

Appendix C: SPT Trip Hammer Calibration Certificates





Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Dynamic sampling

Unit 8

Victory parkway

Victory rd

Derby

DE24 8ZF

Hammer Ref: 110..45

Test Date: 03/07/2021

Report Date: 07/07/2021

File Name: 110..45.spt

Test Operator: AP

Instrumented Rod Data

Diameter d_r (mm): 54

Wall Thickness t_r (mm): 6.0

Assumed Modulus E_a (GPa): 208

Accelerometer No.1: 62901

Accelerometer No.2: 62902

Hammer Information

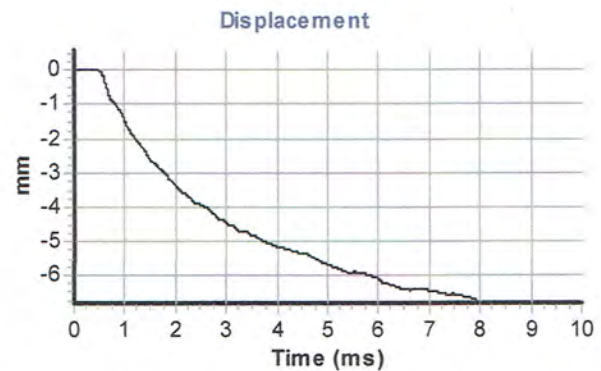
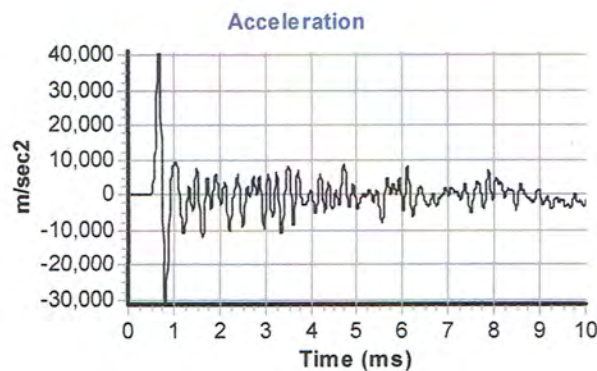
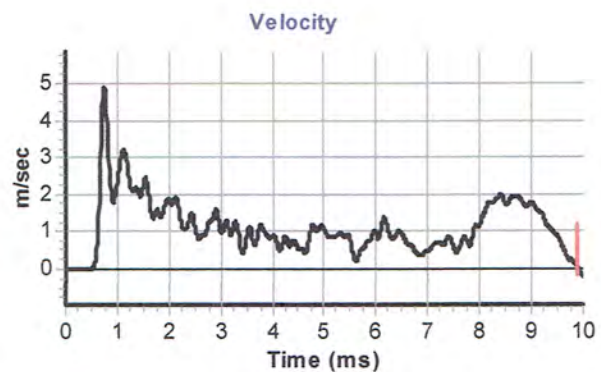
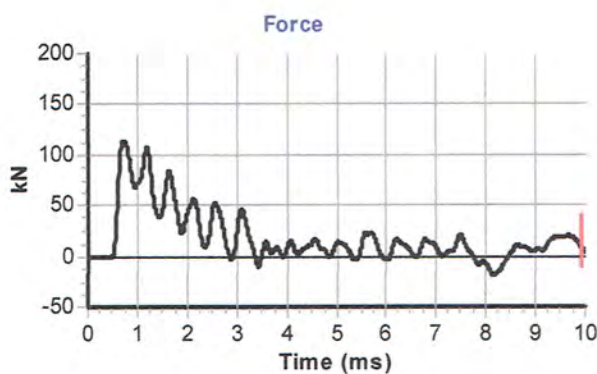
Hammer Mass m (kg): 63.5

Falling Height h (mm): 760

String Length L (m): 15.0

Comments / Location

Hammer tested at Dynamic samplings yard.



Calculations

Area of Rod A (mm²): 905

Theoretical Energy E_{theor} (J): 473

Measured Energy E_{meas} (J): 342

Energy Ratio E_r (%): **72**

Signed: A.parker

Title: Associate Director

The recommended calibration interval is 12 months



Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Dynamic sampling

Unit 8

Victory parkway

Victory rd

Derby

DE24 8ZF

Hammer Ref: 110..49

Test Date: 19/05/2021

Report Date: 19/05/2021

File Name: 110..49.spt

Test Operator: AP

Instrumented Rod Data

Diameter d_r (mm): 54

Wall Thickness t_r (mm): 6.5

Assumed Modulus E_a (GPa): 208

Accelerometer No.1: 62901

Accelerometer No.2: 62902

Hammer Information

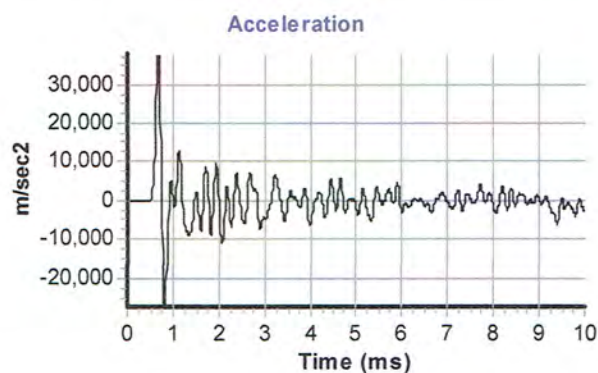
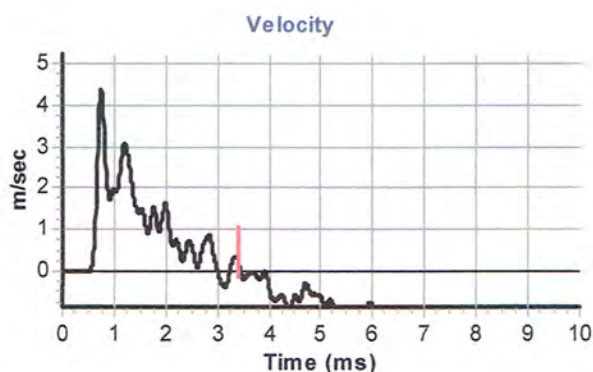
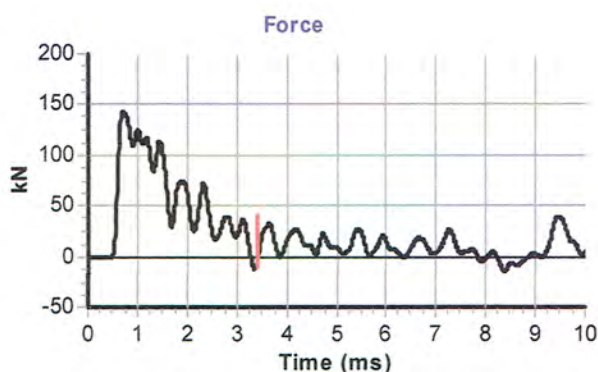
Hammer Mass m (kg): 63.5

Falling Height h (mm): 760

String Length L (m): 15.0

Comments / Location

Hammer tested at Dynamic samplings yard.



Calculations

Area of Rod A (mm^2): 970

Theoretical Energy E_{theor} (J): 473

Measured Energy E_{meas} (J): 326

Energy Ratio E_r (%):

69

Signed: A.parker
Title: Associate Director

The recommended calibration interval is 12 months



Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Dynamic sampling

Unit 8

Victory parkway

Victory rd

Derby

DE24 8ZF

Hammer Ref: 110.54
Test Date: 21/05/2021
Report Date: 21/05/2021
File Name: 110.54.spt
Test Operator: AP

Instrumented Rod Data

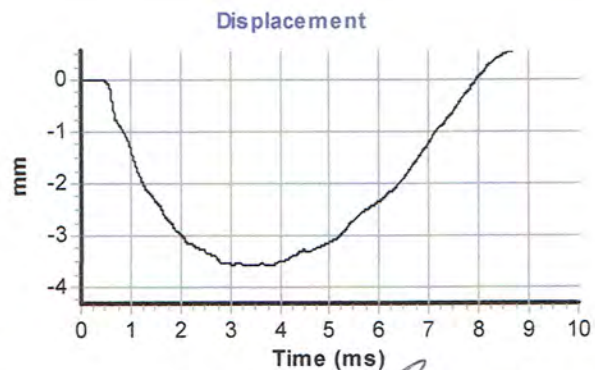
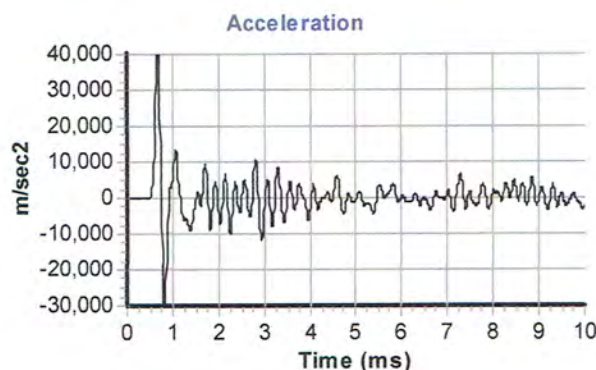
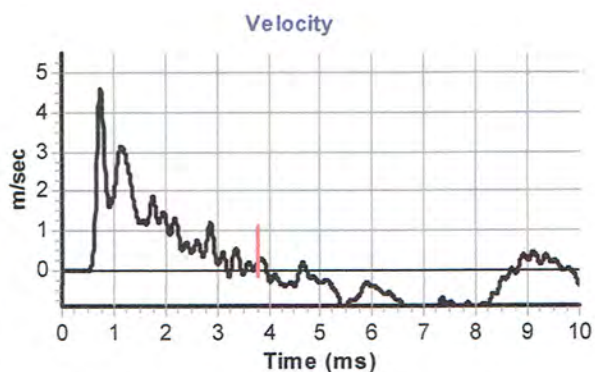
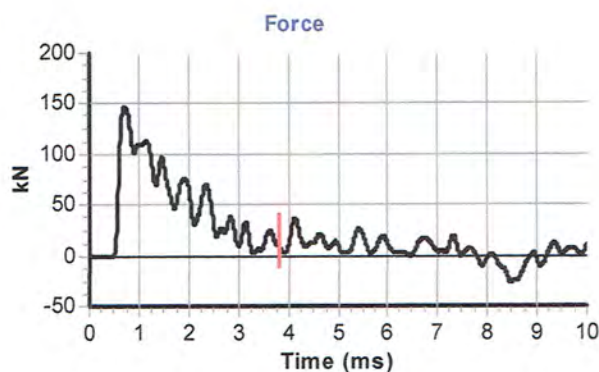
Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.5
Assumed Modulus E_a (GPa): 208
Accelerometer No.1: 62901
Accelerometer No.2: 62902

Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
String Length L (m): 15.0

Comments / Location

Hammer tested at Dynamic samplings yard.



Calculations

Area of Rod A (mm²): 970
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 341

Energy Ratio E_r (%): **72**

Signed: A.parker

Title: Associate Director

The recommended calibration interval is 12 months

Appendix D: Chemical Testing Results



**Laura Westoby**

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Analytical Report Number : 22-42517

Project / Site name:	Newbold Verdon, PJSG21-47	Samples received on:	24/05/2022
Your job number:	C10237	Samples instructed on/ Analysis started on:	25/02/2022
Your order number:	PO-2067	Analysis completed by:	04/03/2022
Report Issue Number:	1	Report issued on:	04/03/2022
Samples Analysed:	3 leachate samples - 10 soil samples		

Signed:

Joanna Wawrzeczko
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-42517

Project / Site name: Newbold Verdon, PJSG21-47

Your Order No: PO-2067

Lab Sample Number				2188530	2188531	2188532	2188533	2188534
Sample Reference				WS01	WS02	WS06	TP05	TP11
Sample Number				1	1	1	1	1
Depth (m)				0.20	0.20	0.20	0.20	0.40
Date Sampled				21/02/2022	21/02/2022	21/02/2022	23/02/2022	23/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	18	18	8.8	12
Total mass of sample received	kg	0.001	NONE	1.0	1.0	1.0	1.0	1.0

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	NTK	NTK	NTK	NTK	

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.1	7.3	7.6	7.9	7.1
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0042	0.0084	0.0057	0.0062	0.0074
Organic Matter (automated)	%	0.1	MCERTS	2.6	4.1	3.2	1.8	0.9

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.9	11	8.3	6.5	5.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	NONE	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	12	19	16	12	12
Copper (aqua regia extractable)	mg/kg	1	MCERTS	18	19	18	16	9.5
Lead (aqua regia extractable)	mg/kg	1	MCERTS	29	32	29	28	12
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	9.3	15	11	10	10
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	47	69	57	47	33

Pesticide and Herbicide Screen

GCMS Pesticide Screen		N/A	NONE	-	-	None Detected	-	-
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U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-42517
Project / Site name: Newbold Verdon, PJSG21-47
Your Order No: PO-2067

Lab Sample Number				2188535	2188536	2188537	2188538	2188539
Sample Reference				TP12	TP14	TP17	TP20	TP23
Sample Number				1	1	1	1	1
Depth (m)				0.40	0.10	0.10	0.50	0.20
Date Sampled				23/02/2022	22/02/2022	22/02/2022	22/02/2022	22/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	15	11	14	17
Total mass of sample received	kg	0.001	NONE	1.0	1.0	1.0	1.0	1.0

Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected	Not-detected	-	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A		JMA	JMA		JMA

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.7	7.2	7.8	8.3	7.8
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0043	0.013	0.0060	0.019	0.021
Organic Matter (automated)	%	0.1	MCERTS	0.9	4.3	2.5	0.9	2.6

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.1	11	7.2	12	9.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	1.1	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	NONE	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	12	24	14	33	22
Copper (aqua regia extractable)	mg/kg	1	MCERTS	12	23	14	25	18
Lead (aqua regia extractable)	mg/kg	1	MCERTS	17	33	26	14	27
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	8.6	17	10	31	16
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	39	72	41	57	67

Pesticide and Herbicide Screen

GCMS Pesticide Screen		N/A	NONE	-	-	None Detected	-	-
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 22-42517

Project / Site name: Newbold Verdon, PJSG21-47

Your Order No: PO-2067

Lab Sample Number	2188540	2188541	2188542
Sample Reference	TP11	TP12	TP20
Sample Number	1	1	1
Depth (m)	0.40	0.40	0.50
Date Sampled	23/02/2022	23/02/2022	22/02/2022
Time Taken	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	1.5	2.3	0.8
Copper (dissolved)	µg/l	0.7	ISO 17025	6.9	6.0	0.8
Lead (dissolved)	µg/l	1	ISO 17025	5.6	3.7	3.4
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	4.3	5.1	2.9
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0
Zinc (dissolved)	µg/l	0.4	ISO 17025	4.9	6.8	2.4

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-42517

Project / Site name: Newbold Verdon, PJSG21-47

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2188530	WS01	1	0.2	Brown clay and loam with vegetation.
2188531	WS02	1	0.2	Brown clay and loam with vegetation.
2188532	WS06	1	0.2	Brown clay and loam with vegetation.
2188533	TP05	1	0.2	Brown clay and sand with vegetation and gravel
2188534	TP11	1	0.4	Brown clay and sand.
2188535	TP12	1	0.4	Brown clay and sand.
2188536	TP14	1	0.1	Brown clay and sand with vegetation and gravel
2188537	TP17	1	0.1	Brown clay and loam with vegetation.
2188538	TP20	1	0.5	Brown clay and sand with vegetation and gravel
2188539	TP23	1	0.2	Brown clay and loam with vegetation.

Analytical Report Number : 22-42517

Project / Site name: Newbold Verdon, PJSG21-47

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
BS EN 12457-1 (2:1) Leachate Prep	2:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-1.	L043-PL	W	NONE
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
GC Pesticide Screen (TIC)	Analysis of unknown pesticides by GCMS	GC Pesticide Screen (TIC)	L064B	D	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.



Laura Westoby

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e: results@explorationtesting.uk

Analytical Report Number : 22-42725

Project / Site name:	Newbold Verdon (PJSG21-47)	Samples received on:	01/03/2022
Your job number:	C10237	Samples instructed on/ Analysis started on:	01/03/2022
Your order number:	PO-2067	Analysis completed by:	07/03/2022
Report Issue Number:	1	Report issued on:	08/03/2022
Samples Analysed:	6 soil samples		


Signed:

Anna Goc
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-42725
 Project / Site name: Newbold Verdon (PJSG21-47)
 Your Order No: PO-2067

Lab Sample Number				2189990	2189991	2189992	2189993	2189994
Sample Reference				WS12	TP09	TP16	TP19	TP21
Sample Number				1	1	1	1	1
Depth (m)				0.90	0.80	2.40	1.00	2.30
Date Sampled				21/02/2022	23/02/2022	22/02/2022	22/02/2022	22/02/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	42	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	14	8.1	14	15	17
Total mass of sample received	kg	0.001	NONE	1.1	1.1	1.1	1.1	1.1

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.4	7.3	7.3	7.5	7.7
Total Sulphate as SO ₄	%	0.005	MCERTS	0.010	0.011	0.006	0.009	0.010
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.017	0.021	0.015	0.016	0.0063
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	17.0	20.8	14.6	16.4	6.3
Total Sulphur	%	0.005	MCERTS	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 22-42725
 Project / Site name: Newbold Verdon (PJS621-47)
 Your Order No: PO-2067

Lab Sample Number				2189995
Sample Reference				TP23
Sample Number				1
Depth (m)				2.20
Date Sampled				22/02/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	13
Total mass of sample received	kg	0.001	NONE	1.1

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.3
Total Sulphate as SO ₄	%	0.005	MCERTS	0.031
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.029
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	29.4
Total Sulphur	%	0.005	MCERTS	0.054

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-42725

Project / Site name: Newbold Verdon (PJS621-47)

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2189990	WS12	1	0.9	Brown clay and sand.
2189991	TP09	1	0.8	Brown sandy clay with stones.
2189992	TP16	1	2.4	Brown sandy clay.
2189993	TP19	1	1	Brown sandy clay.
2189994	TP21	1	2.3	Brown sand.
2189995	TP23	1	2.2	Brown clay and sand with gravel.

Analytical Report Number : 22-42725
Project / Site name: Newbold Verdon (PJSG21-47)

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Appendix E: Geotechnical Testing Results



Laboratory Test Report

Client:	Exploration and Testing Associates Limited
Job Number:	C10237
Project:	Newbold Verdon
Report Number:	L22-136-1
Date Received:	02.03.2022
Client Contact:	Anthony Owen
Address:	'number three' Siskin Drive, Middlemarch Business Park, Coventry, CV3 4FJ

Testing Required:	Water Content – BS EN ISO 17892-1:2014 Determination of Liquid and Plastic Limits and Plasticity Index – BS EN ISO 17892-12:2018 Particle Size Distribution – BS EN ISO 17892- 4:2016
Date Testing Started:	04.03.2022
Date Testing Finished:	23.03.2022

Date Report Issued:	23.03.2022
Reviewed By:	 N. O'Brien – Laboratory Manager
Authorised By:	 N. Hodson – Materials Director
Remarks:	(*) Denotes testing is outside of UKAS Accreditation Scope.

Samples will be stored for one month after the report has been issued before being disposed of.

The published results are appertaining only to the specimens tested.

Exploration & Testing Associates Limited, registered in England and Wales # 11803869 at 8B Bowburn South Ind Est,
Bowburn, Durham, DH6 5AD

Determination of Water Content, Liquid Limit, Plastic Limit and Derivation of Plasticity Index

Project No.

Project Name

C10237

Newbold Verdon (PJSG21-47)

[illegible]

Water Content carried out in accordance with BS EN ISO 17892: Part 1: 2014:
Clause 5.1 & 5.2

Liquid Limit, Plastic Limit & Plasticity Index all performed in accordance with BS EN ISO 17892: Part 12: 2018 - Fall cone four point method - Cone 80g/30°

Date _____

23/03/2022 14:11

Approved By
N Hodson

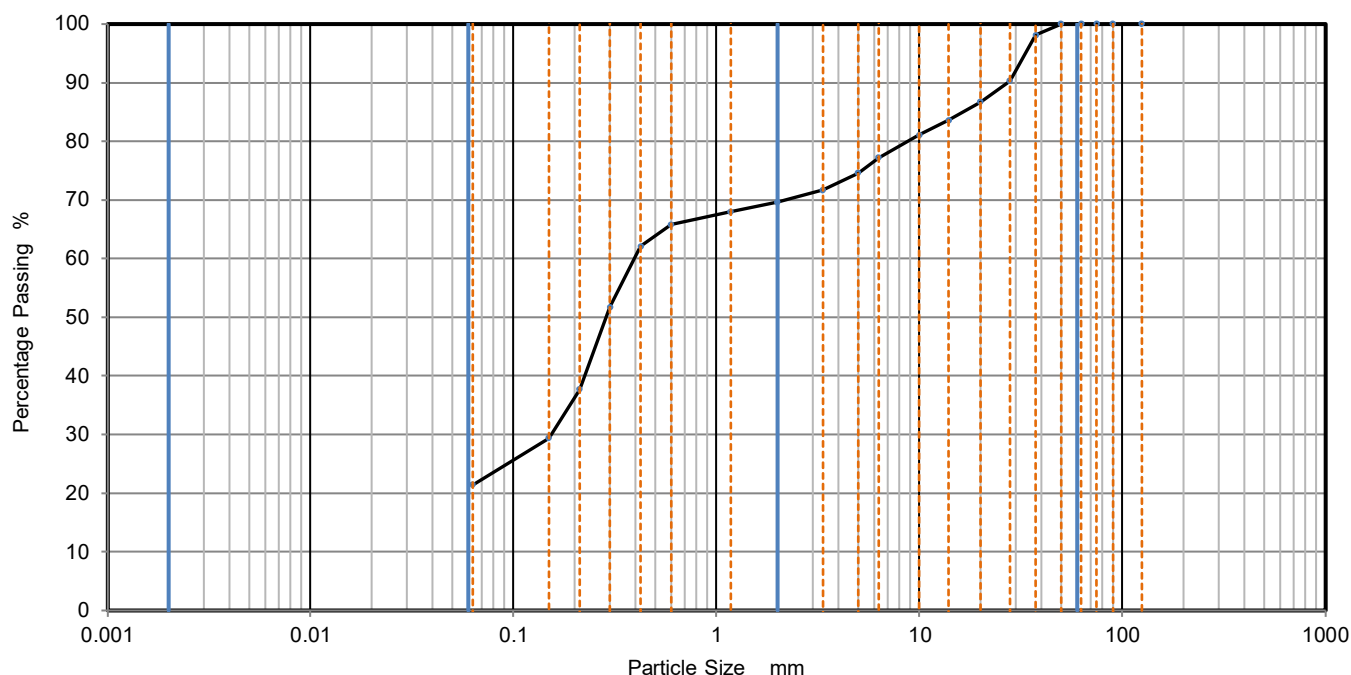
10/10/2019

UKAS Accredited
Laboratory No.
20632

PARTICLE SIZE DISTRIBUTION

Job Ref	C10237
Borehole/Pit No.	TP08
Sample No.	1
Depth, m	0.80
Sample Type	B
KeyLAB ID	EAT_202203028

Site Name	Newbold Verdon (PJSG21-47)		
Soil Description	Brown, Sandy, Gravelly CLAY		
Specimen Reference		Specimen Depth	m
Test Method	BS EN ISO 17892-4:2016 - Wet & Dry Sieving		

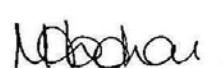


Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	98		
28	90		
20	87		
14	84		
10	81		
6.3	77		
5	75		
3.35	72		
2	70		
1.18	68		
0.6	66		
0.425	62		
0.3	52		
0.212	38		
0.15	29		
0.063	21.4		

Sample Proportions	% dry mass
Very coarse	0
Gravel	30
Sand	48
Fines <0.063mm	21

Grading Analysis	
D ₁₀₀	mm
D ₆₀	mm
D ₃₀	mm
D ₁₀	mm
Uniformity Coefficient	
Curvature Coefficient	

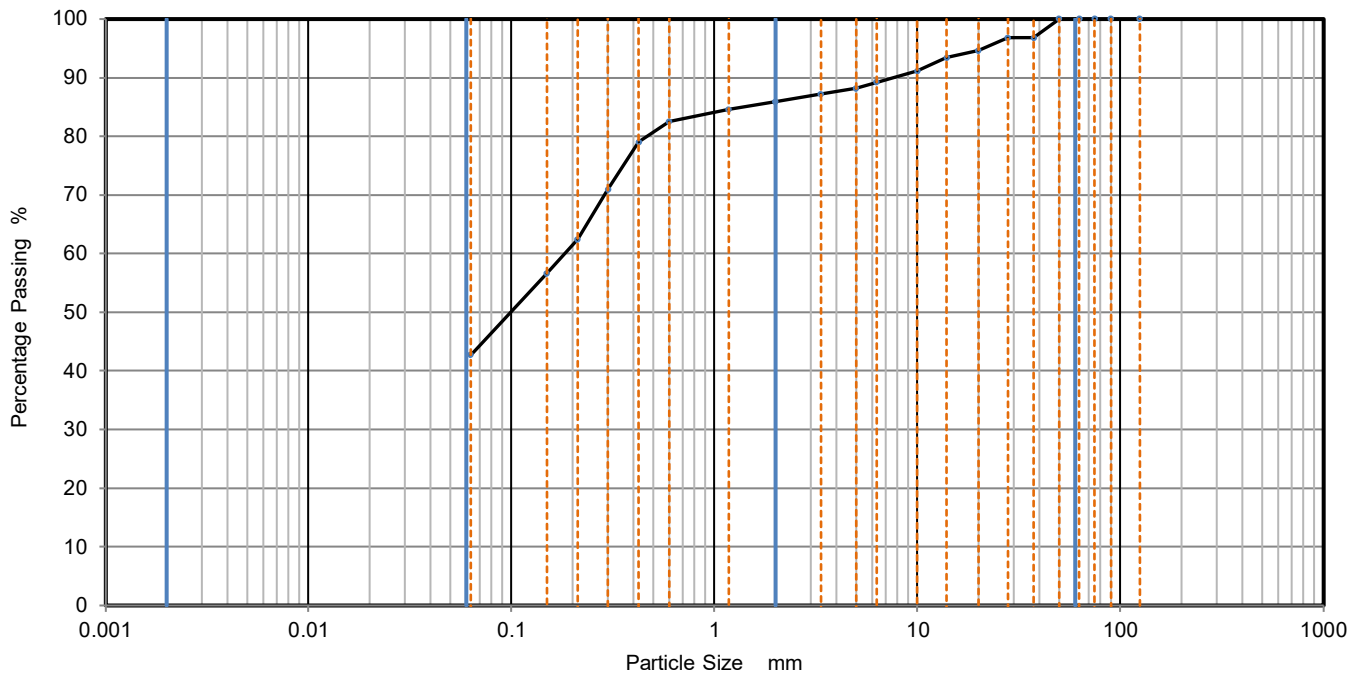
Remarks
Preparation and testing in accordance with BS EN ISO 17892-4:2016 unless noted below

Date	Approved By		UKAS Accredited Laboratory No. 20632
10/03/2022 11:24	N Hodson		

PARTICLE SIZE DISTRIBUTION

Job Ref	C10237
Borehole/Pit No.	TP07
Sample No.	1
Depth, m	1.00
Sample Type	B
KeyLAB ID	EAT_202203027

Site Name	Newbold Verdon (PJSG21-47)		
Soil Description	Brown, Sandy, Gravelly CLAY		
Specimen Reference		Specimen Depth	m
Test Method	BS EN ISO 17892-4:2016 - Wet & Dry Sieving		

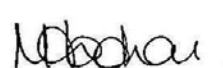


Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	97		
28	97		
20	95		
14	93		
10	91		
6.3	89		
5	88		
3.35	87		
2	86		
1.18	85		
0.6	83		
0.425	79		
0.3	71		
0.212	62		
0.15	57		
0.063	42.7		

Sample Proportions	% dry mass
Very coarse	0
Gravel	14
Sand	43
Fines <0.063mm	43

Grading Analysis	
D ₁₀₀	mm
D ₆₀	mm
D ₃₀	mm
D ₁₀	mm
Uniformity Coefficient	
Curvature Coefficient	

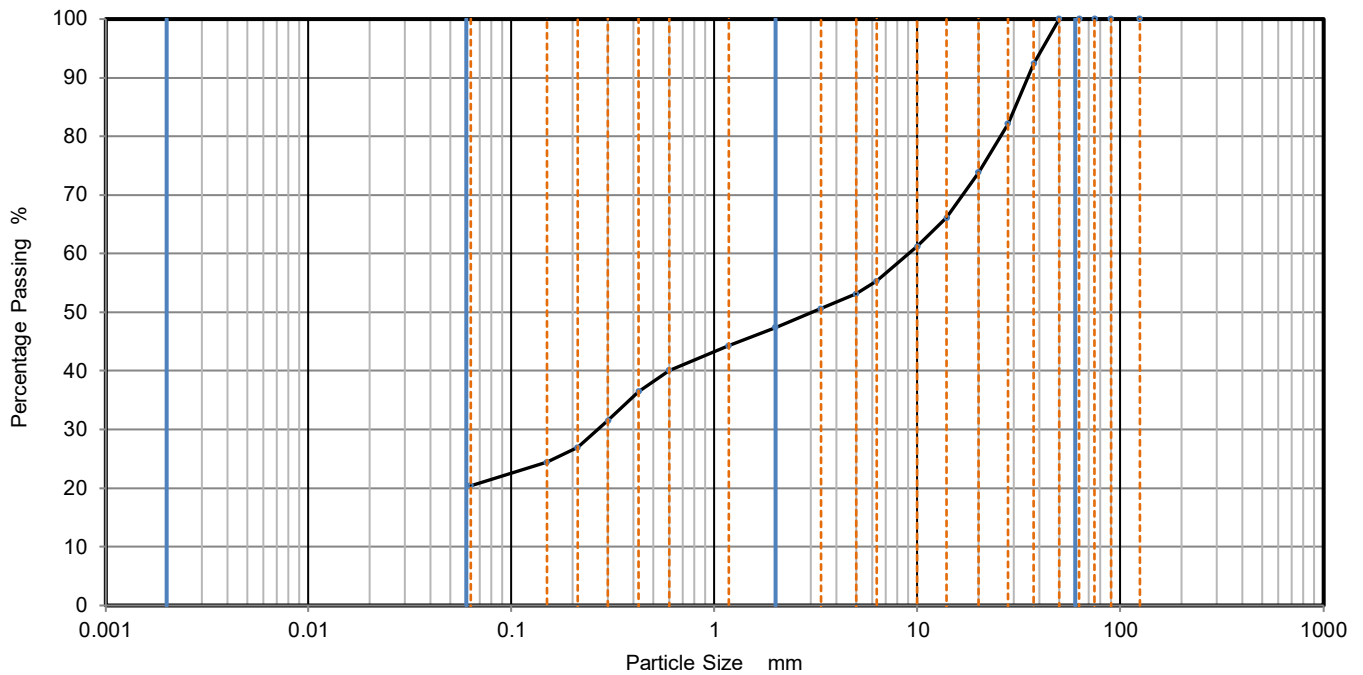
Remarks
Preparation and testing in accordance with BS EN ISO 17892-4:2016 unless noted below

Date	Approved By		UKAS Accredited Laboratory No. 20632
10/03/2022 11:26	N Hodson		

PARTICLE SIZE DISTRIBUTION

Job Ref	C10237
Borehole/Pit No.	TP01
Sample No.	1
Depth, m	2.20
Sample Type	B
KeyLAB ID	EAT_202203025

Site Name	Newbold Verdon (PJSG21-47)		
Soil Description	Brown, Sandy, Gravelly CLAY		
Specimen Reference		Specimen Depth	m
Test Method	BS EN ISO 17892-4:2016 - Wet & Dry Sieving		

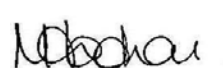


Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	92		
28	82		
20	74		
14	66		
10	61		
6.3	55		
5	53		
3.35	51		
2	47		
1.18	44		
0.6	40		
0.425	37		
0.3	32		
0.212	27		
0.15	24		
0.063	20.4		

Sample Proportions	% dry mass
Very coarse	0
Gravel	53
Sand	27
Fines <0.063mm	20

Grading Analysis	
D ₁₀₀	mm
D ₆₀	mm
D ₃₀	mm
D ₁₀	mm
Uniformity Coefficient	
Curvature Coefficient	

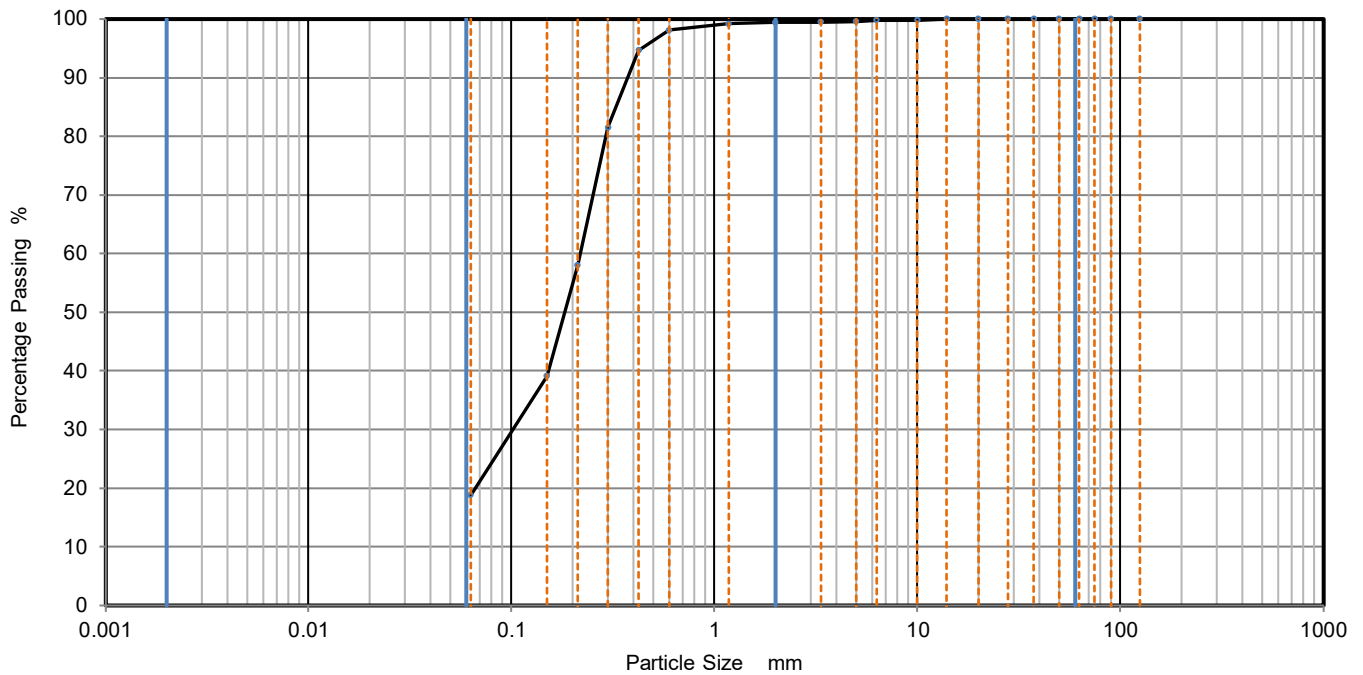
Remarks
Preparation and testing in accordance with BS EN ISO 17892-4:2016 unless noted below

Date	Approved By		UKAS Accredited Laboratory No. 20632
10/03/2022 11:26	N Hodson		

PARTICLE SIZE DISTRIBUTION

Job Ref	C10237
Borehole/Pit No.	TP16
Sample No.	1
Depth, m	2.50
Sample Type	B
KeyLAB ID	EAT_2022030210

Site Name	Newbold Verdon (PJSG21-47)		
Soil Description	Brown, Silty, Fine SAND		
Specimen Reference		Specimen Depth	m
Test Method	BS EN ISO 17892-4:2016 - Wet & Dry Sieving		

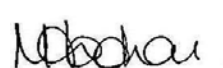


Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	99		
1.18	99		
0.6	98		
0.425	95		
0.3	82		
0.212	58		
0.15	39		
0.063	18.8		

Sample Proportions	% dry mass
Very coarse	0
Gravel	1
Sand	81
Fines <0.063mm	19

Grading Analysis	
D ₁₀₀	mm
D ₆₀	mm
D ₃₀	mm
D ₁₀	mm
Uniformity Coefficient	
Curvature Coefficient	

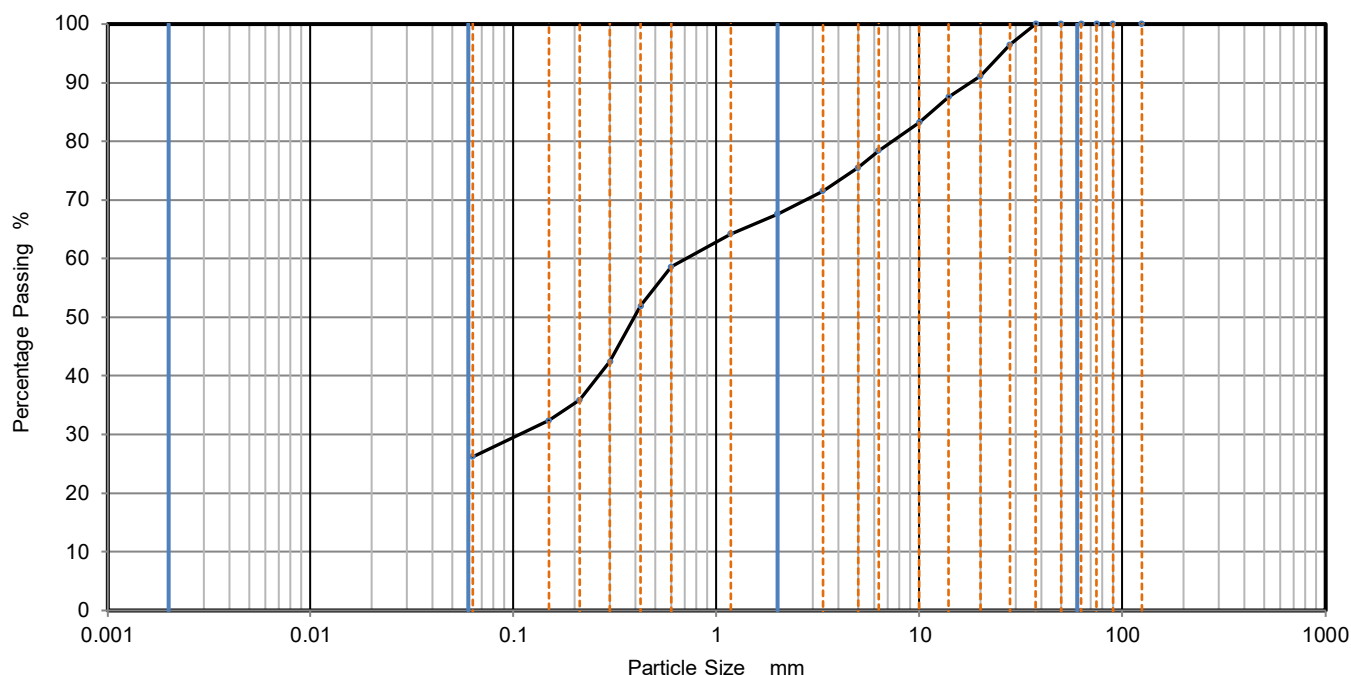
Remarks
Preparation and testing in accordance with BS EN ISO 17892-4:2016 unless noted below

Date	Approved By		UKAS Accredited Laboratory No. 20632
10/03/2022 11:26	N Hodson		

PARTICLE SIZE DISTRIBUTION

Job Ref	C10237
Borehole/Pit No.	TP18
Sample No.	1
Depth, m	2.70
Sample Type	B
KeyLAB ID	EAT_2022030211

Site Name	Newbold Verdon (PJSG21-47)		
Soil Description	Brown, Sandy, Gravelly CLAY (Wet)		
Specimen Reference		Specimen Depth	m
Test Method	BS EN ISO 17892-4:2016 - Wet & Dry Sieving		

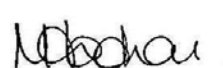


Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	97		
20	91		
14	88		
10	83		
6.3	78		
5	76		
3.35	72		
2	68		
1.18	64		
0.6	59		
0.425	52		
0.3	42		
0.212	36		
0.15	32		
0.063	26.2		

Sample Proportions	% dry mass
Very coarse	0
Gravel	32
Sand	41
Fines <0.063mm	26

Grading Analysis	
D ₁₀₀	mm
D ₆₀	mm
D ₃₀	mm
D ₁₀	mm
Uniformity Coefficient	
Curvature Coefficient	

Remarks
Preparation and testing in accordance with BS EN ISO 17892-4:2016 unless noted below

Date	Approved By		UKAS Accredited Laboratory No. 20632
10/03/2022 11:27	N Hodson		

Appendix F: DCP Testing Results



Date of Test: 23/02/2022
 Location: Newbold Verdon
 Contract No: C10237

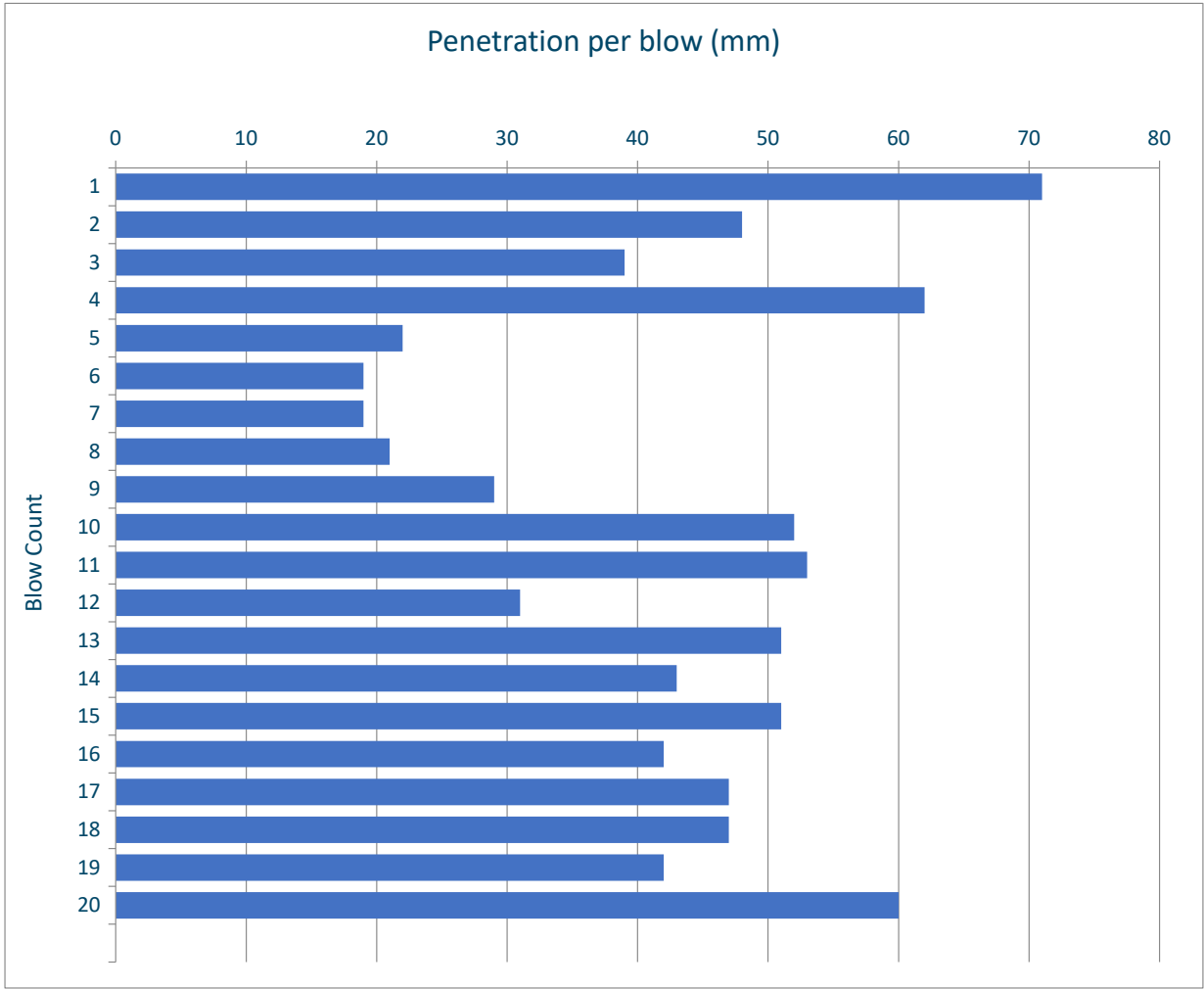
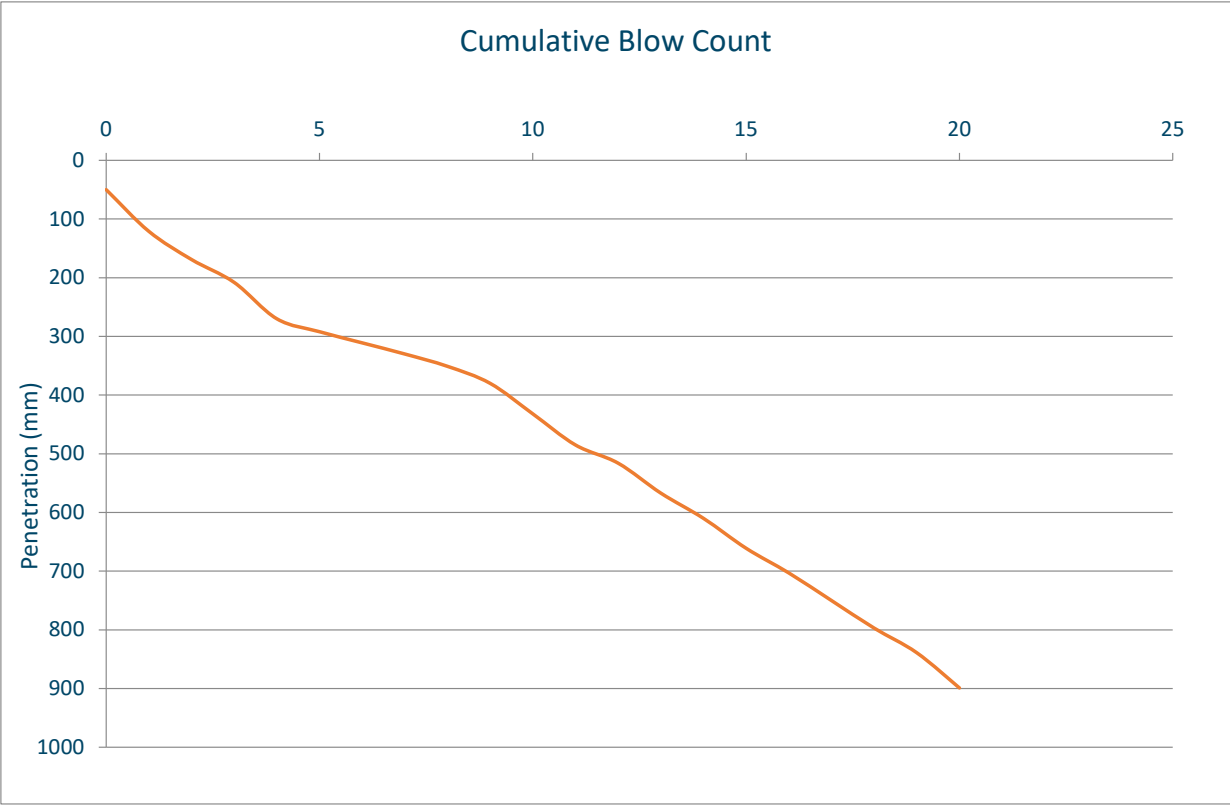
Dynamic Cone Penetrometer (DCP)



Location	DCP01	Zero (mm)			
Depth of cone at start of test (m)	0.050	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	85	50	0.050	N/A	N/A
1	156	121	0.121	71	3.3
2	204	169	0.169	48	5.0
3	243	208	0.208	39	6.3
4	305	270	0.270	62	3.8
5	327	292	0.292	22	11.5
6	346	311	0.311	19	13.4
7	365	330	0.330	19	13.4
8	386	351	0.351	21	12.1
9	415	380	0.380	29	8.6
10	467	432	0.432	52	4.6
11	520	485	0.485	53	4.5
12	551	516	0.516	31	8.0
13	602	567	0.567	51	4.7
14	645	610	0.610	43	5.7
15	696	661	0.661	51	4.7
16	738	703	0.703	42	5.8
17	785	750	0.750	47	5.2
18	832	797	0.797	47	5.2
19	874	839	0.839	42	5.8
20	934	899	0.899	60	4.0

Remarks:

Easting	444469
Northing	303228
Level (mAOD)	N/A



Date of Test: 23/02/2022
 Location: Newbold Verdon
 Contract No: C10237

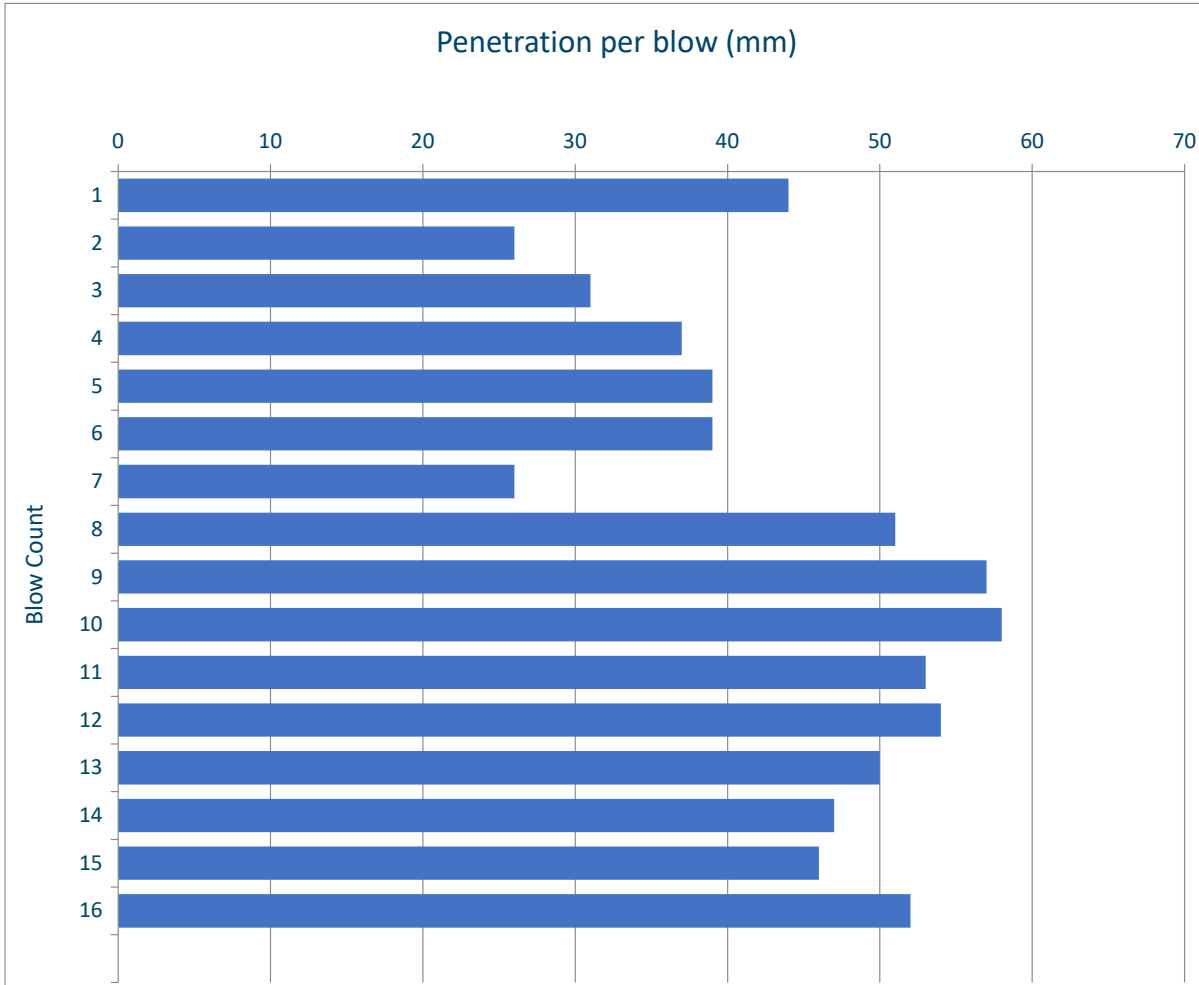
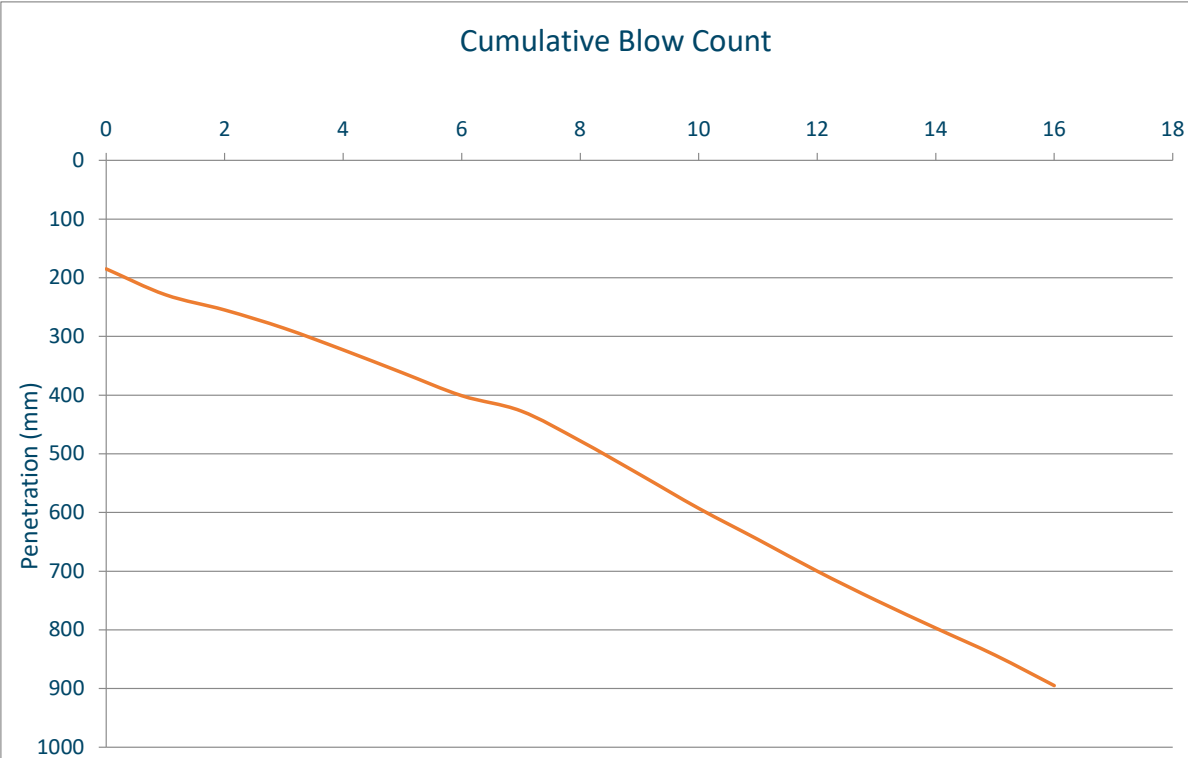
Dynamic Cone Penetrometer (DCP)



Location	DCP02	Zero (mm)			
Depth of cone at start of test (m)	0.185	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	220	185	0.185	N/A	N/A
1	264	229	0.229	44	5.5
2	290	255	0.255	26	9.6
3	321	286	0.286	31	8.0
4	358	323	0.323	37	6.6
5	397	362	0.362	39	6.3
6	436	401	0.401	39	6.3
7	462	427	0.427	26	9.6
8	513	478	0.478	51	4.7
9	570	535	0.535	57	4.2
10	628	593	0.593	58	4.1
11	681	646	0.646	53	4.5
12	735	700	0.700	54	4.5
13	785	750	0.750	50	4.8
14	832	797	0.797	47	5.2
15	878	843	0.843	46	5.3
16	930	895	0.895	52	4.6

Remarks:

Easting	444561
Northing	303194
Level (mAOD)	N/A

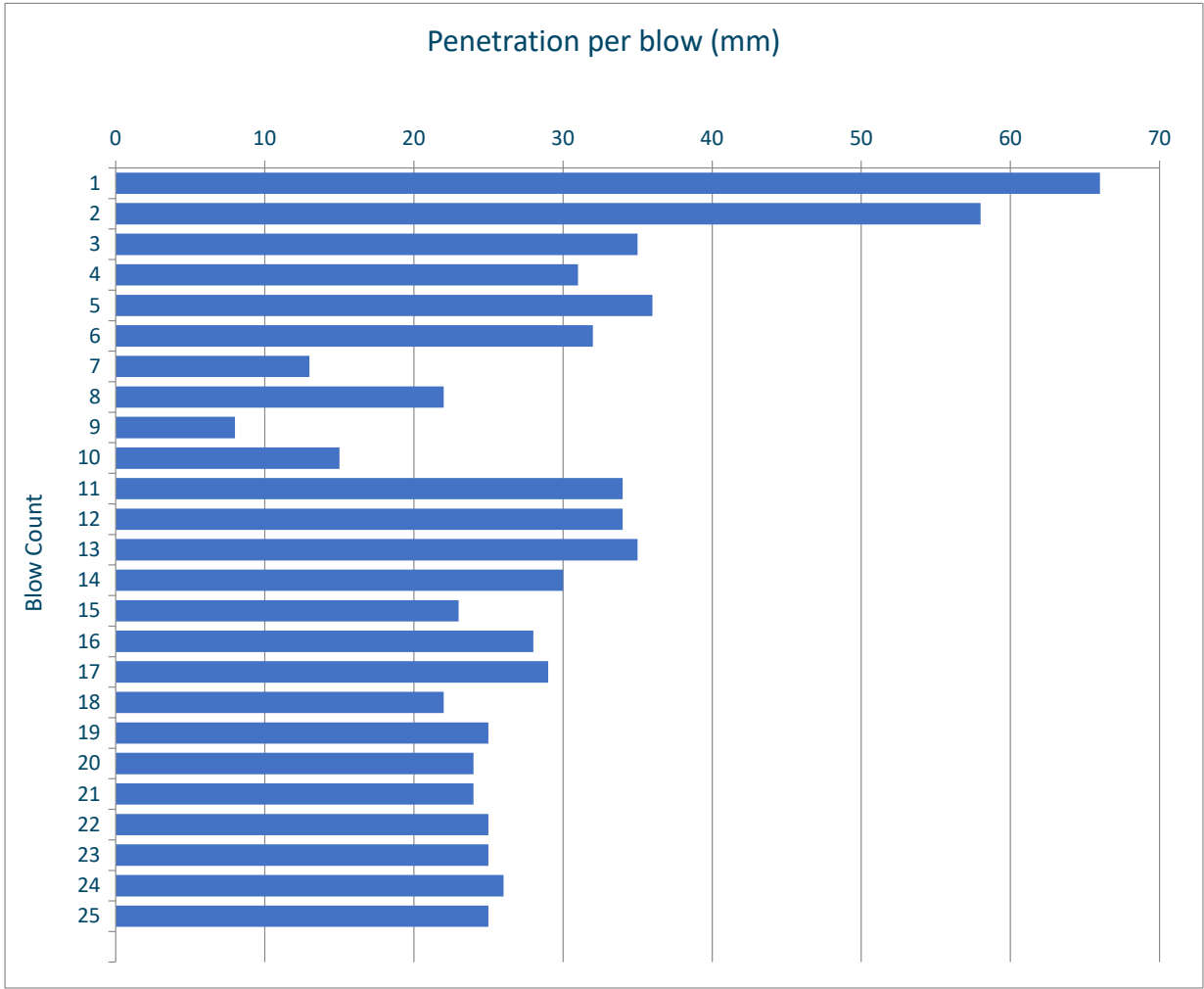
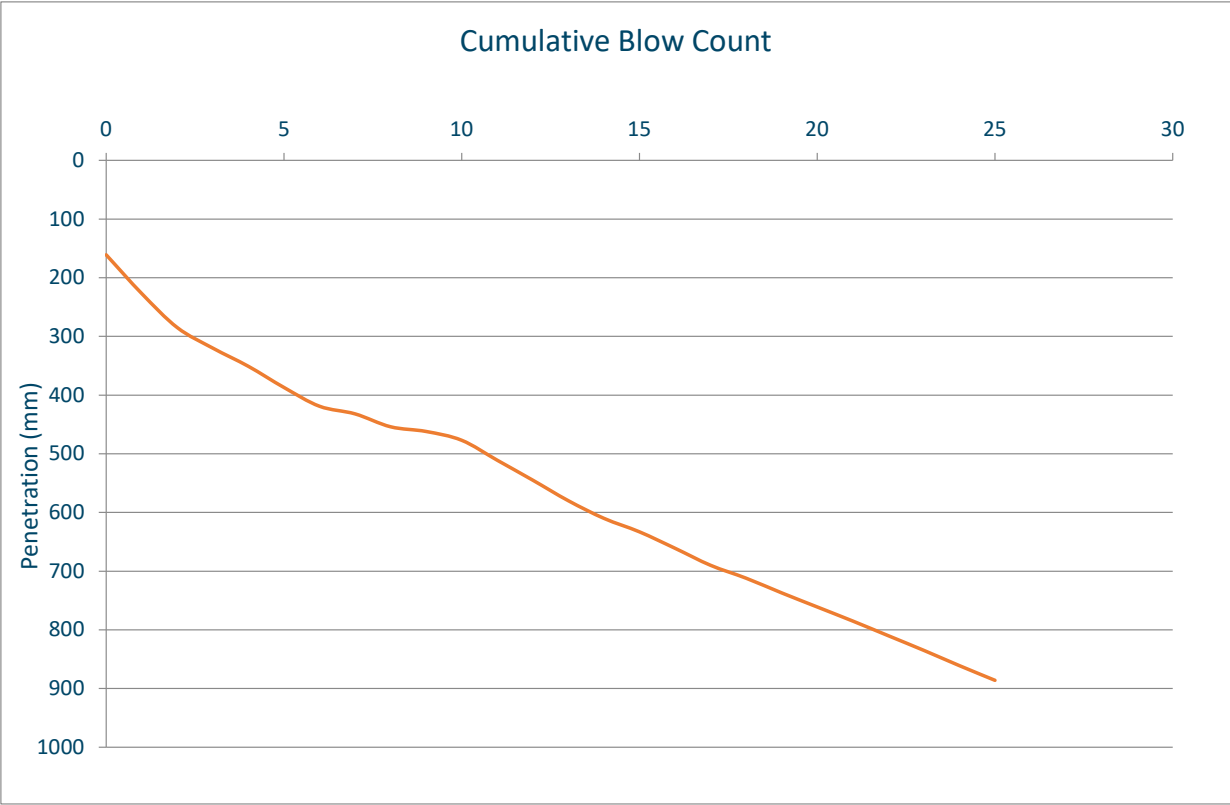


Date of Test: 23/02/2022
 Location: Newbold Verdon
 Contract No: C10237

Dynamic Cone Penetrometer (DCP)



Location	DCP03	Zero (mm)			
Depth of cone at start of test (m)	0.161	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	196	161	0.161	N/A	N/A
1	262	227	0.227	66	3.6
2	320	285	0.285	58	4.1
3	355	320	0.320	35	7.0
4	386	351	0.351	31	8.0
5	422	387	0.387	36	6.8
6	454	419	0.419	32	7.7
7	467	432	0.432	13	20.1
8	489	454	0.454	22	11.5
9	497	462	0.462	8	33.5
10	512	477	0.477	15	17.3
11	546	511	0.511	34	7.3
12	580	545	0.545	34	7.3
13	615	580	0.580	35	7.0
14	645	610	0.610	30	8.3
15	668	633	0.633	23	11.0
16	696	661	0.661	28	8.9
17	725	690	0.690	29	8.6
18	747	712	0.712	22	11.5
19	772	737	0.737	25	10.1
20	796	761	0.761	24	10.5
21	820	785	0.785	24	10.5
22	845	810	0.810	25	10.1
23	870	835	0.835	25	10.1
24	896	861	0.861	26	9.6
25	921	886	0.886	25	10.1
Remarks:			Easting	444640	
			Northing	303195	
			Level (mAOD)	N/A	

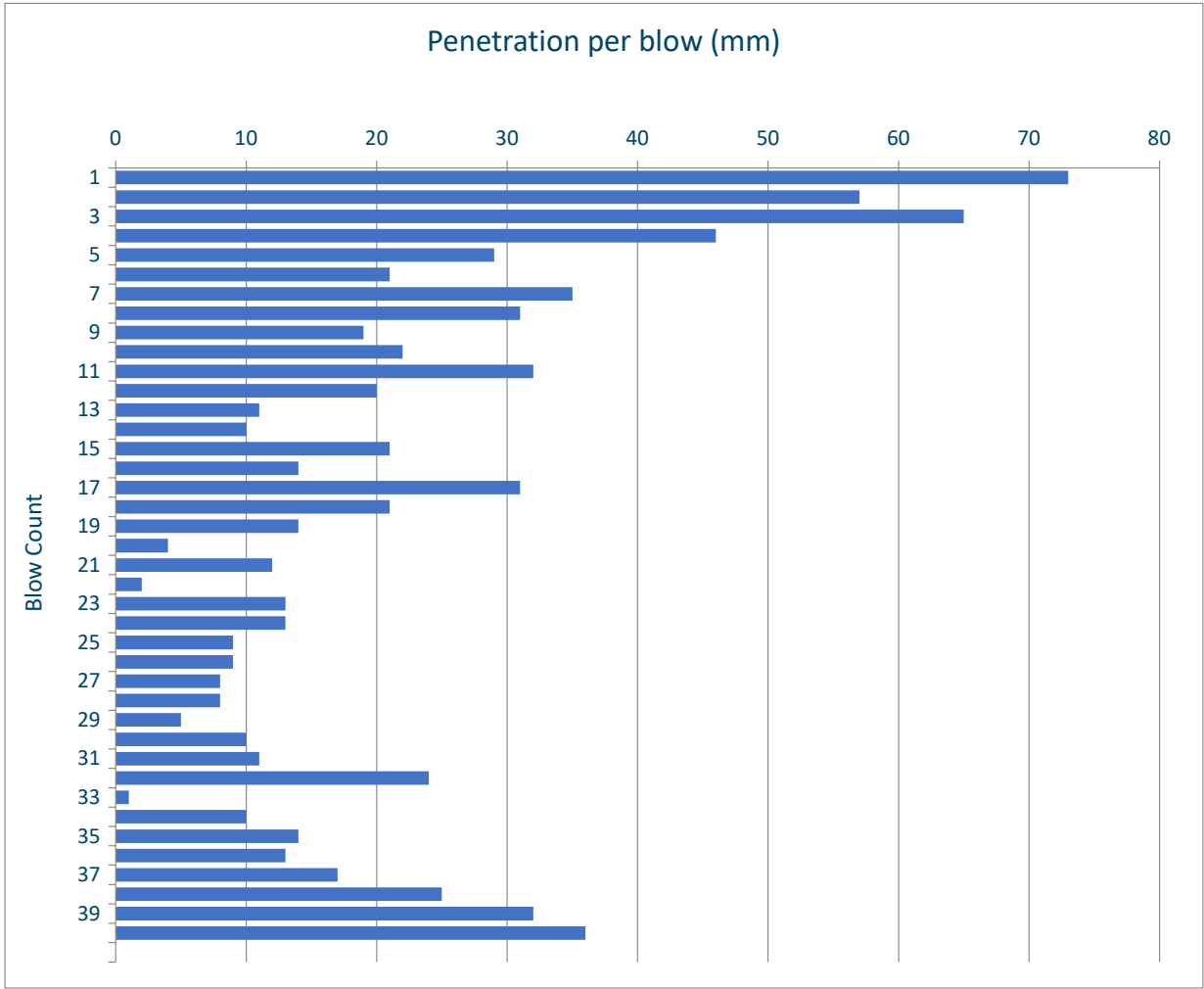
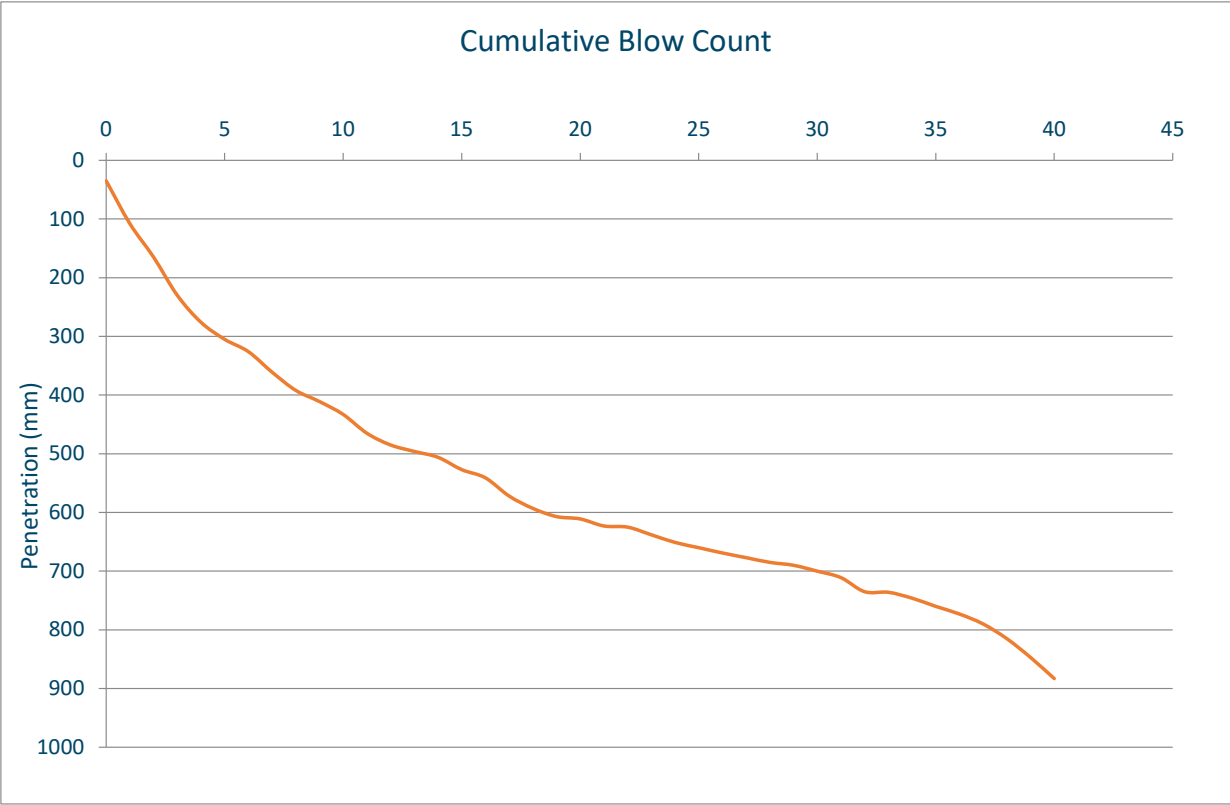


Date of Test: 23/02/2022
 Location: Newbold Verdon
 Contract No: C10237

Dynamic Cone Penetrometer (DCP)



Location	DCP04	Zero (mm)			
Depth of cone at start of test (m)	0.035	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	70	35	0.035	N/A	N/A
1	143	108	0.108	73	3.2
2	200	165	0.165	57	4.2
3	265	230	0.230	65	3.7
4	311	276	0.276	46	5.3
5	340	305	0.305	29	8.6
6	361	326	0.326	21	12.1
7	396	361	0.361	35	7.0
8	427	392	0.392	31	8.0
9	446	411	0.411	19	13.4
10	468	433	0.433	22	11.5
11	500	465	0.465	32	7.7
12	520	485	0.485	20	12.7
13	531	496	0.496	11	23.9
14	541	506	0.506	10	26.5
15	562	527	0.527	21	12.1
16	576	541	0.541	14	18.6
17	607	572	0.572	31	8.0
18	628	593	0.593	21	12.1
19	642	607	0.607	14	18.6
20	646	611	0.611	4	69.8
21	658	623	0.623	12	21.8
22	660	625	0.625	2	145.1
23	673	638	0.638	13	20.1
24	686	651	0.651	13	20.1
25	695	660	0.660	9	29.6
26	704	669	0.669	9	29.6
27	712	677	0.677	8	33.5
28	720	685	0.685	8	33.5
29	725	690	0.690	5	55.1
30	735	700	0.700	10	26.5
31	746	711	0.711	11	23.9
32	770	735	0.735	24	10.5
33	771	736	0.736	1	302.0
34	781	746	0.746	10	26.5
35	795	760	0.760	14	18.6
36	808	773	0.773	13	20.1
37	825	790	0.790	17	15.1
38	850	815	0.815	25	10.1
39	882	847	0.847	32	7.7
40	918	883	0.883	36	6.8
Remarks:			Easting	444432	
			Northing	303157	
			Level (mAOD)	N/A	

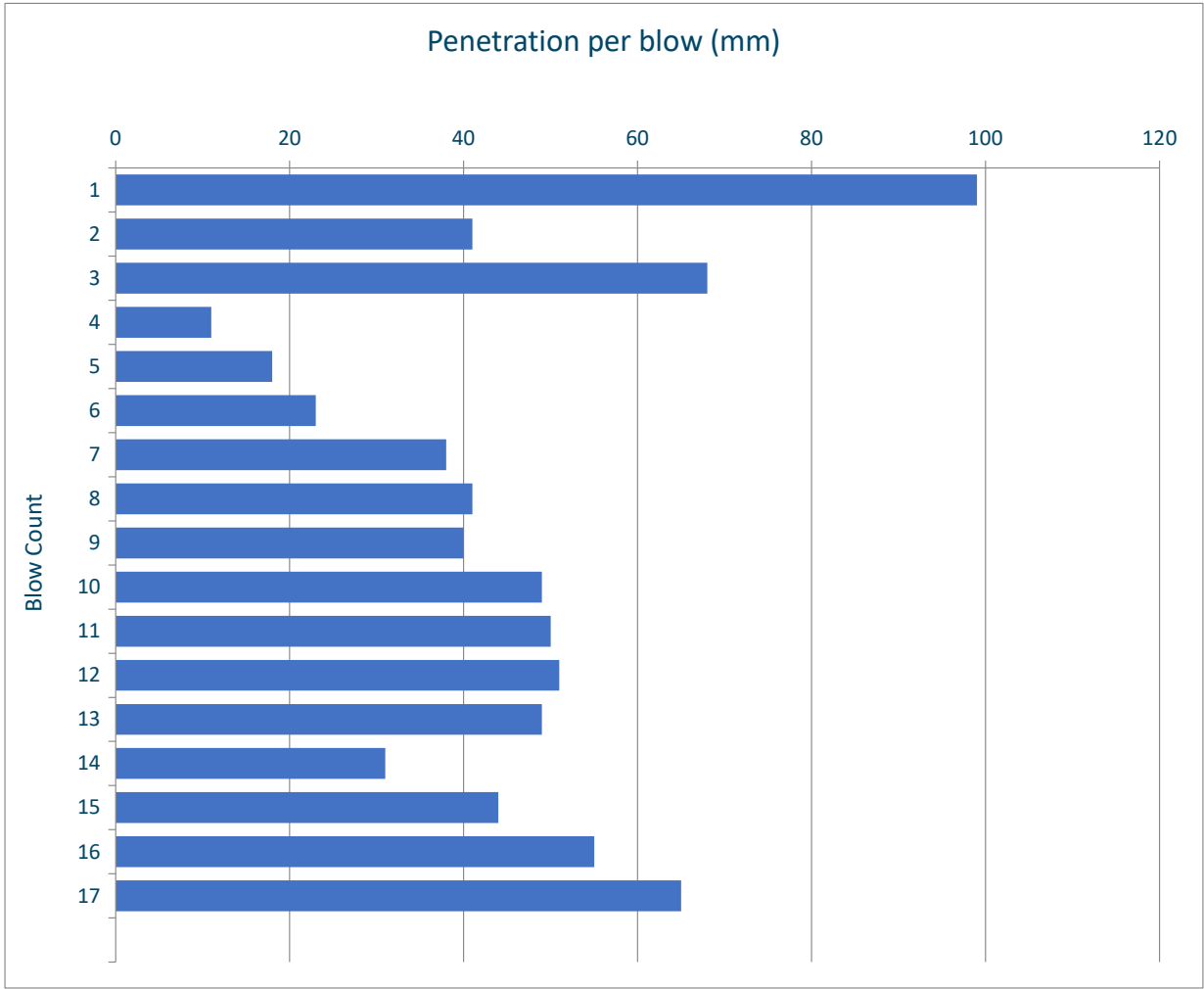
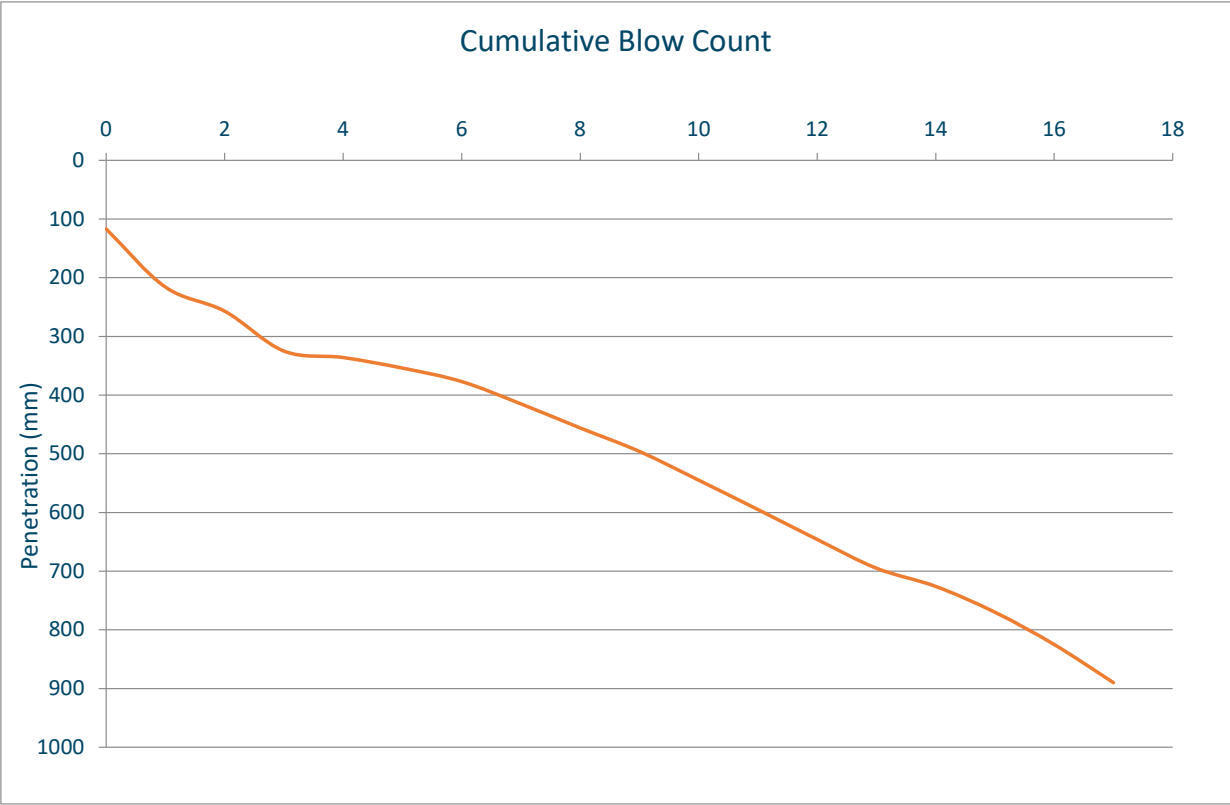


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Dynamic Cone Penetrometer (DCP)



Location		DCP05	Zero (mm)		
Depth of cone at start of test (m)		0.117	35		
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/ blow (mm)	CBR (%) [Ref. CS 229]
0	152	117	0.117	N/A	N/A
1	251	216	0.216	99	2.3
2	292	257	0.257	41	6.0
3	360	325	0.325	68	3.5
4	371	336	0.336	11	23.9
5	389	354	0.354	18	14.2
6	412	377	0.377	23	11.0
7	450	415	0.415	38	6.5
8	491	456	0.456	41	6.0
9	531	496	0.496	40	6.1
10	580	545	0.545	49	4.9
11	630	595	0.595	50	4.8
12	681	646	0.646	51	4.7
13	730	695	0.695	49	4.9
14	761	726	0.726	31	8.0
15	805	770	0.770	44	5.5
16	860	825	0.825	55	4.4
17	925	890	0.890	65	3.7
Remarks:				Easting	444560
				Northing	303133
				Level (mAOD)	N/A



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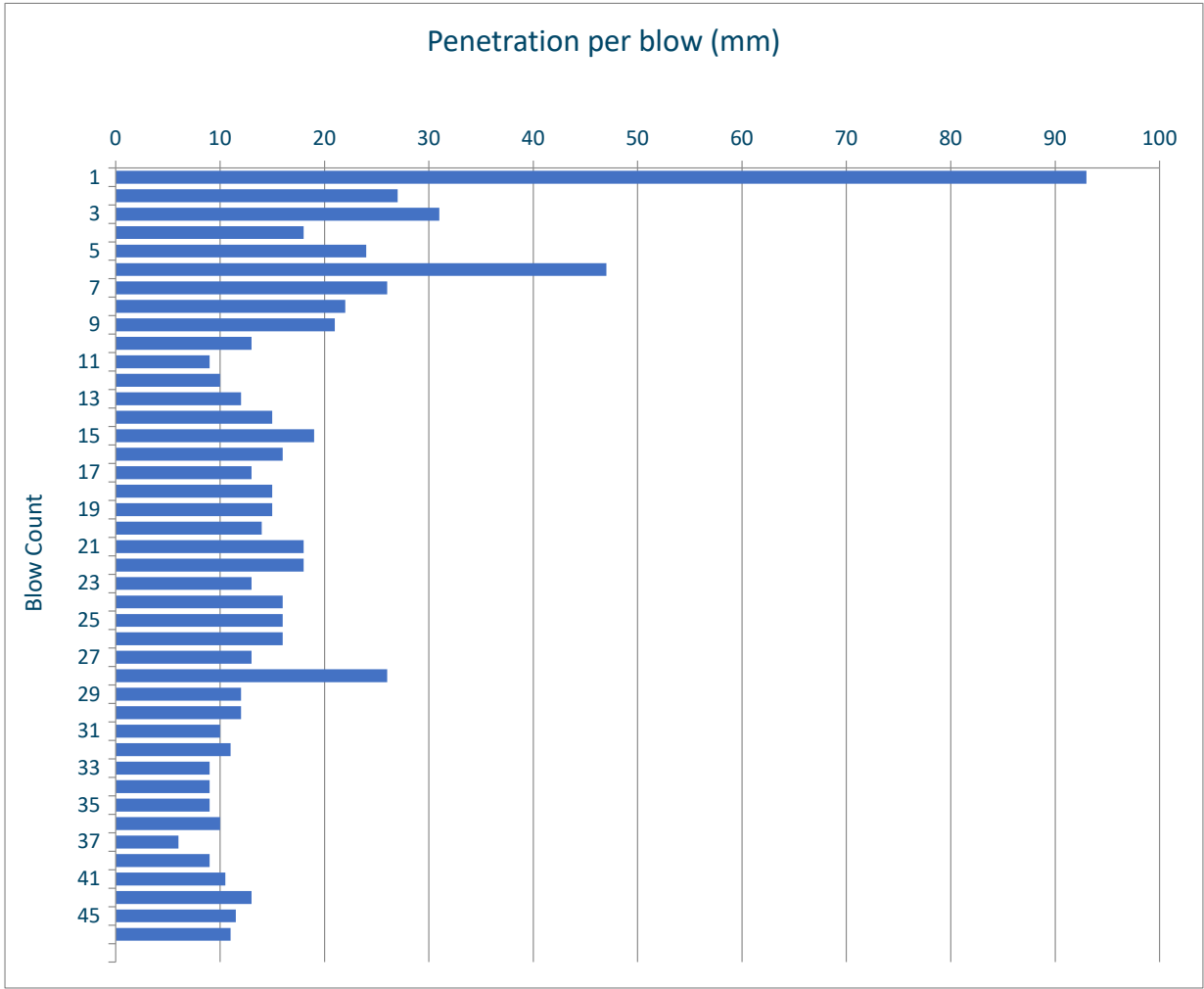
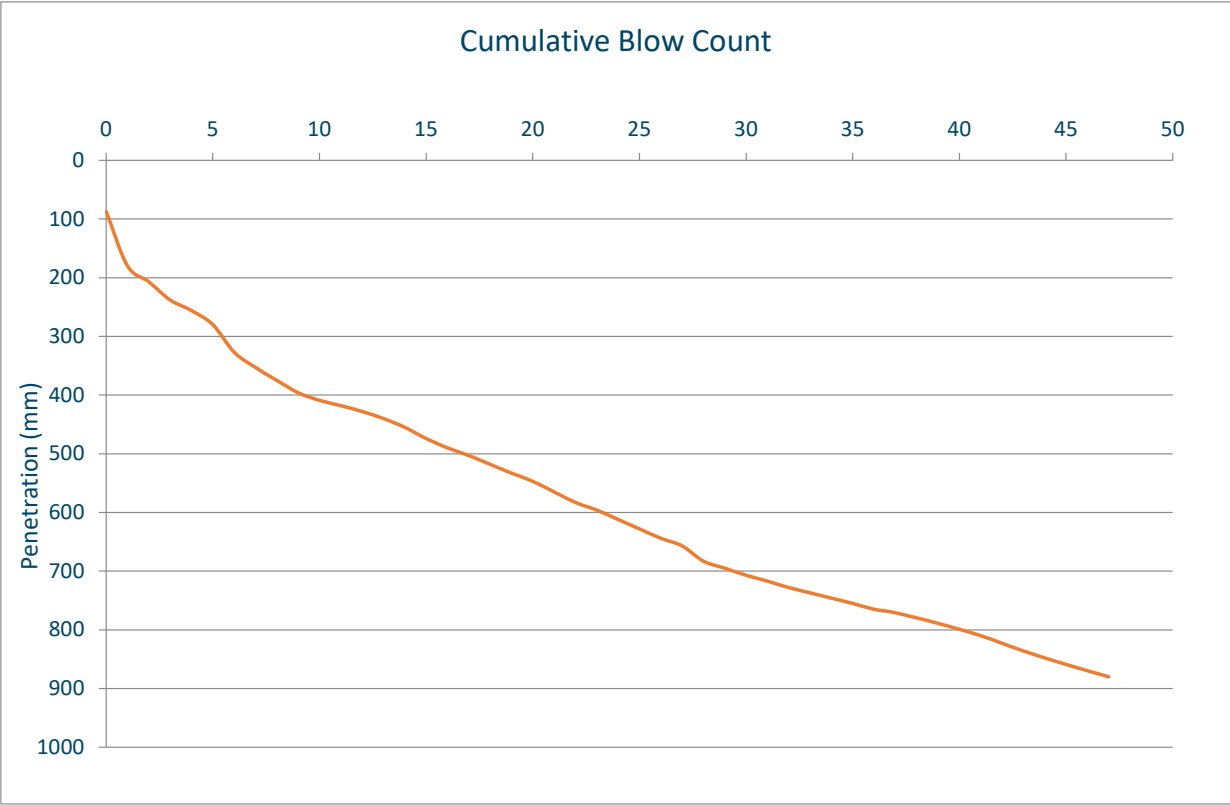
Dynamic Cone Penetrometer (DCP)



Location	DCP06	Zero (mm)			
Depth of cone at start of test (m)	0.087	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	122	87	0.087	N/A	N/A
1	215	180	0.180	93	2.5
2	242	207	0.207	27	9.3
3	273	238	0.238	31	8.0
4	291	256	0.256	18	14.2
5	315	280	0.280	24	10.5
6	362	327	0.327	47	5.2
7	388	353	0.353	26	9.6
8	410	375	0.375	22	11.5
9	431	396	0.396	21	12.1
10	444	409	0.409	13	20.1
11	453	418	0.418	9	29.6
12	463	428	0.428	10	26.5
13	475	440	0.440	12	21.8
14	490	455	0.455	15	17.3
15	509	474	0.474	19	13.4
16	525	490	0.490	16	16.1
17	538	503	0.503	13	20.1
18	553	518	0.518	15	17.3
19	568	533	0.533	15	17.3
20	582	547	0.547	14	18.6
21	600	565	0.565	18	14.2
22	618	583	0.583	18	14.2
23	631	596	0.596	13	20.1
24	647	612	0.612	16	16.1
25	663	628	0.628	16	16.1
26	679	644	0.644	16	16.1
27	692	657	0.657	13	20.1
28	718	683	0.683	26	9.6
29	730	695	0.695	12	21.8
30	742	707	0.707	12	21.8
31	752	717	0.717	10	26.5
32	763	728	0.728	11	23.9
33	772	737	0.737	9	29.6
34	781	746	0.746	9	29.6
35	790	755	0.755	9	29.6
36	800	765	0.765	10	26.5
37	806	771	0.771	6	45.4
39	824	789	0.789	9	29.6
41	845	810	0.810	11	25.2
43	871	836	0.836	13	20.1
45	894	859	0.859	12	22.8
47	915	880	0.880	11	23.9

Remarks:

Easting	444653
Northing	303104
Level (mAOD)	N/A

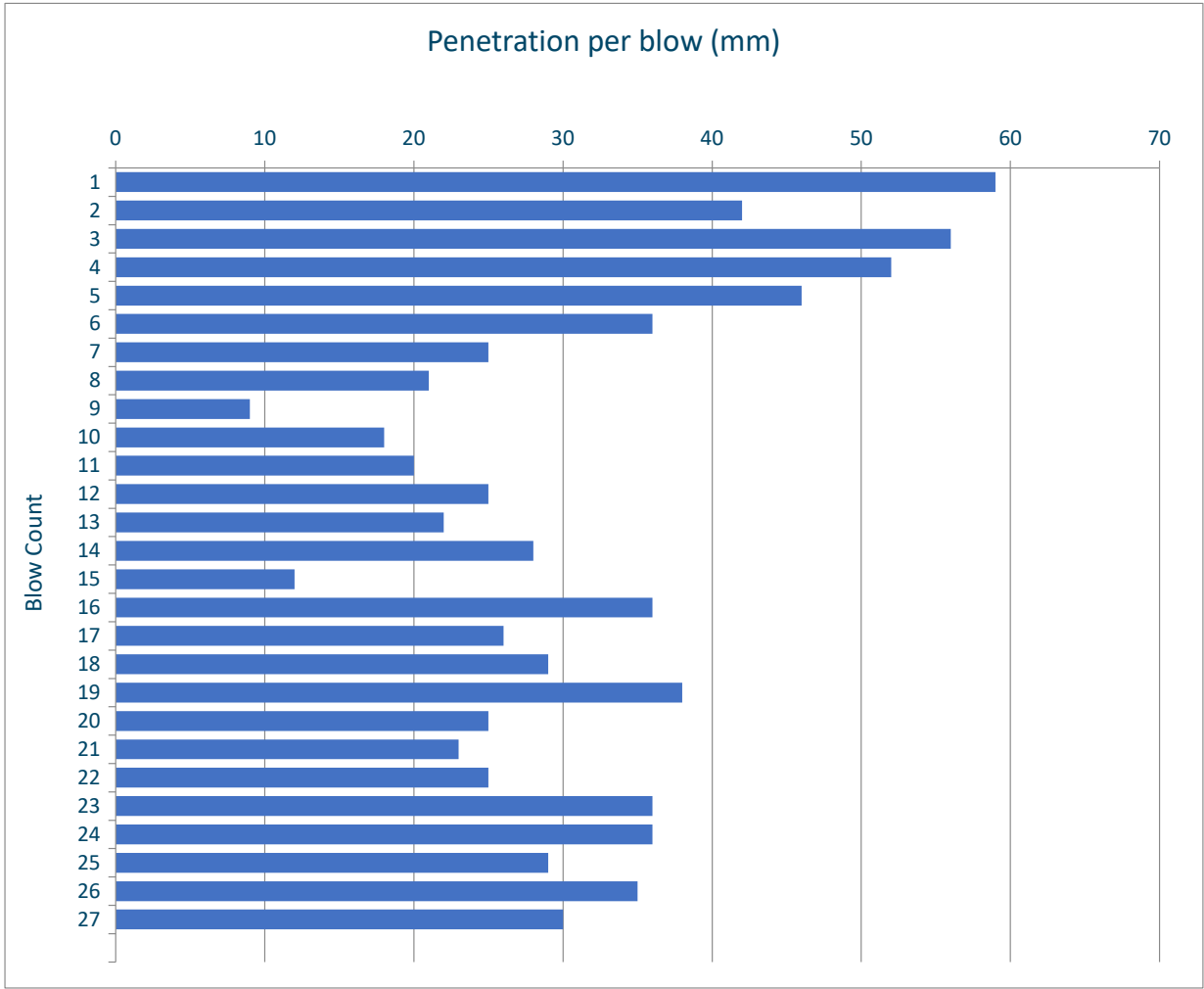
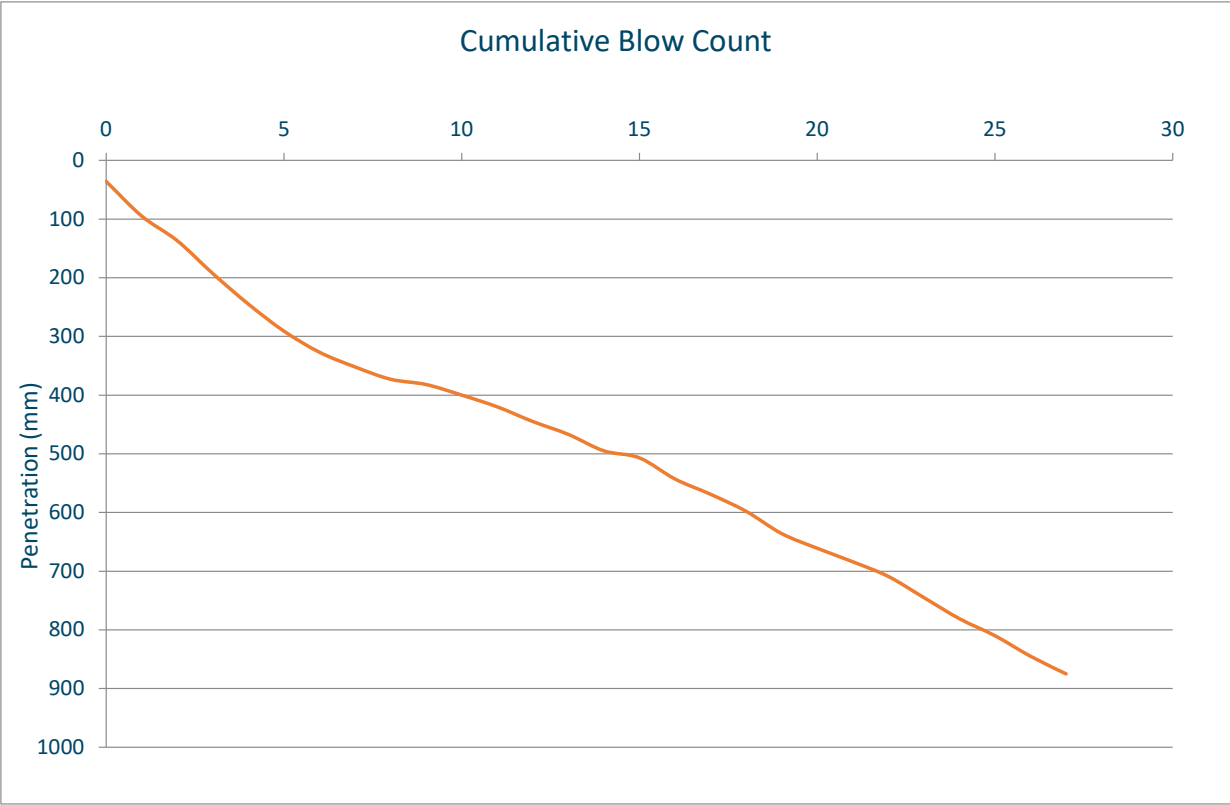


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Dynamic Cone Penetrometer (DCP)



Location	DCP07	Zero (mm)			
Depth of cone at start of test (m)	0.036	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	71	36	0.036	N/A	N/A
1	130	95	0.095	59	4.1
2	172	137	0.137	42	5.8
3	228	193	0.193	56	4.3
4	280	245	0.245	52	4.6
5	326	291	0.291	46	5.3
6	362	327	0.327	36	6.8
7	387	352	0.352	25	10.1
8	408	373	0.373	21	12.1
9	417	382	0.382	9	29.6
10	435	400	0.400	18	14.2
11	455	420	0.420	20	12.7
12	480	445	0.445	25	10.1
13	502	467	0.467	22	11.5
14	530	495	0.495	28	8.9
15	542	507	0.507	12	21.8
16	578	543	0.543	36	6.8
17	604	569	0.569	26	9.6
18	633	598	0.598	29	8.6
19	671	636	0.636	38	6.5
20	696	661	0.661	25	10.1
21	719	684	0.684	23	11.0
22	744	709	0.709	25	10.1
23	780	745	0.745	36	6.8
24	816	781	0.781	36	6.8
25	845	810	0.810	29	8.6
26	880	845	0.845	35	7.0
27	910	875	0.875	30	8.3
Remarks:				Easting	444484
				Northing	303079
				Level (mAOD)	N/A



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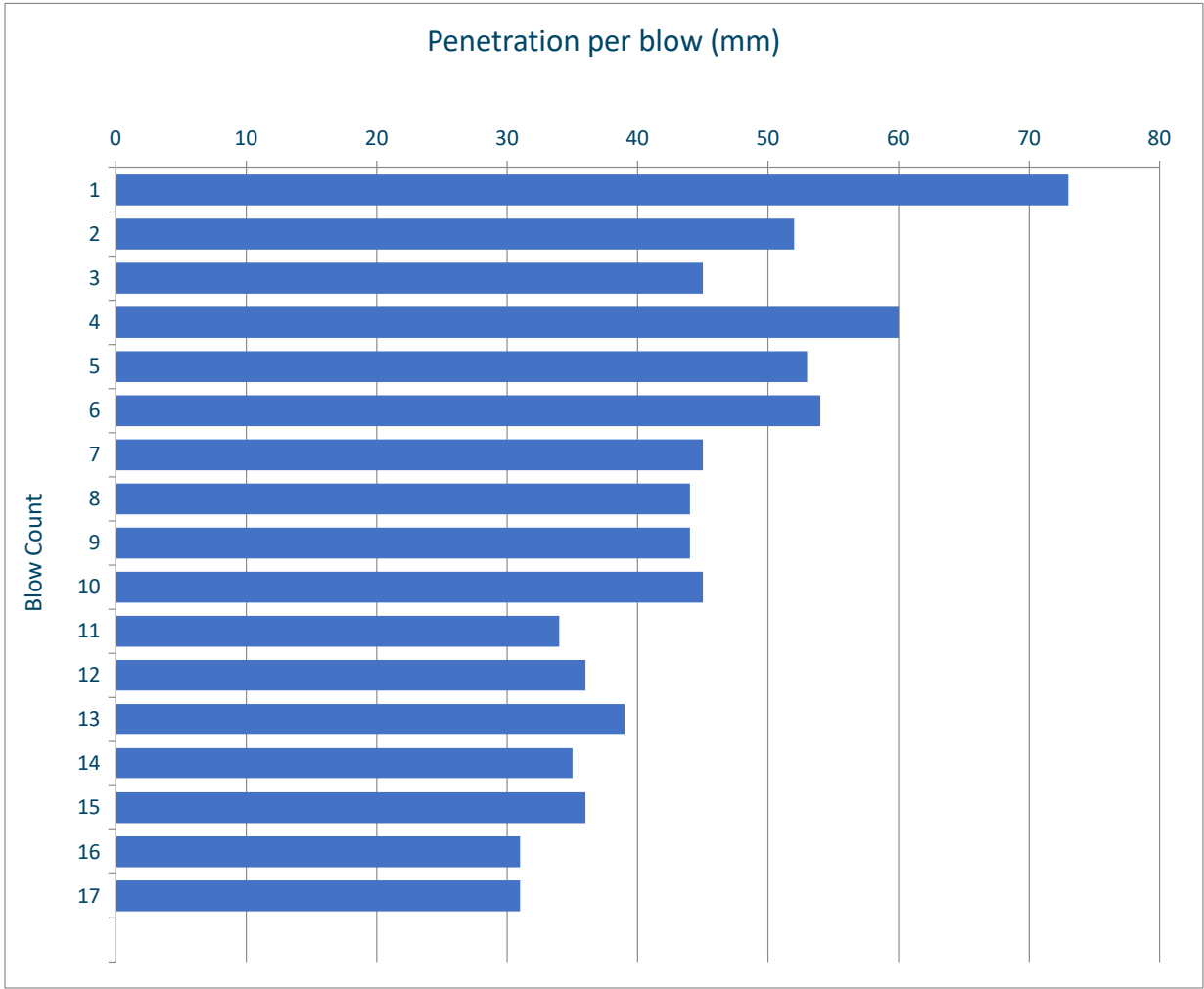
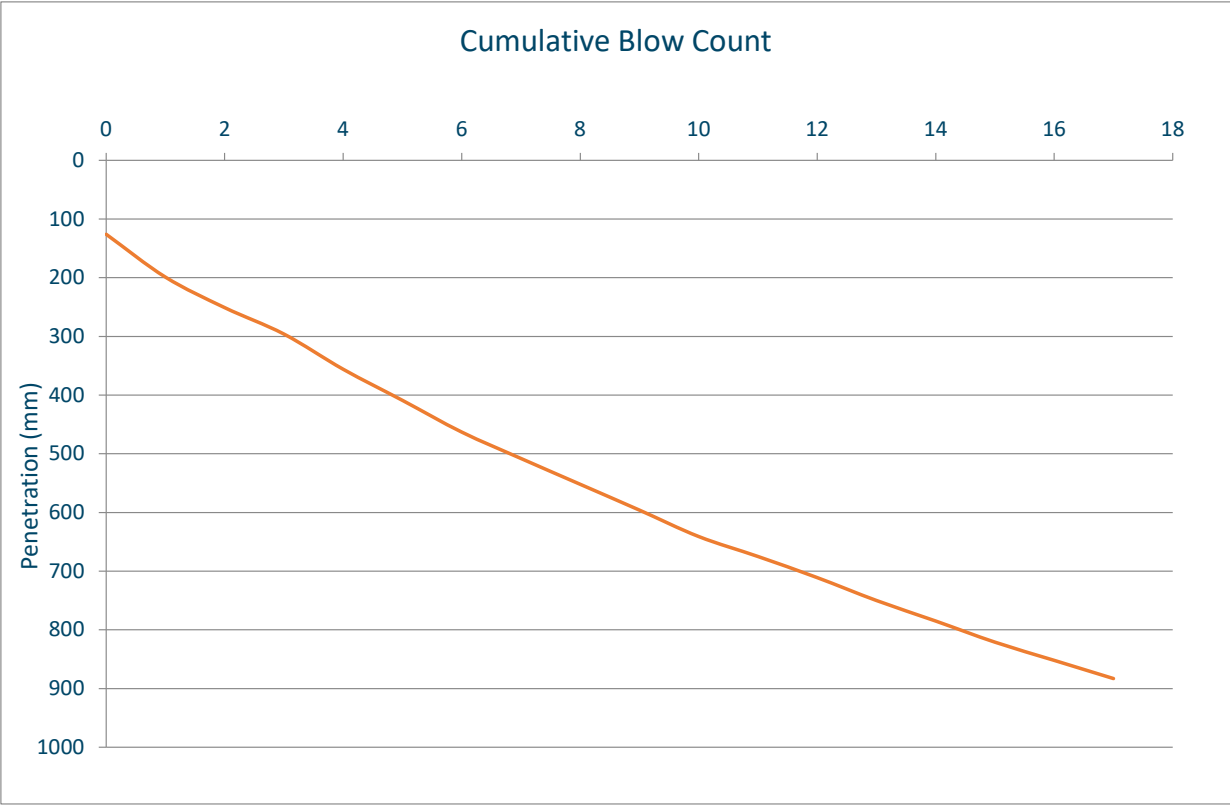
Dynamic Cone Penetrometer (DCP)



Location	DCP08	Zero (mm)			
Depth of cone at start of test (m)	0.126	35			
Cumulative Blow Count	Guage Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	161	126	0.126	N/A	N/A
1	234	199	0.199	73	3.2
2	286	251	0.251	52	4.6
3	331	296	0.296	45	5.4
4	391	356	0.356	60	4.0
5	444	409	0.409	53	4.5
6	498	463	0.463	54	4.5
7	543	508	0.508	45	5.4
8	587	552	0.552	44	5.5
9	631	596	0.596	44	5.5
10	676	641	0.641	45	5.4
11	710	675	0.675	34	7.3
12	746	711	0.711	36	6.8
13	785	750	0.750	39	6.3
14	820	785	0.785	35	7.0
15	856	821	0.821	36	6.8
16	887	852	0.852	31	8.0
17	918	883	0.883	31	8.0

Remarks:

Easting	444589
Northing	303028
Level (mAOD)	N/A



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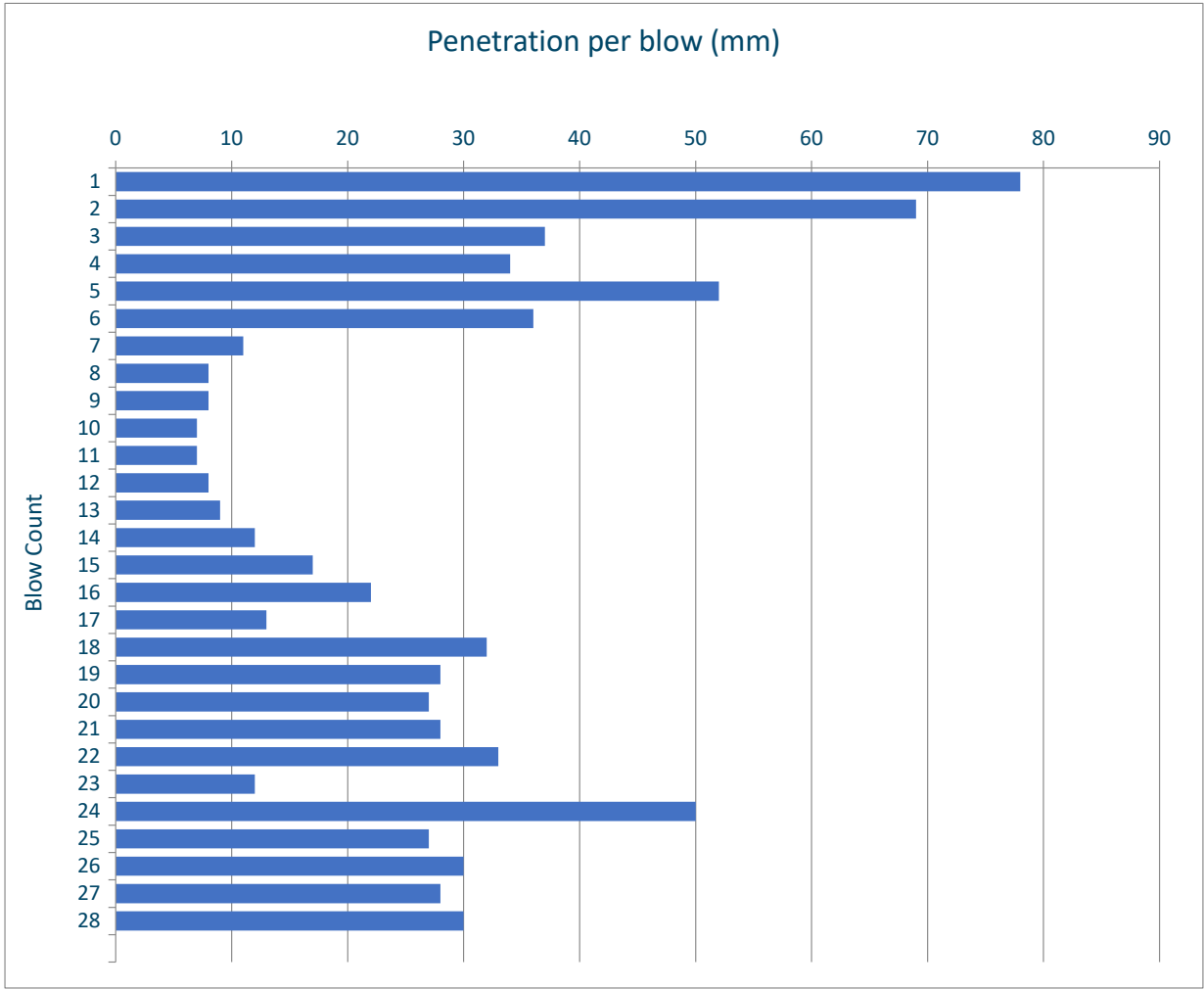
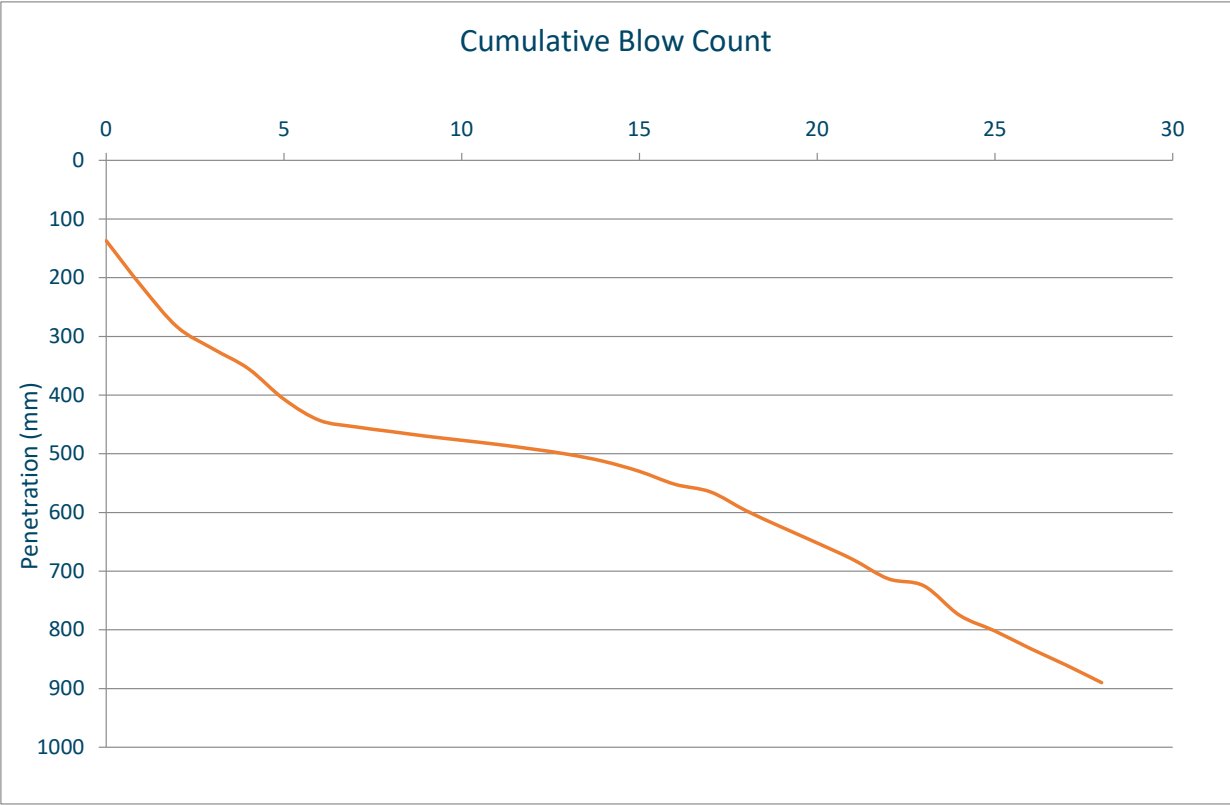
Dynamic Cone Penetrometer (DCP)



Location	DCP09	Zero (mm)			
Depth of cone at start of test (m)	0.137	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	172	137	0.137	N/A	N/A
1	250	215	0.215	78	3.0
2	319	284	0.284	69	3.4
3	356	321	0.321	37	6.6
4	390	355	0.355	34	7.3
5	442	407	0.407	52	4.6
6	478	443	0.443	36	6.8
7	489	454	0.454	11	23.9
8	497	462	0.462	8	33.5
9	505	470	0.470	8	33.5
10	512	477	0.477	7	38.6
11	519	484	0.484	7	38.6
12	527	492	0.492	8	33.5
13	536	501	0.501	9	29.6
14	548	513	0.513	12	21.8
15	565	530	0.530	17	15.1
16	587	552	0.552	22	11.5
17	600	565	0.565	13	20.1
18	632	597	0.597	32	7.7
19	660	625	0.625	28	8.9
20	687	652	0.652	27	9.3
21	715	680	0.680	28	8.9
22	748	713	0.713	33	7.5
23	760	725	0.725	12	21.8
24	810	775	0.775	50	4.8
25	837	802	0.802	27	9.3
26	867	832	0.832	30	8.3
27	895	860	0.860	28	8.9
28	925	890	0.890	30	8.3

Remarks:

Easting	444719
Northing	303094
Level (mAOD)	N/A

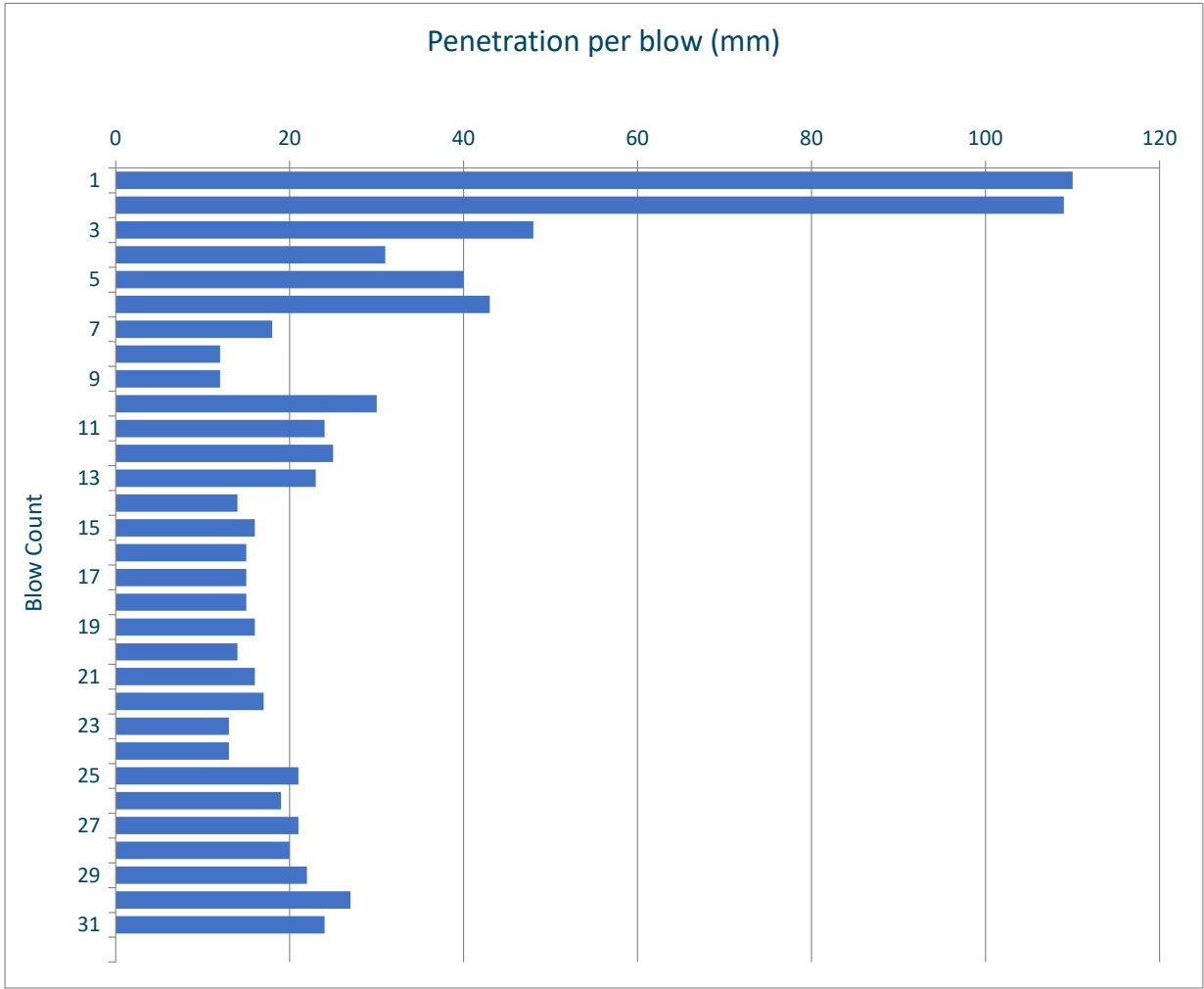
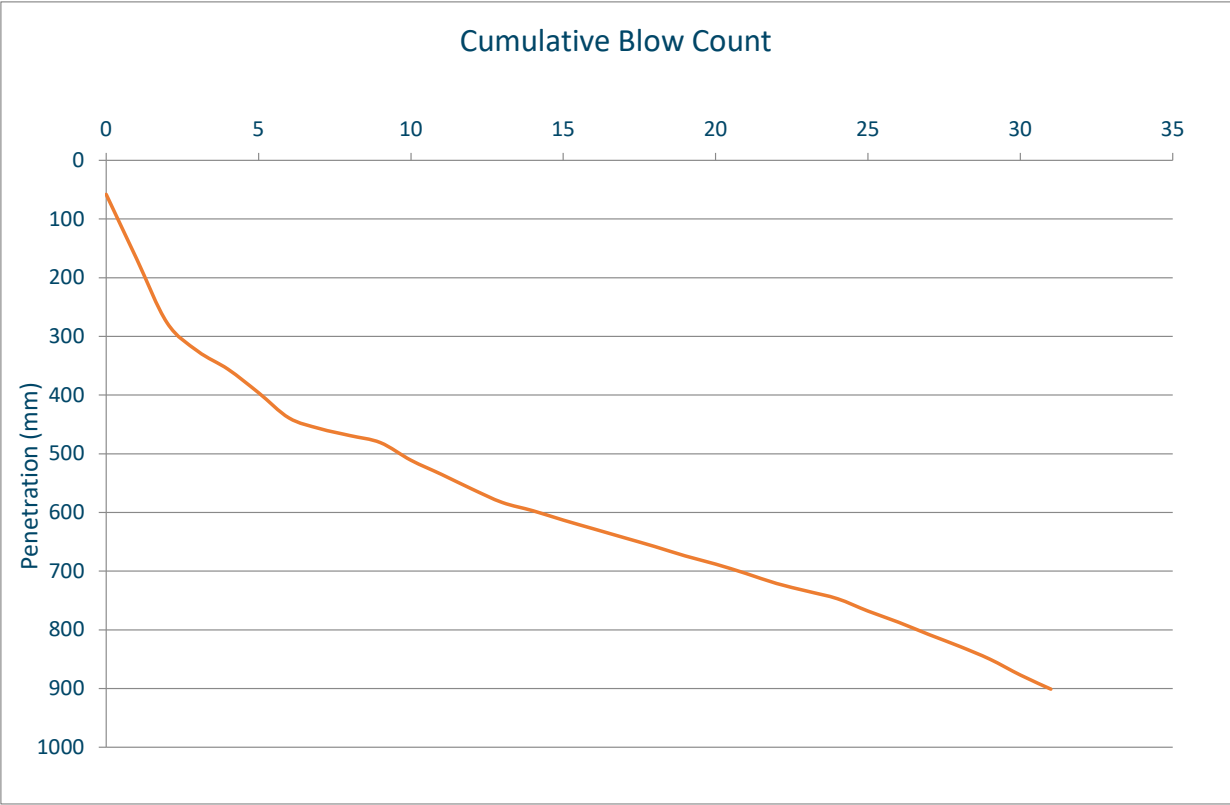


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Dynamic Cone Penetrometer (DCP)



Location	DCP10	Zero (mm)			
Depth of cone at start of test (m)	0.058	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	93	58	0.058	N/A	N/A
1	203	168	0.168	110	2.1
2	312	277	0.277	109	2.1
3	360	325	0.325	48	5.0
4	391	356	0.356	31	8.0
5	431	396	0.396	40	6.1
6	474	439	0.439	43	5.7
7	492	457	0.457	18	14.2
8	504	469	0.469	12	21.8
9	516	481	0.481	12	21.8
10	546	511	0.511	30	8.3
11	570	535	0.535	24	10.5
12	595	560	0.560	25	10.1
13	618	583	0.583	23	11.0
14	632	597	0.597	14	18.6
15	648	613	0.613	16	16.1
16	663	628	0.628	15	17.3
17	678	643	0.643	15	17.3
18	693	658	0.658	15	17.3
19	709	674	0.674	16	16.1
20	723	688	0.688	14	18.6
21	739	704	0.704	16	16.1
22	756	721	0.721	17	15.1
23	769	734	0.734	13	20.1
24	782	747	0.747	13	20.1
25	803	768	0.768	21	12.1
26	822	787	0.787	19	13.4
27	843	808	0.808	21	12.1
28	863	828	0.828	20	12.7
29	885	850	0.850	22	11.5
30	912	877	0.877	27	9.3
31	936	901	0.901	24	10.5
Remarks:			Easting	444844	
			Northing	303132	
			Level (mAOD)	N/A	



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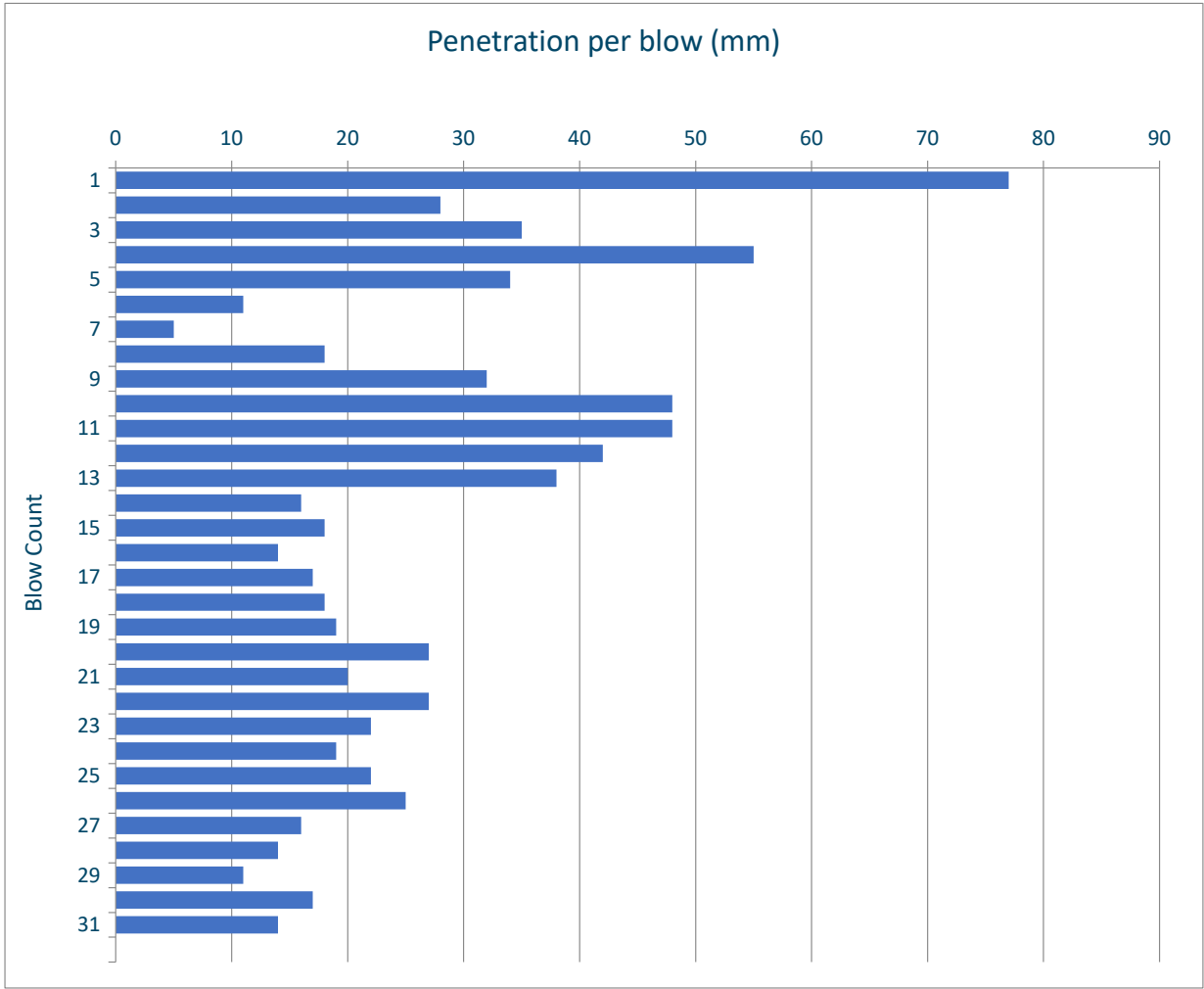
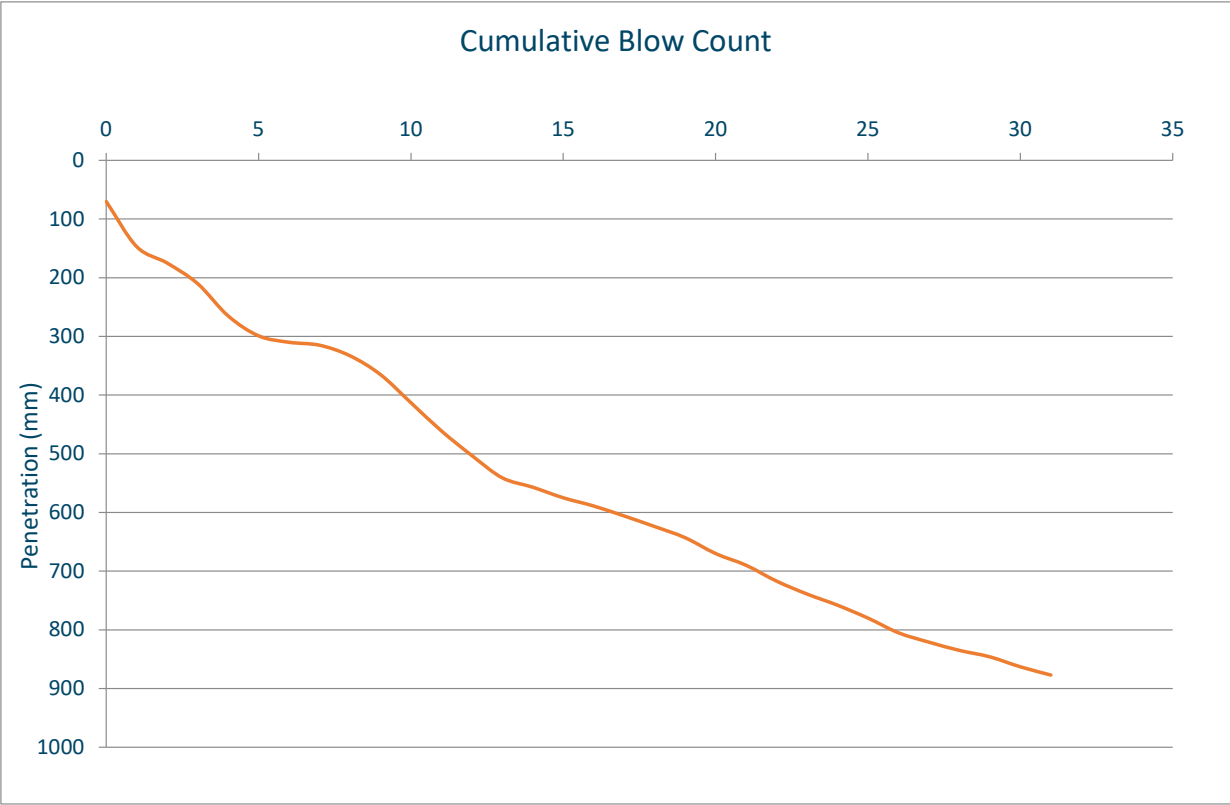
Dynamic Cone Penetrometer (DCP)



Location	DCP11	Zero (mm)			
Depth of cone at start of test (m)	0.070	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	105	70	0.070	N/A	N/A
1	182	147	0.147	77	3.1
2	210	175	0.175	28	8.9
3	245	210	0.210	35	7.0
4	300	265	0.265	55	4.4
5	334	299	0.299	34	7.3
6	345	310	0.310	11	23.9
7	350	315	0.315	5	55.1
8	368	333	0.333	18	14.2
9	400	365	0.365	32	7.7
10	448	413	0.413	48	5.0
11	496	461	0.461	48	5.0
12	538	503	0.503	42	5.8
13	576	541	0.541	38	6.5
14	592	557	0.557	16	16.1
15	610	575	0.575	18	14.2
16	624	589	0.589	14	18.6
17	641	606	0.606	17	15.1
18	659	624	0.624	18	14.2
19	678	643	0.643	19	13.4
20	705	670	0.670	27	9.3
21	725	690	0.690	20	12.7
22	752	717	0.717	27	9.3
23	774	739	0.739	22	11.5
24	793	758	0.758	19	13.4
25	815	780	0.780	22	11.5
26	840	805	0.805	25	10.1
27	856	821	0.821	16	16.1
28	870	835	0.835	14	18.6
29	881	846	0.846	11	23.9
30	898	863	0.863	17	15.1
31	912	877	0.877	14	18.6

Remarks:

Easting	444797
Northing	303072
Level (mAOD)	N/A



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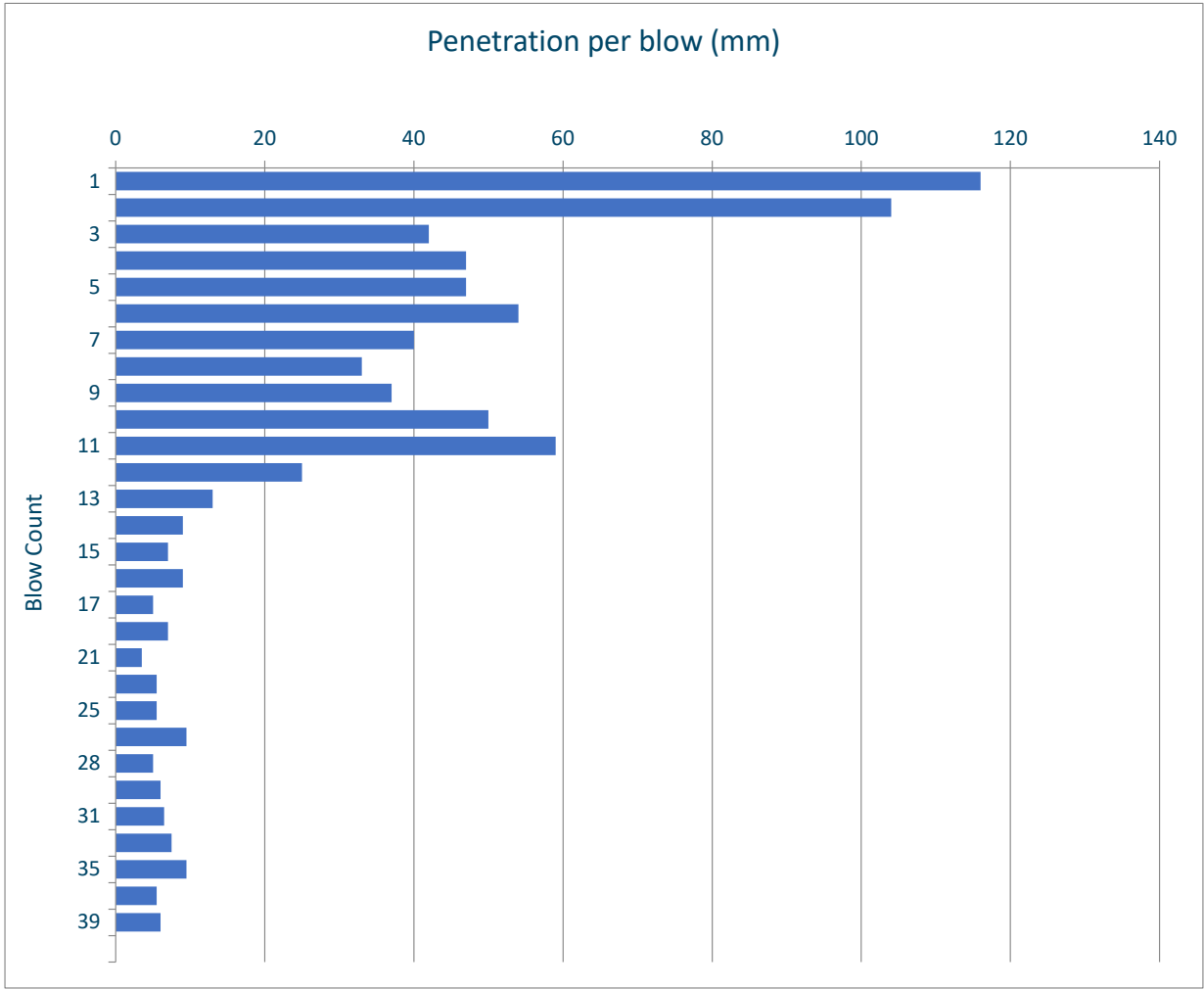
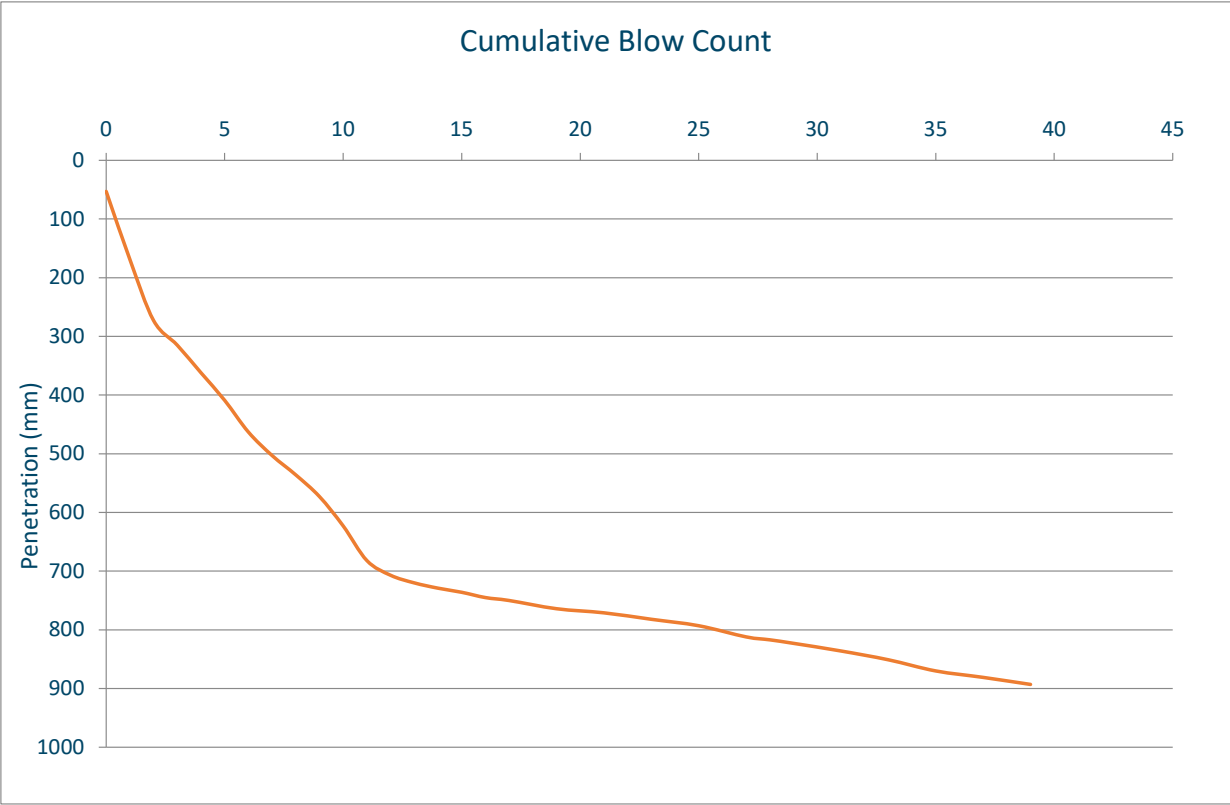
Dynamic Cone Penetrometer (DCP)



Location	DCP12	Zero (mm)			
Depth of cone at start of test (m)	0.053	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	88	53	0.053	N/A	N/A
1	204	169	0.169	116	2.0
2	308	273	0.273	104	2.2
3	350	315	0.315	42	5.8
4	397	362	0.362	47	5.2
5	444	409	0.409	47	5.2
6	498	463	0.463	54	4.5
7	538	503	0.503	40	6.1
8	571	536	0.536	33	7.5
9	608	573	0.573	37	6.6
10	658	623	0.623	50	4.8
11	717	682	0.682	59	4.1
12	742	707	0.707	25	10.1
13	755	720	0.720	13	20.1
14	764	729	0.729	9	29.6
15	771	736	0.736	7	38.6
16	780	745	0.745	9	29.6
17	785	750	0.750	5	55.1
19	799	764	0.764	7	38.6
21	806	771	0.771	4	80.3
23	817	782	0.782	6	49.8
25	828	793	0.793	6	49.8
27	847	812	0.812	10	28.0
28	852	817	0.817	5	55.1
29	858	823	0.823	6	45.4
31	871	836	0.836	7	41.8
33	886	851	0.851	8	35.9
35	905	870	0.870	10	28.0
37	916	881	0.881	6	49.8
39	928	893	0.893	6	45.4

Remarks:

Easting	444893
Northing	303060
Level (mAOD)	N/A



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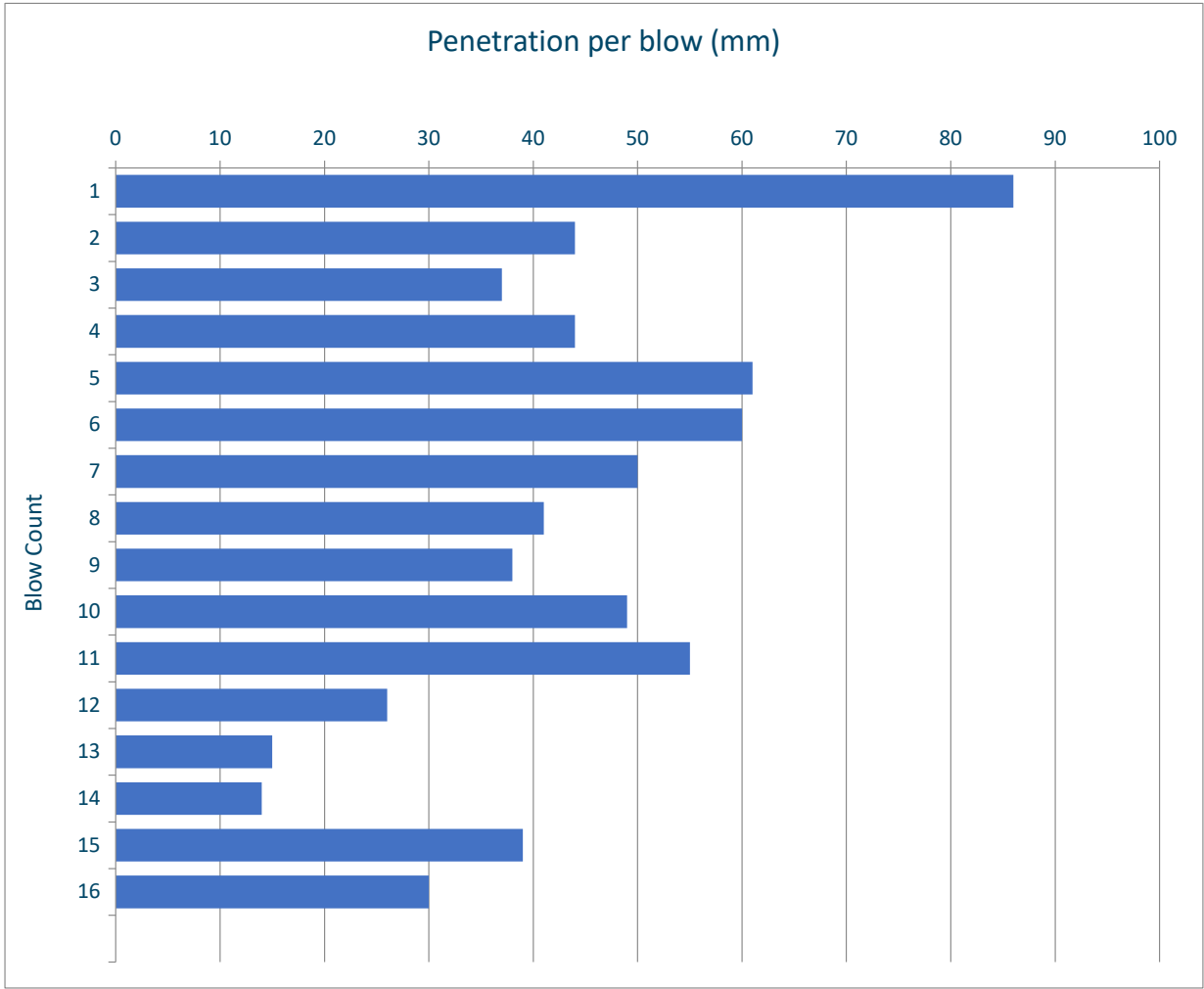
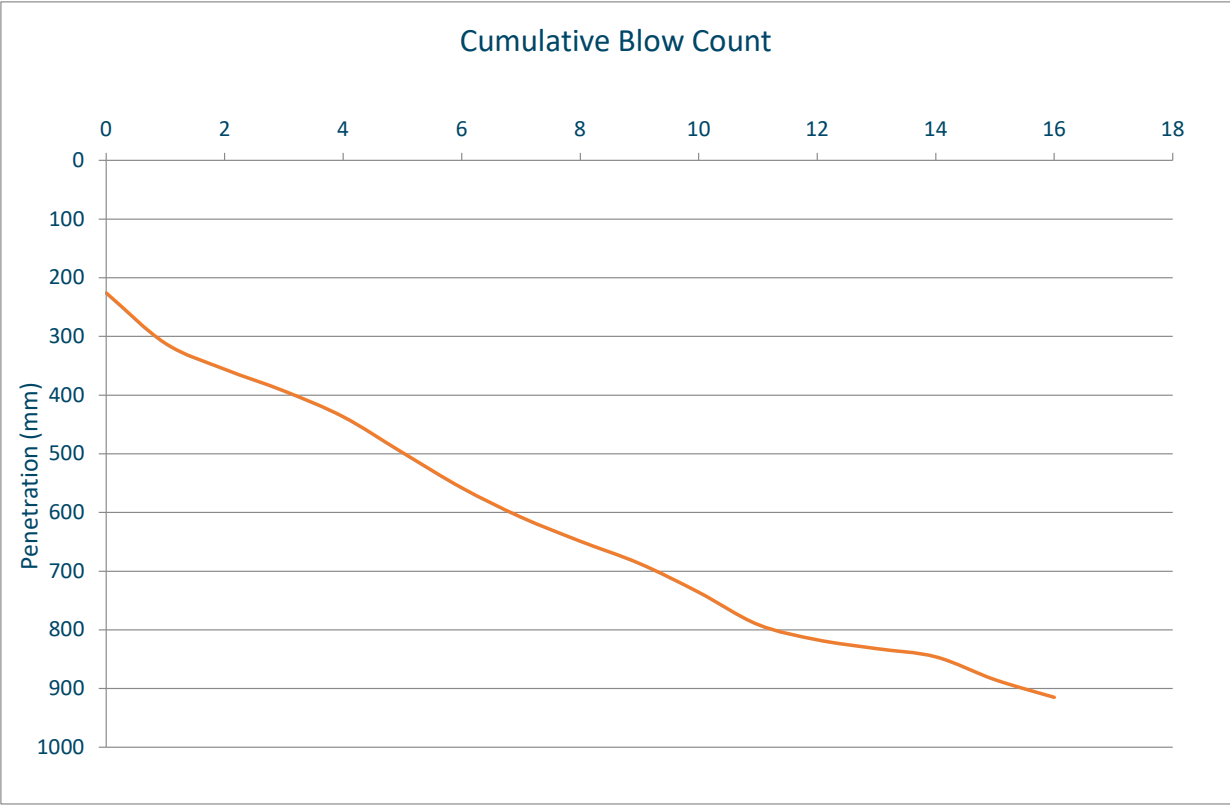
Dynamic Cone Penetrometer (DCP)



Location	DCP13	Zero (mm)			
Depth of cone at start of test (m)	0.226	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	261	226	0.226	N/A	N/A
1	347	312	0.312	86	2.7
2	391	356	0.356	44	5.5
3	428	393	0.393	37	6.6
4	472	437	0.437	44	5.5
5	533	498	0.498	61	3.9
6	593	558	0.558	60	4.0
7	643	608	0.608	50	4.8
8	684	649	0.649	41	6.0
9	722	687	0.687	38	6.5
10	771	736	0.736	49	4.9
11	826	791	0.791	55	4.4
12	852	817	0.817	26	9.6
13	867	832	0.832	15	17.3
14	881	846	0.846	14	18.6
15	920	885	0.885	39	6.3
16	950	915	0.915	30	8.3

Remarks:

Easting	444779
Northing	302993
Level (mAOD)	N/A

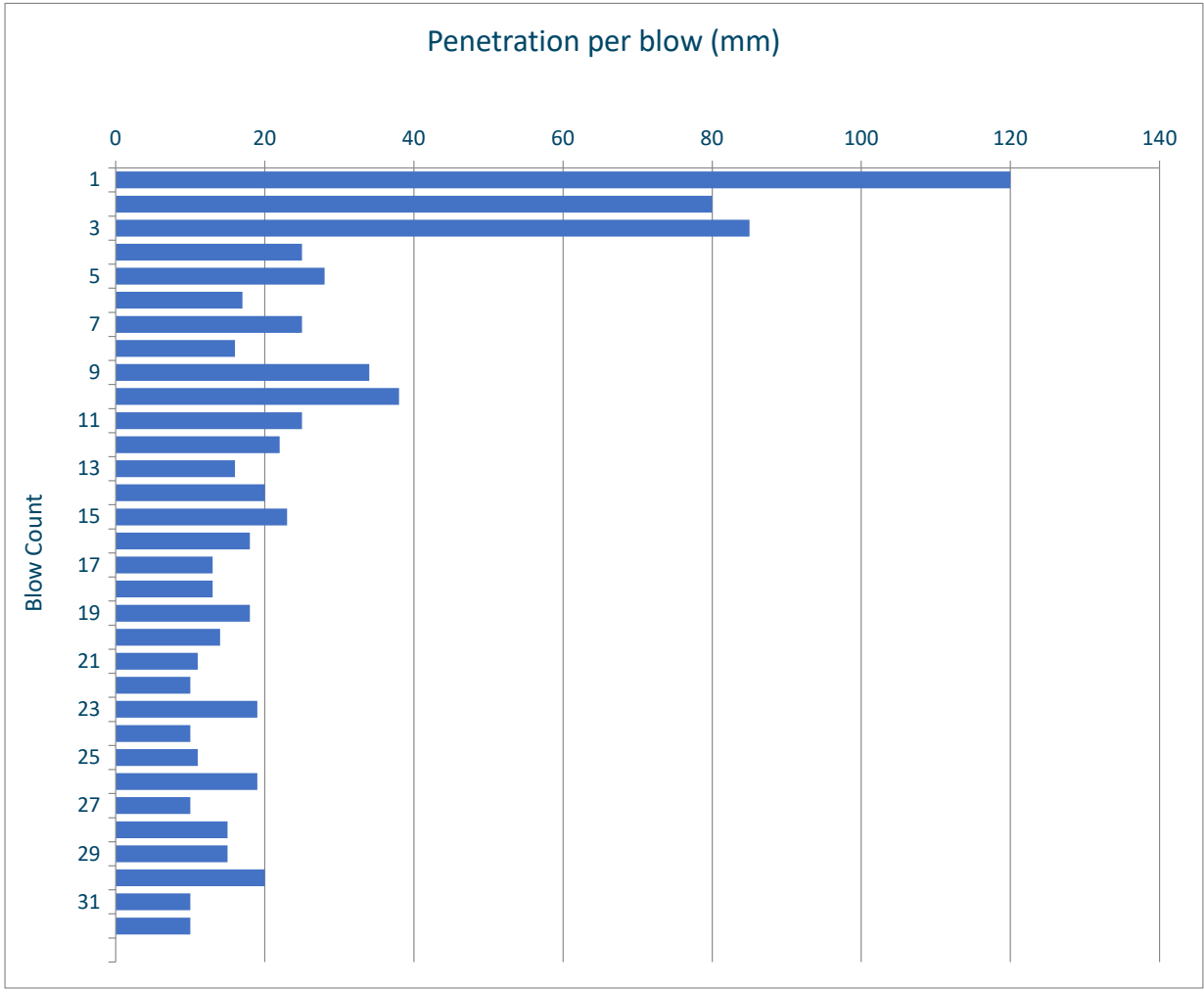
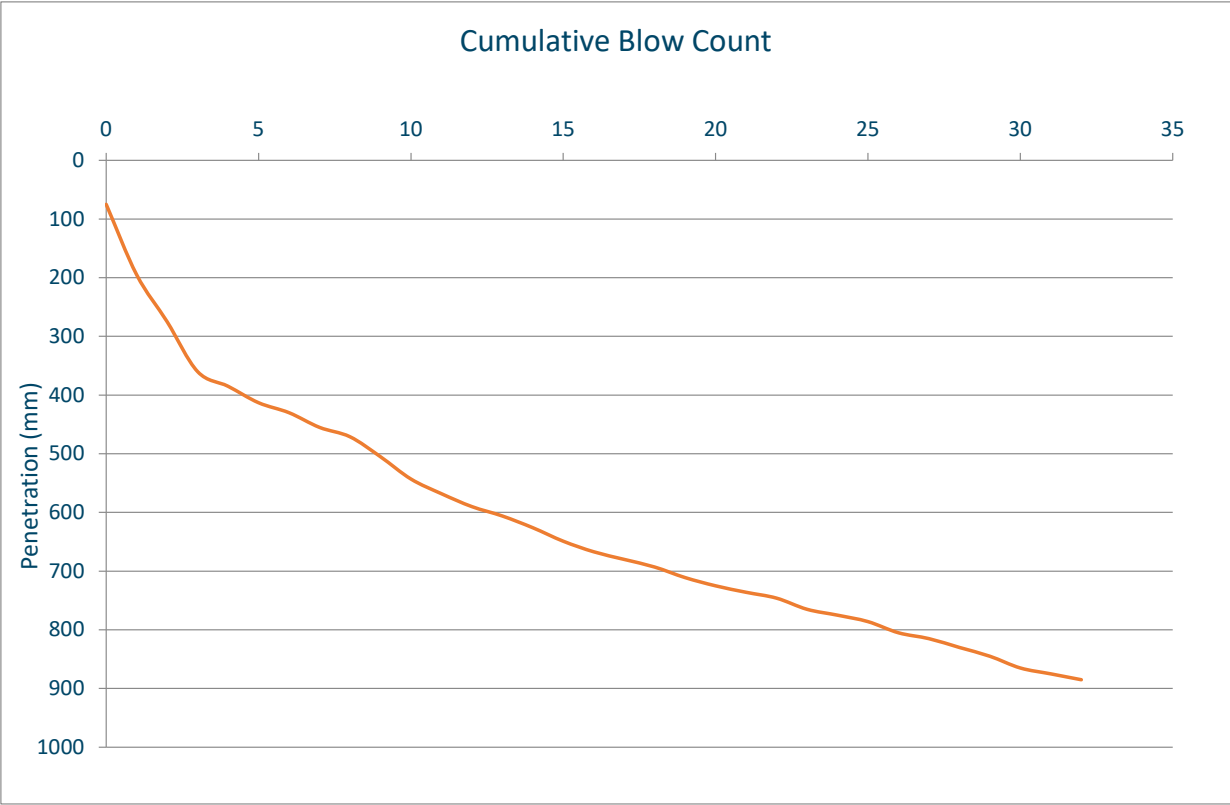


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Dynamic Cone Penetrometer (DCP)



Location	DCP14	Zero (mm)			
Depth of cone at start of test (m)	0.075	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	110	75	0.075	N/A	N/A
1	230	195	0.195	120	1.9
2	310	275	0.275	80	2.9
3	395	360	0.360	85	2.8
4	420	385	0.385	25	10.1
5	448	413	0.413	28	8.9
6	465	430	0.430	17	15.1
7	490	455	0.455	25	10.1
8	506	471	0.471	16	16.1
9	540	505	0.505	34	7.3
10	578	543	0.543	38	6.5
11	603	568	0.568	25	10.1
12	625	590	0.590	22	11.5
13	641	606	0.606	16	16.1
14	661	626	0.626	20	12.7
15	684	649	0.649	23	11.0
16	702	667	0.667	18	14.2
17	715	680	0.680	13	20.1
18	728	693	0.693	13	20.1
19	746	711	0.711	18	14.2
20	760	725	0.725	14	18.6
21	771	736	0.736	11	23.9
22	781	746	0.746	10	26.5
23	800	765	0.765	19	13.4
24	810	775	0.775	10	26.5
25	821	786	0.786	11	23.9
26	840	805	0.805	19	13.4
27	850	815	0.815	10	26.5
28	865	830	0.830	15	17.3
29	880	845	0.845	15	17.3
30	900	865	0.865	20	12.7
31	910	875	0.875	10	26.5
32	920	885	0.885	10	26.5
Remarks:			Easting	444876	
			Northing	302997	
			Level (mAOD)	N/A	



Date of Test: 23/02/2022
 Location: Newbold Verdon
 Contract No: C10237

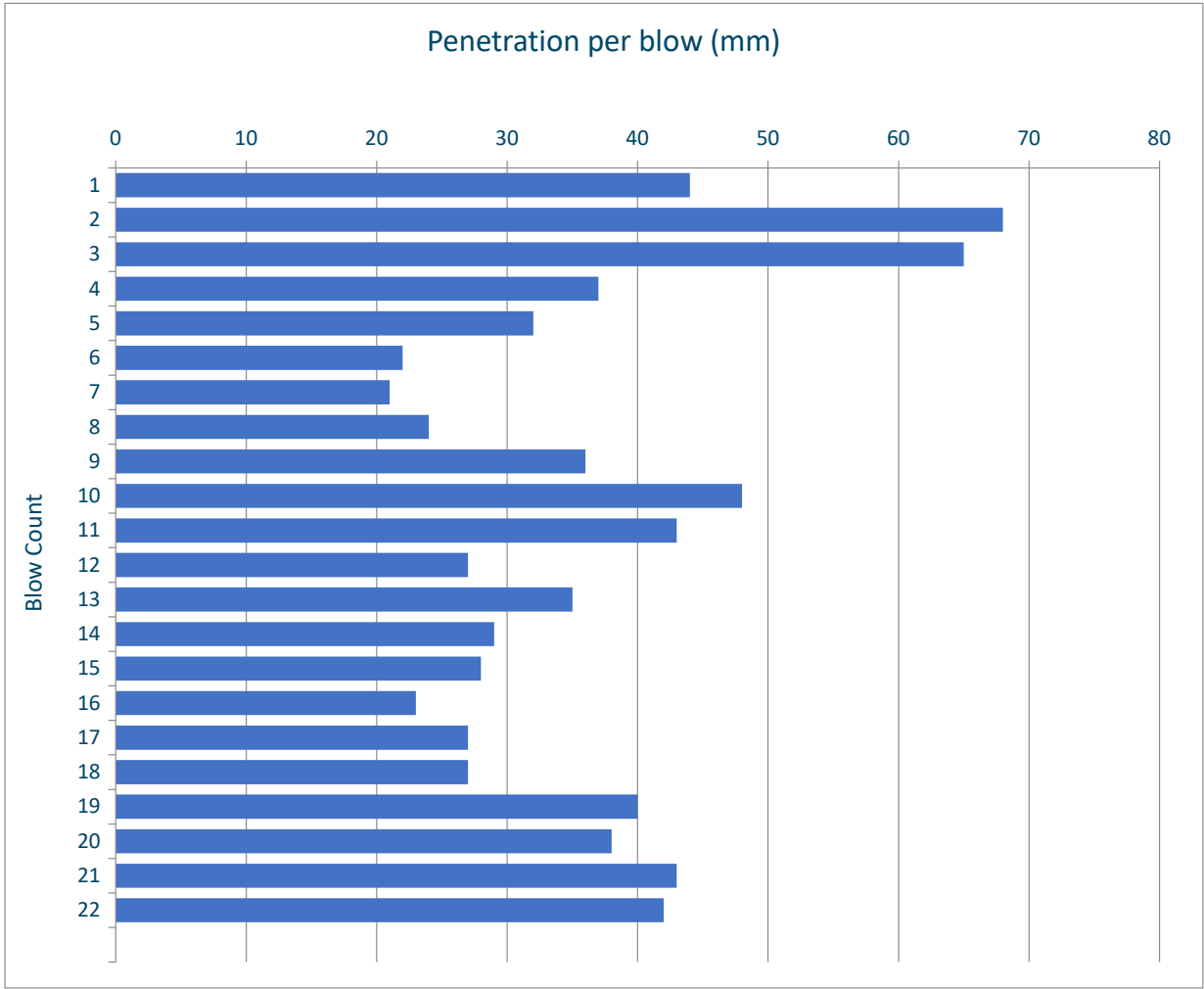
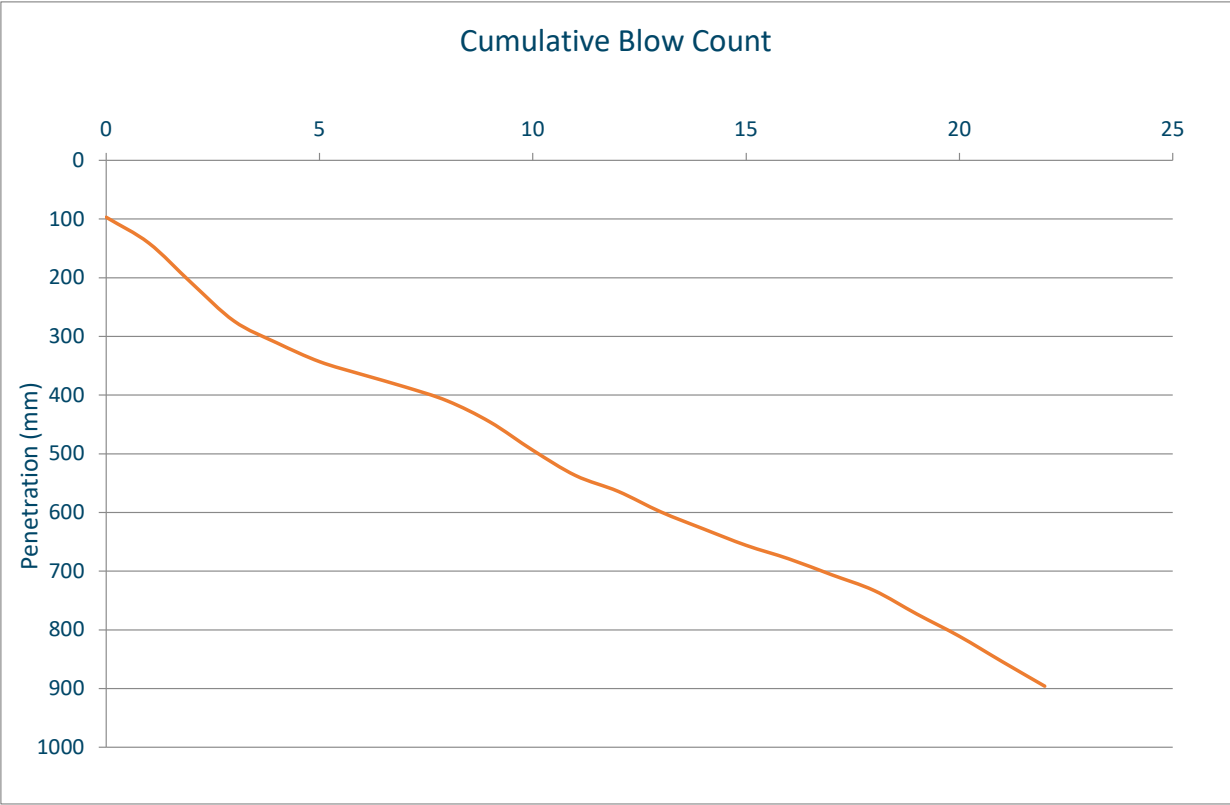
Dynamic Cone Penetrometer (DCP)



Location	DCP15	Zero (mm)			
Depth of cone at start of test (m)	0.097	35			
Cumulative Blow Count	Gauge Reading (mm)	Penetration (mm)	Depth below surface (m)	Penetration/blow (mm)	CBR (%) [Ref. CS 229]
0	132	97	0.097	N/A	N/A
1	176	141	0.141	44	5.5
2	244	209	0.209	68	3.5
3	309	274	0.274	65	3.7
4	346	311	0.311	37	6.6
5	378	343	0.343	32	7.7
6	400	365	0.365	22	11.5
7	421	386	0.386	21	12.1
8	445	410	0.410	24	10.5
9	481	446	0.446	36	6.8
10	529	494	0.494	48	5.0
11	572	537	0.537	43	5.7
12	599	564	0.564	27	9.3
13	634	599	0.599	35	7.0
14	663	628	0.628	29	8.6
15	691	656	0.656	28	8.9
16	714	679	0.679	23	11.0
17	741	706	0.706	27	9.3
18	768	733	0.733	27	9.3
19	808	773	0.773	40	6.1
20	846	811	0.811	38	6.5
21	889	854	0.854	43	5.7
22	931	896	0.896	42	5.8

Remarks:

Easting	444776
Northing	302907
Level (mAOD)	N/A

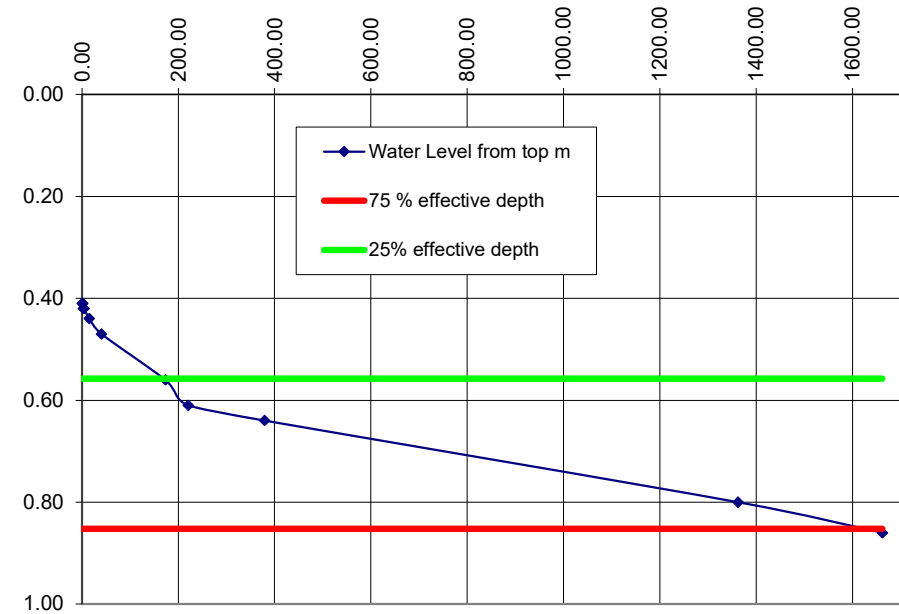


Appendix G: Infiltration Test Results



	SA01
Depth	1.00
Length	2.20
Width	0.90
Water level from surface at start	0.41
Time to 25 % empty mins	173.00
Time to 75 % empty mins	1432.00

Time for outflow between 75% and 25 % effective depth mins	1259.00
Height of water in TP	0.59
Effective depth m	0.59
75% effective depth	0.8525
25% effective depth	0.5575
Vol between 75% and 25% m3	0.5841
Mean Surface Area m50 m2	3.809
Soil Infiltration Rate m/s	2.03E-06

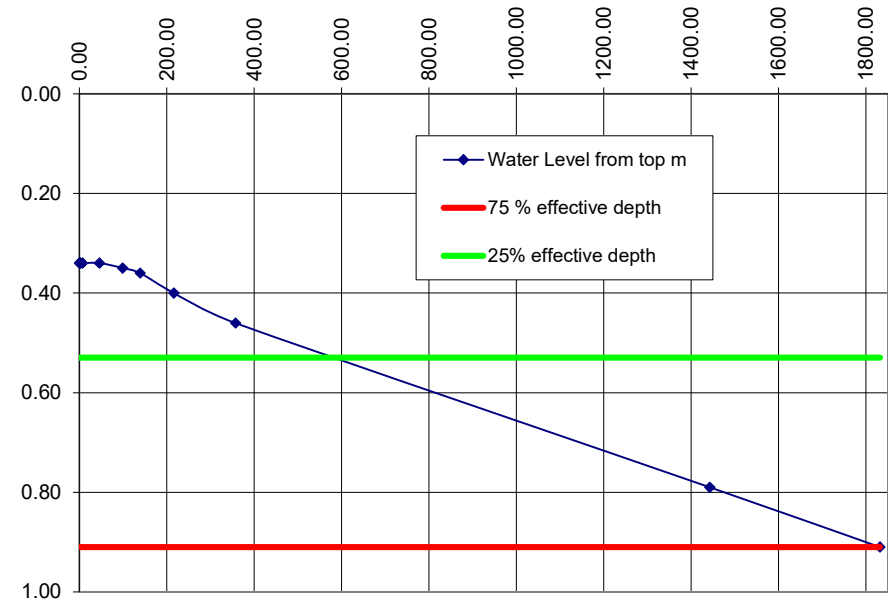


Interval Minutes	Time mins	Time days		Date	Time	Water Level from top m	75 % effective depth	25% effective depth	R of C of water
0.00	0.00	0.00	22/02/2022 09:18	22/02/2022	09:18	0.41	0.8525	0.5575	
1.00	1.00	0.00	22/02/2022 09:19	22/02/2022	09:19	0.41	0.8525	0.5575	0
1.00	2.00	0.00	22/02/2022 09:20	22/02/2022	09:20	0.42	0.8525	0.5575	0.01
1.00	3.00	0.00	22/02/2022 09:21	22/02/2022	09:21	0.42	0.8525	0.5575	0
1.00	4.00	0.00	22/02/2022 09:22	22/02/2022	09:22	0.42	0.8525	0.5575	0
11.00	15.00	0.01	22/02/2022 09:33	22/02/2022	09:33	0.44	0.8525	0.5575	0.001818182
25.00	40.00	0.03	22/02/2022 09:58	22/02/2022	09:58	0.47	0.8525	0.5575	0.0012
133.00	173.00	0.12	22/02/2022 12:11	22/02/2022	12:11	0.56	0.8525	0.5575	0.000676692
47.00	220.00	0.15	22/02/2022 12:58	22/02/2022	12:58	0.61	0.8525	0.5575	0.00106383
159.00	379.00	0.26	22/02/2022 15:37	22/02/2022	15:37	0.64	0.8525	0.5575	0.000188679
983.00	1362.00	0.95	23/02/2022 08:00	23/02/2022	08:00	0.80	0.8525	0.5575	0.000162767
300.00	1662.00	1.15	23/02/2022 13:00	23/02/2022	13:00	0.86	0.8525	0.5575	0.0002

	SA02
Depth	1.10
Length	2.30
Width	0.90
Water level from surface at start	0.34
Time to 25 % empty mins	575.00
Time to 75 % empty mins	1830.00

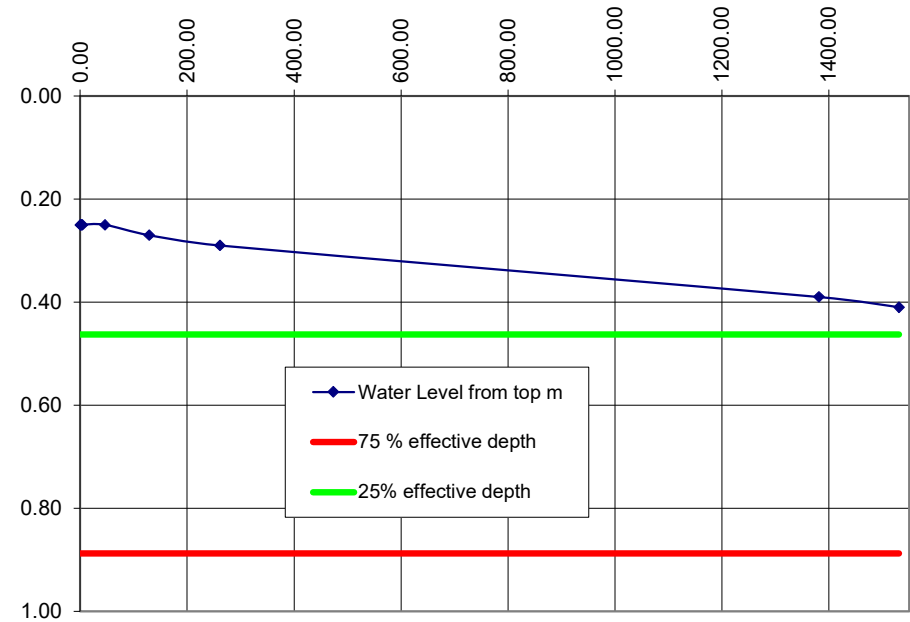
Time for outflow between 75% and 25 % effective depth mins	1255.00
Height of water in TP	0.76
Effective depth m	0.76
75% effective depth	0.91
25% effective depth	0.53
Vol between 75% and 25% m3	0.7866
Mean Surface Area m50 m2	4.502
Soil Infiltration Rate m/s	2.32E-06

Interval Minutes	Time mins	Time days	Date	Time	Water Level from top m	75 % effective depth	25% effective depth	R of C of water
0.00	0.00	0.00	22/02/2022 09:28	22/02/2022 09:28	0.34	0.91	0.53	
1.00	1.00	0.00	22/02/2022 09:29	22/02/2022 09:29	0.34	0.91	0.53	0
1.00	2.00	0.00	22/02/2022 09:30	22/02/2022 09:30	0.34	0.91	0.53	0
5.00	7.00	0.00	22/02/2022 09:35	22/02/2022 09:35	0.34	0.91	0.53	0
39.00	46.00	0.03	22/02/2022 10:14	22/02/2022 10:14	0.34	0.91	0.53	0
53.00	99.00	0.07	22/02/2022 11:07	22/02/2022 11:07	0.35	0.91	0.53	0.000188679
40.00	139.00	0.10	22/02/2022 11:47	22/02/2022 11:47	0.36	0.91	0.53	0.00025
77.00	216.00	0.15	22/02/2022 13:04	22/02/2022 13:04	0.40	0.91	0.53	0.000519481
141.00	357.00	0.25	22/02/2022 15:25	22/02/2022 15:25	0.46	0.91	0.53	0.000425532
1085.00	1442.00	1.00	23/02/2022 09:30	23/02/2022 09:30	0.79	0.91	0.53	0.000304147
390.00	1832.00	1.27	23/02/2022 16:00	23/02/2022 16:00	0.91	0.91	0.53	



	SA03
Depth	1.10
Length	2.50
Width	0.90
Water level from surface at start	0.25
Time to 25 % empty mins	
Time to 75 % empty mins	

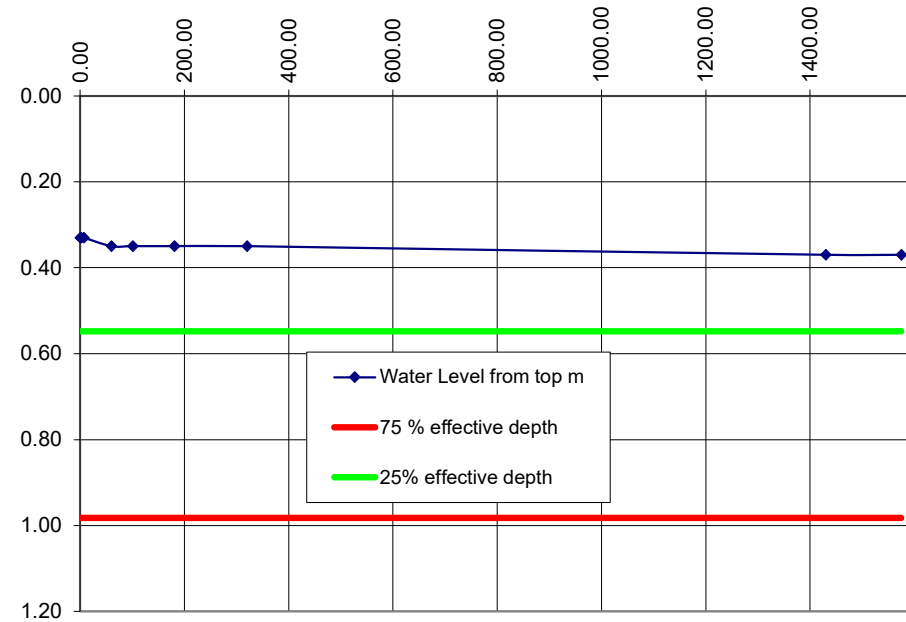
Time for outflow between 75% and 25 % effective depth mins	0.00
Height of water in TP	0.85
Effective depth m	0.85
75% effective depth	0.8875
25% effective depth	0.4625
Vol between 75% and 25% m3	0.95625
Mean Surface Area m50 m2	5.14
Soil Infiltration Rate m/s	#DIV/0!



Interval Minutes	Time mins	Time days	Date	Time	Water Level from top m	75 % effective depth	25% effective depth	R of C of water
0.00	0.00	0.00	22/02/2022 10:59	22/02/2022 10:59	0.25	0.8875	0.4625	
1.00	1.00	0.00	22/02/2022 11:00	22/02/2022 11:00	0.25	0.8875	0.4625	0
1.00	2.00	0.00	22/02/2022 11:01	22/02/2022 11:01	0.25	0.8875	0.4625	0
2.00	4.00	0.00	22/02/2022 11:03	22/02/2022 11:03	0.25	0.8875	0.4625	0
42.00	46.00	0.03	22/02/2022 11:45	22/02/2022 11:45	0.25	0.8875	0.4625	0
83.00	129.00	0.09	22/02/2022 13:08	22/02/2022 13:08	0.27	0.8875	0.4625	0.000240964
132.00	261.00	0.18	22/02/2022 15:20	22/02/2022 15:20	0.29	0.8875	0.4625	0.000151515
1120.00	1381.00	0.96	23/02/2022 10:00	23/02/2022 10:00	0.39	0.8875	0.4625	8.92857E-05
150.00	1531.00	1.06	23/02/2022 12:30	23/02/2022 12:30	0.41	0.8875	0.4625	0.000133333

	SA04
Depth	1.20
Length	2.20
Width	0.90
Water level from surface at start	0.33
Time to 25 % empty mins	
Time to 75 % empty mins	

Time for outflow between 75% and 25 % effective depth mins	0.00
Height of water in TP	0.87
Effective depth m	0.87
75% effective depth	0.9825
25% effective depth	0.5475
Vol between 75% and 25% m3	0.8613
Mean Surface Area m50 m2	4.677
Soil Infiltration Rate m/s	#DIV/0!



Interval Minutes	Time mins	Time days		Date	Time	Water Level from top m	75 % effective depth	25% effective depth	R of C of water
0.00	0.00	0.00	22/02/2022 10:10	22/02/2022	10:10	0.33	0.9825	0.5475	
1.00	1.00	0.00	22/02/2022 10:11	22/02/2022	10:11	0.33	0.9825	0.5475	0
1.00	2.00	0.00	22/02/2022 10:12	22/02/2022	10:12	0.33	0.9825	0.5475	0
5.00	7.00	0.00	22/02/2022 10:17	22/02/2022	10:17	0.33	0.9825	0.5475	0
53.00	60.00	0.04	22/02/2022 11:10	22/02/2022	11:10	0.35	0.9825	0.5475	0.000377358
41.00	101.00	0.07	22/02/2022 11:51	22/02/2022	11:51	0.35	0.9825	0.5475	0
80.00	181.00	0.13	22/02/2022 13:11	22/02/2022	13:11	0.35	0.9825	0.5475	0
139.00	320.00	0.22	22/02/2022 15:30	22/02/2022	15:30	0.35	0.9825	0.5475	0
1110.00	1430.00	0.99	23/02/2022 10:00	23/02/2022	10:00	0.37	0.9825	0.5475	1.8018E-05
145.00	1575.00	1.09	23/02/2022 12:25	23/02/2022	12:25	0.37	0.9825	0.5475	0

Appendix H: Gas & Groundwater Monitoring Results



Gas & Groundwater Monitoring Record

Site Name:	Brascote Lane, Newbold Verdon
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Falling
Temperature:	11

Job Number:	PJSG21-47
Date:	02/03/2022
Last Calibrated:	26th November 2021
Time of Works:	AM
Weather Conditions:	Cloudy, light wind, saturated ground

Time	BH Ref.	Depth of BH (m)	Depth of Water (m)	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
				Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
09:00	WS01	2.30	2.02	0.3	0.2	< 0.1	< 0.1	1.6	1.6	13.6	13.6	< 1	< 1	3	1000
09:20	WS02	4.00	0.88	< 0.1	< 0.1	< 0.1	< 0.1	3.3	3.3	18.5	18.5	10	< 1	0	997
09:10	WS06	2.70	0.47	< 0.1	< 0.1	< 0.1	< 0.1	0.7	0.7	19.4	19.4	< 1	< 1	0	997
10:05	WS08	4.00	DRY	< 0.1	< 0.1	< 0.1	< 0.1	1.0	1.0	18.0	18.0	< 1	< 1	0	997
10:15	WS11	4.00	-0.22	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	20.0	20.0	< 1	< 1	0	998
09:30	WS12	4.00	1.08	0.1	0.1	< 0.1	< 0.1	0.1	0.1	20.4	20.4	< 1	< 1	1	999
09:40	WS13	2.70	1.06	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.4	19.8	19.8	< 1	< 1	0	998
09:50	WS18	3.00	1.09	0.1	0.1	< 0.1	< 0.1	0.4	0.4	20.4	20.4	< 1	< 1	1	998
-	WS19	4.00	2.84	GAS DATA MONITORING NOT REQUIRED											
-	WS20	4.00	0.59	GAS DATA MONITORING NOT REQUIRED											

Maximum	0.3	0.2	0	3.3	20.4	10	0	1000
Minimum	0.1	0.1	0	0.1	13.6	10	0	997

Background Readings	CH4	CO2	O2	CO	H2S
	< 0.1	< 0.1	20.7	< 1	< 1

General remark/ Observation
^a - Groundwater readings taken prior to bailing, gas reading taken after bailing, holes revisited at the end of monitoring and redipped - all holes were dry.
^b - CO measurements still recorded 10ppm after 2 x 3 minute readings on borehole.

Gas & Groundwater Monitoring Record

Site Name:	Brascote Lane, Newbold Verdon
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Static
Temperature:	12

Job Number:	PJSG21-47
Date:	17/03/2022
Last Calibrated:	26th November 2021
Time of Works:	PM
Weather Conditions:	Windy, clear, saturated ground.

Time	BH Ref.	Depth of BH (m)	Depth of Water (m)	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
				Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
09:00	WS01	2.30	1.79	1.5	1.5	< 0.1	< 0.1	0.9	0.9	16.7	16.7	< 1	< 1	6	1014
09:20	WS02	4.00	0.37	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	20.7	20.7	< 1	< 1	0	1014
09:10	WS06	2.70	0.44	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.4	19.7	19.7	< 1	< 1	0	1014
10:05	WS08	4.00	DRY	< 0.1	< 0.1	< 0.1	< 0.1	0.3	0.3	20.4	20.4	< 1	< 1	0	1014
10:15	WS11	4.00	0.16	0.7	0.7	< 0.1	< 0.1	0.1	0.1	20.6	20.6	< 1	< 1	4	1014
09:30	WS12	4.00	0.97	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	19.9	19.9	< 1	< 1	0	1014
09:40	WS13	2.70	1.01	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.4	20.3	20.3	< 1	< 1	0	1014
09:50	WS18	3.00	1.07	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	19.1	19.1	< 1	< 1	0	1014
-	WS19	4.00	1.60	GAS DATA MONITORING NOT REQUIRED											
-	WS20	4.00	0.73	GAS DATA MONITORING NOT REQUIRED											

Maximum	1.5	1.5	0	0.9	20.7	0	0	1014
Minimum	0.7	0.7	0	0.1	16.7	0	0	1014

Background Readings	CH4	CO2	O2	CO	H2S
	< 0.1	< 0.1	20.9	< 1	< 1

General remark/ Observation
^a - Groundwater readings taken prior to bailing, gas reading taken after bailing, holes revisited at the end of monitoring and redipped - all holes were dry.

Gas & Groundwater Monitoring Record

Site Name:	Brascote Lane, Newbold Verdon
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Static
Temperature:	12

Job Number:	PJSG21-47
Date:	17/03/2022
Last Calibrated:	26th November 2021
Time of Works:	PM
Weather Conditions:	Windy, clear, saturated ground.

Time	BH Ref.	Depth of BH (m)	Depth of Water (m)	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
				Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
09:00	WS01	2.30	1.79	1.5	1.5	< 0.1	< 0.1	0.9	0.9	16.7	16.7	< 1	< 1	6	1014
09:20	WS02	4.00	0.37	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	20.7	20.7	< 1	< 1	0	1014
09:10	WS06	2.70	0.44	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.4	19.7	19.7	< 1	< 1	0	1014
10:05	WS08	4.00	DRY	< 0.1	< 0.1	< 0.1	< 0.1	0.3	0.3	20.4	20.4	< 1	< 1	0	1014
10:15	WS11	4.00	0.16	0.7	0.7	< 0.1	< 0.1	0.1	0.1	20.6	20.6	< 1	< 1	4	1014
09:30	WS12	4.00	0.97	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	19.9	19.9	< 1	< 1	0	1014
09:40	WS13	2.70	1.01	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.4	20.3	20.3	< 1	< 1	0	1014
09:50	WS18	3.00	1.07	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	19.1	19.1	< 1	< 1	0	1014
-	WS19	4.00	1.60	GAS DATA MONITORING NOT REQUIRED											
-	WS20	4.00	0.73	GAS DATA MONITORING NOT REQUIRED											

Maximum	1.5	1.5	0	0.9	20.7	0	0	1014
Minimum	0.7	0.7	0	0.1	16.7	0	0	1014

Background Readings	CH4	CO2	O2	CO	H2S
	< 0.1	< 0.1	20.9	< 1	< 1

General remark/ Observation
^a - Groundwater readings taken prior to bailing, gas reading taken after bailing, holes revisited at the end of monitoring and redipped - all holes were dry.

Gas & Groundwater Monitoring Record

Site Name:	Brascote Lane, Newbold Verdon
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Static
Temperature:	16

Job Number:	PJSG21-47
Date:	24/03/2022
Last Calibrated:	26th November 2021
Time of Works:	AM
Weather Conditions:	Clear, warm, gentle wind, dry underfoot

Time	BH Ref.	Depth of BH (m)	Depth of Water (m)	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
				Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
09:00	WS01	2.30	2.14	< 0.1	< 0.1	< 0.1	< 0.1	1.8	1.8	12.8	12.8	< 1	< 1	0	1016
09:20	WS02	4.00	0.70	1.5	1.5	< 0.1	< 0.1	< 0.1	< 0.1	20.8	20.8	< 1	< 1	6	1016 ^a
09:10	WS06	2.70	0.65	1.8	1.8	< 0.1	< 0.1	0.3	0.3	20.1	20.1	< 1	< 1	18	1016 ^a
10:05	WS08	4.00	DRY	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	20.6	20.6	< 1	< 1	0	1016
10:15	WS11	4.00	0.54	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.1	20.9	20.9	< 1	< 1	0	1016 ^a
09:30	WS12	4.00	1.28	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	20.2	20.2	< 1	< 1	0	1016
09:40	WS13	2.70	1.09	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	20.1	20.1	< 1	< 1	0	1016 ^a
09:50	WS18	3.00	1.23	< 0.1	< 0.1	< 0.1	< 0.1	0.6	0.6	19.9	19.9	< 1	< 1	0	1016
-	WS19	4.00	0.22	GAS DATA MONITORING NOT REQUIRED											
-	WS20	4.00	0.80	GAS DATA MONITORING NOT REQUIRED											

Maximum	1.8	1.8	0	1.8	20.9	0	0	1016
Minimum	1.5	1.5	0	0.1	12.8	0	0	1016

Background Readings	CH4	CO2	O2	CO	H2S
	< 0.1	< 0.1	20.7	< 1	< 1

General remark/ Observation
^a - Groundwater readings taken prior to bailing, gas reading taken after bailing, holes revisited at the end of monitoring and redipped - all holes were dry.

Gas & Groundwater Monitoring Record

Site Name:	Brascote Lane, Newbold Verdon
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Static
Temperature:	9

Job Number:	PJSG21-47
Date:	26/04/2022
Last Calibrated:	26th November 2021
Time of Works:	AM
Weather Conditions:	Light breeze, cloudy, dry underfoot

Time	BH Ref.	Depth of BH (m)	Depth of Water (m)	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
				Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
09:00	WS01	2.30	DRY	< 0.1	< 0.1	< 0.1	< 0.1	1.4	1.4	15.6	15.6	< 1	< 1	0	1007
09:20	WS02	4.00	1.03	< 0.1	< 0.1	< 0.1	< 0.1	1.3	1.3	19.8	19.8	< 1	< 1	0	1007
09:10	WS06	2.70	1.17	1.2	1.2	< 0.1	< 0.1	0.4	0.4	19.9	19.9	< 1	< 1	10	1007
10:05	WS08	4.00	DRY	0.2	0.1	< 0.1	< 0.1	0.7	0.7	19.7	19.7	< 1	< 1	2	1007
10:15	WS11	4.00	0.82	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.2	20.5	20.5	< 1	< 1	0	1007
09:30	WS12	4.00	1.55	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.4	20.2	20.2	< 1	< 1	0	1007
09:40	WS13	2.70	1.80	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.4	20.2	20.2	< 1	< 1	0	1007
09:50	WS18	3.00	1.77	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.4	20	20	< 1	< 1	0	1007
-	WS19	4.00	0.41	GAS DATA MONITORING NOT REQUIRED											
-	WS20	4.00	0.91	GAS DATA MONITORING NOT REQUIRED											

Maximum	1.2	1.2	0	1.4	20.5	0	0	1007
Minimum	0.2	0.1	0	0.2	15.6	0	0	1007

Background Readings	CH4	CO2	O2	CO	H2S

General remark/ Observation
^a - Groundwater readings taken prior to bailing, gas reading taken after bailing, holes revisited at the end of monitoring and redipped - all holes were dry.

Gas & Groundwater Monitoring Record

Site Name:	Brascote Lane, Newbold Verdon
Undertaken by:	NB
Equipment Used:	Gas Data (GFM 436)
Atmospheric Pressure Trend	Static
Temperature:	15

Job Number:	PJSG21-47
Date:	10/05/2022
Last Calibrated:	26th November 2021
Time of Works:	PM
Weather Conditions:	Sunny, clear, dry

Time	BH Ref.	Depth of BH (m)	Depth of Water (m)	Gas Flow (l/hr)		CH ₄ (% v/v)		CO ₂ (% v/v)		O (% v/v)		CO (ppm)	H ₂ S (ppm)	BH Pessure (Pa)	Atmospheric Pressure (mb)
				Peak	Steady	Peak	Steady	Peak	Steady	Low	Steady	Peak	Peak		
09:00	WS01	2.30	DRY	< 0.1	< 0.1	< 0.1	< 0.1	2.7	2.7	11.3	11.3	< 1	< 1	0	998
09:20	WS02	4.00	1.11	< 0.1	< 0.1	< 0.1	< 0.1	2.1	2.1	19.3	19.3	< 1	< 1	0	997
09:10	WS06	2.70	1.28	< 0.1	< 0.1	< 0.1	< 0.1	1.1	1.1	16.9	16.9	< 1	< 1	0	998
10:05	WS08	4.00	DRY	< 0.1	< 0.1	< 0.1	< 0.1	0.7	0.7	19.9	19.9	< 1	< 1	0	997
10:15	WS11	4.00	0.92	< 0.1	< 0.1	< 0.1	< 0.1	0.8	0.8	19.9	19.9	< 1	< 1	0	998
09:30	WS12	4.00	1.62	< 0.1	< 0.1	< 0.1	< 0.1	1.2	1.2	19.6	19.6	< 1	< 1	0	998
09:40	WS13	2.70	1.97	< 0.1	< 0.1	< 0.1	< 0.1	1.1	1.1	19.8	19.8	< 1	< 1	0	997
09:50	WS18	3.00	1.87	< 0.1	< 0.1	< 0.1	< 0.1	1.4	1.4	18.7	18.7	< 1	< 1	0	997
-	WS19	4.00	0.62	GAS DATA MONITORING NOT REQUIRED											
-	WS20	4.00	0.95	GAS DATA MONITORING NOT REQUIRED											

Maximum	0	0	0	2.7	19.9	0	0	998
Minimum	0	0	0	0.7	11.3	0	0	997

Background Readings	CH4	CO2	O2	CO	H2S
	< 0.1	< 0.1	20.3	< 1	< 1

General remark/ Observation
^a - Groundwater readings taken prior to bailing, gas reading taken after bailing, holes revisited at the end of monitoring and redipped - all holes were dry.

