

PREPARED BY:	Quantum Geotechnic Ltd	DOCUMENT:	Technical Note 01
CLIENT:	Carmarthenshire County Council	DATE:	27 th June 2024
PROJECT TITLE:	Land Adjacent to Ffordd Pendre Soakaway Testing	OUR REF:	Q1565-TN01

1.0 Introduction & Background

Quantum Geotechnic Ltd (QG) have been instructed by Carmarthenshire County Council (hereafter referred to as the Client) to undertake soakaway testing on land adjacent to Ffordd Pendre, Carmarthen.

The location of the site is shown in Figure 1 below;

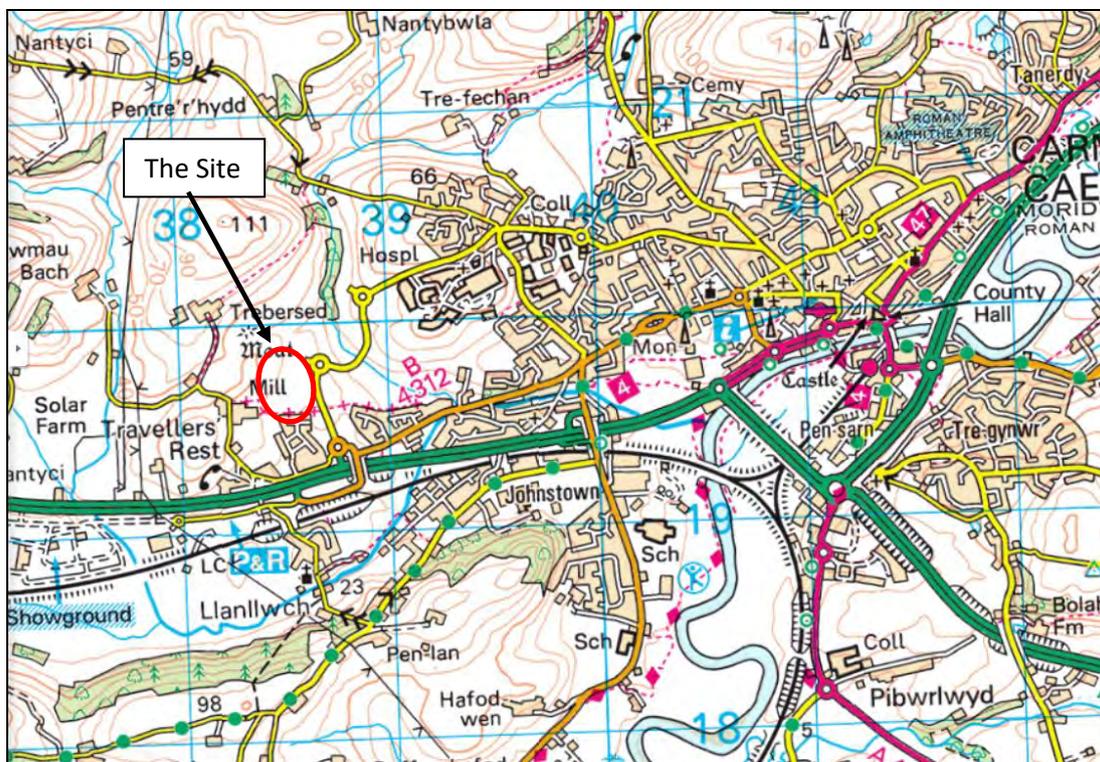


Figure 1: Site Study Area © Bing.

Trial Pits / Soakaway Test Pits were excavated using a 9 tonne rubber tracked 360° excavator. The test pits were located to provide general site coverage and were excavated to depths of 1.5 and 2.5mbgl. The exploratory hole positions are shown on the exploratory hole location plan in Appendix I.

Hole locations are presented in Table 1.

Table 1: Exploratory Holes Locations

Exploratory Hole ID:	Easting	Northing	Elevation (mAOD)
SA01	238613.716	219728.305	32.54
SA02	238624.109	219727.061	32.148
SA03	238620.808	219634.511	32.194

SA04	238632.326	219633.401	32.114
SA05	238569.389	219629.837	31.615
SA06	238557.973	219629.842	32.074
SA07	238579.389	219730.278	33.992
SA08	238569.228	219730.634	34.093
SA09	238566.639	219820.595	34.681
SA10	238587.008	219820.838	34.305
SA11	238607.052	219819.634	34.12
SA12	238623.695	219780.002	32.121

This method of investigation allows direct sampling of the near surface deposits for identification purposes, as well as assessment of any salient features and Made Ground or disturbed ground. The trial pits were logged in accordance with BS5930:2015; BS EN ISO 14688-1:2017 and BS EN ISO 14688-2:2017, and supervised at all times by an Engineering Geologist from QGL.

All Trial Pits / Soakaway Test Pits were backfilled with compacted layers of arisings upon completion. Surface reinstatement was levelled, and existing turf replaced where necessary.

The Trial Pit / Soakaway Test Pit logs are provided in Appendix II.

Soakaway Tests were undertaken within each Trial Pit / Soakaway Test Pit in accordance BRE 365. The test involves filling the Trial Pit / Soakaway Test Pit with water and measuring the water level over a period of time to allow the calculation of soil infiltration rates.

2.0 Soakaway Test Results

Table 2 summarises the soakaway test result findings.

Table 2: Soakaway Test Results Summary

Exploratory Pit ID	Test Zone (mbgl)	Test No.	Soil Infiltration Rate (m/sec)
SA01	2.20 – 2.50	1	3.8194×10^{-4}
	2.12 – 2.50	2	3.5067×10^{-4}
	2.08 – 2.50	3	3.7019×10^{-4}
	Design Soil Infiltration Rate		3.5067×10^{-4}
SA02	0.62 – 1.50	1	5.2207×10^{-6}
	0.74 – 1.50	2	5.4485×10^{-6}
	0.80 – 1.50	3	6.8664×10^{-6}
	Design Soil Infiltration Rate		5.2207×10^{-6}
SA03	1.97 – 2.50	1	5.8010×10^{-4}
	1.90 – 2.50	2	4.9438×10^{-4}
	1.82 – 2.50	3	4.3743×10^{-4}
	Design Soil Infiltration Rate		4.3743×10^{-4}
SA04	Unable to raise head of water due to high permeability of strata		
SA05	1.95 – 2.50	1	4.8841×10^{-4}
	1.95 – 2.50	2	3.8445×10^{-4}
	1.94 – 2.50	3	4.1344×10^{-4}

	Design Soil Infiltration Rate		3.8445 x 10⁻⁴
SA06	1.26 – 1.50	1	1.4226 x 10 ⁻³
	1.17 – 1.50	2	1.7029 x 10 ⁻³
	1.08 – 1.50	3	3.6109 x 10 ⁻⁴
	Design Soil Infiltration Rate		3.6109 x 10⁻⁴
SA07	1.80 – 2.50	1	1.4121 x 10 ⁻⁴
	1.74 – 2.50	2	1.5358 x 10 ⁻⁴
	1.68 – 2.50	3	1.6630 x 10 ⁻⁴
	Design Soil Infiltration Rate		1.4121 x 10⁻⁴
SA08	0.80 – 1.50	1	1.9609 x 10 ⁻⁴
	0.70 – 1.50	2	4.4857 x 10 ⁻⁵
	0.58 – 1.50	3	3.1833 x 10 ⁻⁵
	Design Soil Infiltration Rate		3.1833 x 10⁻⁵
SA09	1.95 – 2.50	1	3.3961 x 10 ⁻⁴
	1.90 – 2.50	2	2.1343 x 10 ⁻⁴
	1.90 – 2.50	3	1.5229 x 10 ⁻⁴
	Design Soil Infiltration Rate		1.5229 x 10⁻⁴
SA10	0.72 – 1.50	1	4.9368 x 10 ⁻⁵
	0.58 – 1.50	2	4.3141 x 10 ⁻⁵
	0.67 – 1.50	3	3.4274 x 10 ⁻⁵
	Design Soil Infiltration Rate		3.4274 x 10⁻⁵
SA11	1.82 – 2.50	1	2.2213 x 10 ⁻⁴
	1.69 – 2.50	2	8.9114 x 10 ⁻⁵
	1.68 – 2.50	3	3.9715 x 10 ⁻⁵
	Design Soil Infiltration Rate		3.9715 x 10⁻⁵
SA12	0.68 – 1.50	1	1.8845 x 10 ⁻⁵
	0.56 – 1.50	2	1.3270 x 10 ⁻⁵
	0.53 – 1.50	3	1.8444 x 10 ⁻⁵
	Design Soil Infiltration Rate		1.3270 x 10⁻⁵

The Soakaway test results are provided in Appendix III.

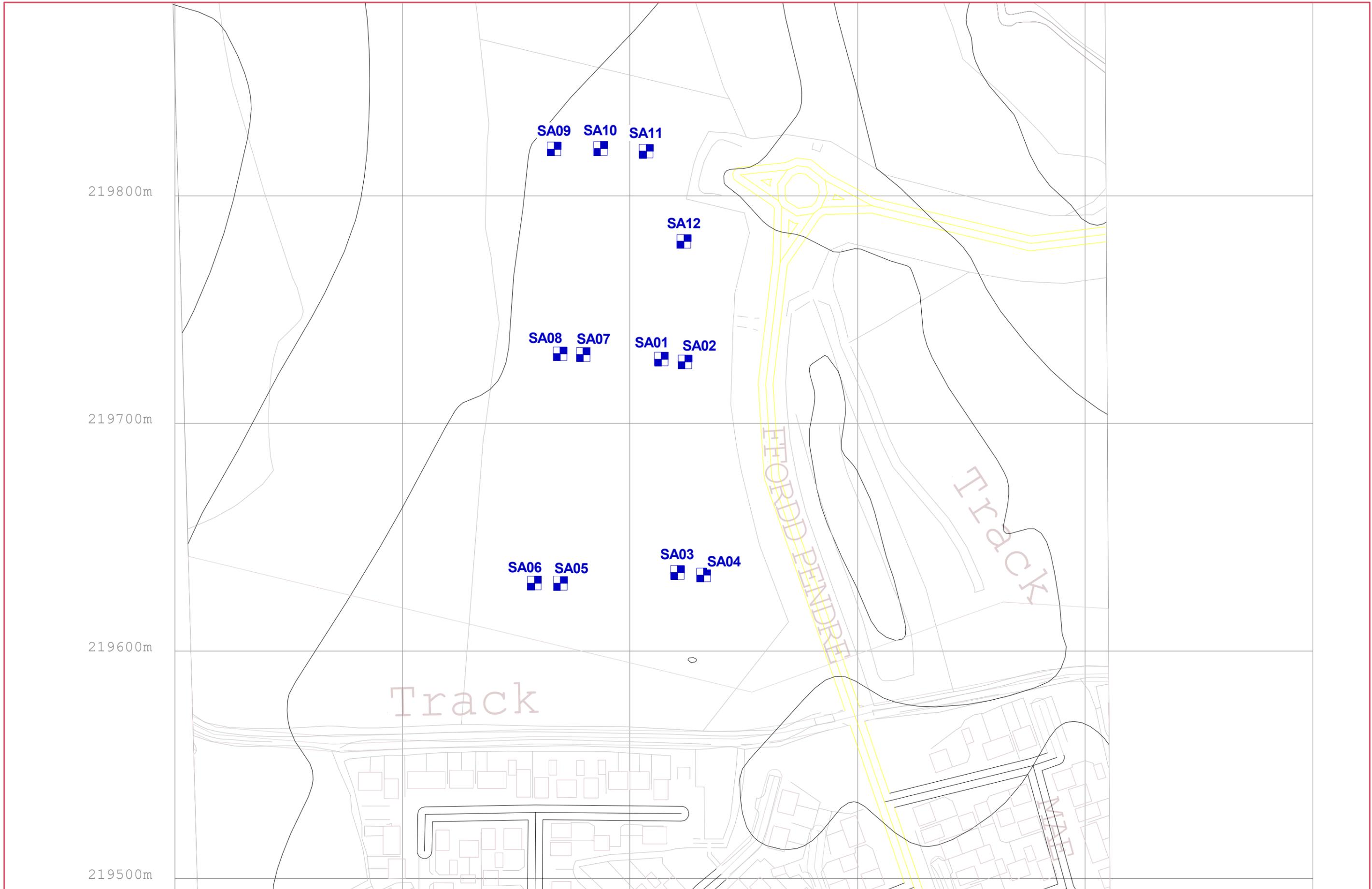
We trust that the above is of assistance; however, if you need any further clarification or have any queries please do not hesitate to contact us.

Yours faithfully,
For and on behalf of
QUANTUM GEOTECHNIC LTD



Phil Darby
Principal Engineering Geologist
B.Sc. (Hons), M.Sc., F.G.S., CGeol

APPENDIX I: SITE PLAN



KEY							
	Borehole		Trial Pit		Dynamic Probe		In-situ Test
	Window Sample		Sampling Point		Historical Borehole		

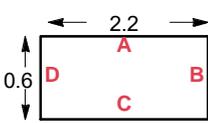
PROJECT
FFORDD PENDRE,
CARMARTHEN

DRAWING TITLE:
EXPLORATORY HOLE
LOCATION PLAN

JOB NO.
Q1565
DATE
27/06/24

FIGURE NO.
1
SCALE
1:1500

APPENDIX II: TRIAL PIT / SOAKAWAY TEST PIT LOGS

Contract : Ffordd Pendre, Carmarthen						Trial Pit No.			
Client : Carmarthenshire County Council						SA01			
Dates : 24/6/24 - 24/6/24			Job Number : Q1565			Ground Level : 32.54 m A.O.D. <i>Level to Ordnance Datum</i>			
Location :			Engineer :			Coordinates: 238613.72 E 219728.31 N <i>Co-ordinates to National Grid</i>			
m B.G.L.	Samples		Tests		Strata			WATER	
	Depth	Type No.	Depth	Test Results	Depth (Thickness)	Description	Legend		Red. Level A.O.D.
1					0.15	TOPSOIL: Dark brown slightly gravelly organic SILT with rootlets within top 10cm. Gravel is fine subrounded to subangular siltstone.			
					0.15	Soft orangey brown clayey gravelly SILT. Gravel is fine to medium sub-rounded to sub-angular siltstone.		32.39	
					0.65				
					0.80	Pale grey brown very sandy fine to coarse sub-rounded to subangular siltstone/sandstone GRAVEL with a medium cobble content. Sand is fine to coarse. Cobble is sub-angular to angular siltstone/sandstone.		31.74	
					1.70				
					2.50	End of Pit 2.5m to undertake soakaway test		30.04	
PLAN			Groundwater:			Remarks: No Groundwater Encountered			
			Stability: Stable						
			Shoring: N/A						
Equipment Used: 9 tonne excavator									
			Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk			Operator: SQL	Logged By: L drapper	Sheet No. 1 Of 1	m Per Page 3
						All measurements in metres unless otherwise stated			

Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA01

Dates : 24/6/24 - 24/6/24

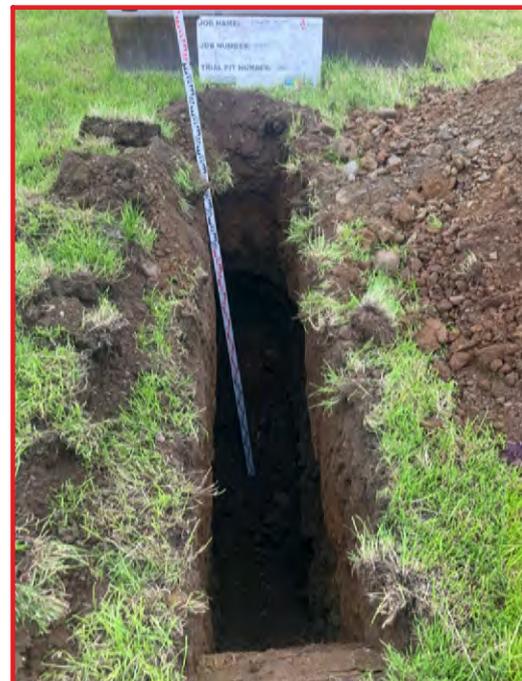
Job Number : Q1565

Ground Level : 32.54 m A.O.D.
Level to Ordnance Datum

Location :

Engineer :

Coordinates: 238613.72 E
219728.31 N
Co-ordinates to National Grid



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SQL

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m Per
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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA01

Dates : 24/6/24 - 24/6/24

Job Number : Q1565

Ground Level : 32.54 m A.O.D.
Level to Ordnance Datum

Location :

Engineer :

Coordinates: 238613.72 E
219728.31 N
Co-ordinates to National Grid



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Contract : Ffordd Pendre, Carmarthen	Trial Pit No.
Client : Carmarthenshire County Council	SA02

Dates : 24/6/24 - 24/6/24	Job Number : Q1565	Ground Level : 32.15 m A.O.D. <i>Level to Ordnance Datum</i>
Location :	Engineer :	Coordinates: 238624.11 E 219727.06 N <i>Co-ordinates to National Grid</i>

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
1					0.20	TOPSOIL: Dark brown slightly gravelly organic SILT with rootlets within top 10cm. Gravel is fine to medium sub-rounded to sub-angular siltstone.			
					0.20	Soft brown slightly gravelly SILT. Gravel is fine to medium sub-rounded to sub-angular siltstone.		31.95	
					0.60				
					0.80	Firm orangey brown slightly silty slightly gravelly CLAY. Gravel is fine to medium siltstone/limestone.		31.35	
					0.70				
					1.50	End of Pit at 1.5m to undertake soakaway test		30.65	

PLAN	Groundwater:	Remarks: No Groundwater Encountered
	Stability: Stable	
	Shoring: N/A	

Equipment Used: 9 tonne excavator

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator: SQL	Logged By: L drapper	Sheet No. 1 Of 3	m Per Page 3	All measurements in metres unless otherwise stated	
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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA02

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 32.15 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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All measurements in
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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA02

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 32.15 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA03

Dates : 24/6/24 - 24/6/24 Job Number : Q1565 Ground Level : 32.19 m A.O.D.
Level to Ordnance Datum
 Location : Engineer : Coordinates: 238620.81 E
 219634.51 N
Co-ordinates to National Grid

m B.G.L.	Samples		Tests		Strata			WATER
	Depth	Type No.	Depth	Test Results	Depth (Thickness)	Description	Legend	
1					0.10	TOPSOIL: Dark brown slightly gravelly organic SILT with rootlets within top 10cm. Gravel is fine to medium sub-rounded to sub-angular siltstone.		32.09
					0.10	Soft light brown gravelly SILT with a medium cobble content. Gravel is fine to coarse sub-rounded to sub-angular siltstone/sandstone.		
					0.85			
					0.95	Soft pale grey very sandy fine to coarse sub-rounded to sub-angular siltstone GRAVEL with a high cobble/boulder content. Sand is fine to coarse. Cobble/boulder is sub-angular to angular sandstone.		31.24
2					1.55			
					2.50	End of Pit at 2.5m to undertake soakaway test		29.69

PLAN

 Groundwater: Remarks: No Groundwater Encountered
 Stability: Stable
 Shoring: N/A

Equipment Used: 9 tonne excavator

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		SQL	L drapper	1 Of 3	3		

Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA03

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 32.19 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA03

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 32.19 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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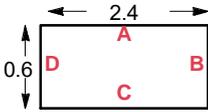
All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen	Trial Pit No.
Client : Carmarthenshire County Council	SA04

Dates : 24/6/24 - 24/6/24	Job Number : Q1565	Ground Level : 32.11 m A.O.D. <i>Level to Ordnance Datum</i>
Location :	Engineer :	Co-ordinates: 238632.33 E 219633.40 N <i>Co-ordinates to National Grid</i>

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
					0.35	TOPSOIL: Dark brown slightly gravelly organic SILT with rootlets within top 10cm. Gravel is fine to medium sub-rounded to sub-angular siltstone.			
					0.35 0.10	Soft orangey brown slightly silty slightly gravelly CLAY. Gravel is fine to coarse sub-rounded to sub-angular siltstone.		31.76	
					0.45	Soft brown very sandy fine to coarse sub-rounded to sub-angular siltstone/sandstone GRAVEL with a high cobble content. Sand is fine to coarse. Cobble is sub-rounded to angular siltstone.		31.66	
1					1.05				
					1.50	End of Pit at 1.5m to undertake soakaway test		30.61	

PLAN	Groundwater:	Remarks: No Groundwater Encountered
	Stability: Stable	
	Shoring: N/A	

Equipment Used: 9 tonne excavator

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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA04

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 32.11 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA04

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 32.11 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen						Trial Pit No.		
Client : Carmarthenshire County Council						SA05		
Dates : 24/6/24 - 24/6/24			Job Number : Q1565			Ground Level : 31.62 m A.O.D. <i>Level to Ordnance Datum</i>		
Location :			Engineer :			Co-ordinates: 238569.39 E 219629.84 N <i>Co-ordinates to National Grid</i>		
m B.G.L.	Samples		Tests		Strata			WATER
	Depth	Type No.	Depth	Test Results	Depth (Thickness)	Description	Legend	
1					0.25	TOPSOIL: Dark brown slightly gravelly organic SILT with rootlets within top 10cm. Gravel is fine to coarse sub-rounded to sub-angular siltstone.		
					0.25	Soft orangey brown gravelly clayey SILT. Gravel is fine to coarse sub-rounded to sub-angular siltstone/sandstone.		31.37
					0.70			
					0.95	Soft pale grey very sandy fine to coarse sub-rounded to sub-angular siltstone/sandstone GRAVEL with a high cobble content. Sand is fine to coarse. Cobble is sub-angular to angular siltstone/sandstone.		30.67
					1.55			
					2.50	End of Pit at 2.5m to undertake soakaway test		29.12
PLAN			Groundwater:			Remarks: No Groundwater Encountered		
			Stability: Stable					
			Shoring: N/A					
Equipment Used: 9 tonne excavator								
			Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk		Operator:	Logged By:	Sheet No.	m Per Page
					SQL	L drapper	1 Of 3	3
					All measurements in metres unless otherwise stated			

Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA05

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 31.62 m A.O.D.
Level to Ordnance Datum
Coordinates : E
N
Co-ordinates to Local Grid



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Logged By:

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m Per
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All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA05

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 31.62 m A.O.D.
Level to Ordnance Datum

Coordinates: E
N
Co-ordinates to Local Grid



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Operator:

Logged By:

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All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA06

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 32.07 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA06

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 32.07 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



Plas Newydd, Ilanedi, Pontarddulais
SA4 0FQ
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Operator:

Logged By:

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Page

All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA07

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 33.99 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



Plas Newydd, Ilanedi, Pontarddulais
SA4 0FQ
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Operator:

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m Per
Page

All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA07

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 33.99 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



Plas Newydd, Ilanedi, Pontarddulais
SA4 0FQ
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Operator:

Logged By:

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All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen	Trial Pit No.
Client : Carmarthenshire County Council	SA08

Dates : 25/6/24 - 25/6/24	Job Number : Q1565	Ground Level : 34.09 m A.O.D. <i>Level to Ordnance Datum</i>
Location :	Engineer :	Coordinates: 238569.23 E 219730.63 N <i>Co-ordinates to National Grid</i>

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
					0.25	TOPSOIL: Dark brown slightly gravelly organic SILT with many rootlets within top 10cm. Gravel is fine to medium sub-rounded to sub-angular siltstone.			
					0.25	Soft orangey brown slightly clayey slightly gravelly SILT. Gravel is fine to coarse sub-rounded to angular siltstone/sandstone.		33.84	
				0.50					
					0.75	Pale grey brown very sandy fine to coarse sub-rounded to angular siltstone/sandstone GRAVEL with a high cobble content. Sand is fine to coarse. Cobble is sub-angular to angular siltstone/sandstone.		33.34	
1				0.75					
					1.50	End of Pit at 1.5m to undertake soakaway test		32.59	

PLAN	Groundwater:	Remarks: No Groundwater Encountered
	Stability: Stable	
	Shoring: N/A	

Equipment Used: 9 tonne excavator

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator: SQL	Logged By: L drapper	Sheet No. 1 Of 3	m Per Page 3	All measurements in metres unless otherwise stated	
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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA08

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 34.09 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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All measurements in
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otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA08

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 34.09 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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Contract : Ffordd Pendre, Carmarthen	Trial Pit No.
Client : Carmarthenshire County Council	SA09

Dates : 25/6/24 - 25/6/24	Job Number : Q1565	Ground Level : 34.68 m A.O.D. <i>Level to Ordnance Datum</i>
Location :	Engineer :	Coordinates: 238566.64 E 219820.60 N <i>Co-ordinates to National Grid</i>

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
1					0.30	TOPSOIL: Dark brown slightly gravelly organic SILT with many rootlets within top 10cm. Gravel is fine to coarse sub-rounded to sub-angular siltstone.			
					0.30	Soft orangey brown clayey gravelly SILT. Gravel is fine to coarse sub-rounded to sub-angular siltstone.		34.38	
					0.80				
						1.10	Pale grey brown very sandy GRAVEL with a medium cobble content. Sand is fine to coarse. Cobble is sub-angular to angular siltstone/sandstone.		33.58
2					1.40				
					2.50	End of Pit at 2.5m to undertake soakaway test		32.18	

PLAN	Groundwater:	Remarks: No Groundwater Encountered
	Stability: Stable	
	Shoring: N/A	

Equipment Used: 9 tonne excavator

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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA09

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 34.68 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA09

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 34.68 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA10

Dates : 25/6/24 - 26/6/24 Job Number : Q1565 Ground Level : 34.31 m A.O.D.
Level to Ordnance Datum
 Location : Engineer : Coordinates: 238587.01 E
 219820.84 N
Co-ordinates to National Grid

m B.G.L.	Samples		Tests		Strata			WATER
	Depth	Type No.	Depth	Test Results	Depth (Thickness)	Description	Legend	
1					0.30	TOPSOIL: Dark brown slightly gravelly organic SILT with many rootlets within top 10cm. Gravel is fine to coarse sub-rounded to sub-angular siltstone.		
					0.30	Soft orangey brown clayey gravelly SILT. Gravel is fine to coarse sub-rounded to sub-angular siltstone.		34.01
					0.60			
					0.90	Pale grey brown very sandy fine to coarse sub-rounded to sub-angular siltstone/sandstone GRAVEL with a medium cobble/boulder content. Sand is fine to coarse. Cobble/boulder is sub-angular to angular siltstone/sandstone.		33.41
				0.60				
					1.50	End of Pit at 1.5m to undertake soakaway test		32.81

PLAN

 Groundwater: Remarks: No Groundwater Encountered
 Stability: Stable
 Shoring: N/A

Equipment Used: 9 tonne excavator

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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA10

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 34.31 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA10

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 34.31 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



Plas Newydd, Ilanedi, Pontarddulais
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All measurements in
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Contract : Ffordd Pendre, Carmarthen	Trial Pit No.
Client : Carmarthenshire County Council	SA11

Dates : 25/6/24 - 26/6/24	Job Number : Q1565	Ground Level : 34.12 m A.O.D. <i>Level to Ordnance Datum</i>
Location :	Engineer :	Coordinates: 238607.05 E 219819.63 N <i>Co-ordinates to National Grid</i>

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
					0.30	TOPSOIL: Dark brown slightly gravelly organic SILT with many rootlets within top 10cm. Gravel is fine to coarse sub-rounded to sub-angular siltstone.			
					0.30 0.40	Soft orangey brown clayey slightly gravelly SILT. Gravel is fine to coarse sub-rounded to sub-angular siltstone.		33.82	
1					0.70 1.80	Pale grey brown very sandy fine to coarse sub-rounded to sub-angular siltstone, sandstone GRAVEL with a high cobble/boulder content. Sand is fine to coarse. Cobble/boulder is sub-angular to angular siltstone/sandstone.		33.42	
2					2.50	End of Pit at 2.5m to undertake soakaway test		31.62	

PLAN	Groundwater:	Remarks: No Groundwater Encountered
	Stability: Stable	
	Shoring: N/A	

Equipment Used: 9 tonne excavator

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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA11

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 34.12 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



Plas Newydd, llanedi, Pontarddulais
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Operator:

Logged By:

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All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA11

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 34.12 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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Logged By:

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All measurements in
metres unless
otherwise stated



Contract : Ffordd Pendre, Carmarthen	Trial Pit No.
Client : Carmarthenshire County Council	SA12

Dates : 25/6/24 - 26/6/24	Job Number : Q1565	Ground Level : 32.12 m A.O.D. <i>Level to Ordnance Datum</i>
Location :	Engineer :	Coordinates: 238623.70 E 219780.00 N <i>Co-ordinates to National Grid</i>

m B.G.L.	Samples		Tests		Strata			WATER
	Depth	Type No.	Depth	Test Results	Depth (Thickness)	Description	Legend	
1					0.40	TOPSOIL: Dark brown gravelly organic SILT with many rootlets in the top 20cm. Gravel is fine to coarse sub-rounded to sub-angular siltstone.		
					0.40	Soft light brown slightly gravelly SILT. Gravel is sub-rounded to sub-angular fine to medium siltstone.		31.72
					0.70	Soft to firm orangey brown silty gravelly CLAY with a medium cobble content. Gravel is fine to coarse sub-rounded to angular siltstone/sandstone. Cobble is sub-angular to angular siltstone/sandstone.		31.32
					1.50	End of Pit at 1.5m to undertake soakaway test		30.62

PLAN	Groundwater:	Remarks:
	Stability: Stable	
	Shoring: N/A	

Equipment Used: 9 tonne excavator

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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA12

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 32.12 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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All measurements in
metres unless
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Contract : Ffordd Pendre, Carmarthen
Client : Carmarthenshire County Council

Trial Pit No.
SA12

Dates : -
Location :

Job Number : Q1565
Engineer :

Ground Level : 32.12 m A.O.D.
Level to Ordnance Datum
Coordinates: E
N
Co-ordinates to Local Grid



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APPENDIX III: SOAKAWAY TEST RESULTS

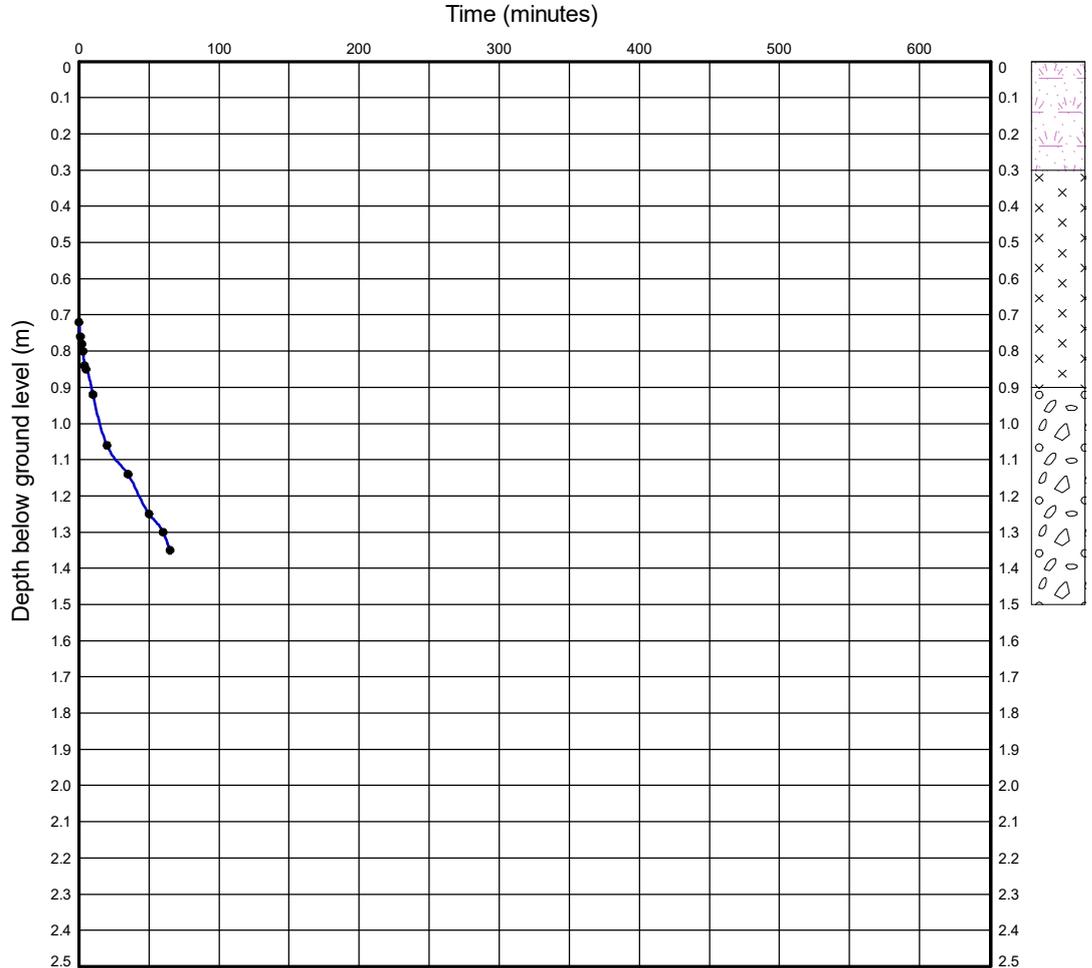
Job Number : Q1565

Engineer :

SOAKAWAY TEST CALCULATION SHEET

Field Observations from soakaway trial pit

Time (Minutes)	Depth of water from ground level (m)
0.0	0.72
1.0	0.76
2.0	0.78
3.0	0.8
4.0	0.84
5.0	0.85
10.0	0.92
20.0	1.06
35.0	1.14
50.0	1.25
60.0	1.3
65.0	1.35



Remarks:

Soakaway test for soil infiltration rate
 design method based on BRE Digest 365

Permeability Test on Strata

Trial Pit Depth	1.500 m	$V_{p75-25} =$	0.632 m ³
Trial Pit Length	2.700 m	$a_{p50} =$	4.194 m ²
Trial Pit Width	0.600 m	$t_{p75-25} =$	50.857 minutes
Effective Depth	0.780 m		
Outflow Time	50.857 mins from 75% to 25% full		

f = 4.9368E-5 m/sec



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Date of Test:

Project File: LD TP 2.GPJ

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Figure No.
 25

Contract : Ffordd Pendre, Carmarthen
 Client : Carmarthenshire County Council

Point Plotted
 SA11,3

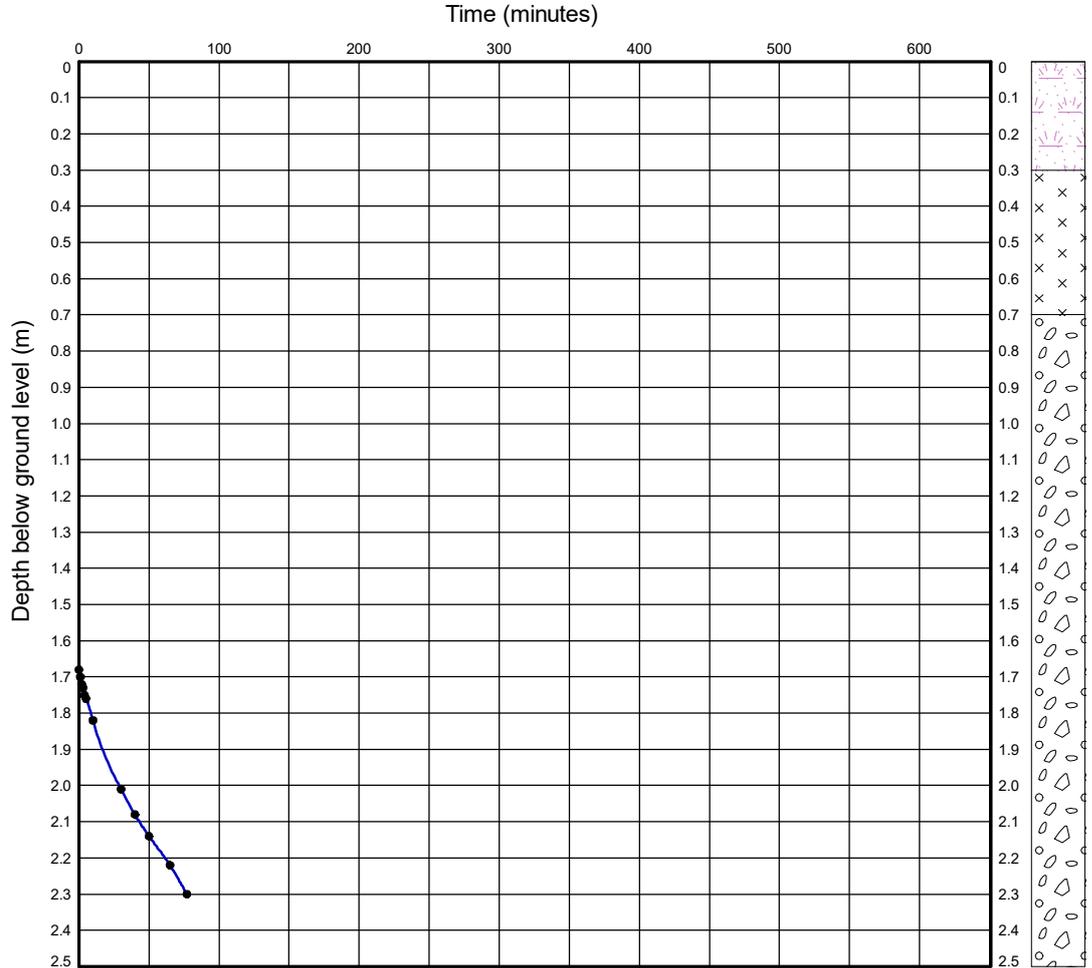
Job Number : Q1565

Engineer :

SOAKAWAY TEST CALCULATION SHEET

Field Observations from soakaway trial pit

Time (Minutes)	Depth of water from ground level (m)
0.0	1.68
1.0	1.7
2.0	1.72
3.0	1.73
4.0	1.75
5.0	1.76
10.0	1.82
30.0	2.01
40.0	2.08
50.0	2.14
65.0	2.22
77.0	2.3



Remarks:

Soakaway test for soil infiltration rate
 design method based on BRE Digest 365

Permeability Test on Strata

Trial Pit Depth	2.500 m	$V_{p75-25} =$	0.656 m ³
Trial Pit Length	3.200 m	$a_{p50} =$	4.634 m ²
Trial Pit Width	0.500 m	$t_{p75-25} =$	59.408 minutes
Effective Depth	0.820 m		
Outflow Time	59.408 mins from 75% to 25% full		

f = 3.9715E-5 m/sec



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Figure No.

30

