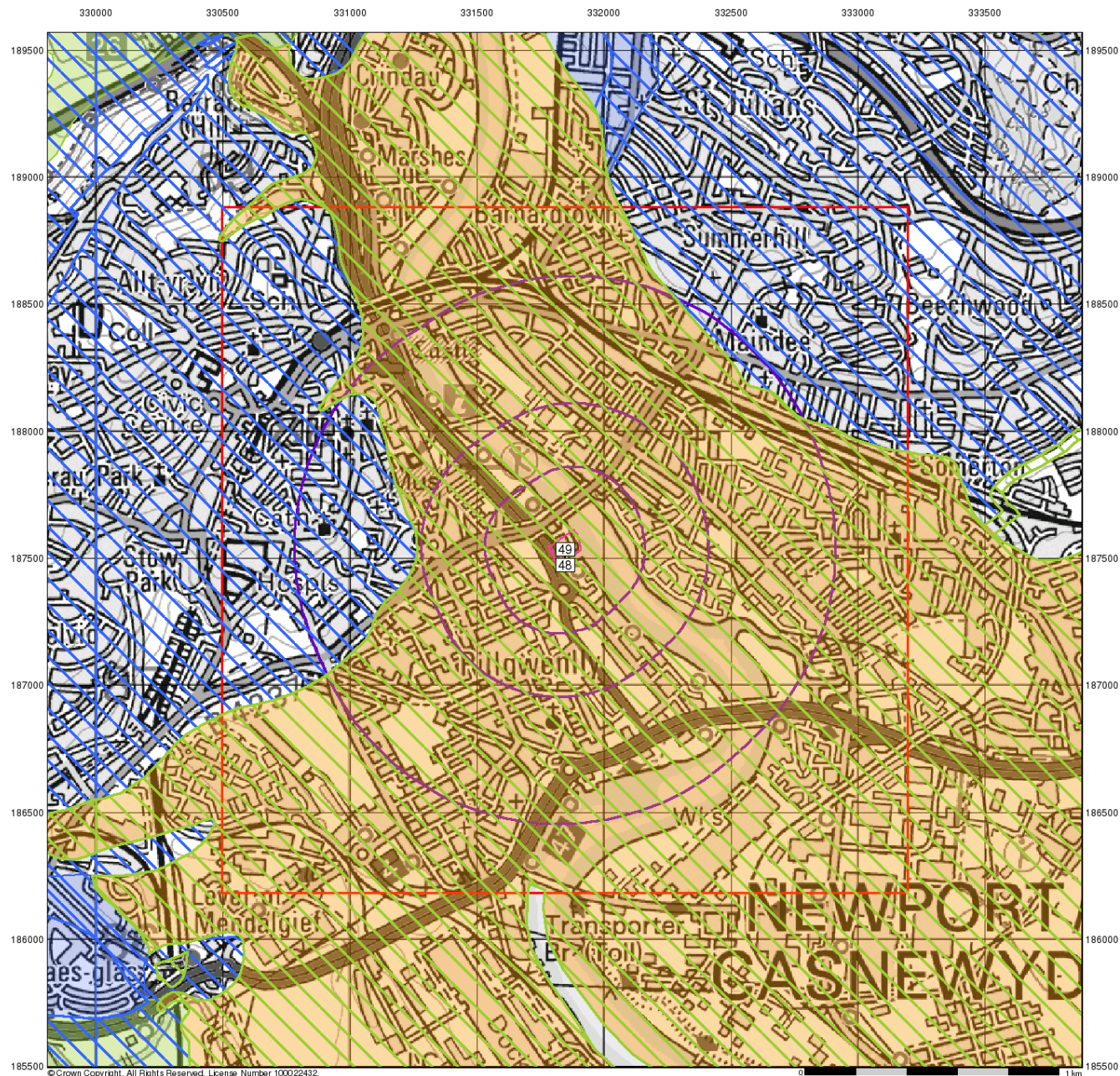




Intégral Géotechnique

Ground Stability Data (1:50,000)

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

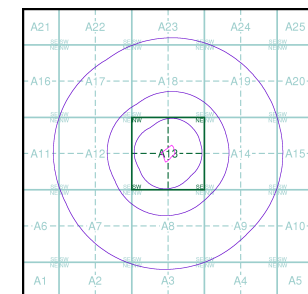
Potential for Running Sand Ground Stability Hazards

- High
- Low
- Moderate
- Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

- High
- Low
- Moderate
- Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number: 284647269_1_1
 Customer Ref: 12923/LP
 National Grid Reference: 331850, 187530
 Slice: A
 Site Area (Ha): 1.09
 Search Buffer (m): 1000

Site Details

Usk Way, Newport, NP20 2DZ

Landmark
 INFORMATION GROUP

Tel: 0844 844 9952
 Fax: 0844 844 9951
 Web: www.ernirocheck.co.uk

Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

MR H Pritchard, Integral Geotechnique, Integral House, 7 Beddau Way, Castlegate Business Park, Caerphilly, CF83 2AX

Order Details

Order Number: 284647269_1_1
Customer Ref: 12923/LP
National Grid Reference: 331850, 187530
Site Area (Ha): 1.09
Search Buffer (m): 1000

Site Details

Usk Way, Newport, NP20 2DZ

Full Terms and Conditions can be found on the following link:
<http://www.landmarkinfo.co.uk/Terms/Show/515>

APPENDIX B

BGS RADON GEOREPORT

LAURA PULLIN
INTEGRAL GEOTECHNIQUE
INTEGRAL HOUSE
7 BEDDAU WAY
CAERPHILLY
CF83 2AX

Radon Report

Advisory report on the requirement for radon protective measures in new buildings, conversions and extensions to existing buildings. The report also indicates whether a site is located within a radon Affected Area

Report Id: *BGS_339993/56514*

Client reference: 12923 Jack Pill, Usk Way, Newport

Search location



Contains OS data © Crown Copyright and database right 2024. OS OpenMap Local: Scale: 1:5 000 (1cm = 50 m)

Search location indicated in red

Area centred at: 331850,187530

Radius of site area: 60 metres

Radon Report: UK

When extensions are made to existing buildings in high radon areas, or new buildings are constructed in these areas, the Building Regulations for England, Wales, Scotland and Northern Ireland require that protective measures are taken against radon entering the building.

This report provides information on whether radon protective measures are required. Depending on the probability of buildings having high radon levels, the Regulations may require either:

1. No protective measures
2. Basic protective measures
3. Full protective measures

This is an advisory report on the requirement for radon protective measures in new buildings, conversions and extensions. The report also indicates whether a site is located within a radon Affected Area

Requirement for radon protective measures

The determination below follows advice in *BR211 Radon: Guidance on protective measures for new buildings (2023 edition)*, which also provides guidance on what to do if the result indicates that protective measures are required.

Is the property in an area where radon protective measures are required for new buildings or extensions to existing ones as described in publication BR211 (2023 edition) Radon: Guidance on protective measures for new buildings?

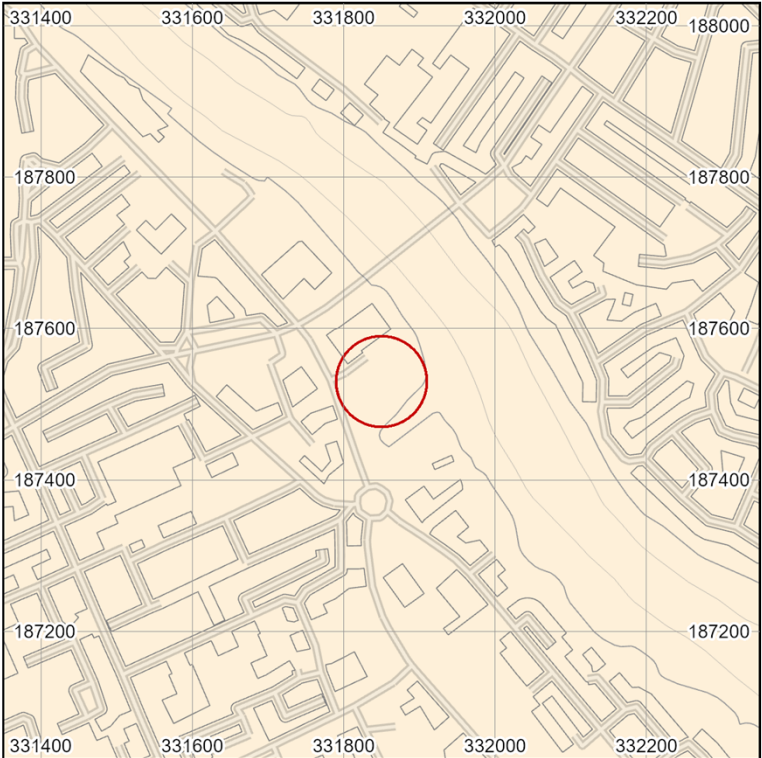
NO RADON PROTECTIVE MEASURES ARE REQUIRED FOR THE REPORT AREA.

More details of the protective measures required are available in *BR211 Radon: Guidance on protective measures for new buildings (2023 Edition)*.

Whether or not the radon level in a building is above or below the radon Action Level can only be established by having the building tested. The UKHSA provides a radon testing service which can be accessed at www.ukradon.org or by telephone (01235 822622).

If you require further information or guidance, you should contact your local authority building control officer or approved inspector.

Radon Affected Area



% Homes estimated to be at or above the action level
0-1%
1-3%
3-5%
5-10%
10-30%
30-100%

Contains OS data © Crown Copyright and database right 2024
Scale: 1:10 000 (1cm = 100 m)
Search area indicated in red

Is the property in a radon Affected Area as defined by the UK Health Security Agency (UKHSA) and if so what percentage of homes are estimated to be at or above the Action Level? NO

Additional Information

THE PROPERTY IS IN AN AREA WHERE LESS THAN 1% OF HOMES ARE ESTIMATED TO BE AT OR ABOVE THE ACTION LEVEL. THE PROPERTY IS NOT IN A RADON AFFECTED AREA.

The UKHSA recommends a radon 'Action Level' of 200 Becquerels per cubic metre of air (Bq m^{-3}) for the annual average of the radon gas concentration in a home. Where 1% or more of homes are estimated to be at or above the Action Level the area should be regarded as a radon Affected Area.

This report informs you whether the property is in a radon Affected Area and the percentage of homes that are estimated to be at or above the radon Action Level at this location. Being in an Affected Area does not necessarily mean there is a high radon level within the property; the only way to determine the radon level is to carry out a radon measurement.

The UKHSA advises that radon gas should be measured in all properties within radon Affected Areas and that homes with radon levels at or above the Action Level (200 Bq m⁻³) should be remediated. Householders with levels between the Target Level (100 Bq m⁻³) and Action Level should seriously consider reducing their radon level, especially if they are at greater risk, such as if they are current or ex smokers. Whether or not a home is in fact above or below the Action Level or Target Level can only be established by having the building tested. The UKHSA provides a validated radon testing service which can be accessed at www.ukradon.org.

The information in this report provides an answer to one of the standard legal enquiries on house purchase in England and Wales, known as Law Society CON29 Enquiries of the Local Authority (2016); 3.14 Radon Gas: Do records indicate that the property is in a “Radon Affected Area” as identified by the UKHSA. The data can also be used to advise house buyers and sellers in Scotland and Northern Ireland.

If you are buying a new build property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

If you are buying a currently occupied property in a radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were at or above the radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and if the results of re-testing confirmed the effectiveness of the measures.

Further information on radon is available from the UKHSA at www.ukradon.org.

What is radon?

Radon is a naturally occurring radioactive gas, which is produced by the radioactive decay of radium which, in turn, is derived from the radioactive decay of uranium. Uranium is found in small quantities in all soils and rocks, although the amount varies from place to place. Radon released from rocks and soils is quickly diluted in the atmosphere. Concentrations in the open air are normally very low and do not present a hazard. Radon that enters enclosed spaces such as some buildings (particularly basements), caves, mines, and tunnels may reach high concentrations in some circumstances. The construction method and degree of ventilation will influence radon levels in individual buildings. A person's exposure to radon will also vary according to how particular buildings and spaces are used.

Inhalation of the radioactive decay products of radon gas increases the chance of developing lung cancer. If individuals are exposed to high concentrations for significant periods of time, there may be cause for concern. In order to limit the risk to individuals, the Government has adopted an Action Level for radon in homes of 200 becquerels per cubic metre (Bq m^{-3}). The Government advises householders that, where the radon level is at or above the Action Level, measures should be taken to reduce the concentration.

Radon in workplaces

The Ionising Radiation Regulations 2017 require employers to take action when radon is present above a defined level in the workplace. Advice may be obtained from your local Health and Safety Executive Area Office or the Environmental Health Department of your local authority. The BRE publishes a guide (BR293): **Radon in the workplace**. BRE publications may be obtained from the BRE Bookshop, Tel: 01923 664262, email: bookshop@bre.co.uk website: www.brebookshop.com

Contact Details

Keyworth Office

British Geological Survey
Environmental Science Centre
Nicker Hill
Keyworth
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NG12 5GG
Tel: 0115 9363100
Email: enquiries@bgs.ac.uk

Wallingford Office

British Geological Survey
Maclean Building
Wallingford
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Edinburgh Office

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Research Avenue South
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EH14 4AP
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General Terms & Conditions

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- The most appropriate techniques for copying original records are used, but there may be some loss of detail and dimensional distortion when such records are copied.
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- Note that for some sites, the latest available records may be historical in nature, and while every effort is made to place the analysis in a modern geological context, it is possible in some cases that the detailed geology at a site may differ from that described.

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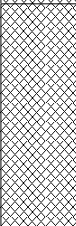
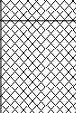
**Report issued by
BGS Enquiry Service**

APPENDIX C

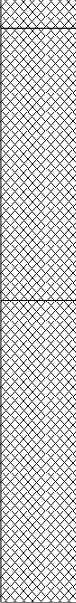
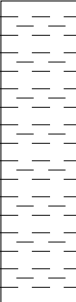
TRIAL PIT LOGS

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP1 Sheet 1 of 1	
Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.40m			
Date Excavated: 12/10/2021			Level:			Depth : 3.00m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.80	ES		0.10			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].			
			0.30			MADE GROUND: (Dense) grey sandy GRAVEL and COBBLES of angular and sub-angular slag and clinker.			
			0.70			MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
2.70	ES		2.30			MADE GROUND: (Medium dense) dark grey and black silty sandy fine to coarse GRAVEL with medium cobble content. Gravel and cobbles are angular and sub-angular of ash, brick, concrete and lime. With occasional timber and plastic.	1		
			2.50			MADE GROUND: (Loose) grey slightly clayey slightly sandy fine to coarse GRAVEL of rounded to angular sandstone. With rare brick.	2		
			2.70			Firm grey organic CLAY [estuarine alluvium - dessicated crust].			
			3.00			End of Trialpit at 3.00 m	3		
							4		
							5		
Remarks:				Groundwater: Fast inflow of perched groundwater at 2.3m bgl.			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample		
				Stability: Overbreak and spalling of excavation sides.					

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP2 Sheet 1 of 1	
Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.50m			
Date Excavated: 12/10/2021			Level:			Depth : 3.00m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.60	ES		0.15			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].			
			0.40			MADE GROUND: (Very dense) grey sandy GRAVEL and COBBLES of angular slag and clinker.			
			1.40			MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
2.20	ES		2.00			MADE GROUND: (Medium dense) dark grey and black silty sandy fine to coarse GRAVEL with medium cobble content. Gravel and cobbles are angular and sub-angular of ash, brick, concrete and lime. With occasional timber and plastic.			
			2.70			MADE GROUND: (Loose) grey gravelly fine to coarse SAND. Gravel is fine to coarse rounded to angular of sandstone - mild hydrocarbon odour.			
2.90	ES		3.00			Soft grey organic CLAY [estuarine alluvium].			
			End of Trialpit at 3.00 m						
Remarks:			Groundwater: Fast inflow of perched groundwater at 2.0m bgl.			Key:			
			Stability: Collapse of excavation sides to ground level.			D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP3 Sheet 1 of 1	
Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.30m			
Date Excavated: 12/10/2021			Level:			Depth : 3.20m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.40	ES		0.10			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].			
			0.30			MADE GROUND: (Dense) grey sandy GRAVEL and COBBLES of angular and sub-angular slag and clinker.			
1.30	ES		1.10			MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
			2.00			MADE GROUND: Firm black gravelly SILT. Gravel is fine to coarse sub-angular and angular of ash, brick, limestone and lime. With occasional plastic, metal and timber - mild hydrocarbon odour.			
3.00	ES		2.90			MADE GROUND: (Loose) grey brown gravelly fine to coarse SAND. Gravel is fine to coarse angular to rounded of sandstone.			
			3.20			Firm grey organic CLAY [estuarine alluvium - dessicated crust].			
			End of Trialpit at 3.20 m						
Remarks:			Groundwater: Fast inflow of perched groundwater at 2.0m bgl.			Key:			
			Stability: Overbreak and spalling of excavation sides.			D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP4 Sheet 1 of 1	
Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.40m			
Date Excavated: 12/10/2021			Level:			Depth : 3.00m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.40	ES		0.20			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].			
						MADE GROUND: (Medium dense) dark grey slightly sandy coarse GRAVEL and COBBLES of angular sandstone [ballast].			
						MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
						MADE GROUND: (Loose) dark grey and black slightly clayey sandy fine to coarse GRAVEL of rounded to angular sandstone, and angular brick and ash.			
1.60	ES		1.20						
			1.90			Soft brown organic CLAY with frequent decomposed grass [buried topsoil].			
						Soft to firm grey organic CLAY [estuarine alluvium].			
			2.00						
			3.00						
						End of Trialpit at 3.00 m			
Remarks:						Groundwater: Heavy seepage of perched groundwater at 1.6m bgl.			
						Stability: Overbreak and spalling of excavation sides.			
						Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP5 Sheet 1 of 1	
Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.30m			
Date Excavated: 12/10/2021			Level:			Depth : 3.00m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.50 0.50	B ES		0.10			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate]. MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
			1.00			MADE GROUND: (Medium dense) dark grey and black silty sandy fine to coarse GRAVEL with medium cobble and boulder content. Gravel and cobbles are angular and sub-angular of ash, brick, concrete and lime. Boulders (up to 1.0m x 0.6m x 0.5m) are angular of concrete and sandstone. With occasional timber and plastic.			
2.00	D		2.00			Soft grey organic CLAY [estuarine alluvium].			
			3.00			End of Trialpit at 3.00 m			
Remarks:			Groundwater: No groundwater encountered.			Key:			
			Stability: Overbreak and spalling of excavation sides.			D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP6 Sheet 1 of 1	
Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.30m			
Date Excavated: 12/10/2021			Level:			Depth : 2.60m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.30	ES		0.15			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].			
0.50	B		0.40			MADE GROUND: (Dense) grey sandy GRAVEL and COBBLES of angular and sub-angular slag and clinker.			
1.50	ES		1.30			MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
2.30	ES		2.30			MADE GROUND: (Medium dense) dark grey very silty sandy fine to coarse GRAVEL of angular and sub-angular sandstone, brick, lime and ash.			
			2.60			Firm grey organic CLAY [estuarine alluvium - dessicated crust].			
						End of Trialpit at 2.60 m			
Remarks:						Groundwater: No groundwater encountered.		Key:	
						Stability: Overbreak and spalling of excavation sides.		D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample	
									

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP7 Sheet 1 of 1	
Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.60m			
Date Excavated: 12/10/2021			Level:			Depth : 3.00m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
1.00	ES		0.15			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].			
			0.30			MADE GROUND: (Dense) grey sandy GRAVEL and COBBLES of angular and sub-angular slag and clinker.			
						MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
			1.00			MADE GROUND: (Medium dense) dark grey very silty sandy fine to coarse GRAVEL of angular and sub-angular sandstone, brick, lime and ash.			
			1.90			MADE GROUND: (Medium dense) red brown silty sandy GRAVEL and COBBLES of rounded to angular sandstone. With occasional timber.			
			2.60			Firm grey organic CLAY [estuarine alluvium - dessicated crust].			
			3.00			End of Trialpit at 3.00 m			
Remarks:			Groundwater: Fast inflow of perched groundwater at 1.9m bgl.			Key:			
			Stability: Overbreak and spalling of excavation sides.			D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP8 Sheet 1 of 1	
Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.40m			
Date Excavated: 12/10/2021			Level:			Depth : 3.20m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.50 0.50	B ES		0.15			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].			
			0.40			MADE GROUND: (Dense) grey sandy GRAVEL and COBBLES of angular and sub-angular slag and clinker.			
2.00	ES		1.40			MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
			1.80			MADE GROUND: Soft to firm red brown gravell CLAY. Gravel is fine to coarse rounded of sandstone and angular of brick.			
			2.40			MADE GROUND: Soft black gravelly SILT. Gravel is fine to coarse of ash and brick. With occasional ceramic.			
			2.90			MADE GROUND: (Loose) red brown silty sandy GRAVEL and COBBLES of rounded to angular sandstone. With occasional timber.			
			3.20			Firm grey organic CLAY [estuarine alluvium - dessicated crust].			
			End of Trialpit at 3.20 m						
Remarks:			Groundwater: Fast inflow of perched groundwater at 2.4m bgl.			Key:			
			Stability: Overbreak and spalling of excavation sides.			D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

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Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.40m			
Date Excavated: 12/10/2021			Level:			Depth : 2.80m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.40	ES		0.10			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate]. MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
1.00	ES		0.90			MADE GROUND: (Medium dense) dark grey and black silty sandy fine to coarse GRAVEL with medium cobble content. Gravel and cobbles are angular and sub-angular of ash, brick, concrete and lime. With occasional timber and plastic.	1		
1.60	D		1.60			Soft grey organic CLAY [estuarine alluvium].	2		
			2.80			End of Trialpit at 2.80 m	3		
							4		
							5		
Remarks:			Groundwater: Heavy seepage of perched groundwater at 1.6m bgl.			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			
			Stability: Overbreak and spalling of excavation sides.						

			Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP10 Sheet 1 of 1	
Location: Newport						Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX						Coordinates:			Dimensions Depth : 2.80m 0.60m			
Date Excavated: 12/10/2021						Level:						
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description						
Depth (m)	Type	Results										
0.40	ES		0.10			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].						
			0.30			MADE GROUND: (Medium dense) dark grey slightly sandy coarse GRAVEL and COBBLES of angular sandstone [ballast].						
			0.60			MADE GROUND: Firm red brown slightly gravelly silty CLAY. Gravel is fine to coarse rounded of sandstone. With occasional glass and metal.						
			1.90			MADE GROUND: (Loose) red brown silty sandy GRAVEL and COBBLES of rounded to angular sandstone. With occasional timber.						
			2.50			Firm grey organic CLAY [estuarine alluvium - dessicated crust].						
			2.80			End of Trialpit at 2.80 m						
Remarks:						Groundwater: Fast inflow of perched groundwater at 1.9m bgl.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample				
						Stability: Collapse of excavation sides to ground level.						

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Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.60m			
Date Excavated: 12/10/2021			Level:			Depth : 3.20m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
			0.20			MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].			
						MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
			1.40			MADE GROUND: (Medium dense) dark grey and black silty sandy fine to coarse GRAVEL with medium cobble content. Gravel and cobbles are angular and sub-angular of ash, brick, concrete and lime. With occasional timber and plastic.			
			2.10			Firm grey organic CLAY [estuarine alluvium - dessicated crust]. - old 8inch diameter clay pipe encountered at 2.2m bgl.			
			3.20			End of Trialpit at 3.20 m			
Remarks:						Groundwater: Heavy seepage of perched groundwater at 2.0m bgl.		Key:	
						Stability: Overbreak and spalling of excavation sides.		D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample	



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Location: Newport			Client: Hedyn			Logged By: JJ		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.80m			
Date Excavated: 12/10/2021			Level:			Depth : 3.60m 0.60m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
			0.50			MADE GROUND: Grass over (dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].			
						MADE GROUND: (Loose) dark grey and black silty sandy fine to coarse GRAVEL with medium cobble content. Gravel and cobbles are angular and sub-angular of ash, brick, concrete and lime. With occasional timber and plastic.			
			3.60			End of Trialpit at 3.60 m			
Remarks:			Groundwater: Heavy seepage of perched groundwater at 3.5m bgl.			Key:			
			Stability: Collapse of excavation sides to ground level.			D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			

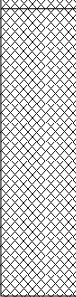
Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP01 Sheet 1 of 1	
Location: Newport			Client: Hedyn			Logged By: FG		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.00m			
Date Excavated: 24/10/2024			Level:			Depth : 1.80m 0.70m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.50	ES		0.10			Concrete			
					MADE GROUND: Loose blackish brown clayey ashy gravelly SAND. Gravel is fine to coarse angular of sandstone, shale, brick, ash, ash and clinker				
					MADE GROUND: Loose to medium dense brown sandy silty GRAVEL with moderate cobble content of angular blocky sandstone. Gravel is fine to coarse angular sandstone.				
			1.80			End of Trialpit at 1.80 m			
Remarks: 1. Trial pit terminated at 1.8m below existing ground level due to rapid groundwater inflow.			Groundwater: 1. Rapid groundwater inflow encountered at 1.8m below existing ground level.			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			
			Stability: 1. Generally stable in the short term with local instability associated with cobble removal.						

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Location: Newport			Client: Hedyn			Logged By: FG		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.10m			
Date Excavated: 24/10/2024			Level:			Depth : 3.00m 0.70m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.30	ES		0.05			Bituminous Hardstanding			
			0.25			MADE GROUND: Loose yellow gravelly SAND. Gravel is fine to coarse angular to rounded sandstone.			
						MADE GROUND: Loose black, red and grey silty gravelly locally very gravelly SAND with low cobble content of angular vesicular slag. Gravel is fine to coarse angular and sub-angular of ash, clinker and shale.			
			1.60			MADE GROUND: Loose to medium dense brown silty very sandy GRAVEL with moderate cobble content of angular platy mudstone and sandstone. Gravel is fine to coarse angular platy sandstone and mudstone.			
			2.70			Firm bluish grey silty CLAY.			
			3.00			End of Trialpit at 3.00 m			
Remarks: 1. Trial pit terminated at 3.0m below existing ground level upon encountering natural soils.			Groundwater: 1. Low to moderate groundwater inflow encountered at 1.6m below existing ground level.			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			
			Stability: 1. Generally stable in the short term with localised instability associated with loose deposits and cobble removal.						

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Location: Newport			Client: Hedyn			Logged By: FG		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 1.90m			
Date Excavated: 24/10/2024			Level:			Depth : 3.50m 0.70m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.40	ES		0.20			Concrete			1
			0.60			MADE GROUND: Loose red, black and brown silty gravelly ashy SAND. Gravel is fine to coarse angular and sub-angular of sandstone, shale, ash and clinker.			
						MADE GROUND: Loose bluish grey, red yellow and black silty gravelly locally very clayey SAND. Gravel is fine to coarse angular to sub-rounded of sandstone, ash and clinker.			
						MADE GROUND: Soft to firm bluish grey silty very slightly gravelly CLAY. Gravel is fine to coarse angular brick. [Reworked Natural Soils]			
						MADE GROUND: Loose greyish brown sandy GRAVEL with moderate cobble content of angular to rounded sandstone. Gravel is fine to coarse sub-angular to rounded sandstone.			
2.20		Firm grey silty sandy CLAY with occasional lenses of yellow fine to coarse sand.			3				
2.90									
3.50		End of Trialpit at 3.50 m			4				
					5				
Remarks: 1. Trial pit terminated at 3.5m below existing ground level upon encountering natural soils.			Groundwater: 1. Moderate groundwater inflow encountered at 2.2m below existing ground level.			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			
			Stability: 1. Generally stable in the short term with localised instability associated with loose deposits and cobble removal.						

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Location: Newport			Client: Hedyn			Logged By: FG		Scale 1:25		
Equipment: JCB 3CX			Coordinates:			Dimensions 2.30m				
Date Excavated: 24/10/2024			Level:			Depth : 3.10m 0.70m				
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description				
Depth (m)	Type	Results								
0.50	ES		0.10			Bituminous Hardstanding			1	
			0.25			MADE GROUND: Loose yellow gravelly SAND. Gravel is fine to coarse sub-rounded sandstone.				
						MADE GROUND: Loose to medium dense black and reddish black silty ashy gravelly SAND with moderate cobble and low boulder content of angular blocky vesicular. Gravel is fine to coarse angular to sub-rounded of sandstone, ash, clinker, shale and vesicular slag.				
			1.50			MADE GROUND: Loose yellowish brown and greyish brown gravelly silty SAND. Gravel if fine to coarse sub-rounded of sandstone.				
			2.10			MADE GROUND: Loose brown silty sandy GRAVEL. Gravel is fine to coarse angular to rounded sandstone.				
			2.70			Firm bluish grey silty slightly sandy CLAY.				
			3.10			End of Trialpit at 3.10 m			3	
									4	
									5	
Remarks: 1. Trial pit terminated at 3.0m below existing ground level upon encountering natural soils.				Groundwater: 1. Low to moderate groundwater inflow encountered at 1.6m below existing ground level.			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			
				Stability: 1. Generally stable in the short term with localised instability associated with loose deposits and cobble removal.						

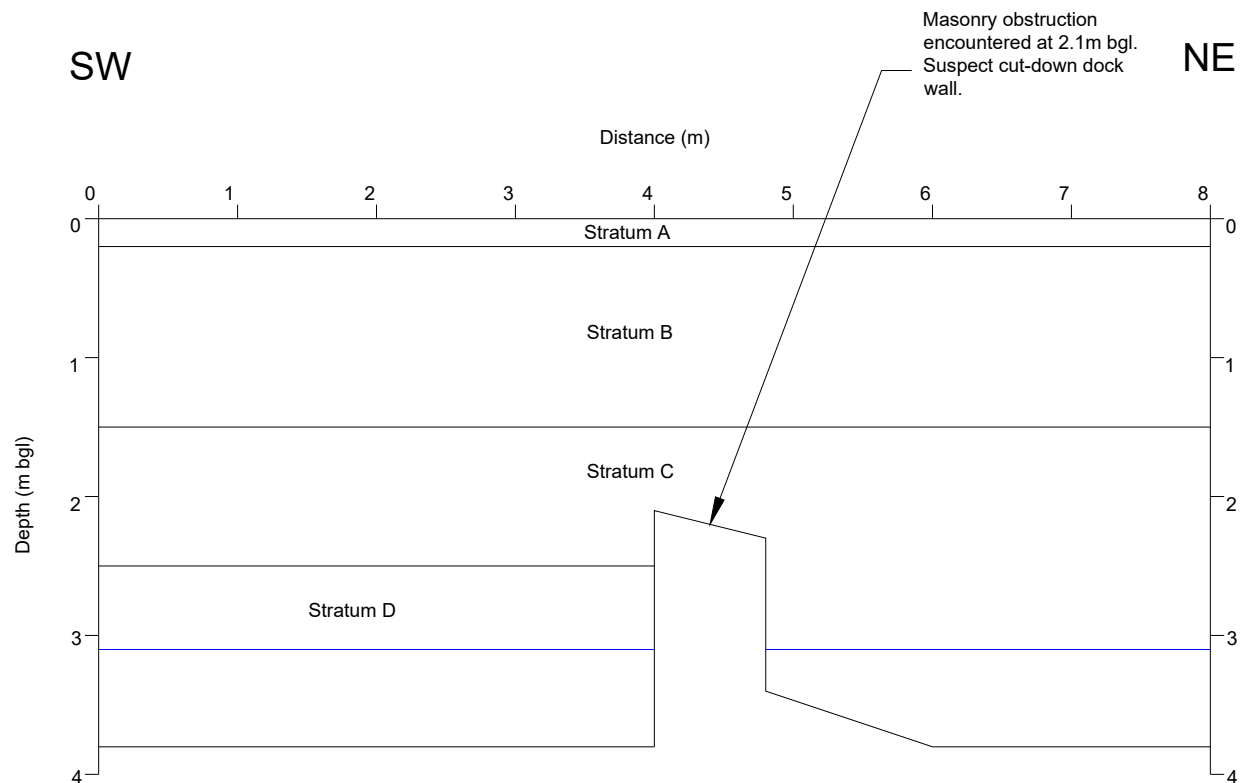
Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com			Project Name: Jacks Pill, Usk Way			Project No.: 14627		Trial Pit No.: TP05 Sheet 1 of 1	
Location: Newport			Client: Hedyn			Logged By: FG		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.10m			
Date Excavated: 24/10/2024			Level:			Depth : 1.20m 0.70m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.40	ES		0.10			Concrete			
						MADE GROUND: Loose black slightly gravelly SAND. Gravel is fine to coarse angular of ash, clinker and vesicular slag.			
						0.50		MADE GROUND: Medium dense grey silty ashy gravelly SAND with moderate cobble content and low boulder content of sub-angular blocky vesicular slag. Gravel is fine to coarse angular to sub-rounded of sandstone, shale, vesicular slag, ash and clinker.	
1.20		End of Trialpit at 1.20 m							
Remarks: 1. Trial pit terminated at 1.2m below existing ground level within made ground deposits.			Groundwater: 1. No groundwater encountered.			Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			
			Stability: 1. Generally stable in the short term with local instability associated with cobble removal.						

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Location: Newport			Client: Hedyn			Logged By: FG		Scale 1:25	
Equipment: JCB 3CX			Coordinates:			Dimensions 2.20m			
Date Excavated: 24/10/2024			Level:			Depth : 1.20m 0.70m			
Samples & In-situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
Depth (m)	Type	Results							
0.30	ES		0.10			Bituminous Hardstanding			
			0.25			MADE GROUND: Loose yellow gravelly SAND. Gravel is fine to coarse sub-rounded sandstone.			
			1.20			MADE GROUND: Loose grey and dark brown gravelly ashy SAND. Gravel is fine to coarse angular to sub-rounded of sandstone, shale, vesicular slag, ash and clinker. Inclusions of railway sleepers and timber.			
						End of Trialpit at 1.20 m			
Remarks:			Groundwater:			Key:			
1. Trial pit terminated at 1.2m below existing ground level within made ground deposits.			1. No groundwater encountered.			D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample W - Water sample			
Stability:			1. Generally stable in the short term with local instability associated with cobble removal.						

APPENDIX D

TRIAL TRENCH CROSS SECTIONS

TRENCH 1



Strata Legend:

- Stratum A - MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].
- Stratum B - MADE GROUND: (Medium dense to dense) grey and brown sandy fine to coarse GRAVEL of angular brick, concrete and slag [compacted fill].
- Stratum C - MADE GROUND: (Medium dense) dark grey and brown clayey sandy fine to coarse GRAVEL of angular ash, brick, concrete, With occasional timber.
- Stratum D - Soft red brown becoming grey CLAY [suspected natural].

Trench 1

Project: Jacks Pill Land, Usk Way, Newport

Job No.: 14627

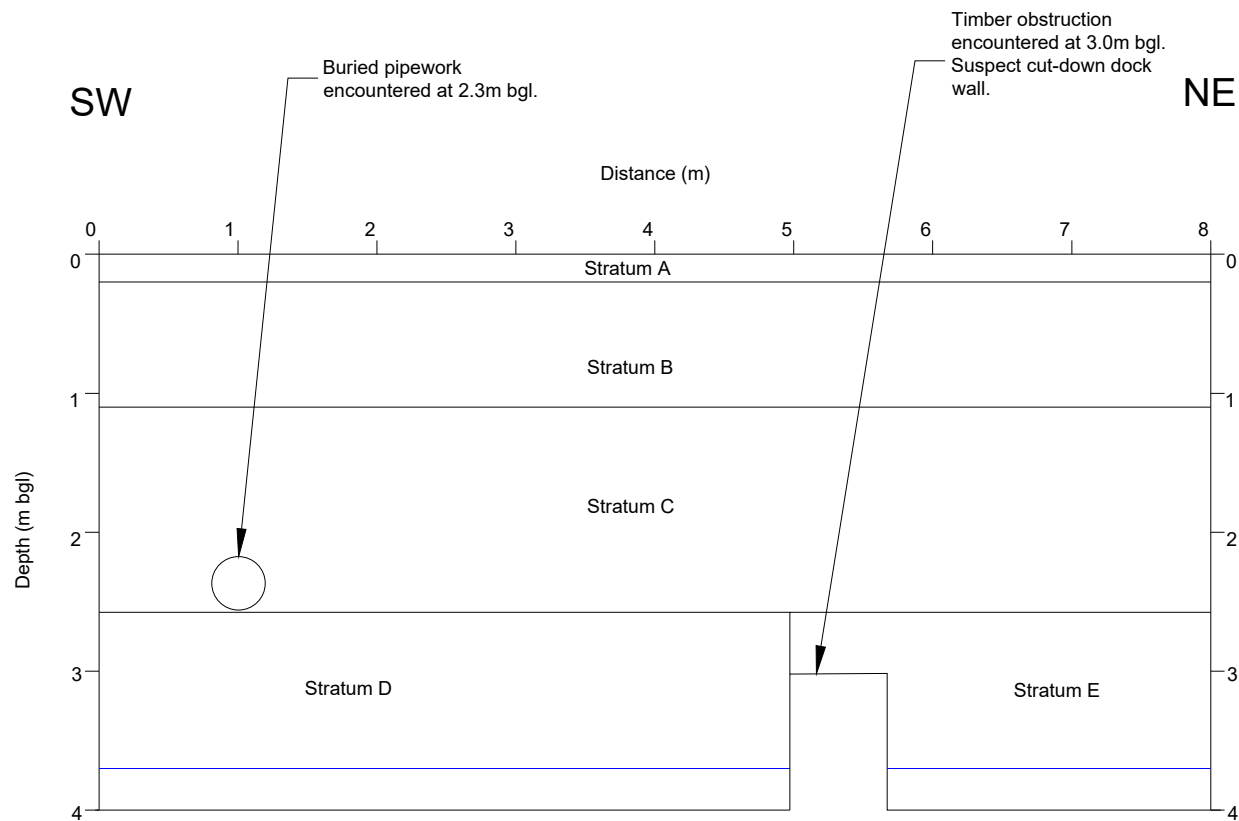
Client: Hedyn

Scale: NTS

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Castlegate Business Park,
Caerphilly,
CF83 2AX.
Tel: 029 2080 7991

TRENCH 2



Strata Legend:

Stratum A - MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].

Stratum B - MADE GROUND: (Medium dense to dense) grey and brown sandy fine to coarse GRAVEL of angular brick, concrete and slag [compacted fill].

Stratum C - MADE GROUND: (Medium dense) dark grey and brown clayey sandy fine to coarse GRAVEL of angular ash, brick, concrete, With occasional timber.

Stratum D - MADE GROUND: (Loose) grey clayey sandy fine to coarse GRAVEL of rounded sandstone and angular ash.

Stratum E - Soft red brown becoming grey CLAY [suspected natural].

rench 2

Project: Jacks Pill Land, Usk Way, Newport

Client: Hedyn

Job No.: 14627

Scale: NTS

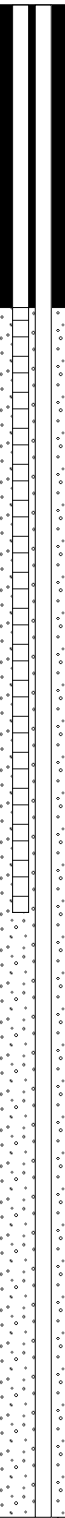
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Tel: 029 2080 7991

APPENDIX E

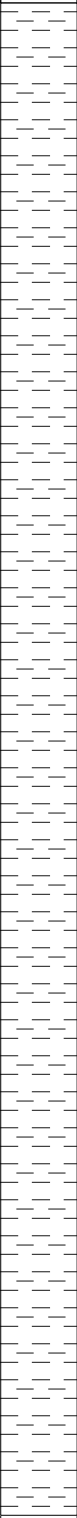
SHELL AND AUGER BOREHOLE LOGS

		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way		Project No.: 14627		Borehole No.: BH1 Sheet 1 of 5	
Location: Newport				Client: Hedyn		Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm		Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.00m		Dates 05/10/2021 - 08/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10		MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate]. MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].	1	
		1.00	C	N=7 (1,1/1,2,2,2)	1.20		MADE GROUND: (Medium dense) dark grey and black silty sandy fine to coarse GRAVEL with medium cobble content. Gravel and cobbles are angular and sub-angular of ash, brick, concrete and lime. With occasional timber and plastic.	2	
		2.00	C	N=11 (2,2/2,3,3,3)	2.20		Soft grey organic CLAY [estuarine alluvium].		
		3.00	S	N=8 (3,2/2,2,2,2)				3	
		4.00	S	N=3 (1,0/1,0,1,1)				4	
		5.00	S	N=2 (1,0/1,0,1,0)				5	

Remarks: 1. Borehole terminated at 22.1m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation			
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[illegible]

Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way		Project No.: 14627		Borehole No.: BH1 Sheet 3 of 5			
Location: Newport		Client: Hedyn		Coordinates:		Hole Type: CP			
Equipment: Dando 2000		Diameter of Casing: 200mm		Level:		Scale 1:25			
Diameter of Boring: 200mm		Depth of Casing: 21.00m		Dates 05/10/2021 - 08/10/2021		Logged By: JJ			
Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		11.00	S	N=1 (1,0/0,1,0,0)					
		12.50	S	N=2 (1,0/0,1,0,1)					
		14.00	S	N=3 (0,0/1,0,1,1)					

Remarks:

1. Borehole terminated at 22.1m bgl after 2 hrs of chiselling through weathered mudstone bedrock.

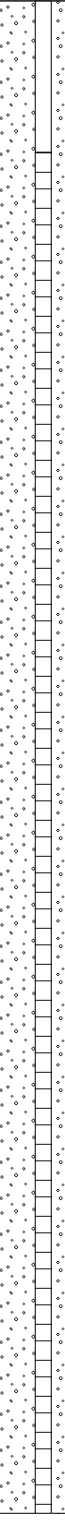
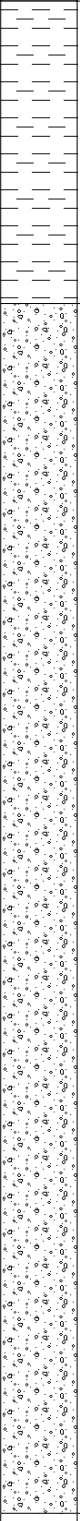
Key:

D - Small disturbed sample
B - Bulk disturbed sample
ES - Environmental soil sample
SPT - Standard Penetration Test (split spoon)
CPT - Standard Penetration Test (solid cone)

W - Water sample
U - Undisturbed sample
TCR - Total Core Recovery
SCR - Solid Core Recovery
RQD - Rock Quality Designation

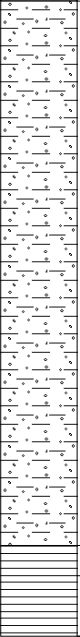


		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way			Project No.: 14627		Borehole No.: BH1 Sheet 4 of 5	
Location: Newport				Client: Hedyn			Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm			Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.00m			Dates 05/10/2021 - 08/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		15.50	S	N=2 (0, 1/0, 1, 0, 1)	16.00		Loose to medium dense, becoming medium dense, brown sandy fine to coarse GRAVEL of rounded sandstone. With medium cobble content of rounded sandstone.	16	
		17.00	S	N=9 (1, 1/1, 2, 3, 3)				17	
		18.50	C	N=30 (3, 3/5, 10, 7, 8)				18	
		20.00	C	N=36 (5, 6/7, 9, 10, 10)				20	

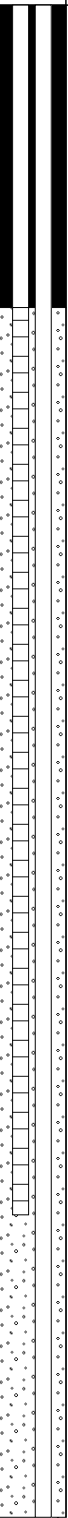
Remarks: 1. Borehole terminated at 22.1m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way			Project No.: 14627		Borehole No.: BH1 Sheet 5 of 5	
Location: Newport				Client: Hedyn			Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm			Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.00m			Dates 05/10/2021 - 08/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		21.50	C	N=151 (20,25/27,34,41,49)	21.80		Stiff becoming very stiff red brown gravelly CLAY. Gravel is fine to coarse of angular mudstone [completely weathered bedrock].	
		22.10	C	80 (30,50/80 for 150mm)	22.10		Extremely weak red highly weathered MUDSTONE; recovered as clayey gravel and cobbles of angular mudstone. - Chiselled from 21.9m to 22.3m for 4 hrs.	
End of Borehole at 22.10 m								

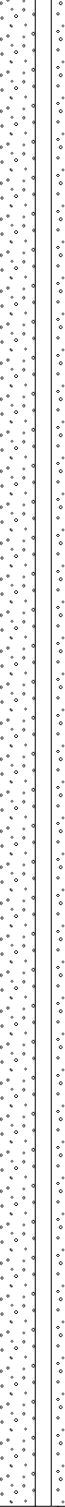
Remarks: 1. Borehole terminated at 22.1m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way		Project No.: 14627		Borehole No.: BH2 Sheet 1 of 5	
Location: Newport				Client: Hedyn		Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm		Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.50m		Dates 12/10/2021 - 14/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
		Depth (m)	Type	Results						
					0.10		MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].			
					0.30		MADE GROUND: (Dense) grey sandy GRAVEL and COBBLES of angular and sub-angular slag and clinker.			
					1.00	C	N=7 (3,2/2,1,2,2)	1.10	MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].	1
					2.00	C	N=9 (2,3/2,3,2,2)	2.00	MADE GROUND: Firm black gravelly SILT. Gravel is fine to coarse sub-angular and angular of ash, brick, limestone and lime. With occasional plastic, metal and timber.	2
					2.70 2.80					
					3.00	C	N=4 (1,1/1,1,1,1)	2.90	MADE GROUND: (Loose) grey brown gravelly fine to coarse SAND. Gravel is fine to coarse angular to rounded of sandstone.	3
					4.00	S	N=7 (1,2/1,2,2,2)	4.00	Soft to firm grey organic CLAY [estuarine alluvium - dessicated crust].	4
					5.00	S	N=3 (1,0/1,0,1,1)		Soft grey organic CLAY [estuarine alluvium].	5

Remarks: 1. Borehole terminated at 22.3m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way			Project No.: 14627		Borehole No.: BH2 Sheet 2 of 5	
Location: Newport				Client: Hedyn			Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm			Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.50m			Dates 12/10/2021 - 14/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		6.50	S	N=3 (1,0/1,0,1,1)					
		8.00	S	N=3 (1,0/0,1,1,1)					
		9.50	S	N=3 (1,0/1,0,1,1)					

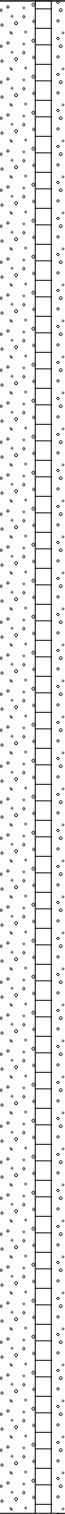
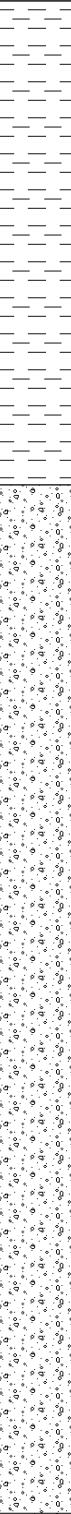
Remarks: 1. Borehole terminated at 22.3m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Integral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way			Project No.: 14627		Borehole No.: BH2 Sheet 3 of 5	
Location: Newport				Client: Hedyn			Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm			Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.50m			Dates 12/10/2021 - 14/10/2021		Logged By: JJ	

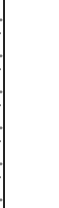
Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
	 11.10	11.00	S	N=2 (1,0/1,0,1,0)					11
		12.50	S	N=2 (1,0/0,1,0,1)					12
		14.00	S	N=2 (1,0/1,0,1,0)					13
									14
									15

Remarks: 1. Borehole terminated at 22.3m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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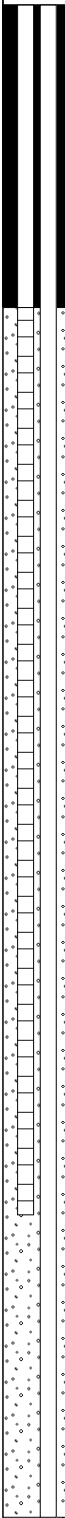
		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way		Project No.: 14627		Borehole No.: BH2 Sheet 4 of 5	
Location: Newport				Client: Hedyn		Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm		Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.50m		Dates 12/10/2021 - 14/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		15.50	S	N=3 (1,0/1,0,1,1)	16.60			
		17.00	C	N=65 (1,3/5,16,15,29)				
		18.50	C	N=43 (4,4/8,11,12,12)				
		20.00	C	N=113 (8,8/18,16,29,50)				

Remarks: 1. Borehole terminated at 22.3m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way					Project No.: 14627		Borehole No.: BH2 Sheet 5 of 5				
		Location: Newport					Client: Hedyn		Coordinates:		Hole Type: CP		
Equipment: Dando 2000					Diameter of Casing: 200mm					Level:		Scale 1:25	
Diameter of Boring: 200mm					Depth of Casing: 21.50m					Dates 12/10/2021 - 14/10/2021		Logged By: JJ	
Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description					
		Depth (m)	Type	Results									
		21.50	C	N=81 (10,12/16,18,20,27)	21.90			Stiff becoming very stiff red brown gravelly CLAY. Gravel is fine to coarse of angular mudstone [completely weathered bedrock]. - Chiselled from 20.3m to 20.7m for 1 hr.					
		22.30	C	50 (50,50/50 for 60mm)	22.30			Extremely weak red highly weathered MUDSTONE; recovered as clayey gravel and cobbles of angular mudstone. - Chiselled from 21.9m to 22.3m for 2 hrs.					
								End of Borehole at 22.30 m					
Remarks:													
1. Borehole terminated at 22.3m bgl after 2 hrs of chiselling through weathered mudstone bedrock.													
Key:							W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery ROD - Rock Quality Designation						
													

		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way		Project No.: 14627		Borehole No.: BH3 Sheet 1 of 5	
Location: Newport				Client: Hedyn		Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm		Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.00m		Dates 15/10/2021 - 19/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.15		MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].		
					0.40		MADE GROUND: (Very dense) grey sandy GRAVEL and COBBLES of angular slag and clinker.		
					1.00	C	N=24 (2,6/4,8,4,8)		1
					1.40			MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill].	
					2.00	C	50 (25 for 75mm/50 for 75mm)		2
				3.00	C	N=5 (1,1/1,1,1,2)			3
	3.50  3.60 				3.50		MADE GROUND: (Medium dense) dark grey and black silty sandy fine to coarse GRAVEL with medium cobble content. Gravel and cobbles are angular and sub-angular of ash, brick, concrete and lime. With occasional timber and plastic.		
					4.00	S	N=4 (1,1/1,1,1,1)		4
					5.00	S	N=3 (1,0/1,0,1,1)	Soft grey organic CLAY [estuarine alluvium].	5

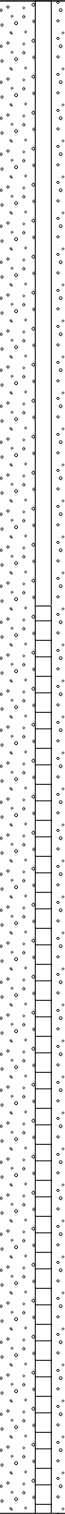
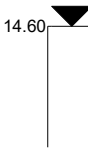
Remarks: 1. Borehole terminated at 21.9m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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 Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way			Project No.: 14627		Borehole No.: BH3 Sheet 2 of 5	
		Location: Newport			Client: Hedyn		Coordinates:	
Equipment: Dando 2000		Diameter of Casing: 200mm			Level:		Scale 1:25	
Diameter of Boring: 200mm		Depth of Casing: 21.00m			Dates 15/10/2021 - 19/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		6.50	S	N=2 (1,0/1,0,1,0)					6
		8.00	S	N=3 (1,0/1,0,1,1)					7
		9.50	S	N=2 (1,0/1,0,1,0)					8
									9
									10

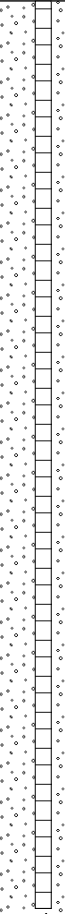
Remarks: 1. Borehole terminated at 21.9m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Integral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way			Project No.: 14627		Borehole No.: BH3 Sheet 3 of 5	
Location: Newport				Client: Hedyn			Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm			Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.00m			Dates 15/10/2021 - 19/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		11.00	S	N=3 (1,0/1,0,1,1)					11		
											12
											13
											14
											15

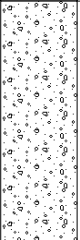
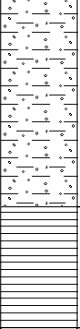
Remarks: 1. Borehole terminated at 21.9m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way		Project No.: 14627		Borehole No.: BH3 Sheet 4 of 5	
Location: Newport				Client: Hedyn		Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm		Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.00m		Dates 15/10/2021 - 19/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		15.50	C	N=8 (1,2/1,2,2,3)				
		17.00	C	N=10 (1,2/2,3,3,2)	17.00			
		18.50	C	N=40 (6,6/7,9,12,12)				
		20.00	C	N=44 (4,11/8,10,12,14)				

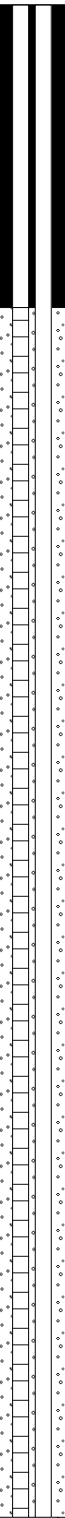
Remarks: 1. Borehole terminated at 21.9m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way			Project No.: 14627		Borehole No.: BH3 Sheet 5 of 5	
Location: Newport				Client: Hedyn			Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm			Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.00m			Dates 15/10/2021 - 19/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
		Depth (m)	Type	Results							
					20.80			Stiff red brown gravelly CLAY. Gravel is fine to coarse of angular mudstone [completely weathered bedrock].	21		
		21.50	C	50 (50,50/50 for 75mm)	21.50						Extremely weak red highly weathered MUDSTONE; recovered as clayey gravel and cobbles of angular mudstone. - Chiselled from 21.5m to 21.9m for 2 hrs.
					21.90						
							End of Borehole at 21.90 m		22		
									23		
									24		
									25		

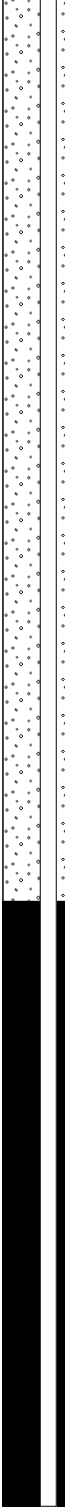
Remarks: 1. Borehole terminated at 21.9m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way		Project No.: 14627		Borehole No.: BH4 Sheet 1 of 5	
Location: Newport				Client: Hedyn		Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm		Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.50m		Dates 20/10/2021 - 22/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10		MADE GROUND: (Loose) grey and red brown sandy fine to coarse GRAVEL of angular limestone [aggregate].		
					0.30		MADE GROUND: (Dense) grey sandy GRAVEL and COBBLES of angular and sub-angular slag and clinker.		
					0.80		MADE GROUND: (Dense) grey and brown sandy fine to coarse GRAVEL of angular slag, brick and concrete [compacted fill]. - Chiselled from 0.4m to 0.8m for 1 hr.		
		1.00	C	N=9 (7,4/2,2,2,3)			MADE GROUND: (Medium dense) dark grey and black silty sandy fine to coarse GRAVEL with medium cobble content. Gravel and cobbles are angular and sub-angular of ash, brick, concrete and lime. With occasional timber and plastic.	1	
		2.00	C	N=29 (1,2/3,3,5,18)				2	
					2.30		MADE GROUND: (Loose) grey slightly clayey slightly sandy fine to coarse GRAVEL of rounded to angular sandstone. With rare brick.		
	2.70								
	3.00	3.00	C	N=7 (1,2/1,2,2,2)	3.00		Soft grey organic CLAY [estuarine alluvium].	3	
		4.00	S	N=7 (1,1/1,2,2,2)				4	
		5.00	S	N=6 (1,1/1,1,2,2)				5	

Remarks: 1. Borehole terminated at 22.2m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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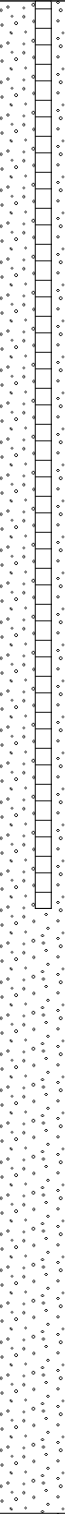
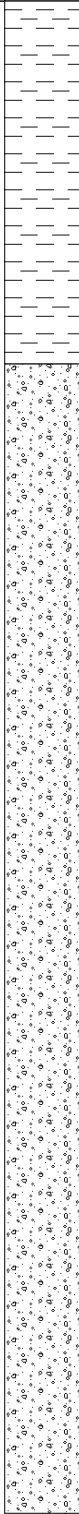
		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way			Project No.: 14627		Borehole No.: BH4 Sheet 2 of 5	
Location: Newport				Client: Hedyn			Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm			Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.50m			Dates 20/10/2021 - 22/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		6.50	S	N=3 (1,0/1,0,1,1)					6
		8.00	S	N=4 (1,0/1,1,1,1)					7
		9.50	S	N=4 (1,0/1,1,1,1)					8
									9
									10

Remarks: 1. Borehole terminated at 22.2m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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Intégral Géotechnique		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way				Project No.: 14627		Borehole No.: BH4 Sheet 3 of 5	
Location: Newport				Client: Hedyn				Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm				Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.50m				Dates 20/10/2021 - 22/10/2021		Logged By: JJ	
Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		11.00	S	N=3 (1,0/1,0,1,1)							
		12.50	S	N=5 (1,1/1,1,1,2)							
		14.00	C	N=4 (1,0/1,1,1,1)							
Remarks: 1. Borehole terminated at 22.2m bgl after 2 hrs of chiselling through weathered mudstone bedrock.								Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone) W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation			

		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way		Project No.: 14627		Borehole No.: BH4 Sheet 4 of 5	
Location: Newport				Client: Hedyn		Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm		Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.50m		Dates 20/10/2021 - 22/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		15.50	C	N=4 (1,0/1,0,1,2)	16.20			
		17.00	C	N=27 (3,5/6,6,8,7)				
		18.50	C	N=39 (4,4/8,9,10,12)				
		20.00	C	N=27 (4,5/5,6,8,8)				

Remarks: 1. Borehole terminated at 22.2m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way			Project No.: 14627		Borehole No.: BH4 Sheet 5 of 5	
Location: Newport				Client: Hedyn			Coordinates:		Hole Type: CP	
Equipment: Dando 2000				Diameter of Casing: 200mm			Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 21.50m			Dates 20/10/2021 - 22/10/2021		Logged By: JJ	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					20.80				
		21.50	C	N=39 (3,5/9,10,10,10)	21.80		Stiff red brown gravelly CLAY. Gravel is fine to coarse of angular mudstone [completely weathered bedrock].	21	
		22.20	C	50 (41,50/50 for 55mm)	22.20		Extremely weak red highly weathered MUDSTONE; recovered as clayey gravel and cobbles of angular mudstone. - Chiselled from 21.8m to 22.2m for 2 hrs.	22	
							End of Borehole at 22.20 m		23
									24
									25

Remarks: 1. Borehole terminated at 22.2m bgl after 2 hrs of chiselling through weathered mudstone bedrock.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jack's Pill			Project No.: 14627		Borehole No.: BH5 Sheet 1 of 4	
Location: Usk Way, Newport				Client: Tai Hedyn Limited			Coordinates:		Hole Type: CP	
Equipment: Dando				Diameter of Casing: 200mm			Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 17.00m			Dates 30/07/2026 - 31/07/2026		Logged By: RH	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10		(Loose) grey and reddish brown sandy fine to coarse angular GRAVEL of limestone. (MADE GROUND)		
					0.20		(Dense) grey SAND and fine to medium angular to sub-angular GRAVEL of mudstone and slag. (MADE GROUND)		
					0.70		(Dense) dark grey coarse SAND and very fine to medium angular to sub-rounded GRAVEL of mudstone and fine to medium angular GRAVEL of slag.		
		1.20	C	N=44 (12,15/15,14,7,8)			Dense becoming medium dense dark greyish brown silty initially slightly clayey gravelly SAND. Gravel is fine to medium angular to sub-rounded of mudstone, clinker, slag and occasional concrete. Occasional brick and rare glass fragments below 1.2m depth.	1	
		2.20	C	N=27 (5,6/8,8,6,5)				2	
		3.20	C	N=50 (2,5/50 for 265mm)	3.20			3	
		4.20	C	N=13 (1,2/2,2,4,5)			Firm to stiff reddish brown mottled grey silty initially slightly sandy gravelly cobbly CLAY. Gravel and cobble are fine to coarse angular to sub-angular of slag. Dark grey inclusions below 5.2m with rare fragments of organic matter. (MADE GROUND)	4	
								5	

Remarks: Borehole terminated at 17.0m depth due to refusal at top of probable underlying granular buried channel deposits. Chiselling from 0.2m - 0.5m (1 hour), 0.5m - 0.9m (1 hour). Water strike at 6.0m rose to 4.8m after 20 minutes. Water strike at 15.0m rose to 9.1m after 20 minutes.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jack's Pill		Project No.: 14627		Borehole No.: BH5 Sheet 2 of 4	
Location: Usk Way, Newport				Client: Tai Hedyn Limited		Coordinates:		Hole Type: CP	
Equipment: Dando				Diameter of Casing: 200mm		Level:		Scale 1:25	
Diameter of Boring: 200mm				Depth of Casing: 17.00m		Dates 30/07/2026 - 31/07/2026		Logged By: RH	

Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		5.20	C	N=32 (4,8/11,11,5,5)					
	6.00 	6.00	S	N=6 (8,1/1,1,2,2)	5.80			Soft grey slightly silty CLAY. (Tidal Flat Deposits)	6
		7.50	S	N=4 (1,1/1,1,1,1)					7
					7.95			Soft grey slightly silty CLAY. Interspersed bands of brown clay or dark grey silty often slightly sandy clay. (Tidal Flat Deposits)	8
		9.00	S	N=4 (2,1/1,1,1,1)					9
									10

Remarks: Borehole terminated at 17.0m depth due to refusal at top of probable underlying granular buried channel deposits. Chiselling from 0.2m - 0.5m (1 hour), 0.5m - 0.9m (1 hour). Water strike at 6.0m rose to 4.8m after 20 minutes. Water strike at 15.0m rose to 9.1m after 20 minutes.		Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		
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Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jack's Pill		Project No.: 14627		Borehole No.: BH5 Sheet 4 of 4				
Location: Usk Way, Newport		Client: Tai Hedyn Limited		Coordinates:		Hole Type: CP				
Equipment: Dando		Diameter of Casing: 200mm		Level:		Scale 1:25				
Diameter of Boring: 200mm		Depth of Casing: 17.00m		Dates 30/07/2026 - 31/07/2026		Logged By: RH				
Well	Water Strikes	Samples & In situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		15.50	S	N=9 (2,2/2,2,2,3)	15.50			Firm grey to dark grey silty slightly sandy slightly gravelly CLAY. Gravel is fine to medium angular to sub-rounded. Occasional shell fragments. (Tidal Flat Deposits)	16	
		16.00	S	N=8 (1,2/2,2,2,2)					17	
		17.00	C	N=50 (12,15/15,15,17,3)	17.00			End of Borehole at 17.00 m	18	
									19	
									20	
Remarks: Borehole terminated at 17.0m depth due to refusal at top of probable underlying granular buried channel deposits. Chiselling from 0.2m - 0.5m (1 hour), 0.5m - 0.9m (1 hour). Water strike at 6.0m rose to 4.8m after 20 minutes. Water strike at 15.0m rose to 9.1m after 20 minutes.						Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone) W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation				

APPENDIX F

ROTARY BOREHOLE LOGS

Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way				Project No.: 14627		Borehole No.: RC01 Sheet 1 of 2				
Location: Newport				Client: Hedyn				Coordinates:		Hole Type: RC		
Equipment: Tracked Rotary Rig Klemm 802				Diameter of Casing: 115mm				Level:		Scale 1:100		
Diameter of Boring: 115mm				Depth of Casing: 21.00m				Dates 25/10/2024 -		Logged By: AF		
Well	Water Strikes	Rotary Coring					Depth (m)	Level (m AOD)	N Value	Legend	Stratum Description	
		Depth (m)	TCR	SCR	RQD	FI					Made Ground. (Driller's open holing description)	1
							3.00					2
											Alluvium. (Driller's open holing description)	3
												4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
							17.00				Gravels. (open holing driller's description)	17
												18
												19
							20.00					20
Remarks: Rotary open hole drilling GL to 21.00m. Rotary coring 21.00 to 30.00m.										Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone) W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		

Intégral Géotechnique		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com				Project Name: Jacks Pill, Usk Way				Project No.: 14627		Borehole No.: RC01 Sheet 2 of 2			
Location: Newport						Client: Hedyn				Coordinates:		Hole Type: RC			
Equipment: Tracked Rotary Rig Klemm 802						Diameter of Casing: 115mm				Level:		Scale 1:100			
Diameter of Boring: 115mm						Depth of Casing: 21.00m				Dates 25/10/2024 -		Logged By: AF			
Well	Water Strikes	Rotary Coring					Depth (m)	Level (m AOD)	N Value	Legend	Stratum Description				
		Depth (m)	TCR	SCR	RQD	FI									
							21.00				Marl. (Open holing driller's description)		21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40		
		21.00 - 22.50	0	0	0						No Recovery. Marl (Driller's description)				
		22.50 - 24.00	83	0	0						Very weak locally extremely weak reddish brown locally mottled greenish grey indistinctly structured slightly calcareous MUDSTONE. Typically NI, recovered as very angular to subangular fine to coarse gravel locally with some slightly sandy clay. Possible randomly orientated extremely closely and very closely spaced fractures. (MERCIA MUDSTONE Zone II/III)				
		24.00 - 25.50	93	15	9						 Very weak locally weak very thinly to thinly bedded reddish brown locally mottled greenish grey slightly calcareous SILTSTONE. Bedding fractures are 0 to 15 degree closely locally very closely spaced planar rough, locally infilled with <2mm clay. Joints are 70 to 90 degree and randomly orientated very closely spaced undulating rough. (MERCIA MUDSTONE Zone II)				
		25.50 - 27.00	87	0	0						 Extremely weak reddish brown locally mottled greenish grey indistinctly structured slightly calcareous MUDSTONE. Typically NI, recovered as very angular to subangular fine to coarse gravel locally with some slightly sandy gravelly clay. Possible randomly orientated extremely closely and closely spaced fractures. (MERCIA MUDSTONE Zone II/III)				
		27.00 - 28.50	93	29	0						 Very weak very thinly bedded reddish brown locally mottled greenish grey and white calcareous MUDSTONE with occasional white calcareous mineralisation. Bedding fractures are 0 to 15 degree closely locally very closely spaced planar rough, locally infilled with <2mm clay. Joints are 70 to 90 degree and randomly orientated very closely spaced undulating rough. (MERCIA MUDSTONE Zone II)				
		28.50 - 30.00	95	59	33						 Moderately weak locally medium strong thinly locally medium bedded reddish brown to purplish brown locally mottled greenish grey calcareous fine grained SANDSTONE with occasional sub-ordinate beds of extremely weak and very weak MUDSTONE (40 to 55mm thickness). Bedding fractures are 0 to 15 degree closely locally medium spaced planar and undulating rough, locally infilled with <2mm silty sand. Joints are 70 to 90 degree and randomly orientated undulating rough. (MERCIA MUDSTONE Zone II) <u>28.58-28.68m: Medium strong</u> <u>29.10-29.20m: Very weak MUDSTONE. With extremely closely spaced fractures.</u> <u>29.45-29.51m: Extremely weak MUDSTONE</u> <u>29.60-29.70m: Medium strong</u> <u>29.72-30.00m: Moderately weak reddish brown mottled white and greenish grey highly calcareous CONGLOMERATE.</u> End of Borehole at 30.00 m				
												30.00			
Remarks: Rotary open hole drilling GL to 21.00m. Rotary coring 21.00 to 30.00m.													Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone) W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		

Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way		Project No.: 14627		Borehole No.: RC02 Sheet 1 of 2						
Location: Newport		Client: Hedyn		Coordinates:		Hole Type: RC						
Equipment: Tracked Rotary Rig Klemm 802		Diameter of Casing: 115mm		Level:		Scale 1:100						
Diameter of Boring: 115mm		Depth of Casing: 21.00m		Dates 28/10/2024 -		Logged By: AF						
Well	Water Strikes	Rotary Coring					Depth (m)	Level (m AOD)	N Value	Legend	Stratum Description	
		Depth (m)	TCR	SCR	RQD	FI					Made Ground. (Driller's open holing description)	1
							2.80					2
											Alluvium. (Open holing driller's description)	3
												4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
							18.00					18
											Gravels. (Open holing driller's description)	19
												20
Remarks: Rotary open hole drilling GL to 21.00m. Rotary coring 21.00 to 29.30m.										Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone) W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		

Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way		Project No.: 14627		Borehole No.: RC02 Sheet 2 of 2							
Location: Newport		Client: Hedyn		Coordinates:		Hole Type: RC							
Equipment: Tracked Rotary Rig Klemm 802		Diameter of Casing: 115mm		Level:		Scale 1:100							
Diameter of Boring: 115mm		Depth of Casing: 21.00m		Dates 28/10/2024 -		Logged By: AF							
Well	Water Strikes	Rotary Coring					Depth (m)	Level (m AOD)	N Value	Legend	Stratum Description		
		Depth (m)	TCR	SCR	RQD	FI							
							20.30				Marl. (Open holing driller's description)		
							21.00				No recovery. Broken weak marl. Excessive water. (Driller's description)	21	
		21.00 - 22.50	0	0	0						22		
		22.50 - 24.00	0	0	0						23		
		24.00 - 24.70	79	0	0		24.00			Partial recovery. Possible loss of weaker/ more weathered material. Extremely weak to very weak purplish brown locally mottled greenish grey indistinctly structured slightly calcareous SILTSTONE. Typically NI, recovered as very angular to subangular fine to coarse gravel with some sandy clay. Possible randomly orientated extremely closely and very closely spaced fractures. (MERCIA MUDSTONE Zone II/III)	24		
		24.70 - 26.20	63	0	0						25		
		26.20 - 27.70	0	0	0						26		
		27.70 - 28.50	0	0	0		27.70			No recovery. Broken weak marl. Excessive water. (Driller's description)	27		
		28.50 - 29.30									28		
						29.30			End of Borehole at 29.30 m		29		
												30	
												31	
												32	
												33	
												34	
												35	
												36	
												37	
												38	
												39	
												40	
Remarks: Rotary open hole drilling GL to 21.00m. Rotary coring 21.00 to 29.30m.										Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone) W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation			

Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way				Project No.: 14627		Borehole No.: RC03 Sheet 1 of 2						
Location: Newport				Client: Hedyn				Coordinates:		Hole Type: RC				
Equipment: Tracked Rotary Rig Klemm 802				Diameter of Casing: 115mm				Level:		Scale 1:100				
Diameter of Boring: 115mm				Depth of Casing: 22.30m				Dates 30/10/2024 -		Logged By: AF				
Well	Water Strikes	Rotary Coring					Depth (m)	Level (m AOD)	N Value	Legend	Stratum Description			
		Depth (m)	TCR	SCR	RQD	FI								
											Made Ground. (Driller's open holing description)	1		
							2.90					2		
											Alluvium. (Open holing driller's description)	3		
												4		
												5		
												6		
												7		
												8		
												9		
												10		
												11		
												12		
												13		
												14		
												15		
												16		
							17.00				Gravels. (Open holing driller's description)	17		
												18		
												19		
												20		
Remarks: Rotary open hole drilling GL to 22.30m. Rotary coring 22.30 to 29.60m.										Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone) W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation				

Intégral Géotechnique		Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way				Project No.: 14627		Borehole No.: RC03 Sheet 2 of 2					
Location: Newport				Client: Hedyn				Coordinates:		Hole Type: RC					
Equipment: Tracked Rotary Rig Klemm 802				Diameter of Casing: 115mm				Level:		Scale 1:100					
Diameter of Boring: 115mm				Depth of Casing: 22.30m				Dates 30/10/2024 -		Logged By: AF					
Well	Water Strikes	Rotary Coring					Depth (m)	Level (m AOD)	N Value	Legend	Stratum Description				
		Depth (m)	TCR	SCR	RQD	FI									
							20.40				Marl. (Open holing driller's description)	21			
							21.50				Sandstone. (Open holing driller's description)	22			
		22.30 - 23.60	95	92	84		22.30 22.55				Medium strong very thinly to thinly bedded purplish brown locally mottled greenish grey calcareous fine grained SANDSTONE. Bedding fractures are 0 to 10 degree very closely to closely spaced planar rough, locally infilled with <3mm sand. (MERCIA MUDSTONE Zone I)	23			
		23.60 - 25.10	78	76	76		25.10				Medium strong thinly locally medium bedded reddish brown mottled white and greenish grey highly calcareous CONGLOMERATE with heavy white calcareous mineralisation throughout rock mass. Bedding fractures are 0 to 15 degree closely and medium spaced planar rough, locally infilled with <2mm silty sand. (MERCIA MUDSTONE Zone I)	24			
		25.10 - 26.60	13	0	0						Partial recovery, possible loss of weaker more weathered fraction of material. Some drilling disturbance. Recovered core comprises purplish brown slightly calcareous very angular to subangular fine to coarse GRAVEL sized lithorelicts of extremely weak and very weak siltstone and mudstone with some locally much sandy clay matrix. (MERCIA MUDSTONE Zone III)	25			
		26.60 - 28.10	88	15	15		27.20				26.60-27.20m: increase in percentage of sandy clay matrix. Very weak locally extremely weak reddish brown locally mottled greenish grey indistinctly structured slightly calcareous MUDSTONE. Typically NI, recovered as very angular to subangular fine to coarse gravel locally with some slightly sandy clay. Possible randomly orientated extremely closely and very closely spaced fractures. (MERCIA MUDSTONE Zone II/III)	26			
		28.10 - 29.60	73	0	0		28.40 28.40 29.00				26.60-27.20m: increase in percentage of sandy clay matrix. Very weak locally extremely weak purplish brown locally mottled greenish grey indistinctly structured calcareous MUDSTONE. Typically NI, recovered as very angular to subangular fine to coarse gravel locally with a little slightly sandy clay matrix. Possible randomly orientated extremely closely and very closely spaced fractures. (MERCIA MUDSTONE Zone II/III)	27			
							29.60				Stiff indistinctly fissured reddish brown locally mottled greenish grey slightly calcareous slightly sandy gravelly CLAY. Gravel is very angular to subangular fine to coarse lithorelicts of extremely weak mudstone. (MERCIA MUDSTONE Zone III)	28			
											Partial recovery, possible loss of weaker/ more weathered material. Very weak purplish brown locally mottled greenish grey indistinctly structured calcareous MUDSTONE. NI, recovered as very angular to subangular fine to coarse gravel. Possible randomly orientated extremely closely and very closely spaced fractures. (MERCIA MUDSTONE Zone II/III)	29			
											29.20-29.60m: Assessed zone of core loss End of Borehole at 29.60 m	30			
Remarks:												Key:			
Rotary open hole drilling GL to 22.30m. Rotary coring 22.30 to 29.60m.												D - Small disturbed sample U - Undisturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone)		W - Water sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation	
												AGS			



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Location: Newport				Client: Hedyn				Coordinates:		Hole Type: RC		
Equipment: Tracked Rotary Rig Klemm 802				Diameter of Casing: 115mm				Level:		Scale 1:100		
Diameter of Boring: 115mm				Depth of Casing: 21.00m				Dates 24/10/2024 -		Logged By: AF		
Well	Water Strikes	Rotary Coring					Depth (m)	Level (m AOD)	N Value	Legend	Stratum Description	
		Depth (m)	TCR	SCR	RQD	FI					Made Ground. (Open holing driller's description)	1
							3.00					2
											Alluvium. (Open holing driller's description)	3
												4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
							17.00				Gravel. (Open holing driller's description)	17
												18
												19
							20.00					20
Remarks: Rotary open hole drilling GL to 21.00m. Rotary coring 21.00 to 29.90m.										Key: D - Small disturbed sample B - Bulk disturbed sample ES - Environmental soil sample SPT - Standard Penetration Test (split spoon) CPT - Standard Penetration Test (solid cone) W - Water sample U - Undisturbed sample TCR - Total Core Recovery SCR - Solid Core Recovery RQD - Rock Quality Designation		

Intégral Géotechnique Intégral House, 7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX Tel. 029 20807991 Fax. 029 20862176 mail@integralgeotec.com		Project Name: Jacks Pill, Usk Way				Project No.: 14627		Borehole No.: RC04 Sheet 2 of 2				
Location: Newport				Client: Hedyn				Coordinates:		Hole Type: RC		
Equipment: Tracked Rotary Rig Klemm 802				Diameter of Casing: 115mm				Level:		Scale 1:100		
Diameter of Boring: 115mm				Depth of Casing: 21.00m				Dates 24/10/2024 -		Logged By: AF		
Well	Water Strikes	Rotary Coring					Depth (m)	Level (m AOD)	N Value	Legend	Stratum Description	
		Depth (m)	TCR	SCR	RQD	FI						
							21.00				Marl. (Driller's description)	
		21.00 - 22.00	0	0	0				No recovery. Marl. (Driller's description)	21		
		22.00 - 22.70	86	0	0		22.00				22	
		22.70 - 23.90	67	14	0				Very weak locally extremely weak very thinly bedded purplish brown becoming reddish brown locally mottled greenish grey slightly calcareous MUDSTONE with occasional beds of stiff slightly sandy gravelly CLAY (<150mm thickness). Bedding fractures are 0 to 10 degree very closely spaced planar rough, locally infilled with <2mm clay. Joints are 70 to 90 degree and randomly orientated very closely spaced undulating rough. (MERCIA MUDSTONE Zone II/III)	23		
		23.90 - 25.40	73	10	0				Drilling disturbance noted, possible MM Zone III. Stiff slightly sandy gravelly CLAY. (MM Zone III) 23.50-23.90m: Assessed zone of core loss	24		
		25.40 - 26.90	73	0	0		25.40			Stiff indistinctly fissured reddish brown locally mottled greenish grey slightly calcareous slightly sandy gravelly CLAY. Gravel is very angular to subangular fine to coarse lithorelicts of extremely weak locally very weak mudstone. (MERCIA MUDSTONE Zone III)	25	
		26.90 - 28.40	47	13	9				26.90-27.70m: Assessed zone of core loss	26		
		28.40 - 29.90	80	10	0		27.70			Very weak to weak very thinly to thinly bedded purplish brown locally mottled greenish grey SILTSTONE. Bedding fractures are 0 to 10 degree very closely to closely spaced planar rough, locally infilled with <2mm clay. Randomly orientated extremely closely and very closely spaced incipient fractures throughout rockmass, locally NI. (MERCIA MUDSTONE Zone II)	27	
						28.40				Very weak locally extremely weak reddish brown locally mottled greenish grey indistinctly structured calcareous MUDSTONE with occasional sub-ordinate beds of very weak to weak SILTSTONE (<70mm thickness) below 29.50m. Typically NI, recovered as very angular to subangular fine to coarse gravel locally with some slightly sandy clay. Possible randomly orientated extremely closely and very closely spaced fractures. (MERCIA MUDSTONE Zone II/III) End of Borehole at 29.90 m	28	
												29
							29.00					30
												31
												32
												33
												34
												35
												36
												37
												38
												39
										40		

Remarks:

Rotary open hole drilling GL to 21.00m. Rotary coring 21.00 to 29.90m.

Key:

D - Small disturbed sample
B - Bulk disturbed sample
ES - Environmental soil sample
SPT - Standard Penetration Test (split spoon)
CPT - Standard Penetration Test (solid cone)

W - Water sample
U - Undisturbed sample
TCR - Total Core Recovery
SCR - Solid Core Recovery
RQD - Rock Quality Designation

APPENDIX G

ROTARY CORE PHOTOGRAPHS



ROTARY CORE PHOTOGRAPHS - RC01 (22.50 to 28.50m)

14627- Jack's Pill Newport

Intégral
Géotechnique

Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176



ROTARY CORE PHOTOGRAPHS - RC01 (28.50 to 30.00m)

14627- Jack's Pill Newport

Intégral
Géotechnique

Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176



ROTARY CORE PHOTOGRAPHS - RC02 (24.00 to 27.70m)

14627 - Jack's Pill Newport

Intégral
Géotechnique

Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176



ROTARY CORE PHOTOGRAPHS - RC03 (22.30 to 29.60m)

14627 - Jack's Pill Newport

Intégral
Géotechnique

Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176



ROTARY CORE PHOTOGRAPHS - RC04 (22.00 to 28.40m)

14627- Jack's Pill Newport

Intégral
Géotechnique

Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176



ROTARY CORE PHOTOGRAPHS - RC04 (28.40 to 29.90m)

14627- Jack's Pill Newport

Intégral
Géotechnique

Integral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
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APPENDIX H

CPT REPORT

USK WAY, NEWPORT

FACTUAL REPORT ON CONE PENETRATION TESTING

Report No M4028-24

November 2024

Issue No 1

Carried out for:
Intégral Géotechnique (Wales) Limited
Intégral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX

Report No M4028-24

ISSUE No	DATE	STATUS	PREPARED BY	CHECKED BY	APPROVED BY
1	November 2024	Final report	Sarah Clarke BSc FGS 	Sarah Clarke BSc FGS 	Craig Curtis 

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C O N T E N T S

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1	INTRODUCTION.....	1
2	SITE LOCATION AND DESCRIPTION	1
3	CONE PENETRATION TESTING	1
	3.1 General.....	1
	3.2 CPT Data Processing.....	2
4	REFERENCES.....	5

APPENDIX A FIGURES AND DRAWINGS

APPENDIX B CONE PENETRATION TESTS RECORDS



1 INTRODUCTION

SOCOTEC UK Limited (SOCOTEC) was commissioned in October 2024 by Intégral Géotechnique (Wales) Limited to carry out cone penetration testing at Usk Way, Newport to confirm the ground conditions at the site. The scope of the investigation was specified by Intégral Géotechnique (Wales) Limited (Intégral) and comprised cone penetration testing (CPT) and reporting.

This report presents the factual records of the CPT work carried out 24 October 2024. The information is also presented in digital data format as defined in AGS (2017).

2 SITE LOCATION AND DESCRIPTION

The site is located approximately 500 m east of Newport city centre, at National Grid reference ST318875, see Site Location Plan in Appendix A. The site address is: Car park next to Newport Student Village, Usk Way, Pillgwenlly, Newport, Gwent, Wales NP20 2DZ.

The site is located in an area of mixed use, with a mixture of commercial and residential properties, the site is bound to the east by the Usk River, a tributary of the Usk River to the south, the Usk Way (also referred to as the A4042) to the west and Newport student village to the North. The site comprises an area approximately 700 m by 700 m, with gravel hardstanding.

3 CONE PENETRATION TESTING

3.1 General

CPTs were instructed by Intégral to be carried out at 6 locations to a maximum scheduled depth of 17.00 m, where possible, using an electric piezocone operated from a 17 tonne tracked CPT unit. Multiple attempts at each location were performed as the gravel hardstanding surfacing was too dense for successful penetration. An excavator was deployed from another part of the site operations to remove the surfacing which enabled the CPT method to be effective.

The test locations were selected by Intégral and set out from local features. The co-ordinates and ground levels of the positions were not obtained and are therefore not shown on the CPT logs. The locations are shown on the Site Plan in Appendix A.



Testing was carried out in accordance with Part 9 of BS 1377 (1990) and in general accordance with BS EN ISO 22476-1 (2023). The serial number of the cone used is indicated on the test plots. The calibration certificate is included in Appendix B and provides details of the manufacturer, cone dimensions, capacity and geometry.

3.2 CPT Data Processing

Test control and data acquisition was carried out using CPTask, a proprietary software supplied by Geomil Equipment BV of Holland. The measured cone end resistance, sleeve friction, dynamic porewater pressure, and inclination were recorded at 1 cm intervals of penetration.

Interpretation of the CPT data was carried out using proprietary software supplied by Datgel Limited to derive the friction ratio and pore pressure ratio (see CPT Key) and the soil parameters identified in Section 3.3. The soil classification uses the Soil Behaviour Type chart of Robertson (1990), see CPT Key. Groundwater levels for data interpretation have been estimated based on the examination of porewater pressure measurements and are shown on the CPT logs in Appendix B.

Explanation of the terms used and derivations of the cone parameters are given in the Key, see KeyCPT. The data is presented graphically as plots relative to depth below ground level on the CPT logs in Appendix A. The stratum descriptions shown are derived using the interpreted soil classification, together with the shear strength in accordance with Section 3.3.1 method 1 and relative density in accordance with Section 3.3.2 method 3 related to the CPT data.

3.3 Derived Soil Parameters

3.3.1 Undrained Shear Strength

Undrained Shear Strength (S_u) is reported in kilopascals (kPa) and presented on the logs in accordance with the following methods.

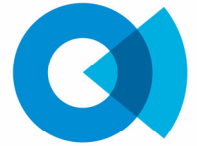
1. Lunne et al. (1997). When q_t data is available $S_u = (q_t - \sigma_{vo}) / N_{kt}$, or when q_t data is not available

$$S_u = (q_c - \sigma_{vo}) / N_k$$

N_k and N_{kt} are empirical cone factors, values of 16 for N_k and 17 for N_{kt} (for over consolidated clay) are used for the presentation on the logs

σ_{vo} = total vertical stress (dry bulk unit weight = 17 kN/m³ and saturated bulk unit weight = 18 kN/m³)

2. Lunne et al. (1997). When q_t data is available $S_u = q_t / N_{kt}$ or when q_t data is not available



$$S_u = q_c / N_k$$

3. Wroth (1984). $S_u = 0.5 * \sin\phi' * OCR^\lambda * \sigma'_{vo}$

ϕ' = Effective Friction Angle, Method 3 below

OCR = Overconsolidation Ratio, Method 1 below

σ'_{vo} = vertical effective stress

$$\lambda = 0.85$$

4. Trak et al. (1980), Terzaghi et al. (1996). $S_u = 0.22 * (0.33 * (q_t - \sigma_{vo}))$

5. Robertson (2009). $S_u = \Delta u / N_{\Delta u}$

$N_{\Delta u}$ is an empirical factor which varies between 2 and 10, to give a conservative estimate a value of 7 is used.

3.3.2 Relative Density

Relative Density (D_r) is reported as a percentage (%) and presented on the logs in accordance with the following methods

1. Baldi et al. (1986). $D_r = (1/C2) * \ln((q_c * Wehr) / (C1 * (\sigma'_{vo})^{0.55})) * 100$

C1 = a consolidation coefficient, 157 used for normally consolidated soils

C2 = a consolidation coefficient, 2.41 used for normally consolidated soils

Wehr = a correction coefficient for calcareous soils, 1 used for non-calcareous soils

2. Jamiolkowski et al. (2001). $D_r = 100 * [0.268 * \ln((q_t / \sigma_{atm}) / (\sqrt{(\sigma'_{vo} / \sigma_{atm})})) + C1]$

C1 = a compressibility coefficient, -0.675 used for average compressibility soils

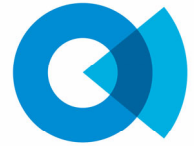
σ_{atm} = atmospheric pressure, 100 kPa used

3. Kulhawy and Mayne (1990). $D_r = (q_t / (305 * C1 * OCR^{0.18} * (1.2 + 0.05 * \log(t / 100))))^{0.5}$

C1 = a compressibility coefficient, 1.0 used for medium compressible sands

t = time in years

Studies carried out on clean, predominantly quartz sands, have shown that CPT resistance in granular soils tends to be controlled by the relative density of the material, in situ effective stresses and compressibility. More compressible sands will generally give lower penetration resistance for a given relative density than less compressible sands.



3.3.3 Friction Angle

Friction Angle (ϕ') is reported in degrees (deg) and is presented on the logs in accordance with the following methods

1. Mayne and Campanella (2005). $\phi' = 29.5^\circ * B_q^{0.121} * (0.256 + 0.336 * B_q + \log Q_t)$
2. Robertson and Campanella (1983). $\phi' = \tan^{-1} (0.1 + 0.38 * \log(q_t / \sigma'_{vo}))$
3. Kulhawy and Mayne (1990). $\phi' = 17.6^\circ + 11.0^\circ * \log(q_t)$

3.3.4 Standard Penetration Test (SPT) N_{60} Value

The SPT N value normalised to 60% standard energy ratio is presented on the logs in accordance with the following methods

1. Robertson and Wride (1998). $N_{60} = q_c / (8.5 * \sigma_{atm} (1 - I_c / 4.6))$
 σ_{atm} = atmospheric pressure, 100 kPa used
 I_c = the Soil Behaviour Type Index in accordance with Robertson (2010)
2. Jefferies and Davies (1993). $N_{60} = q_c / (0.85 * (1 - I_c / 4.75))$



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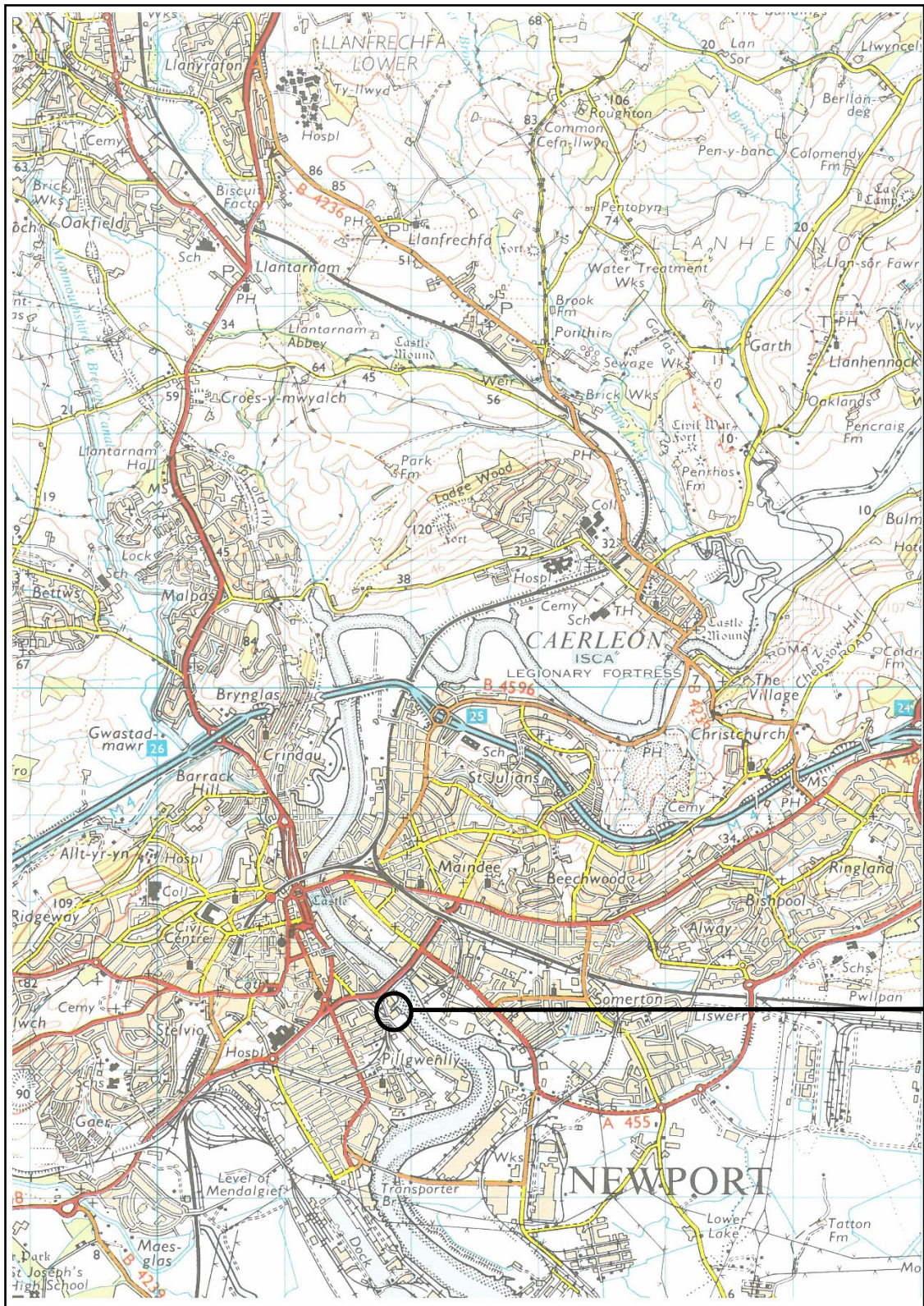
APPENDIX A

FIGURES AND DRAWINGS

Site Location Plan
Site Plan

A1
A2

Site Location Plan



Reproduced from the 1974 Ordnance Survey 1:50 000 scale Landranger Map No 171 by permission of Ordnance Survey on behalf of The Controller of His Majesty's Stationery Office, © Crown copyright, SOCOTEC UK Limited. All rights reserved. Licence Number 100006060

THE
SITE

Notes: Scale 1:50 000	Project USK WAY, NEWPORT Project No. M4028-24 Carried out for Intégral Géotechnique (Wales) Limited	Figure A1
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Title EXPLORATORY HOLE LOCATION PLAN	
Project USK WAY, NEWPORT	
Client Intégral Géotechnique (Wales) Limited	
Image edited from exploratory hole plan provided by Intégral Géotechnique (Wales) Limited	
Key  - CPT	
Scale Not to Scale	
	
Project No M4028-24	Figure A2



APPENDIX B

CONE PENETRATION TESTS RECORDS

Key to Cone Penetration Test Records

Cone Calibration Certificate

Cone Penetration Test Logs

Key CPT

S10-CFIIP.2473

CPT 1, CPT 1A

CPT 2, CPT 2A, CPT 2B, CPT 2C

CPT3, CPT 3A, CPT3B

CPT 4, CPT 4A, CPT 4B, CPT 4C

CPT 5, CPT 5A

CPT 6, CPT 6A

Cone Penetration Test Logs - Coefficient of
Volume Compressibility and Youngs
Modulus

CPT 1, CPT 1A

CPT 2, CPT 2A, CPT 2B, CPT 2C

CPT3, CPT 3A, CPT3B

CPT 4, CPT 4A, CPT 4B, CPT 4C

CPT 5, CPT 5A

CPT 6, CPT 6A

Key to Cone Penetration Test Records



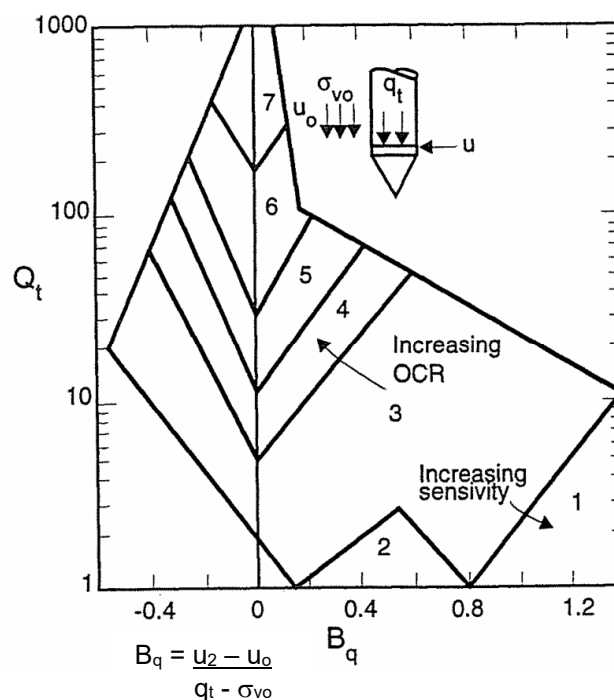
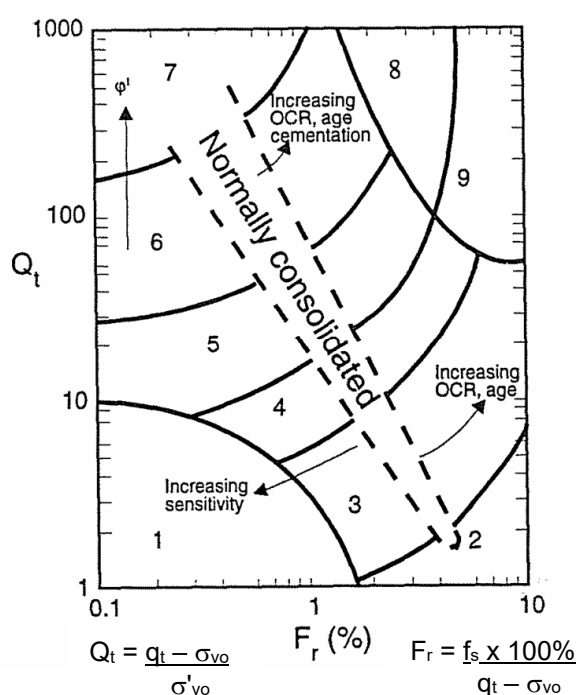
SOCOTEC

Parameter	Unit	Description	Equation
Measured parameters			
q_c	MPa	Cone resistance	Measured parameter
f_s	MPa	Sleeve friction	Measured parameter
I	degrees	Inclination	Measured parameter
u	MPa	Dynamic pore pressure (Piezocone only)	Measured parameter. Denoted as u_1 and u_2 for pore pressure filter locations on cone face and cone shoulder respectively.
-	m/s	Penetration depth and corresponding time	Measured parameters
Derived cone parameters			
R_f	%	Friction ratio	$f_s / q_c \cdot 100 \%$
q_t	MPa	Corrected cone resistance (Piezocone only)	$q_c + (1 - a) \cdot u_2$ $a = \text{area ratio of cone} = A_n / A_c$ $A_n = \text{cross sectional areas of cone tip shaft}$ $A_c = \text{projected area of cone tip}$
f_t	MPa	Corrected sleeve friction (Piezocone only)	$(f_s - (u_2 \cdot A_{sb} - u_3 \cdot A_{st})) / A_s$ $b = \text{area ratio of friction sleeve}$ A_{sb} and A_{st} are bottom and top cross sectional areas of friction sleeve
q_e	MPa	Effective cone resistance (Piezocone only)	$q_t - u_2$
q_n	MPa	Net cone resistance (Piezocone or using $q_t = q_c$)	$q_t - \sigma_{vo}$ $\sigma_{vo} = \text{vertical total stress}$
R_t'	%	Corrected friction ratio (Piezocone only)	$f_t / q_t \cdot 100 \%$
Δu	MPa	Excess pore pressure (Piezocone only)	$u - u_0$ $u_0 = \text{equilibrium pore water pressure}$
B_q	-	Pore pressure ratio (Piezocone only)	$(u - u_0) / (q_t - \sigma_{vo}) = \Delta u / q_n$
-	-	Dynamic pore pressure ratio (Piezocone only)	u / q_c
Q_t	-	Normalised cone resistance (Piezocone or using $q_t = q_c$)	$(q_t - \sigma_{vo}) / \sigma'_{vo} = q_n / \sigma'_{vo}$ $\sigma'_{vo} = \text{vertical effective stress}$
F_r	%	Normalised local friction (Piezocone or using $q_t = q_c$)	$f_s / (q_t - \sigma_{vo}) = f_s / q_n \cdot 100 \%$

Figure
Key CPT

Key to Cone Penetration Test Records

MATERIAL DESCRIPTION			
Soil Type	After Robertson (1990) using normalised cone resistance (Q_t), normalised friction ratio (F_r) and pore pressure ratio (B_q).		
Undrained shear strength description	Material strength description presented using Method 1, Section 3.3.1 for fine soil. In accordance with BS EN ISO 14688-2:2018	Descriptive Term	Shear Strength, kPa
		Extremely low strength	<10
		Very low strength	10 to 20
		Low strength	20 to 40
		Medium strength	40 to 75
		High strength	75 to 150
		Very high strength	>150
Relative density description	Material relative density description presented using Method 3 Section 3.3.2 for coarse soil. In accordance with BS EN ISO 14688-2:2018	Descriptive Term	Relative Density, %
		Very loose	<15
		Loose	15 to 35
		Medium dense	35 to 65
		Dense	65 to 85
		Very dense	>85



KEY TO SOIL BEHAVIOUR TYPES – after Robertson (1990)

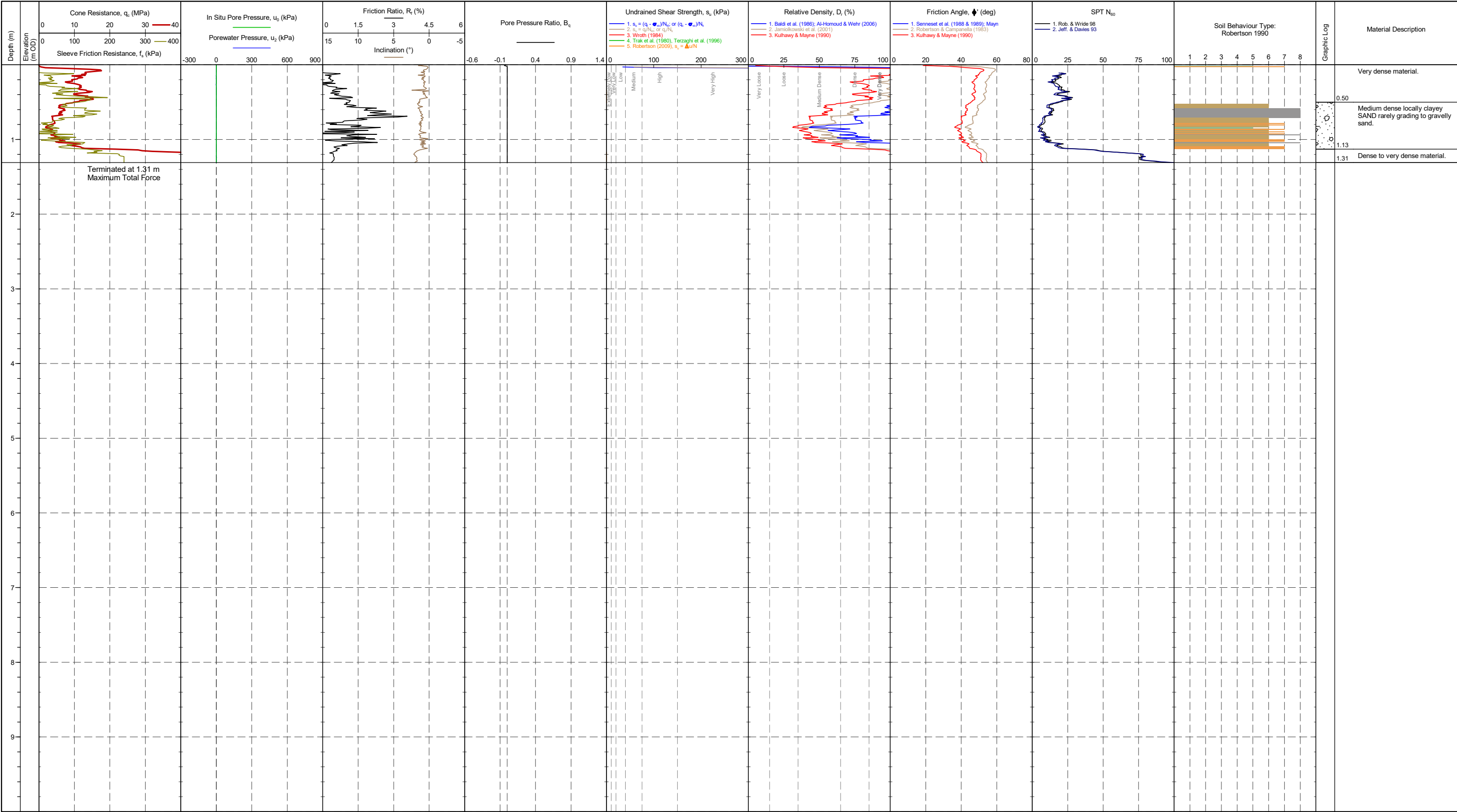
ZONE	SOIL BEHAVIOUR TYPE	ZONE	SOIL BEHAVIOUR TYPE	ZONE	SOIL BEHAVIOUR TYPE
1	Sensitive fine grained	4	Silt mixtures: clayey silt to silty clay	7	Gravelly sand to sand
2	Organic soils – peats	5	Sand mixtures: silty sand to sandy silt	8	Very stiff sand to clayey sand
3	Clays: clay to silty clay	6	Sands: clean sand to silty sand	9	Very stiff fine grained



PointID

CPT 1

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 1 OF 1
ENGINEER :	EASTING :	CONE TYPE : Subtraction	CHECKED DATE : 28/10/2024		STATUS : Final
PROJECT : Usk Way CPT - Newport	NORTHING :	CONE ID : S10-CFIIP.2473	APPROVED BY : Craig Curtis		DATE : 24/10/2024
LOCATION : Newport	COORD. SYS.: OSGB	OPERATOR : Harley Barnett	APPROVED DATE : 7/11/2024		
PROJECT No. : M4028-24	ELEVATION :				



SOCOTEC 2.00.1.LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 7/11/2024 11:13 10:03:00.00 Diagonal Lab and In Situ Tool - DGD [Lib: Socotec 2.00.1 2022-12-02 PJ: Socotec 2.00.1 2022-12-02]

METHOD: Robertson 1990

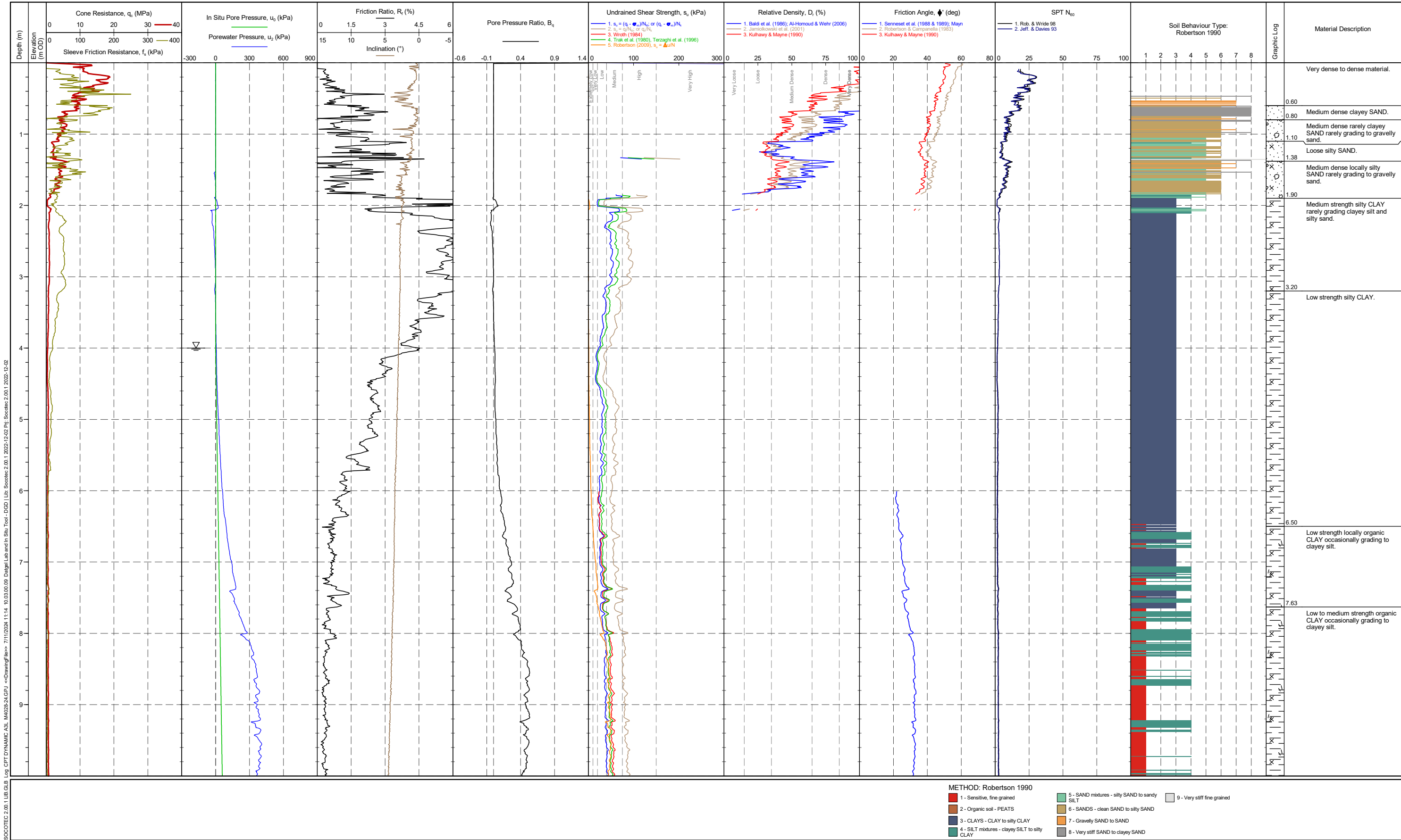
1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	



PointID

CPT 1A

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 1 OF 2
ENGINEER :	EASTING :	CONE TYPE : Subtraction	CHECKED DATE : 28/10/2024		STATUS : Final
PROJECT : Usk Way CPT - Newport	NORTHING :	CONE ID : S10-CFIIP.2473	APPROVED BY : Craig Curtis		DATE : 24/10/2024
LOCATION : Newport	COORD. SYS.: OSGB	OPERATOR : Harley Barnett	APPROVED DATE : 7/11/2024		
PROJECT No. : M4028-24	ELEVATION :				





PointID

CPT 1A

CLIENT : Integral Geotechnique (Wales) Limited
ENGINEER :
PROJECT : Usk Way CPT - Newport
LOCATION : Newport
PROJECT No. : M4028-24

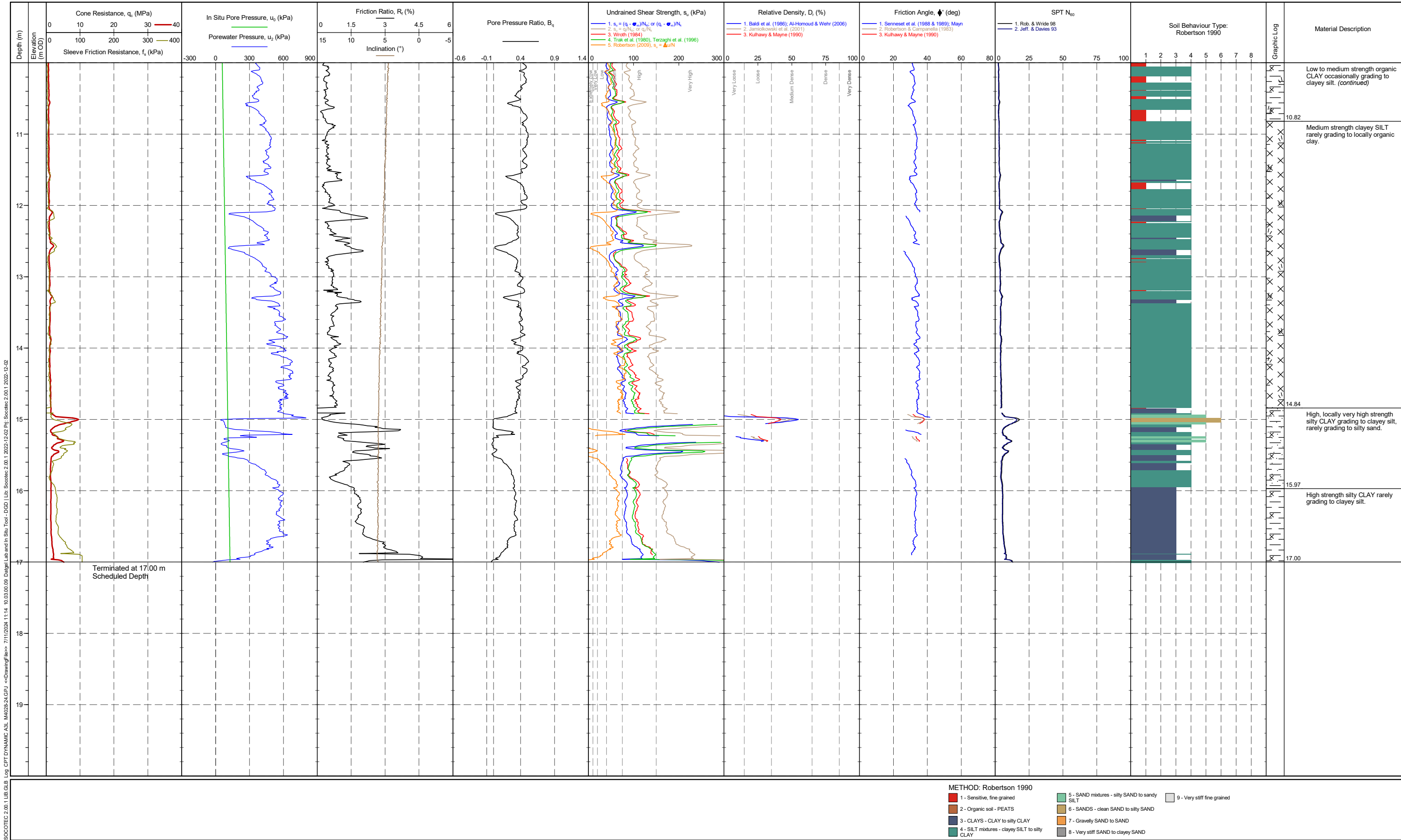
AREA :
EASTING :
NORTHING :
COORD. SYS.: OSGB
ELEVATION :

RIG : Geomil Panther 170
CONE TYPE : Subtraction
CONE ID : S10-CFIIP.2473
OPERATOR : Harley Barnett

CHECKED BY : Sarah Clarke
CHECKED DATE : 28/10/2024
APPROVED BY : Craig Curtis
APPROVED DATE : 7/11/2024

REMARK

SHEET : 2 OF 2
STATUS : Final
DATE : 24/10/2024

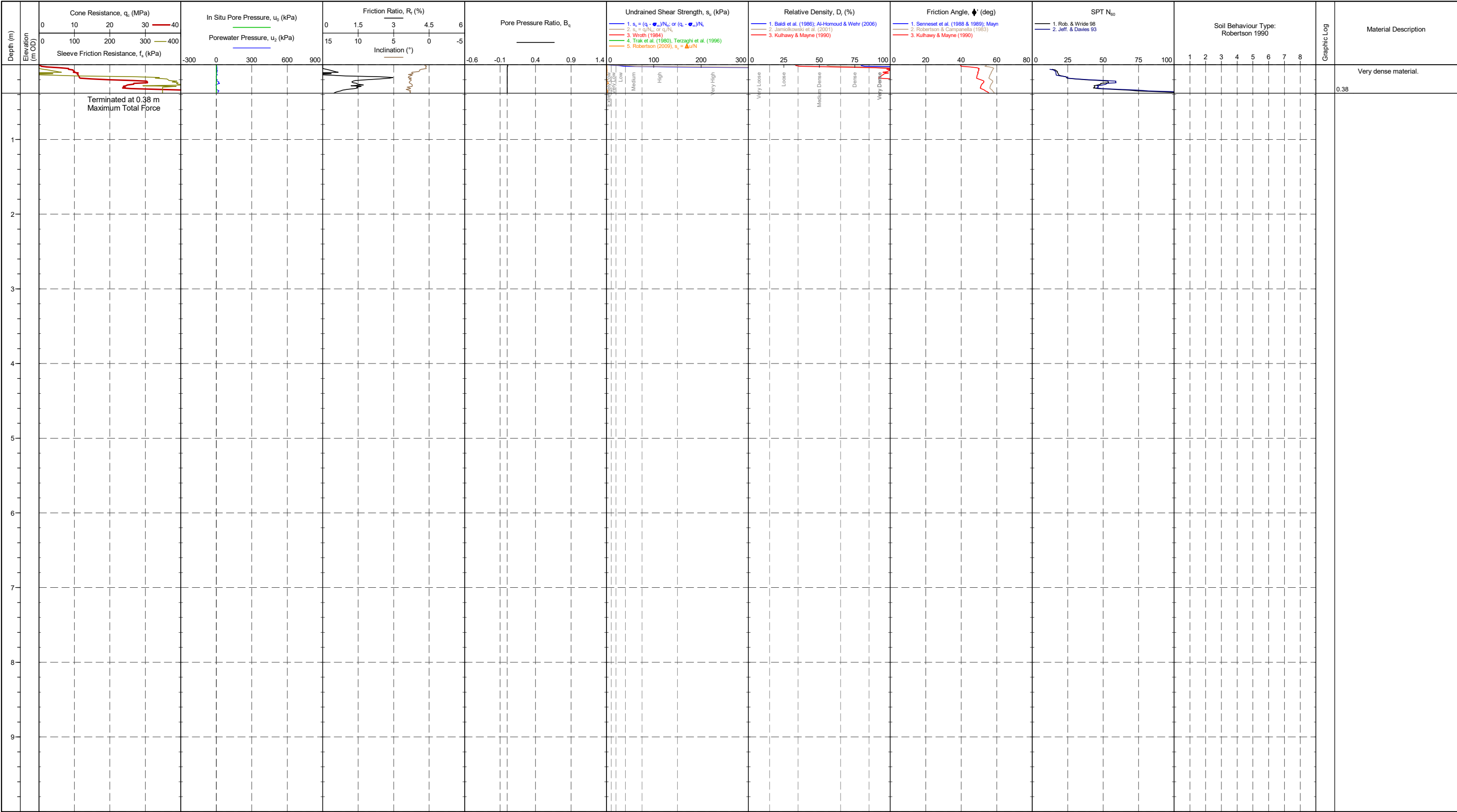




PointID

CPT 2

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 1 OF 1
ENGINEER :	EASTING :	CONE TYPE : Subtraction	CHECKED DATE : 28/10/2024		STATUS : Final
PROJECT : Usk Way CPT - Newport	NORTHING :	CONE ID : S10-CFIIP.2473	APPROVED BY : Craig Curtis		DATE : 24/10/2024
LOCATION : Newport	COORD. SYS.: OSGB	OPERATOR : Harley Barnett	APPROVED DATE : 7/11/2024		
PROJECT No. : M4028-24	ELEVATION :				



SOCOTEC 2.00.1.LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 7/11/2024 11:15 10.03.00.00 Diagonal Lab and In Situ Tool - DGD [Lib: Socotec 2.00.1 2022-12-02 PJ: Socotec 2.00.1 2022-12-02]

- METHOD: Robertson 1990
- | | | |
|---|--|-----------------------------|
| 1 - Sensitive, fine grained | 5 - SAND mixtures - silty SAND to sandy SILT | 9 - Very stiff fine grained |
| 2 - Organic soil - PEATS | 6 - SANDS - clean SAND to silty SAND | |
| 3 - CLAYS - CLAY to silty CLAY | 7 - Gravelly SAND to SAND | |
| 4 - SILT mixtures - clayey SILT to silty CLAY | 8 - Very stiff SAND to clayey SAND | |



PointID

CPT 2A

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 1 OF 1
ENGINEER :	EASTING :	CONE TYPE : Subtraction	CHECKED DATE : 28/10/2024		STATUS : Final
PROJECT : Usk Way CPT - Newport	NORTHING :	CONE ID : S10-CFIIP.2473	APPROVED BY : Craig Curtis		DATE : 24/10/2024
LOCATION : Newport	COORD. SYS.: OSGB	OPERATOR : Harley Barnett	APPROVED DATE : 7/11/2024		
PROJECT No. : M4028-24	ELEVATION :				



METHOD: Robertson 1990

1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	



PointID

CPT 2B

CLIENT : Integral Geotechnique (Wales) Limited
ENGINEER :
PROJECT : Usk Way CPT - Newport
LOCATION : Newport
PROJECT No. : M4028-24

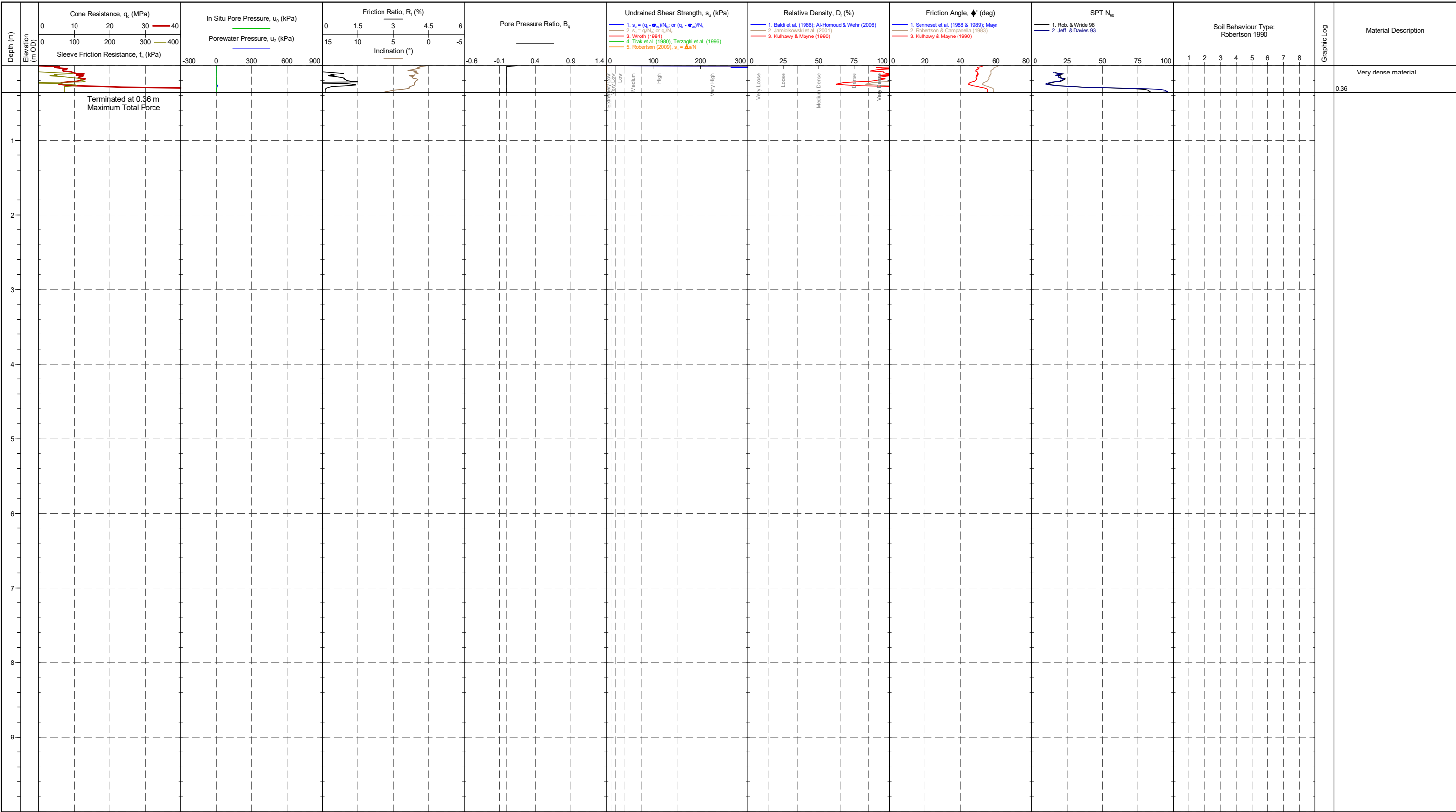
AREA :
EASTING :
NORTHING :
COORD. SYS.: OSGB
ELEVATION :

RIG : Geomil Panther 170
CONE TYPE : Subtraction
CONE ID : S10-CFIIP.2473
OPERATOR : Harley Barnett

CHECKED BY : Sarah Clarke
CHECKED DATE : 28/10/2024
APPROVED BY : Craig Curtis
APPROVED DATE : 7/11/2024

REMARK

SHEET : 1 OF 1
STATUS : Final
DATE : 24/10/2024



SOCOTEC 2.00.1.LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 7/11/2024 11:16 10.03.00.00 Diagonal Lab and In Situ Tool - DGD [Lib: Socotec 2.00.1 2022-12-02 PJ: Socotec 2.00.1 2022-12-02]

METHOD: Robertson 1990

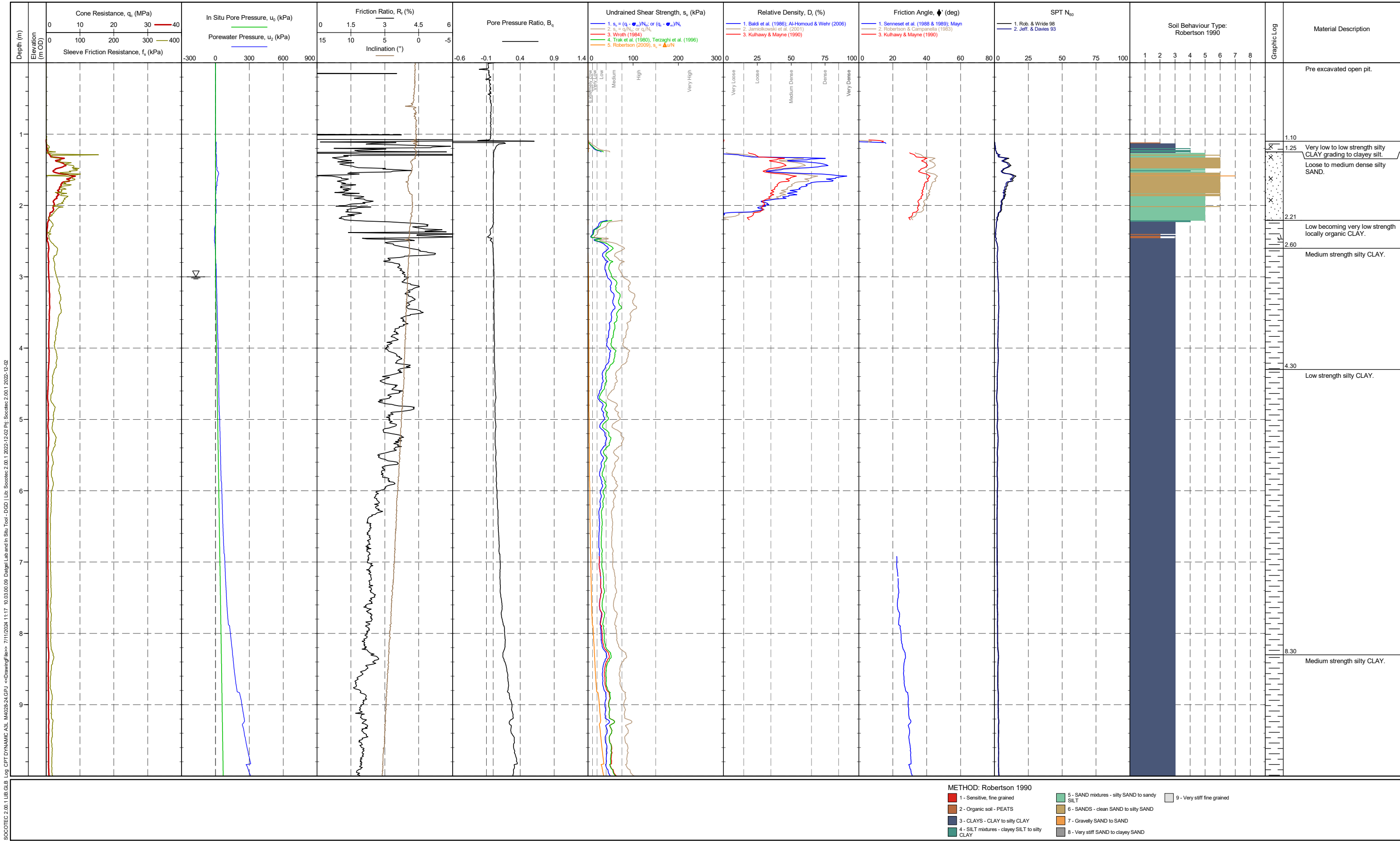
1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	



PointID

CPT 2C

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 1 OF 2
ENGINEER :	EASTING :	CONE TYPE : Subtraction	CHECKED DATE : 28/10/2024		STATUS : Final
PROJECT : Usk Way CPT - Newport	NORTHING :	CONE ID : S10-CFIIP.2473	APPROVED BY : Craig Curtis		DATE : 24/10/2024
LOCATION : Newport	COORD. SYS.: OSGB	OPERATOR : Harley Barnett	APPROVED DATE : 7/11/2024		
PROJECT No. : M4028-24	ELEVATION :				





PointID

CPT 2C

CLIENT : Integral Geotechnique (Wales) Limited
ENGINEER :
PROJECT : Usk Way CPT - Newport
LOCATION : Newport
PROJECT No. : M4028-24

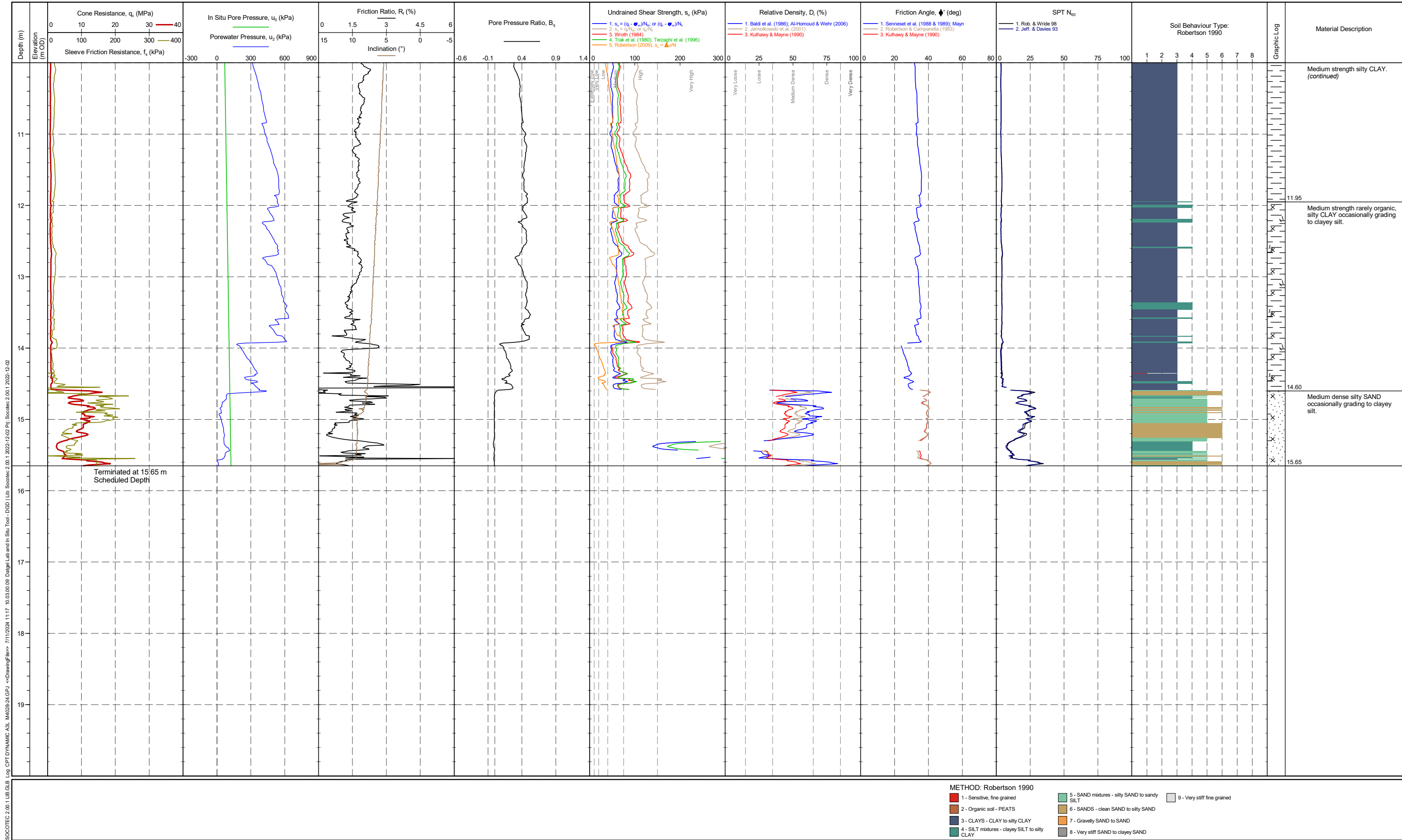
AREA :
EASTING :
NORTHING :
COORD. SYS.: OSGB
ELEVATION :

RIG : Geomil Panther 170
CONE TYPE : Subtraction
CONE ID : S10-CFIIP.2473
OPERATOR : Harley Barnett

CHECKED BY : Sarah Clarke
CHECKED DATE : 28/10/2024
APPROVED BY : Craig Curtis
APPROVED DATE : 7/11/2024

REMARK

SHEET : 2 OF 2
STATUS : Final
DATE : 24/10/2024

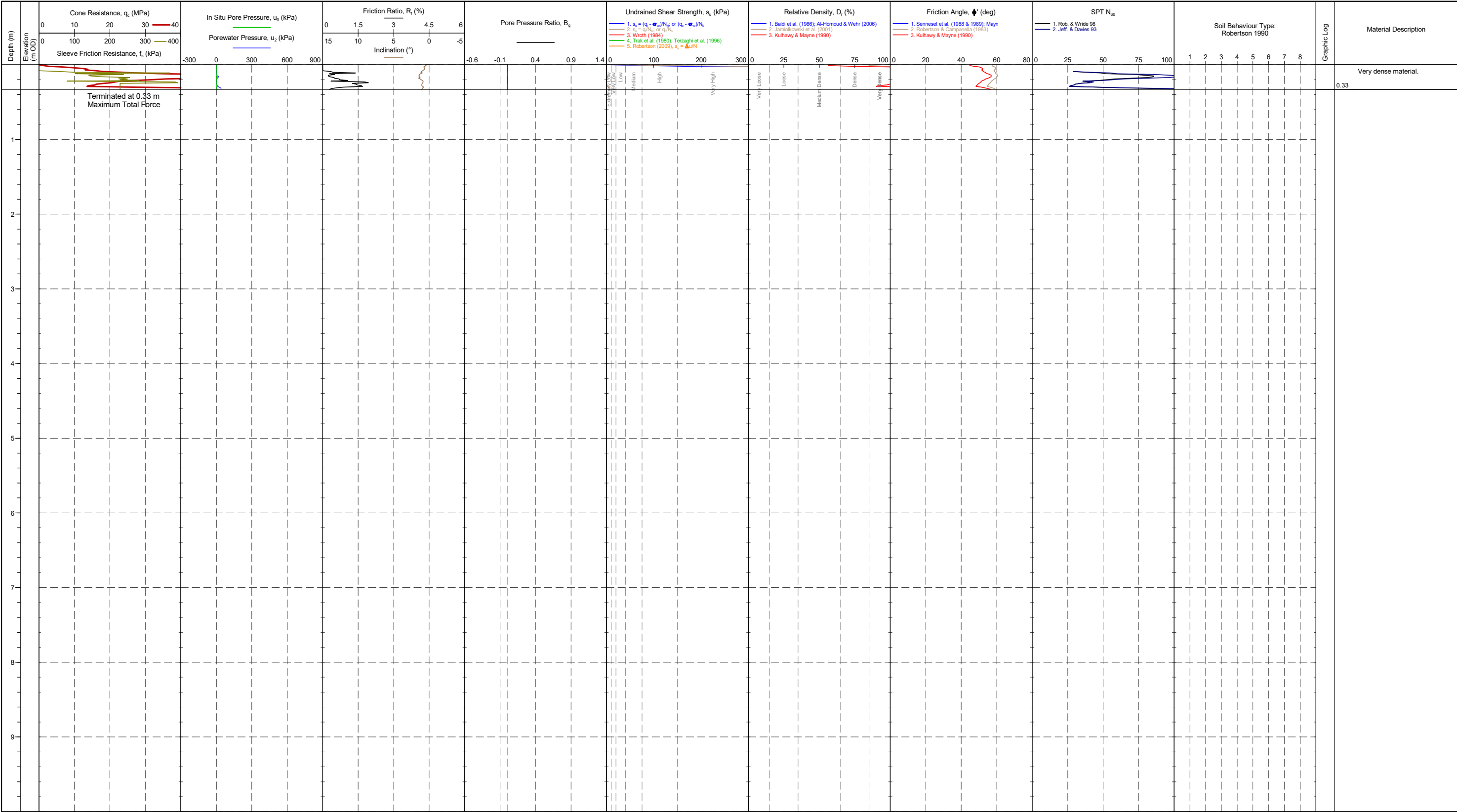




PointID

CPT 3

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 1 OF 1
ENGINEER :	EASTING :	CONE TYPE : Subtraction	CHECKED DATE : 28/10/2024		STATUS : Final
PROJECT : Usk Way CPT - Newport	NORTHING :	CONE ID : S10-CFIIP.2473	APPROVED BY : Craig Curtis		DATE : 24/10/2024
LOCATION : Newport	COORD. SYS.: OSGB	OPERATOR : Harley Barnett	APPROVED DATE : 7/11/2024		
PROJECT No. : M4028-24	ELEVATION :				



SOCOTEC 2.00.1.LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 7/11/2024 11:18 10.03.00.00 Diagonal Lab and In Situ Tool - DGD [Lib: Socotec 2.00.1 2022-12-02 PJ: Socotec 2.00.1 2022-12-02]

METHOD: Robertson 1990

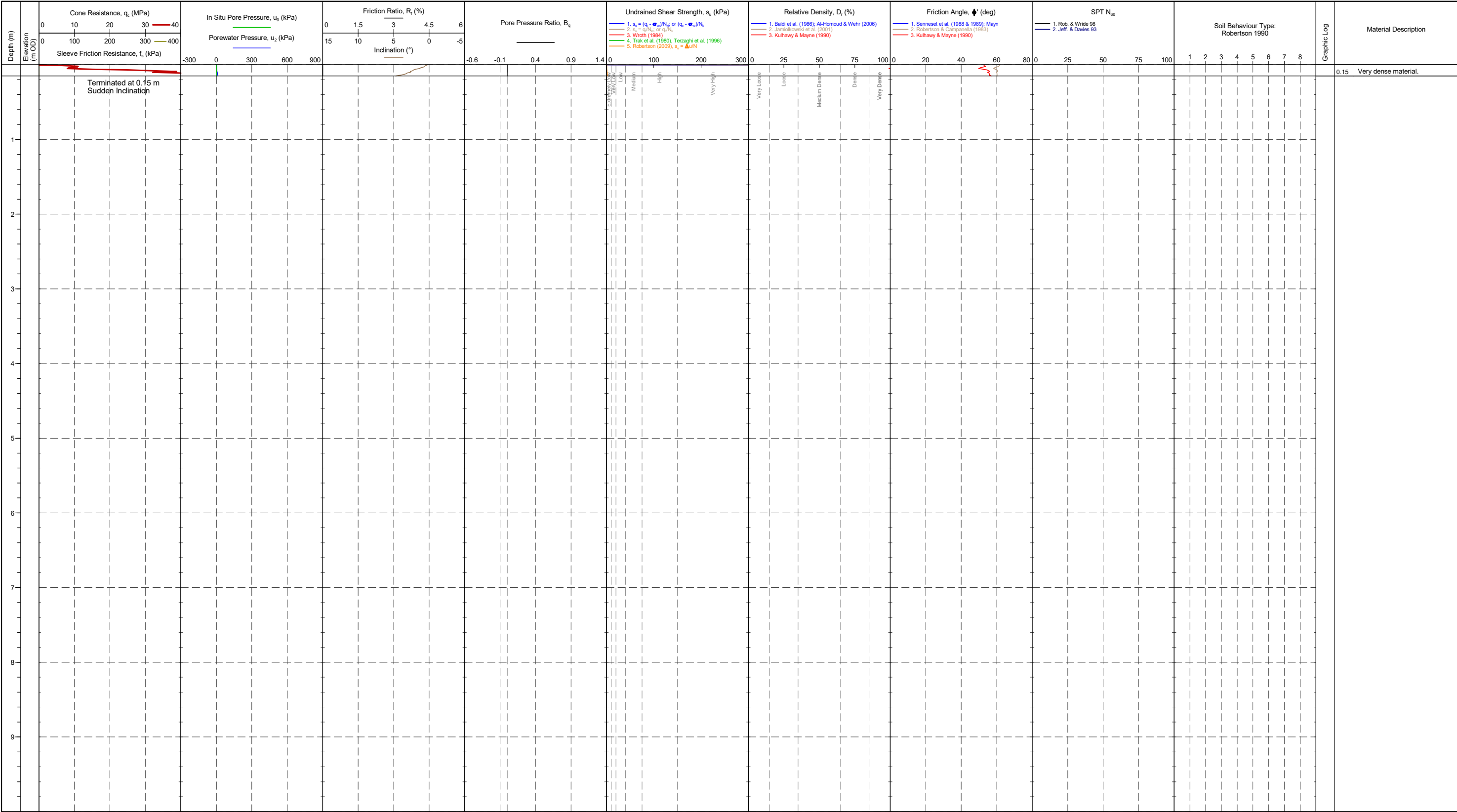
1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	



PointID

CPT 3A

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 1 OF 1
ENGINEER :	EASTING :	CONE TYPE : Subtraction	CHECKED DATE : 28/10/2024		STATUS : Final
PROJECT : Usk Way CPT - Newport	NORTHING :	CONE ID : S10-CFIIP.2473	APPROVED BY : Craig Curtis		DATE : 24/10/2024
LOCATION : Newport	COORD. SYS.: OSGB	OPERATOR : Harley Barnett	APPROVED DATE : 7/11/2024		
PROJECT No. : M4028-24	ELEVATION :				



SOCOTEC 2.00.1.LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 7/11/2024 11:18 10.03.00.00 Diagonal Lab and In Situ Tool - DGD [Lib: Socotec 2.00.1 2022-12-02 PJ: Socotec 2.00.1 2022-12-02]

METHOD: Robertson 1990

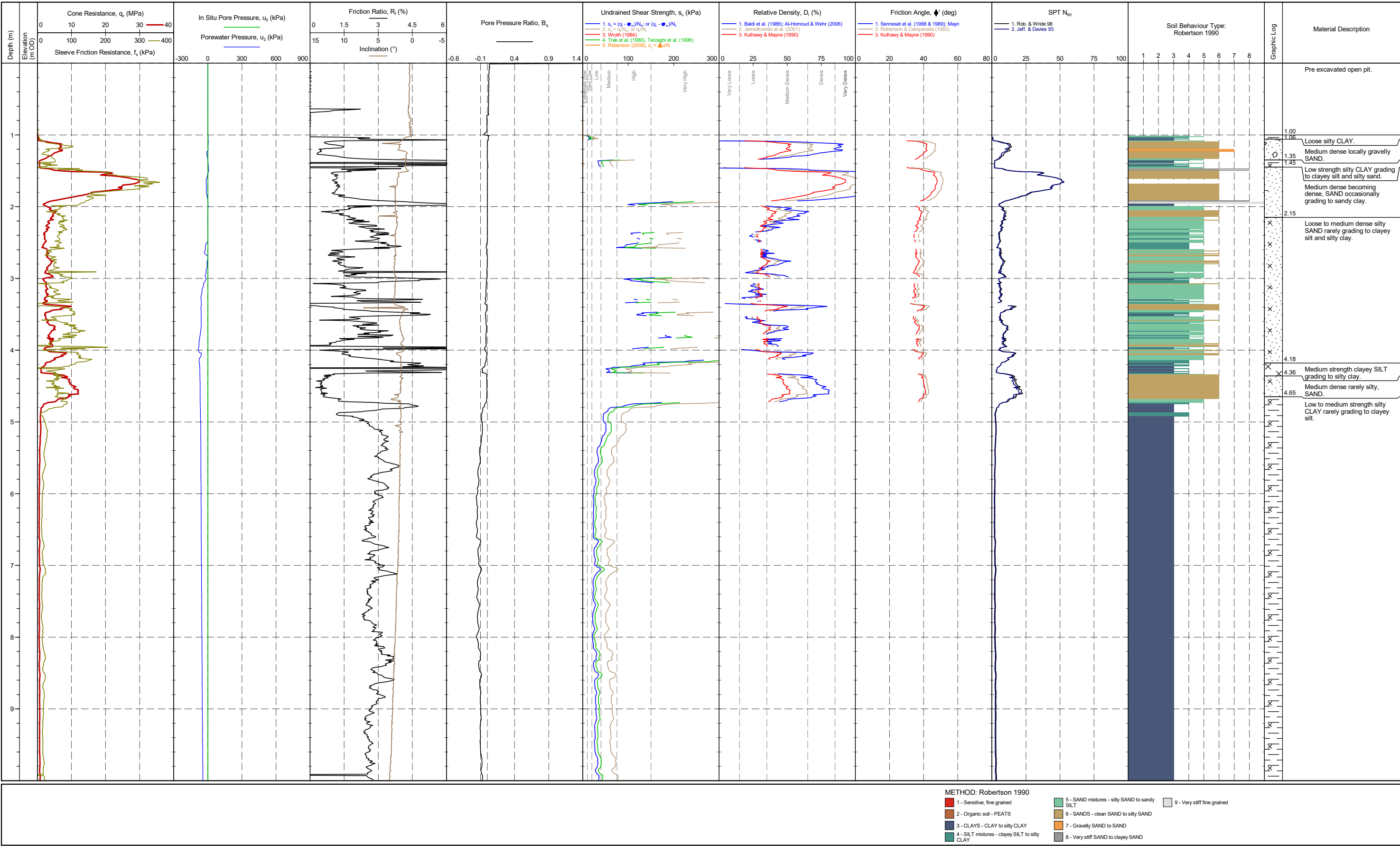
1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	



PointID

CPT 3B

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 1 OF 2
ENGINEER :	EASTING :	CONE TYPE : Subtraction	CHECKED DATE : 28/10/2024		STATUS : Final
PROJECT : Usk Way CPT - Newport	NORTHING :	CONE ID : S10-CFIIP.2473	APPROVED BY : Craig Curtis		DATE : 24/10/2024
LOCATION : Newport	COORD. SYS.: OSGB	OPERATOR : Harley Barnett	APPROVED DATE : 7/11/2024		
PROJECT No. : M4028-24	ELEVATION :				





PointID

CPT 3B

CLIENT : Integral Geotechnique (Wales) Limited
ENGINEER :
PROJECT : Usk Way CPT - Newport
LOCATION : Newport
PROJECT No. : M4028-24

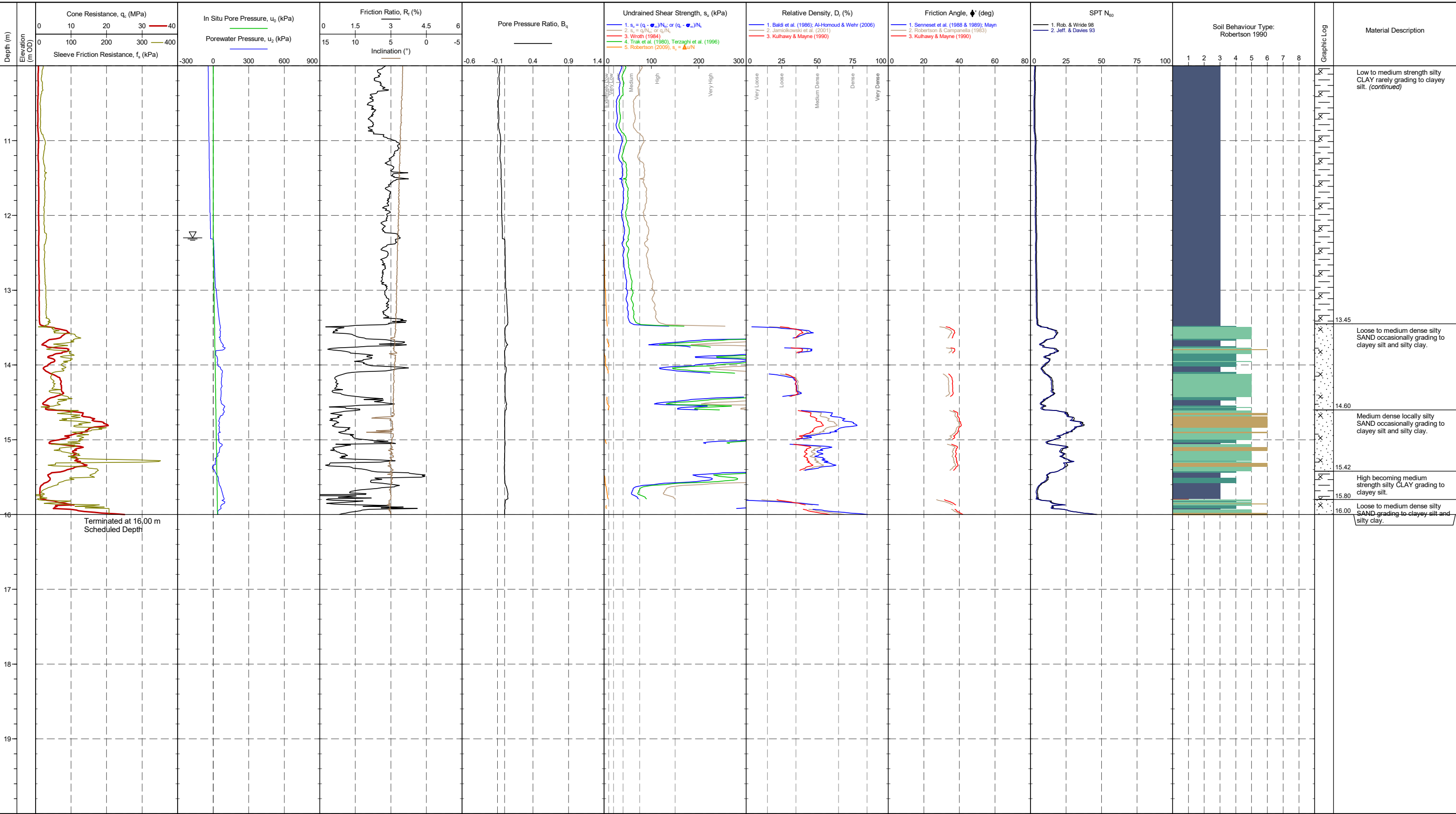
AREA :
EASTING :
NORTHING :
COORD. SYS.: OSGB
ELEVATION :

RIG : Geomil Panther 170
CONE TYPE : Subtraction
CONE ID : S10-CFIIP.2473
OPERATOR : Harley Barnett

CHECKED BY : Sarah Clarke
CHECKED DATE : 28/10/2024
APPROVED BY : Craig Curtis
APPROVED DATE : 7/11/2024

REMARK

SHEET : 2 OF 2
STATUS : Final
DATE : 24/10/2024



SOCOTEC 2.00.1.LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 7/11/2024 11:19 10.03.00.00 Diagam Lab and In Situ Tool - DGD [Lib: Socotec 2.00.1 2022-12-02 PJ: Socotec 2.00.1 2022-12-02]

METHOD: Robertson 1990

1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	



PointID

CPT 4

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 1 OF 1
ENGINEER :	EASTING :	CONE TYPE : Subtraction	CHECKED DATE : 28/10/2024		STATUS : Final
PROJECT : Usk Way CPT - Newport	NORTHING :	CONE ID : S10-CFIIP.2473	APPROVED BY : Craig Curtis		DATE : 24/10/2024
LOCATION : Newport	COORD. SYS.: OSGB	OPERATOR : Harley Barnett	APPROVED DATE : 7/11/2024		
PROJECT No. : M4028-24	ELEVATION :				



- METHOD: Robertson 1990
- 1 - Sensitive, fine grained

2 - Organic soil - PEATS

3 - CLAYS - CLAY to silty CLAY

4 - SILT mixtures - clayey SILT to silty CLAY

5 - SAND mixtures - silty SAND to sandy SILT

6 - SANDS - clean SAND to silty SAND

7 - Gravelly SAND to SAND

8 - Very stiff SAND to clayey SAND

9 - Very stiff fine grained



PointID

CPT 4A

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 1 OF 1
ENGINEER :	EASTING :	CONE TYPE : Subtraction	CHECKED DATE : 28/10/2024		STATUS : Final
PROJECT : Usk Way CPT - Newport	NORTHING :	CONE ID : S10-CFIIP.2473	APPROVED BY : Craig Curtis		DATE : 24/10/2024
LOCATION : Newport	COORD. SYS.: OSGB	OPERATOR : Harley Barnett	APPROVED DATE : 7/11/2024		
PROJECT No. : M4028-24	ELEVATION :				



SOCOTEC 2.00.1.LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 7/11/2024 11:20 10.03.00.00 Diagonal Lab and In Situ Tool - DGD [Lib: Socotec 2.00.1 2022-12-02 PJ: Socotec 2.00.1 2022-12-02]

METHOD: Robertson 1990

1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	