3.000m	3
								4
								5

Stability: Unstable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated to perform infiltration test. 4] Trial pit backfilled with arisings on completion of test.

Trial Pit Log

Trial Pit No:
TP03
Sheet 1 of 1

Project Name: St Arvans

Project No:
14979

Co-ords: 351878.75 - 196271.02
Level: 105.30

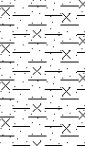
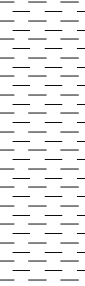
Date:
20/11/2023

Location: St Arvans

Dimensions: 2.00
Depth 1.70

Scale:
1:25
Logged:
ES

Client: Monmouthshire Housing

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.50	104.80		Reddish brown slightly gravelly sandy silty CLAY. Gravel is angular and subangular fine to coarse of limestone
				1.50	103.80		Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone
				1.70	103.60		Reddish brown mottled brown slightly sandy gravelly silty CLAY with low cobble and boulder content. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone. Cobbles and boulders are angular and subangular of limestone.
							End of Pit at 1.700m

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated upon pit obstruction. 4] Trial pit backfilled with arisings on completion of test.

Trial Pit Log

Trial Pit No:
TP03A
 Sheet 1 of 1

Project Name: St Arvans

Project No:
 14979

Co-ords: 351875.11 - 196269.24
 Level: 105.31

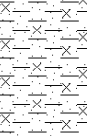
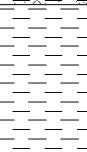
Date:
 20/11/2023

Location: St Arvans

Dimensions: 1.50
 Depth 1.00

Scale:
 1:25
 Logged:
 ES

Client: Monmouthshire Housing

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.50	104.81		Reddish brown slightly gravelly sandy silty CLAY. Gravel is angular and subangular fine to coarse of limestone	
				1.00	104.31		Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone	
							End of Pit at 1.000m	1
								2
								3
								4
								5

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated to perform infiltration test. 4] Trial pit backfilled with arisings on completion of test.

Trial Pit Log

Trial Pit No:
TP04
 Sheet 1 of 1

Project Name: St Arvans

Project No:
 14979

Co-ords: 351889.71 - 196295.53
 Level: 106.93

Date:
 20/11/2023

Location: St Arvans

Dimensions: 2.40

Depth

1.80

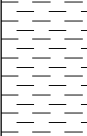
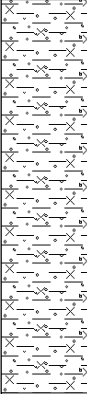
0.60

Scale:

1:25

Logged:
 ES

Client: Monmouthshire Housing

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.50	106.43		Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone	
				1.80	105.13		Reddish brown mottled brown slightly sandy gravelly silty CLAY with low cobble and boulder content. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone. Cobbles and boulders are angular and subangular of limestone.	1
							End of Pit at 1.800m	2
								3
								4
								5

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated upon pit obstruction. 4] Trial pit backfilled with arisings on completion of test.

Trial Pit Log

Trial Pit No:
TP04A
 Sheet 1 of 1

Project Name: St Arvans

Project No:
 14979

Co-ords: 351896.07 - 196302.27
 Level: 107.76

Date:
 20/11/2023

Location: St Arvans

Dimensions: 1.30

Depth

0.80

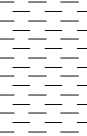
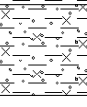
0.60

Scale:

1:25

Logged:
 ES

Client: Monmouthshire Housing

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.50	107.26		Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone
				0.80	106.96		Reddish brown mottled brown slightly sandy gravelly silty CLAY with low cobble and boulder content. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone. Cobbles and boulders are angular and subangular of limestone.
							End of Pit at 0.800m
							1
							2
							3
							4
							5

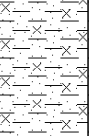
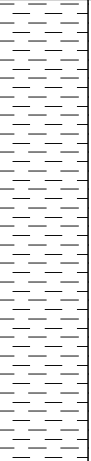
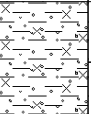
Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated to perform infiltration test. 4] Trial pit backfilled with arisings on completion of test.

Trial Pit Log

Trial Pit No:
TP05
 Sheet 1 of 1

Project Name: St Arvans	Project No: 14979	Co-ords: 351825.57 - 196275.24 Level: 106.03	Date: 20/11/2023
Location: St Arvans	Dimensions: 2.30 Depth 2.50		Scale: 1:25 Logged: ES
Client: Monmouthshire Housing			

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.50	105.53		Reddish brown slightly gravelly sandy silty CLAY. Gravel is angular and subangular fine to coarse of limestone
							Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone
				2.10	103.93		Reddish brown mottled brown slightly sandy gravelly silty CLAY with low cobble and boulder content. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone. Cobbles and boulders are angular and subangular of limestone.
				2.50	103.53		Possible broken limestone bedrock at base. End of Pit at 2.500m

Stability: Unstable
 Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated to perform infiltration test. 4] Trial pit backfilled with arisings on completion of test.

Trial Pit Log

Trial Pit No:
TP05A
 Sheet 1 of 1

Project Name: St Arvans

Project No:
 14979

Co-ords: 351833.79 - 196270.84
 Level: 105.90

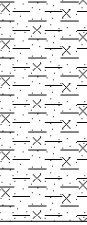
Date:
 20/11/2023

Location: St Arvans

Dimensions: 1.20
 Depth 0.60
 0.75

Scale:
 1:25
 Logged:
 ES

Client: Monmouthshire Housing

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.75	105.15		Reddish brown slightly gravelly sandy silty CLAY. Gravel is angular and subangular fine to coarse of limestone	
							End of Pit at 0.750m	1
								2
								3
								4
								5

Stability: Stable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated to perform infiltration test. 4] Trial pit backfilled with arisings on completion of test.

Trial Pit Log

Trial Pit No:
TP06
 Sheet 1 of 1

Project Name: St Arvans

Project No:
 14979

Co-ords: 351847.93 - 196244.81
 Level: 104.89

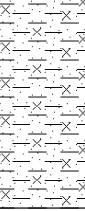
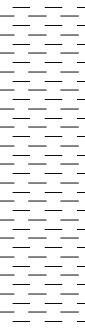
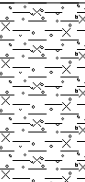
Date:
 20/11/2023

Location: St Arvans

Dimensions: 2.20
 Depth 2.40

Scale:
 1:25
 Logged:
 ES

Client: Monmouthshire Housing

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.70	104.19		Reddish brown slightly gravelly sandy silty CLAY. Gravel is angular and subangular fine to coarse of limestone	
							Reddish brown mottled brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone	1
				1.80	103.09		Reddish brown mottled brown slightly sandy gravelly silty CLAY with low cobble and boulder content. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of limestone. Cobbles and boulders are angular and subangular of limestone.	2
				2.40	102.49		End of Pit at 2.400m	3
								4
								5

Stability: Unstable

Remarks: 1] Consistency, strength and density indicators are based upon field judgement. 2] Density indicator is in brackets and is for guidance only, and is not in accordance with BS 5930:2015. 3] Trial pit terminated upon pit obstruction. 4] Trial pit backfilled with arisings on completion of test.

ANNEX B
Soakaway Results

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

Trial Pit: TP01

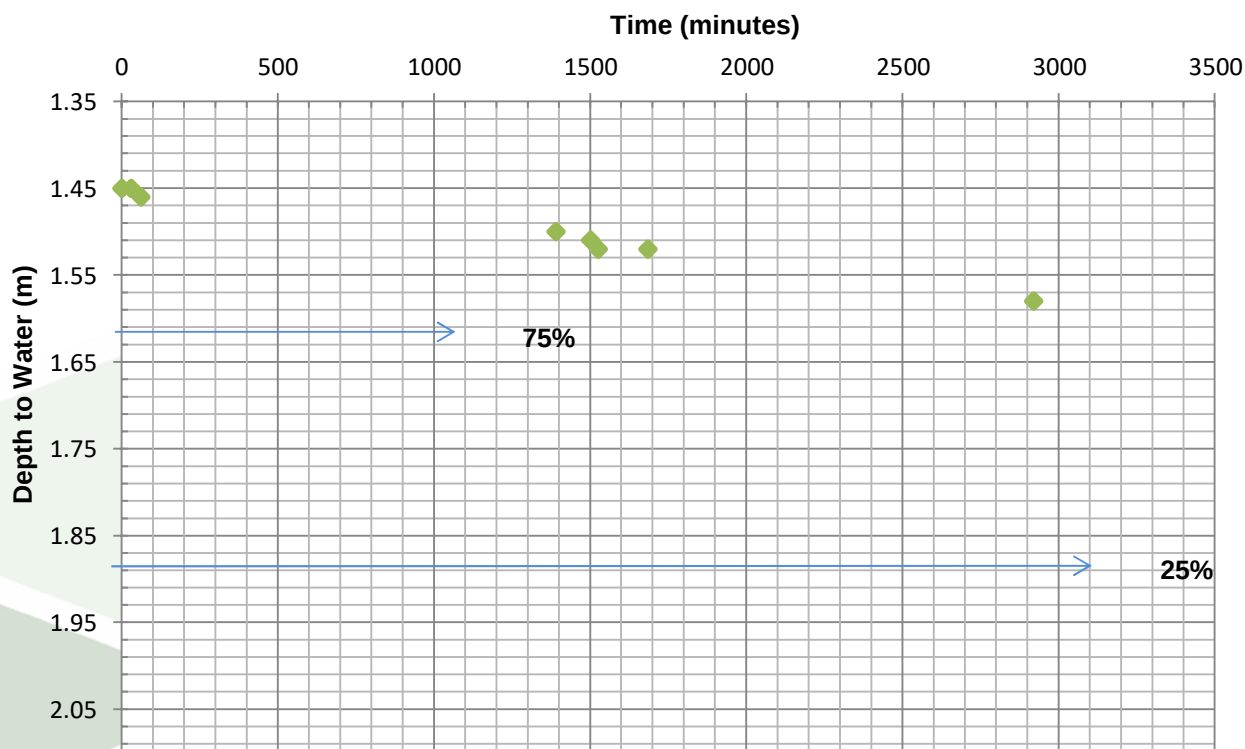
TEST 1

Length	2.30 m
Width	0.60 m
Depth	2.00 m
Fill Level	1.45

V_{p75-25}	0.078 m ³
a_{p50}	0.801 m ²
t_{p75-25}	0 minutes

Soil Infiltration Rate, f

Insufficient infiltration observed, test cancelled



REMARKS:

Insufficient infiltration observed, test cancelled. Test was carried out in general accordance with BRE365.(2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

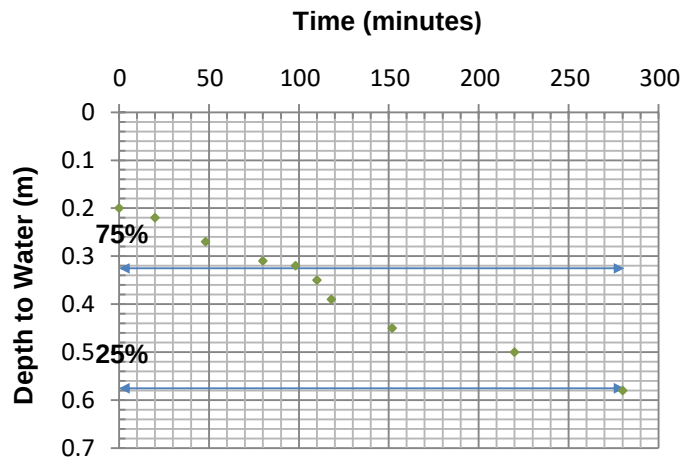
Trial Pit: TP01A

TEST 1

Length 1.70 m
Width 0.60 m
Depth 0.70 m
Fill Level 0.20 m

V_{p75-25} 0.255 m³
 a_{p50} 2.17 m²
 t_{p75-25} 172 minutes

Soil Infiltration Rate, f 1.14E-05 ms⁻¹

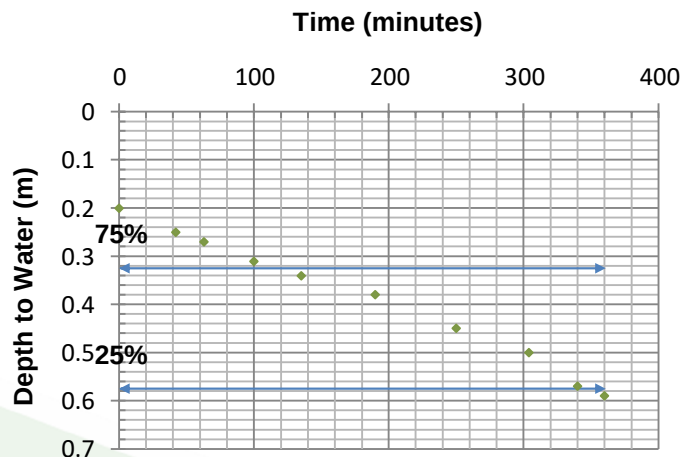


TEST 2

Length 1.70 m
Width 0.60 m
Depth 0.70 m
Fill Level 0.20 m

V_{p75-25} 0.255 m³
 a_{p50} 2.17 m²
 t_{p75-25} 230 minutes

Soil Infiltration Rate, f 8.52E-06 ms⁻¹

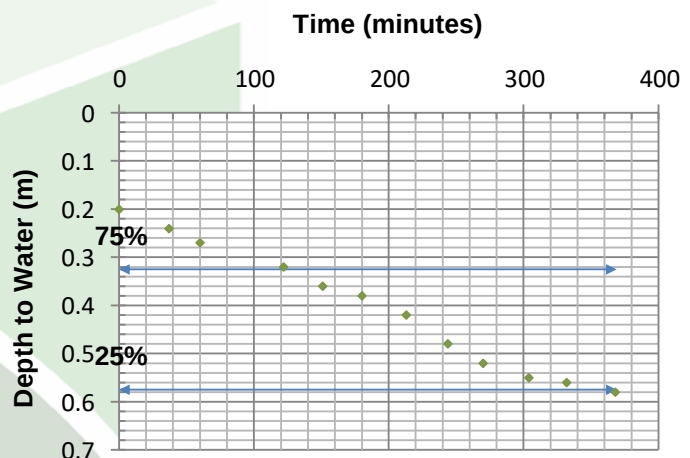


TEST 3

Length 1.70 m
Width 0.60 m
Depth 0.70 m
Fill Level 0.20 m

V_{p75-25} 0.255 m³
 a_{p50} 2.17 m²
 t_{p75-25} 240 minutes

Soil Infiltration Rate, f 8.16E-06 ms⁻¹



REMARKS:

Test carried out in general accordance with BRE Digest 365 (2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

Trial Pit: **TP01B**

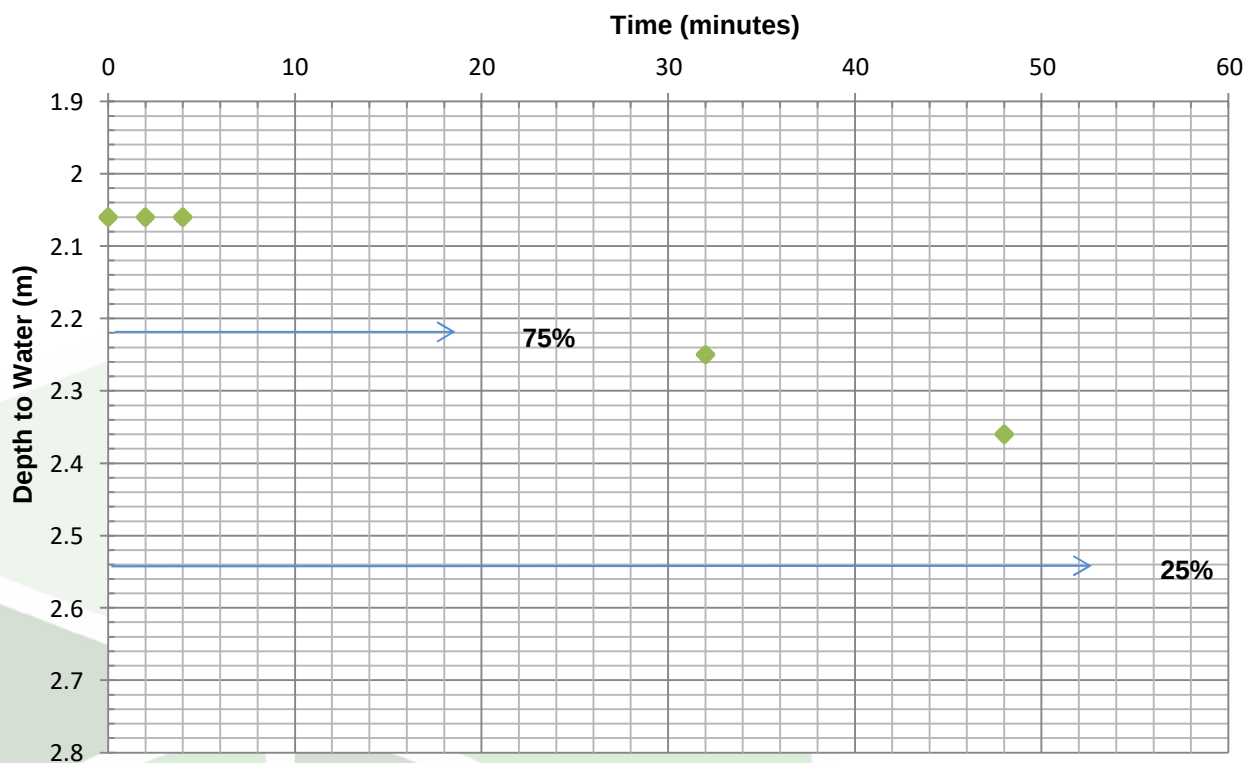
TEST 1

Length	2.30 m
Width	0.60 m
Depth	2.70 m
Fill Level	2.06

V_{p75-25}	0.090 m ³
a_{p50}	0.885 m ²
t_{p75-25}	0 minutes

Soil Infiltration Rate, f

Pit collapse. Backfilled and redug TP06 in vicinity.



REMARKS:

Pit collapse, test cancelled. Test was carried out in general accordance with BRE365.(2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

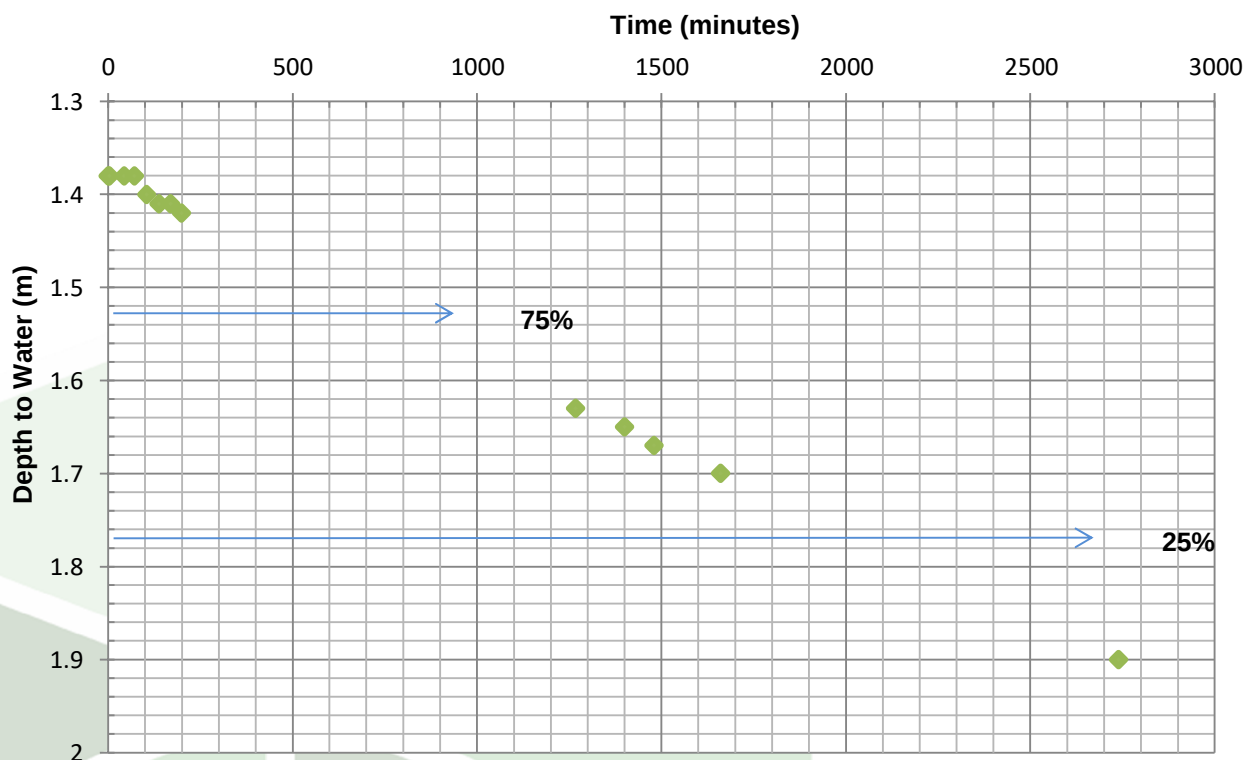
Trial Pit: TP02

TEST 1

Length	1.90 m
Width	0.60 m
Depth	1.90 m
Fill Level	1.40

V_{p75-25}	0.071 m ³
a_{p50}	0.754 m ²
t_{p75-25}	0 minutes

Soil Infiltration Rate, f Insufficient flow to calculate infiltration rate - Unable to achieve 50% outflow within 24 hours.



REMARKS:

Insufficient infiltration observed, test cancelled. Test was carried out in general accordance with BRE365.(2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

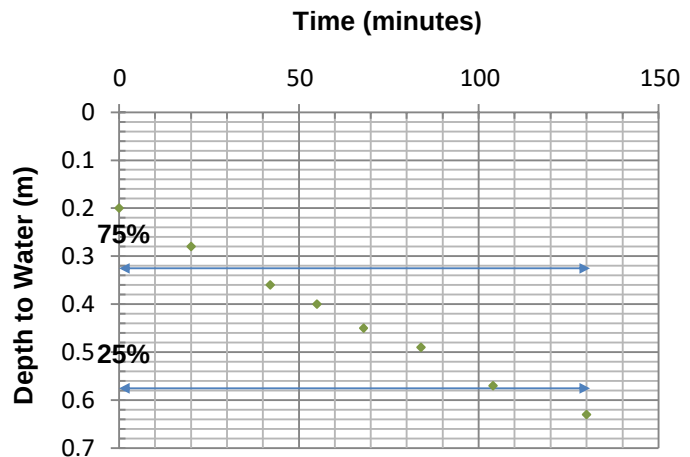
Trial Pit: TP02A

TEST 1

Length 1.50 m
Width 0.60 m
Depth 0.70 m
Fill Level 0.20 m

V_{p75-25} 0.225 m³
 a_{p50} 1.95 m²
 t_{p75-25} 74 minutes

Soil Infiltration Rate, f 2.60E-05 ms⁻¹

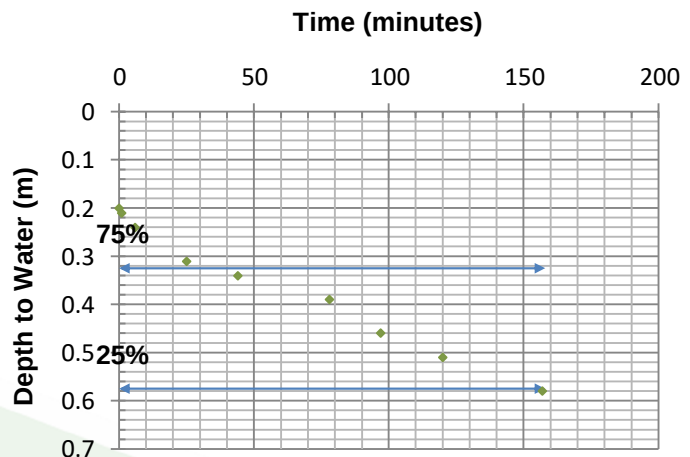


TEST 2

Length 1.50 m
Width 0.60 m
Depth 0.70 m
Fill Level 0.20 m

V_{p75-25} 0.225 m³
 a_{p50} 1.95 m²
 t_{p75-25} 120 minutes

Soil Infiltration Rate, f 1.60E-05 ms⁻¹

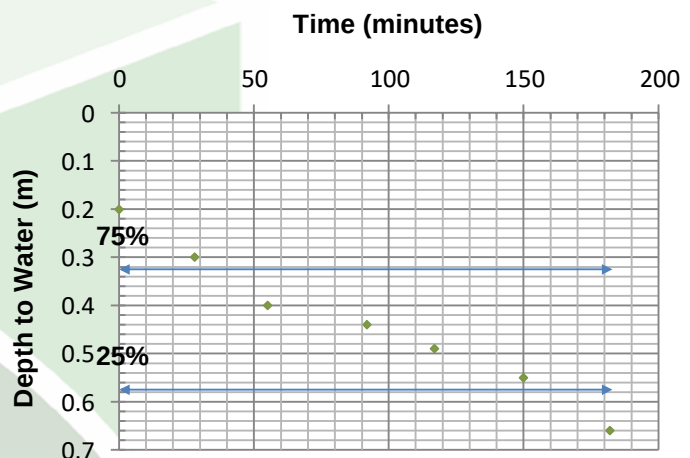


TEST 3

Length 1.50 m
Width 0.60 m
Depth 0.70 m
Fill Level 0.20 m

V_{p75-25} 0.225 m³
 a_{p50} 1.95 m²
 t_{p75-25} 128 minutes

Soil Infiltration Rate, f 1.50E-05 ms⁻¹



REMARKS:

Test carried out in accordance with BRE Digest 365 (2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

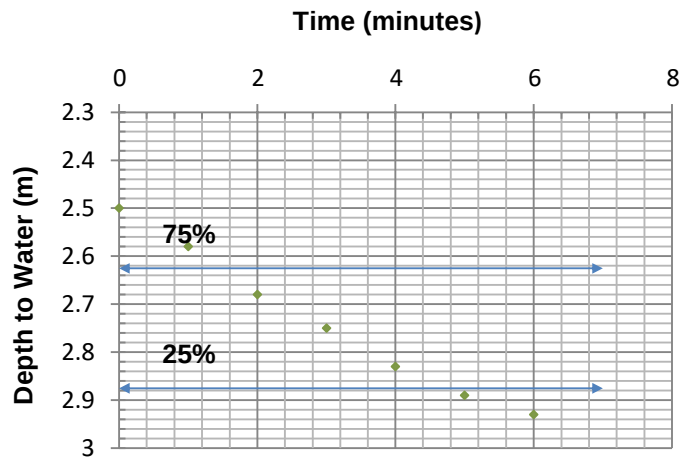
Trial Pit: TP02B

TEST 1

Length 2.50 m
Width 0.60 m
Depth 3.00 m
Fill Level 2.50 m

V_{p75-25} 0.375 m³
 a_{p50} 3.05 m²
 t_{p75-25} 3 minutes

Soil Infiltration Rate, f 6.83E-04 ms⁻¹

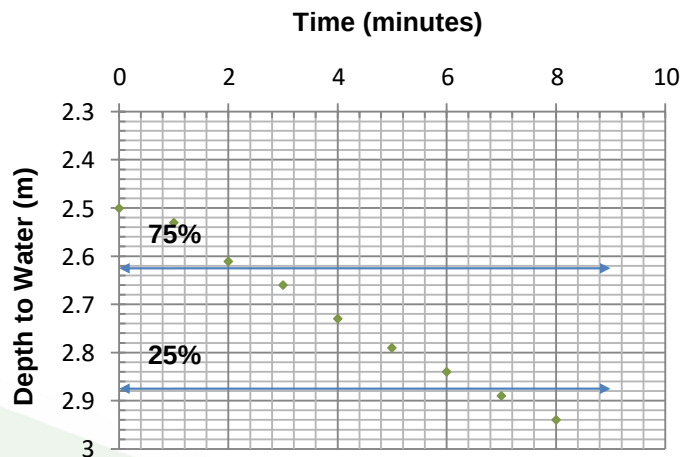


TEST 2

Length 2.50 m
Width 0.60 m
Depth 3.00 m
Fill Level 2.50 m

V_{p75-25} 0.375 m³
 a_{p50} 3.05 m²
 t_{p75-25} 4 minutes

Soil Infiltration Rate, f 5.12E-04 ms⁻¹

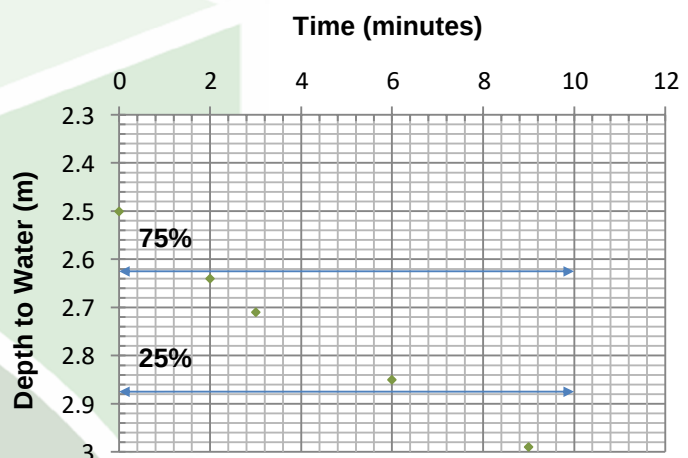


TEST 3

Length 2.50 m
Width 0.60 m
Depth 3.00 m
Fill Level 2.50 m

V_{p75-25} 0.375 m³
 a_{p50} 3.05 m²
 t_{p75-25} 5.5 minutes

Soil Infiltration Rate, f 3.73E-04 ms⁻¹



REMARKS:

Test carried out in accordance with BRE Digest 365 (2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

Trial Pit: TP03

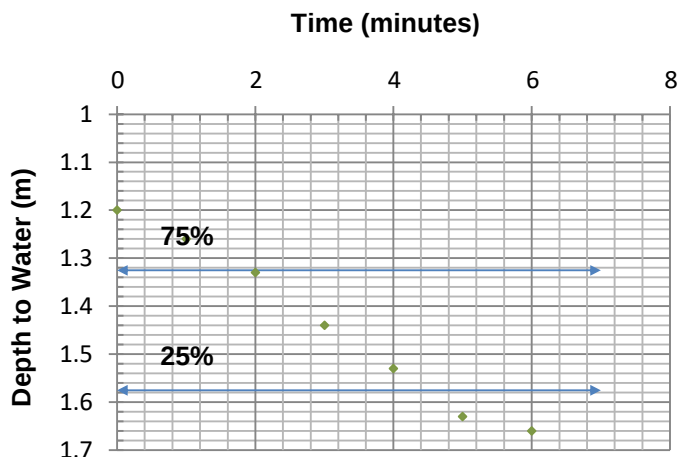
TEST 1

Length
Width
Depth
Fill Level

2.00 m
0.60 m
1.70 m
1.20 m

V_{p75-25} 0.3 m³
 a_{p50} 2.5 m²
 t_{p75-25} 3 minutes

Soil Infiltration Rate, f 6.67E-04 ms⁻¹



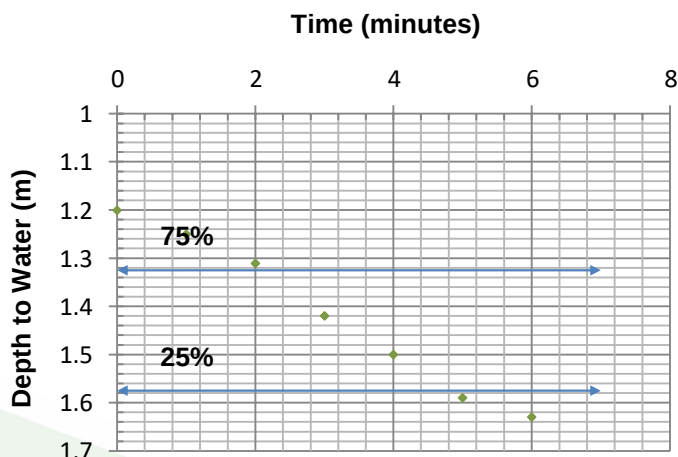
TEST 2

Length
Width
Depth
Fill Level

2.00 m
0.60 m
1.70 m
1.20 m

V_{p75-25} 0.3 m³
 a_{p50} 2.5 m²
 t_{p75-25} 2.5 minutes

Soil Infiltration Rate, f 8.00E-04 ms⁻¹



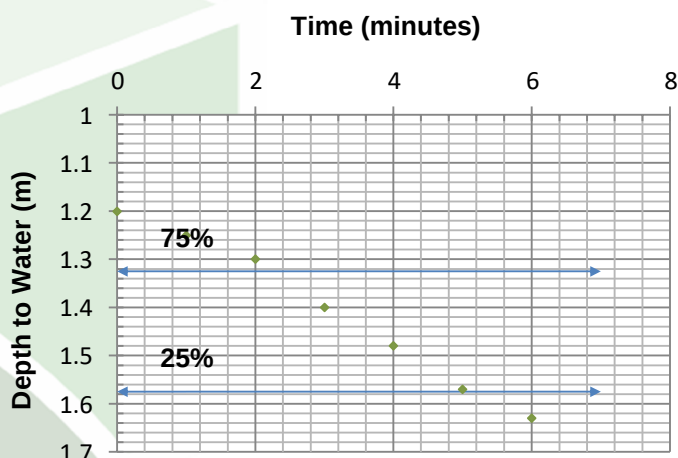
TEST 3

Length
Width
Depth
Fill Level

2.00 m
0.60 m
1.70 m
1.20 m

V_{p75-25} 0.3 m³
 a_{p50} 2.5 m²
 t_{p75-25} 2.5 minutes

Soil Infiltration Rate, f 8.00E-04 ms⁻¹



REMARKS:

Test carried out in accordance with BRE Digest 365 (2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

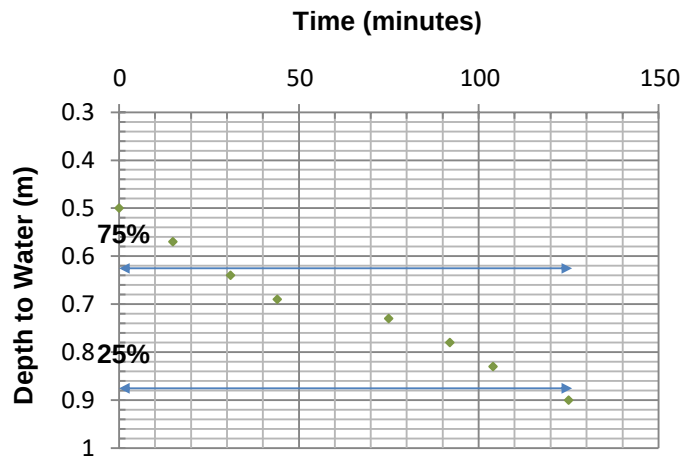
Trial Pit: TP03A

TEST 1

Length 1.50 m
Width 0.60 m
Depth 1.00 m
Fill Level 0.50 m

V_{p75-25} 0.225 m³
 a_{p50} 1.95 m²
 t_{p75-25} 85 minutes

Soil Infiltration Rate, f 2.26E-05 ms⁻¹

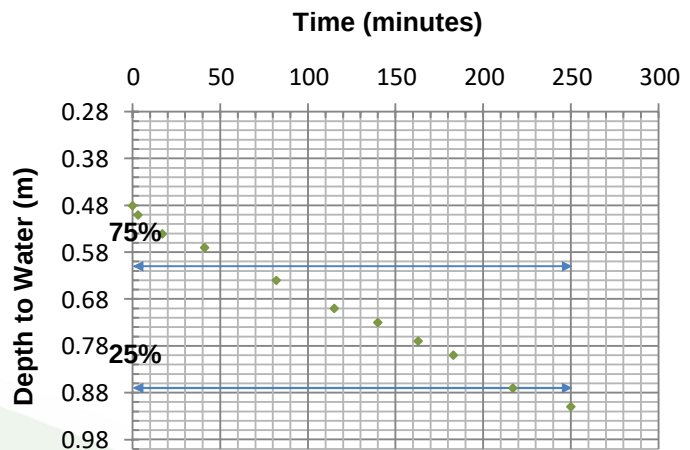


TEST 2

Length 1.50 m
Width 0.60 m
Depth 1.00 m
Fill Level 0.48 m

V_{p75-25} 0.234 m³
 a_{p50} 1.992 m²
 t_{p75-25} 157 minutes

Soil Infiltration Rate, f 1.25E-05 ms⁻¹

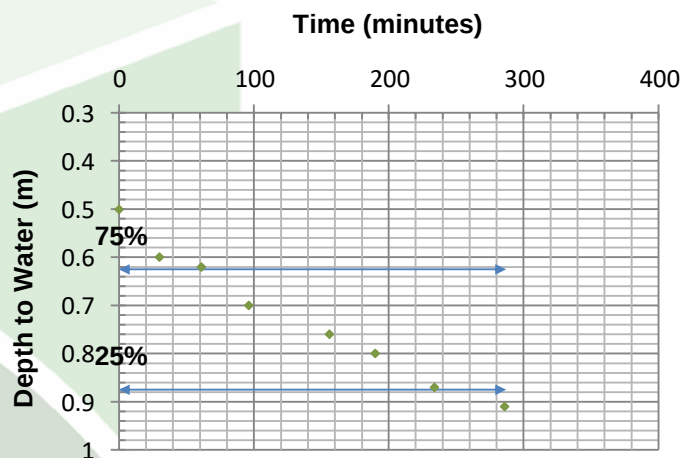


TEST 3

Length 1.50 m
Width 0.60 m
Depth 1.00 m
Fill Level 0.50 m

V_{p75-25} 0.225 m³
 a_{p50} 1.95 m²
 t_{p75-25} 174 minutes

Soil Infiltration Rate, f 1.11E-05 ms⁻¹



REMARKS:

Test carried out in accordance with BRE Digest 365 (2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

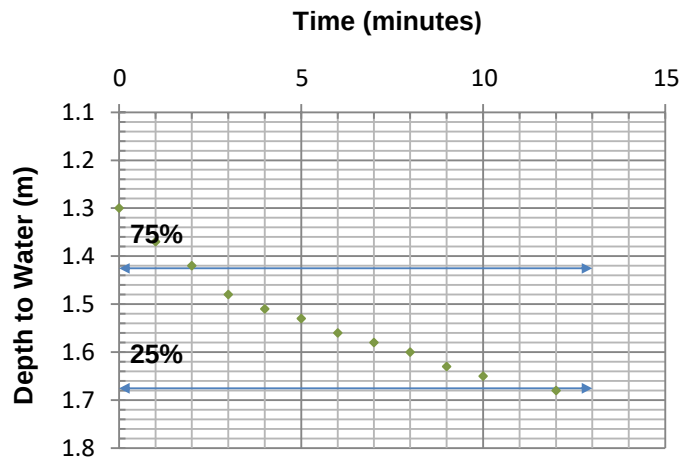
Trial Pit: TP04

TEST 1

Length 2.40 m
Width 0.60 m
Depth 1.80 m
Fill Level 1.30 m

V_{p75-25} 0.36 m³
 a_{p50} 2.94 m²
 t_{p75-25} 8.5 minutes

Soil Infiltration Rate, f 2.40E-04 ms⁻¹

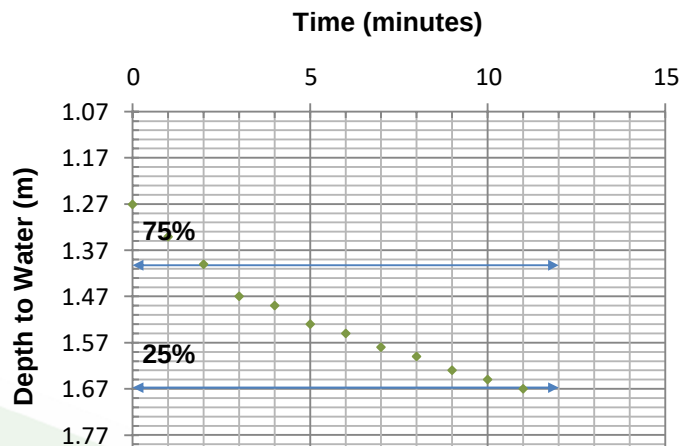


TEST 2

Length 2.40 m
Width 0.60 m
Depth 1.80 m
Fill Level 1.27 m

V_{p75-25} 0.382 m³
 a_{p50} 3.03 m²
 t_{p75-25} 8.5 minutes

Soil Infiltration Rate, f 2.47E-04 ms⁻¹

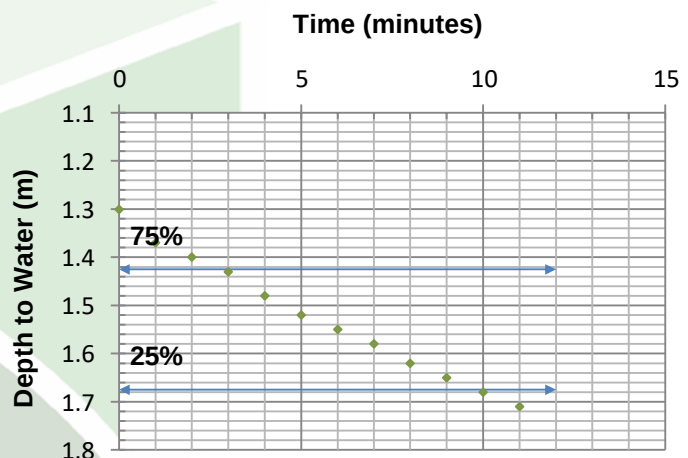


TEST 3

Length 2.40 m
Width 0.60 m
Depth 1.80 m
Fill Level 1.30 m

V_{p75-25} 0.36 m³
 a_{p50} 2.94 m²
 t_{p75-25} 7 minutes

Soil Infiltration Rate, f 2.92E-04 ms⁻¹



REMARKS:

Test carried out in accordance with BRE Digest 365 (2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

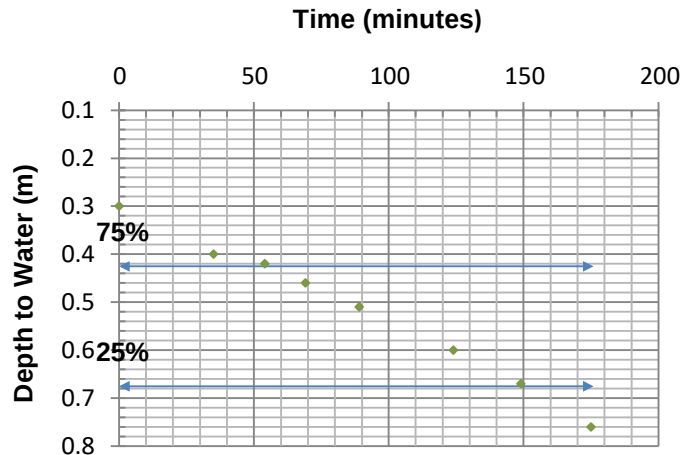
Trial Pit: TP04A

TEST 1

Length 1.30 m
Width 0.60 m
Depth 0.80 m
Fill Level 0.30 m

V_{p75-25} 0.195 m³
 a_{p50} 1.73 m²
 t_{p75-25} 95 minutes

Soil Infiltration Rate, f 1.98E-05 ms⁻¹

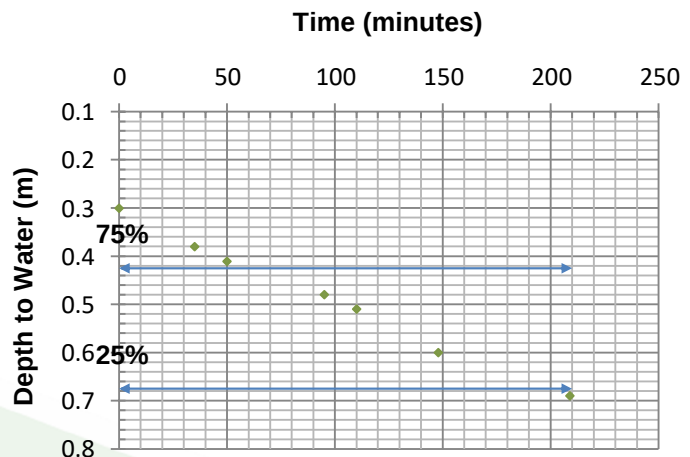


TEST 2

Length 1.30 m
Width 0.60 m
Depth 0.80 m
Fill Level 0.30 m

V_{p75-25} 0.195 m³
 a_{p50} 1.73 m²
 t_{p75-25} 130 minutes

Soil Infiltration Rate, f 1.45E-05 ms⁻¹

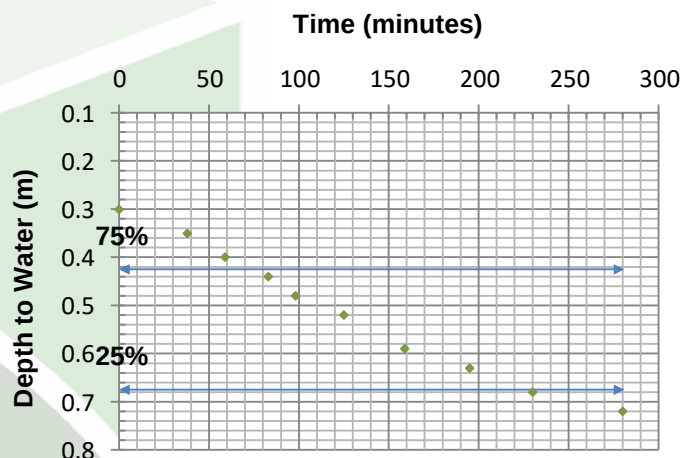


TEST 3

Length 1.30 m
Width 0.60 m
Depth 0.80 m
Fill Level 0.30 m

V_{p75-25} 0.195 m³
 a_{p50} 1.73 m²
 t_{p75-25} 155 minutes

Soil Infiltration Rate, f 1.21E-05 ms⁻¹



REMARKS:

Test carried out in accordance with BRE Digest 365 (2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

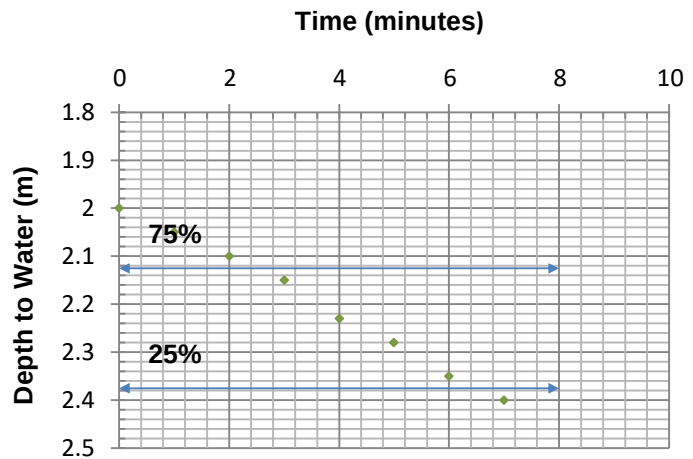
Trial Pit: TP05

TEST 1

Length 2.30 m
Width 0.60 m
Depth 2.50 m
Fill Level 2.00 m

V_{p75-25} 0.345 m³
 a_{p50} 2.83 m²
 t_{p75-25} 4 minutes

Soil Infiltration Rate, f 5.08E-04 ms⁻¹

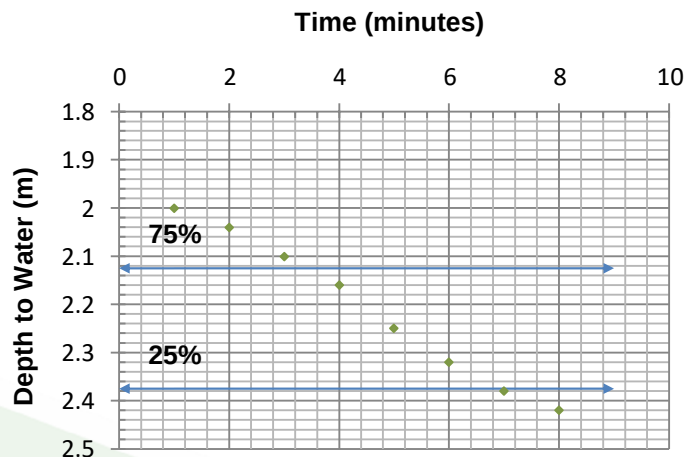


TEST 2

Length 2.30 m
Width 0.60 m
Depth 2.50 m
Fill Level 2.00 m

V_{p75-25} 0.345 m³
 a_{p50} 2.83 m²
 t_{p75-25} 3 minutes

Soil Infiltration Rate, f 6.77E-04 ms⁻¹

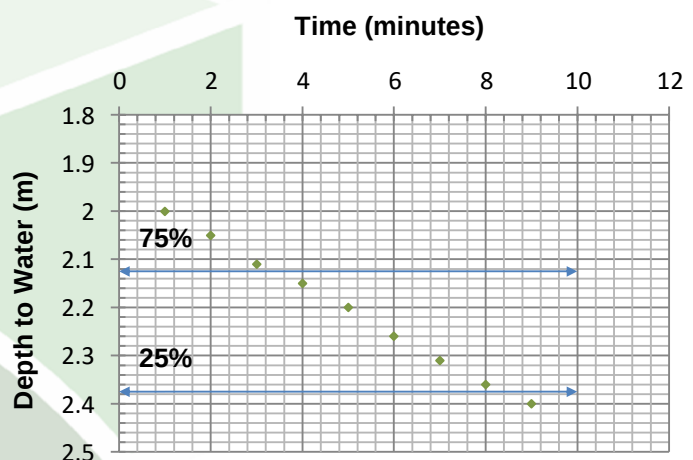


TEST 3

Length 2.30 m
Width 0.60 m
Depth 2.50 m
Fill Level 2.00 m

V_{p75-25} 0.345 m³
 a_{p50} 2.83 m²
 t_{p75-25} 4.5 minutes

Soil Infiltration Rate, f 4.52E-04 ms⁻¹



REMARKS:

Test carried out in accordance with BRE Digest 365 (2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

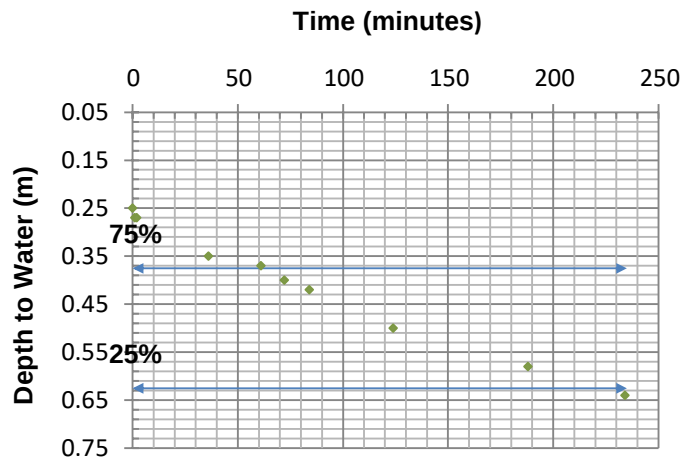
Trial Pit: TP05A

TEST 1

Length 1.20 m
Width 0.60 m
Depth 0.75 m
Fill Level 0.25 m

V_{p75-25} 0.18 m³
 a_{p50} 1.62 m²
 t_{p75-25} 149 minutes

Soil Infiltration Rate, f 1.24E-05 ms⁻¹

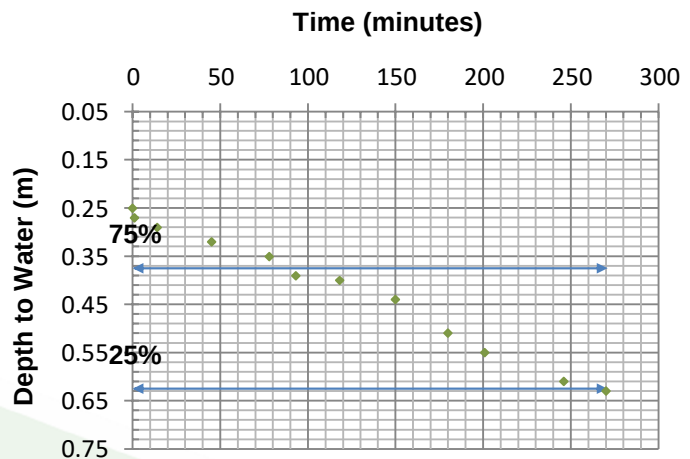


TEST 2

Length 1.20 m
Width 0.60 m
Depth 0.75 m
Fill Level 0.25 m

V_{p75-25} 0.18 m³
 a_{p50} 1.62 m²
 t_{p75-25} 173 minutes

Soil Infiltration Rate, f 1.07E-05 ms⁻¹

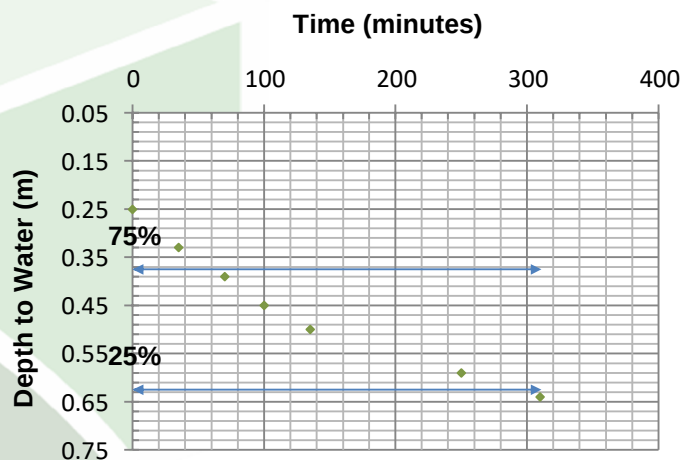


TEST 3

Length 1.20 m
Width 0.60 m
Depth 0.75 m
Fill Level 0.25 m

V_{p75-25} 0.18 m³
 a_{p50} 1.62 m²
 t_{p75-25} 240 minutes

Soil Infiltration Rate, f 7.72E-06 ms⁻¹



REMARKS:

Test carried out in accordance with BRE Digest 365 (2016)

SOAKAWAY TEST



Site Name: St Arvans
Project Number: 14979
Date: 20/11/2023-22/11/2023
Engineer: Elliot

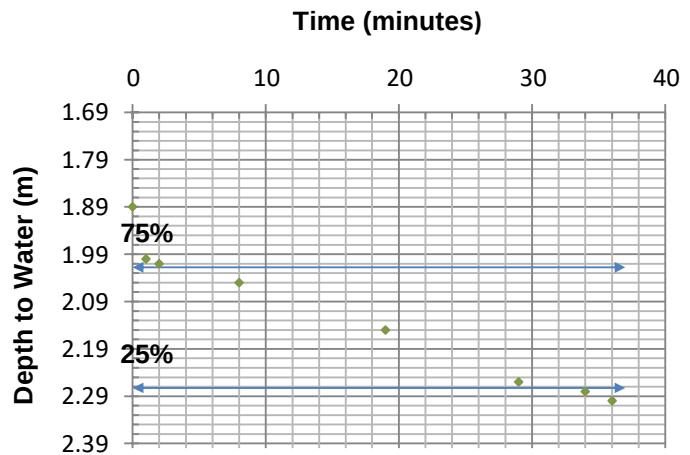
Trial Pit: TP06

TEST 1

Length 2.20 m
Width 0.60 m
Depth 2.40 m
Fill Level 1.89 m

V_{p75-25} 0.337 m³
 a_{p50} 2.748 m²
 t_{p75-25} 30 minutes

Soil Infiltration Rate, f 6.80E-05 ms⁻¹

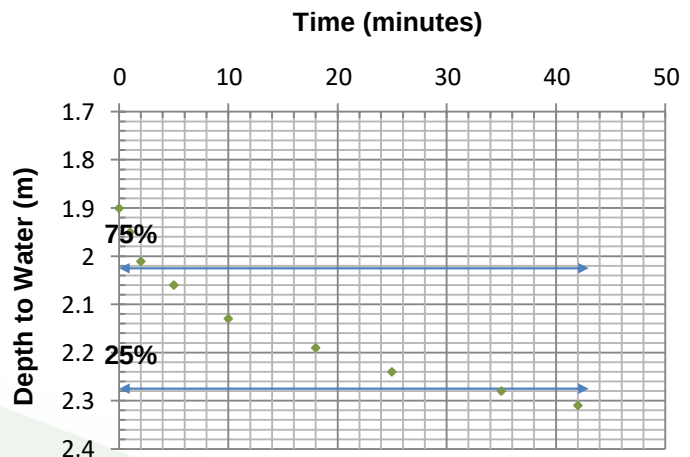


TEST 2

Length 2.20 m
Width 0.60 m
Depth 2.40 m
Fill Level 1.90 m

V_{p75-25} 0.33 m³
 a_{p50} 2.72 m²
 t_{p75-25} 32 minutes

Soil Infiltration Rate, f 6.32E-05 ms⁻¹

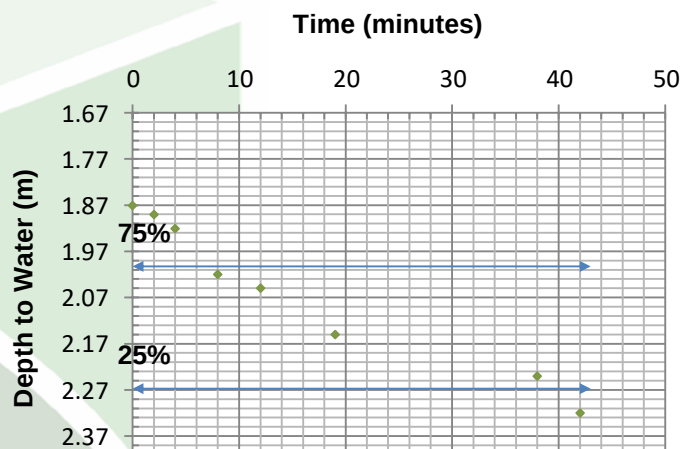


TEST 3

Length 2.20 m
Width 0.60 m
Depth 2.40 m
Fill Level 1.87 m

V_{p75-25} 0.35 m³
 a_{p50} 2.804 m²
 t_{p75-25} 32 minutes

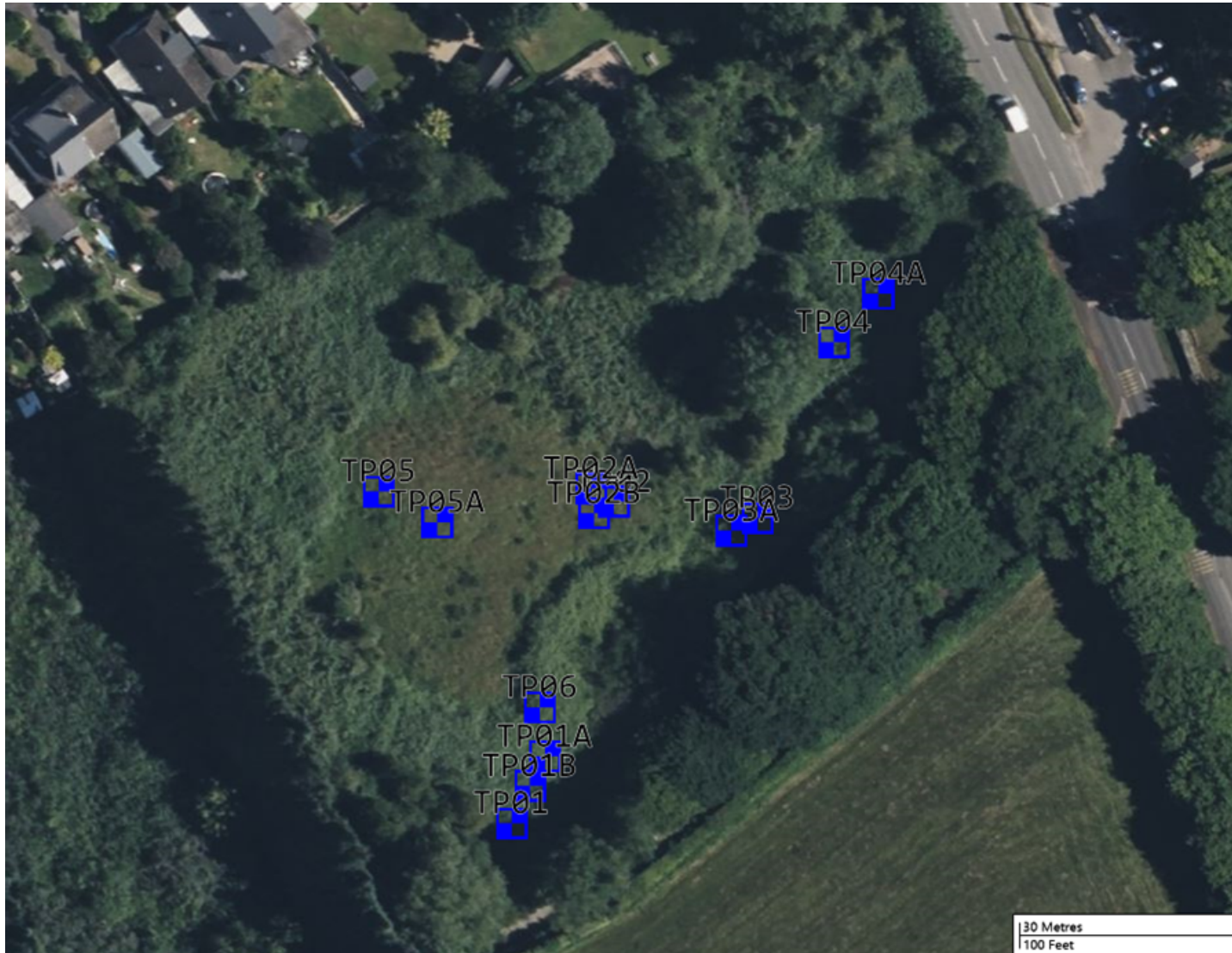
Soil Infiltration Rate, f 6.50E-05 ms⁻¹



REMARKS:

Test carried out in accordance with BRE Digest 365 (2016)

DRAWINGS



Job Number: 14979

Job Title:
St Arvans

Drawing Title:
Site Layout with
Proposed Exploratory Hole Locations

Drawing Number:
01

Scale:
Not To Scale

Legend:

