



PointID

CPT 4B

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

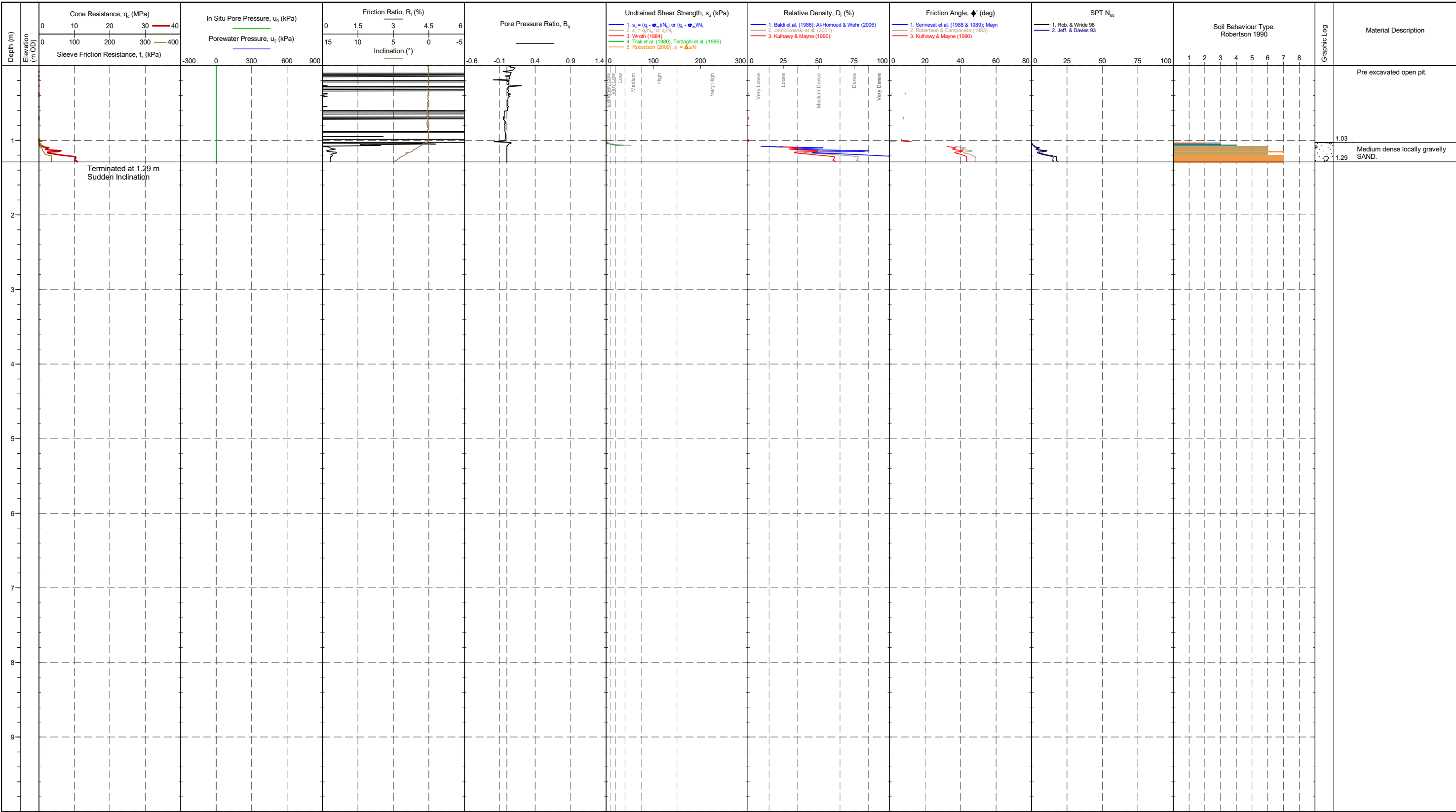
AREA :
EASTING :
NORTHING :
COORD. SYS.: OSGB
ELEVATION :

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 11:21 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

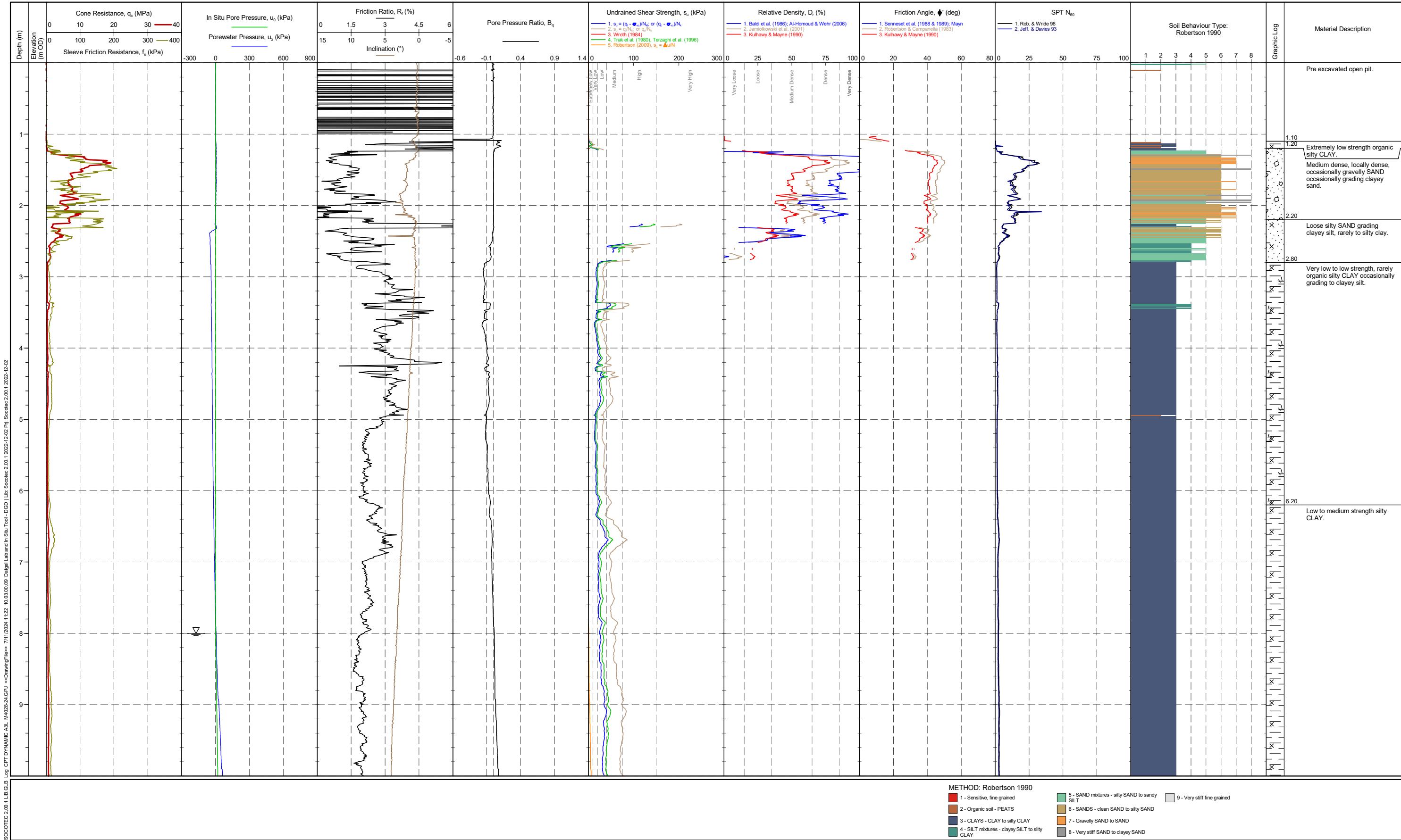
1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	



PointID

CPT 4C

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 4C

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

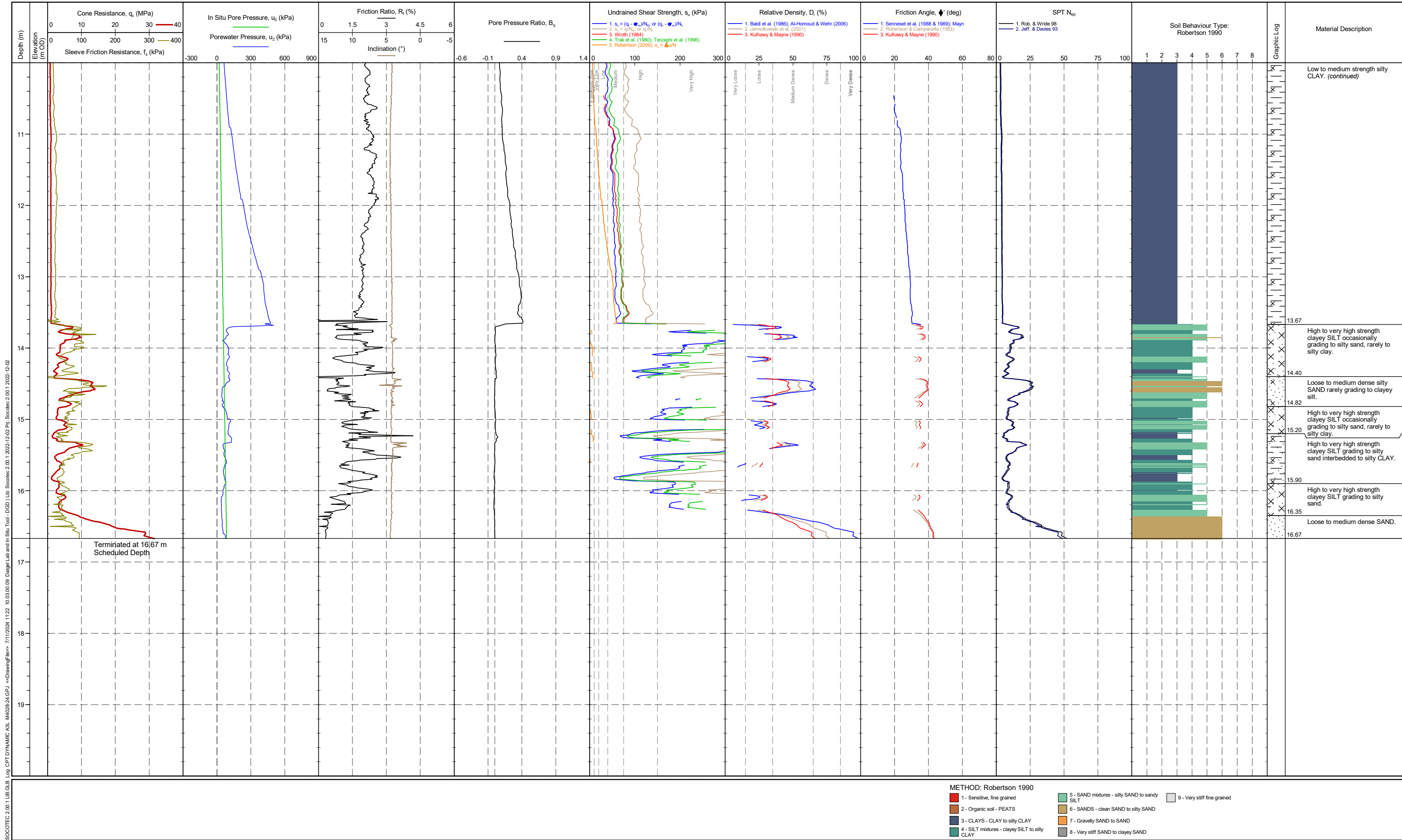
AREA :
EASTING :
NORTHING :
COORD. SYS.: OSGB
ELEVATION :

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

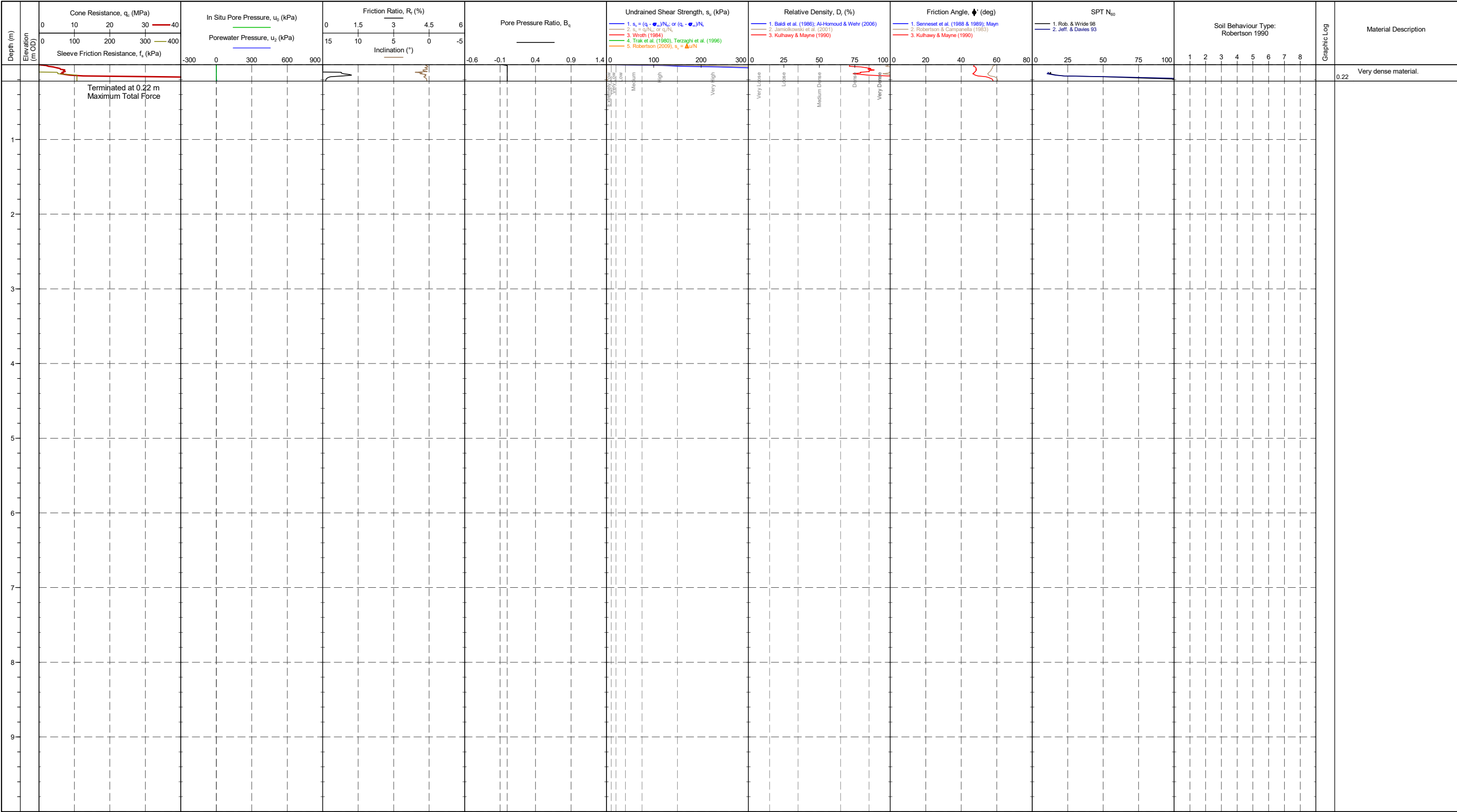




PointID

CPT 5

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 11:23 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

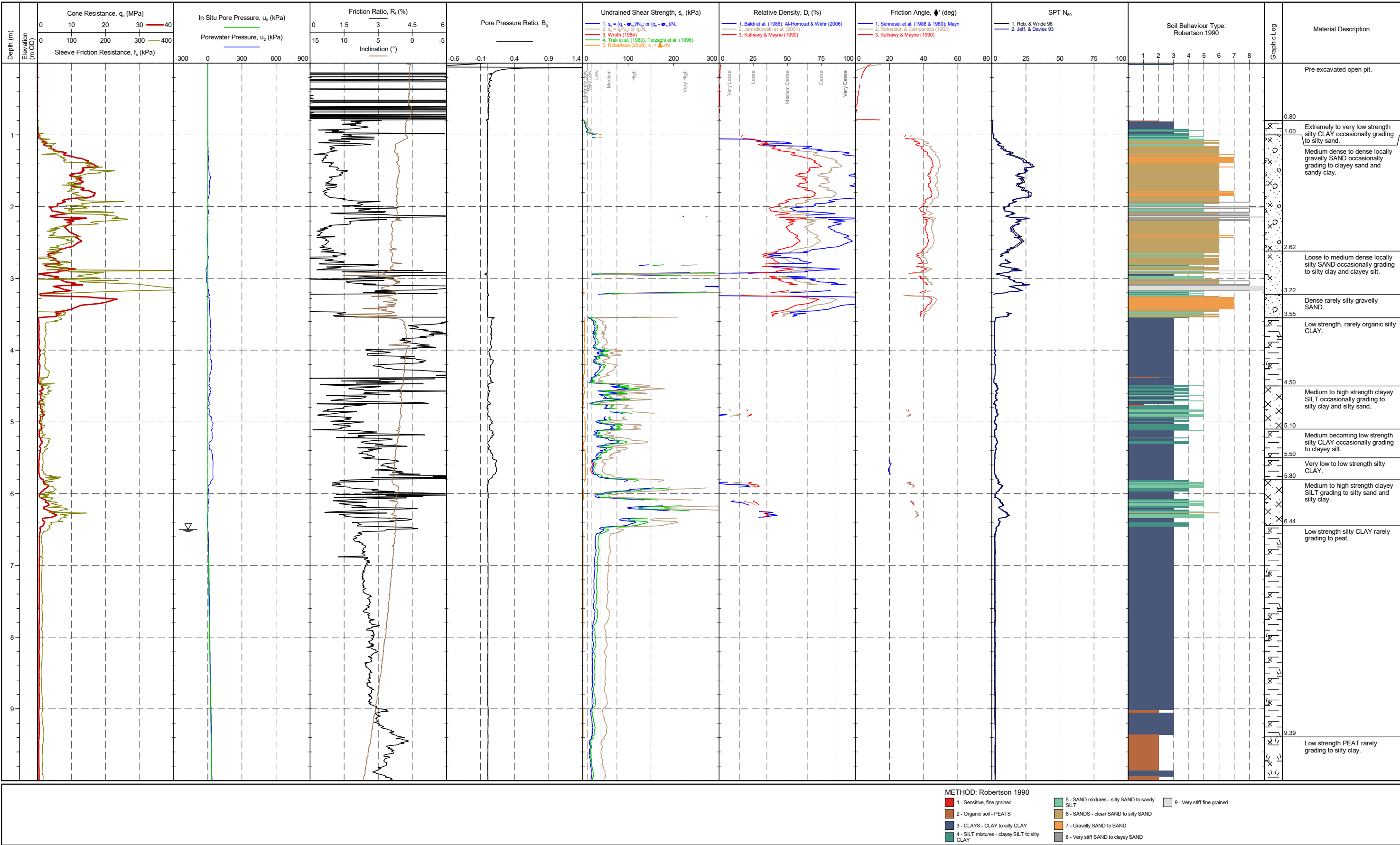
1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	



PointID

CPT 5A

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 :				

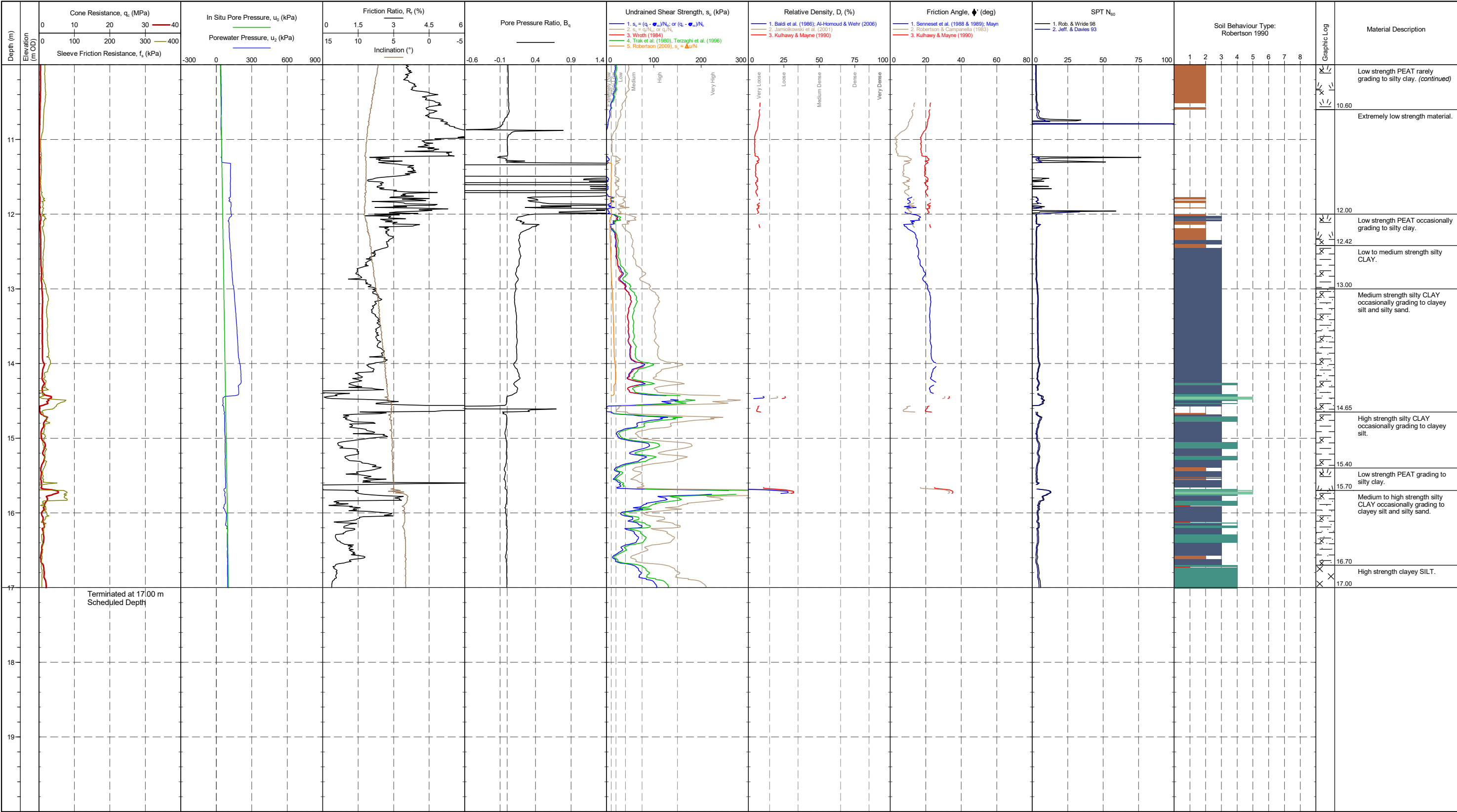




PointID

CPT 5A

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 2 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 :				



SOCOTEC 2.00.1.LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 7/11/2024 11:24 10.03.00.00 Diagen 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

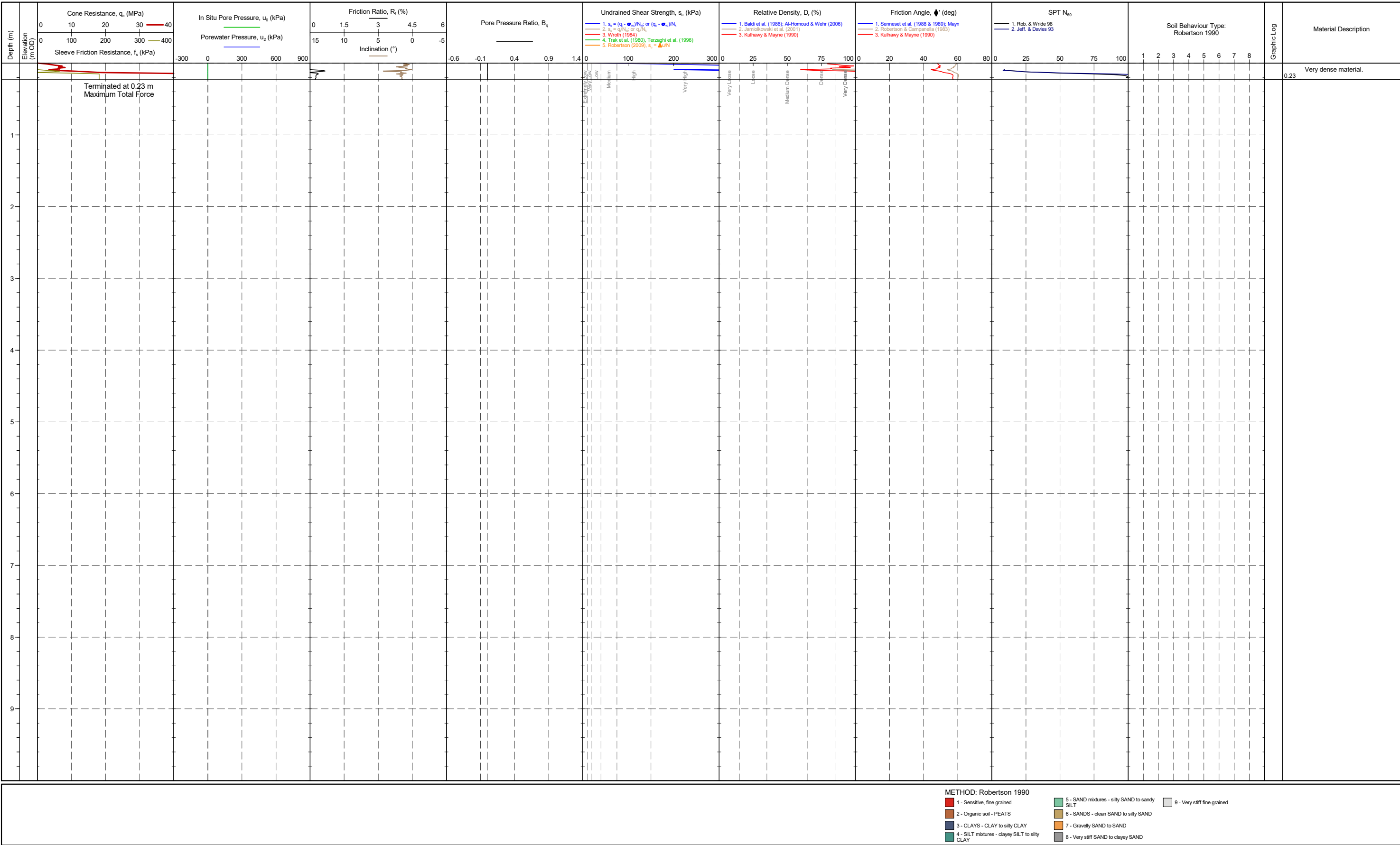
1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	



PointID

CPT 6

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 :				

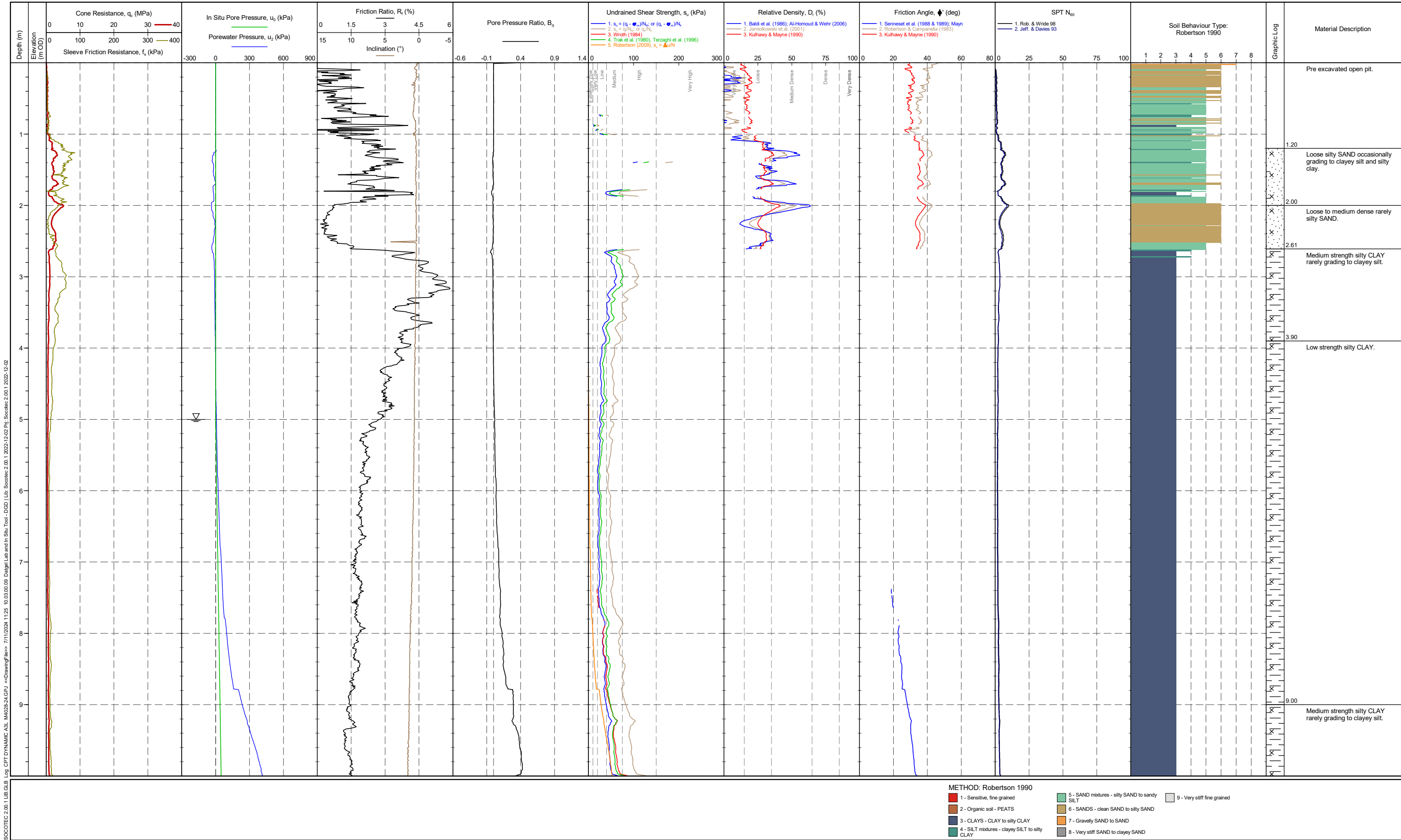




PointID

CPT 6A

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 6A

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

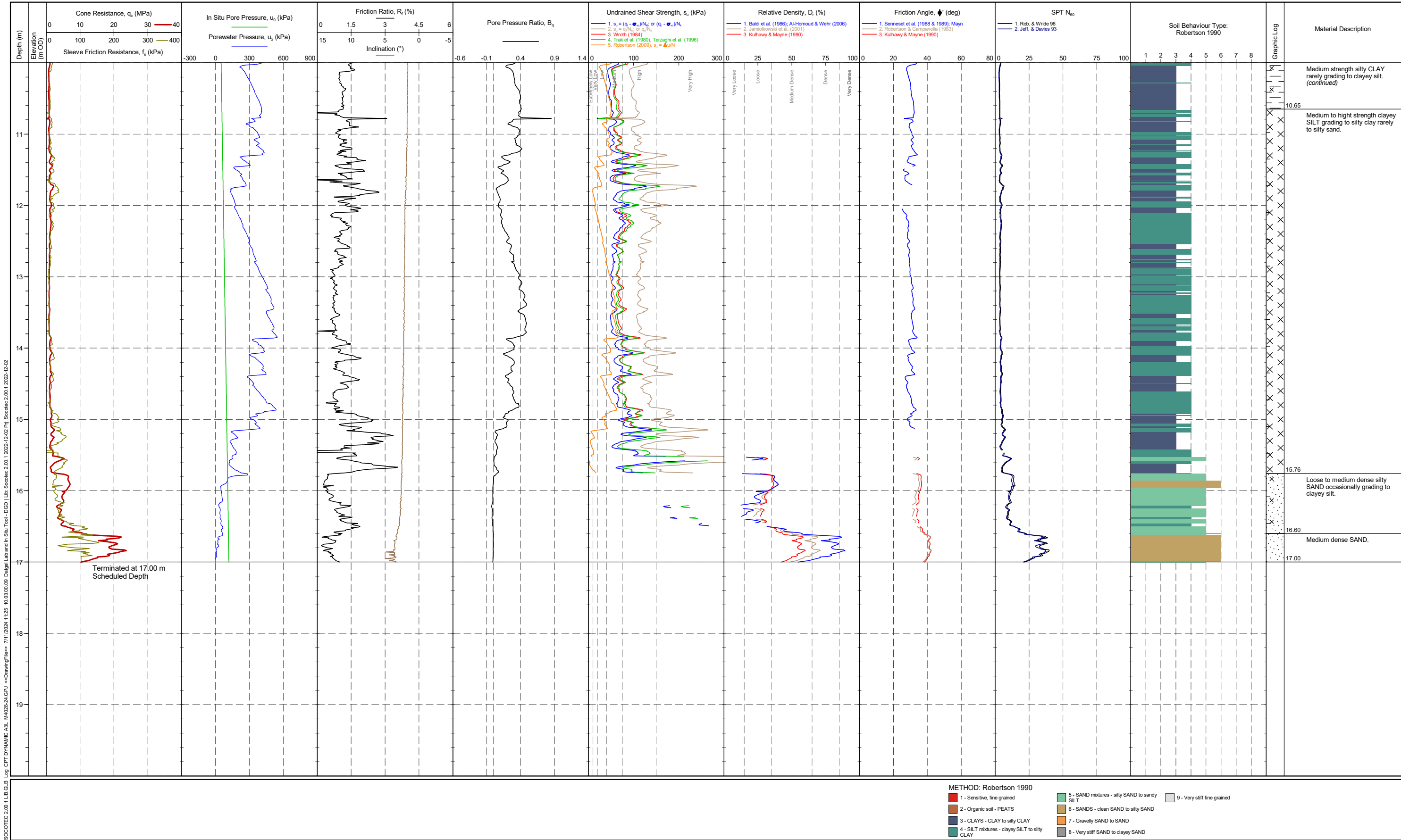
AREA :
EASTING :
NORTHING :
COORD. SYS.: OSGB
ELEVATION :

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

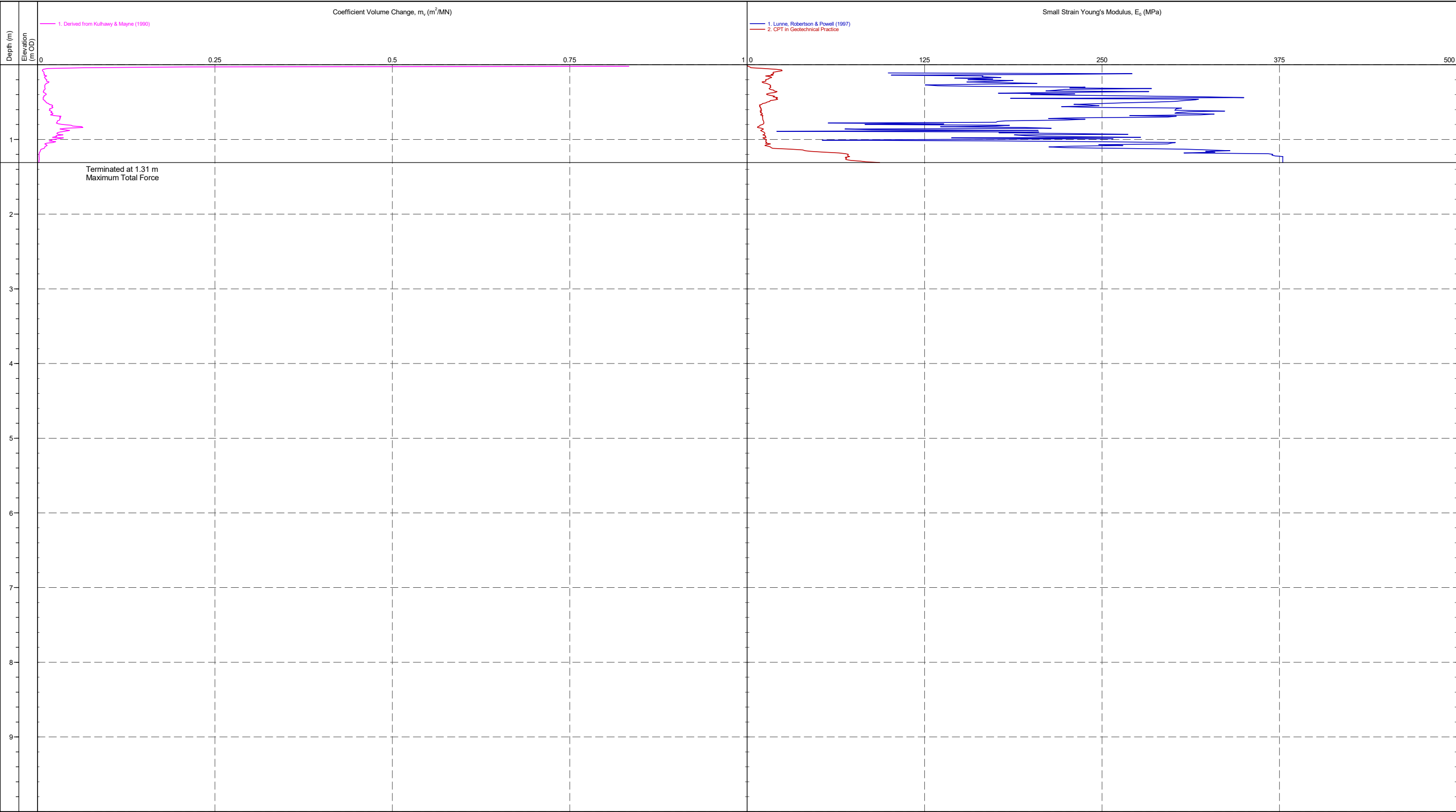




PointID

CPT 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>> 13/11/2024 10:31 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Pij Socotec 2.00.1 2022-12-02

METHOD: Robertson 1990

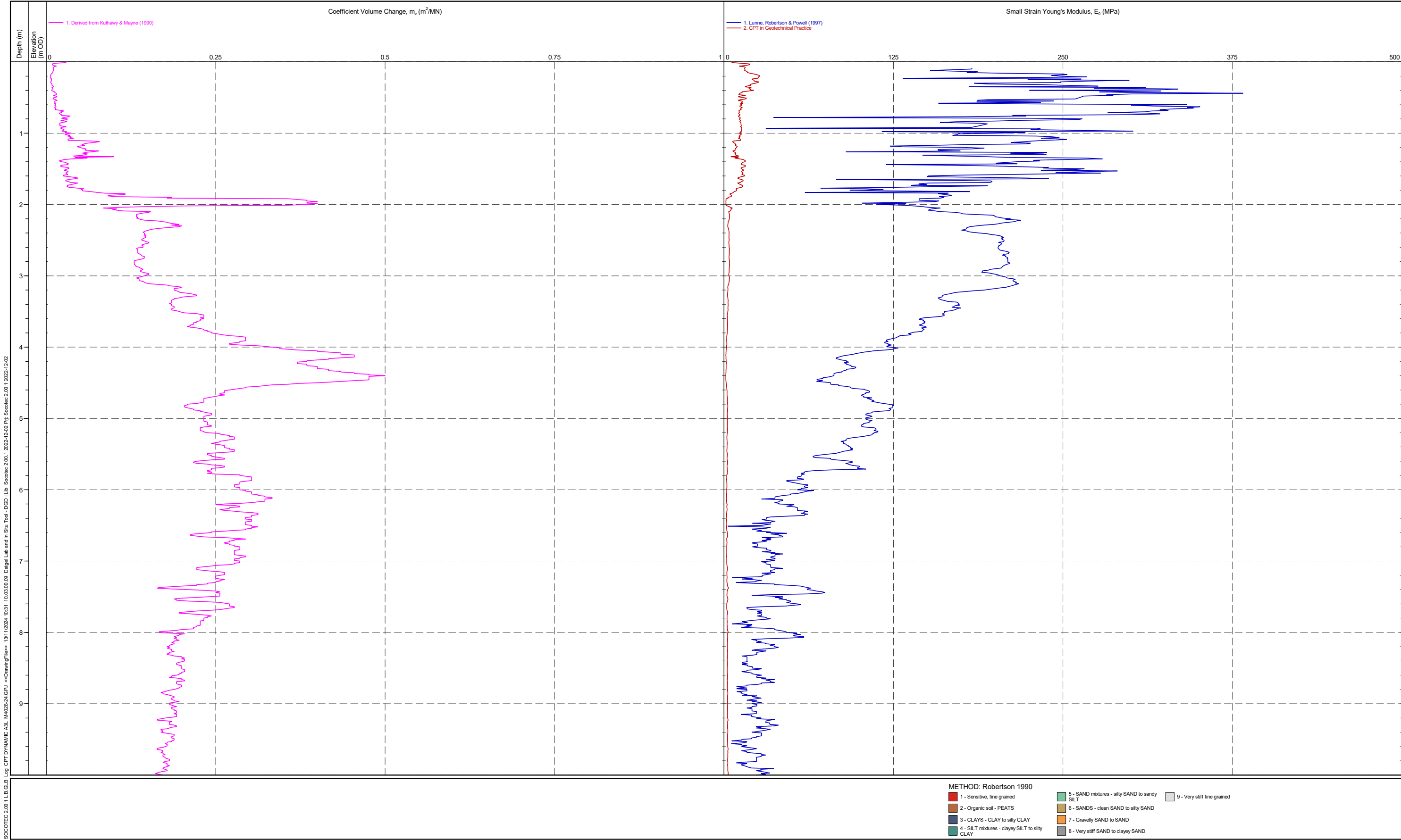
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	2 - Organic soil - PEATS		6 - SANDS - clean SAND to silty SAND		
	3 - CLAYS - CLAY to silty CLAY		7 - Gravelly SAND to SAND		
	4 - SILT mixtures - clayey SILT to silty CLAY		8 - Very stiff SAND to clayey SAND		



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

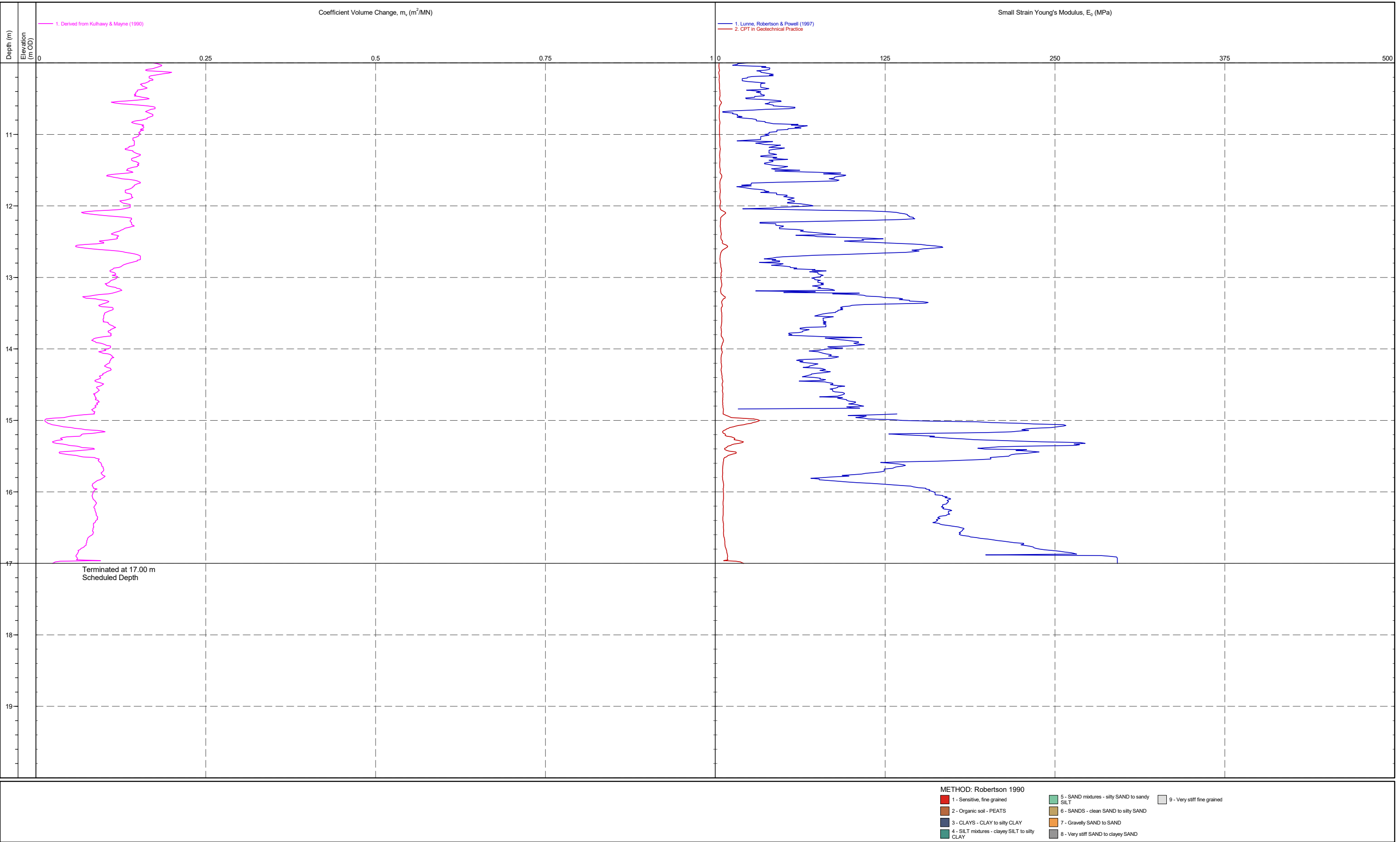
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AREA      :
EASTING   :
NORTHING  :
COORD. SYS.: OSGB
ELEVATION :
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RIG      : Geomil Panther 170
CONE TYPE : Subtraction
CONE ID   : S10-CFIIP.2473
OPERATOR  : Harley Barnett
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CHECKED 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

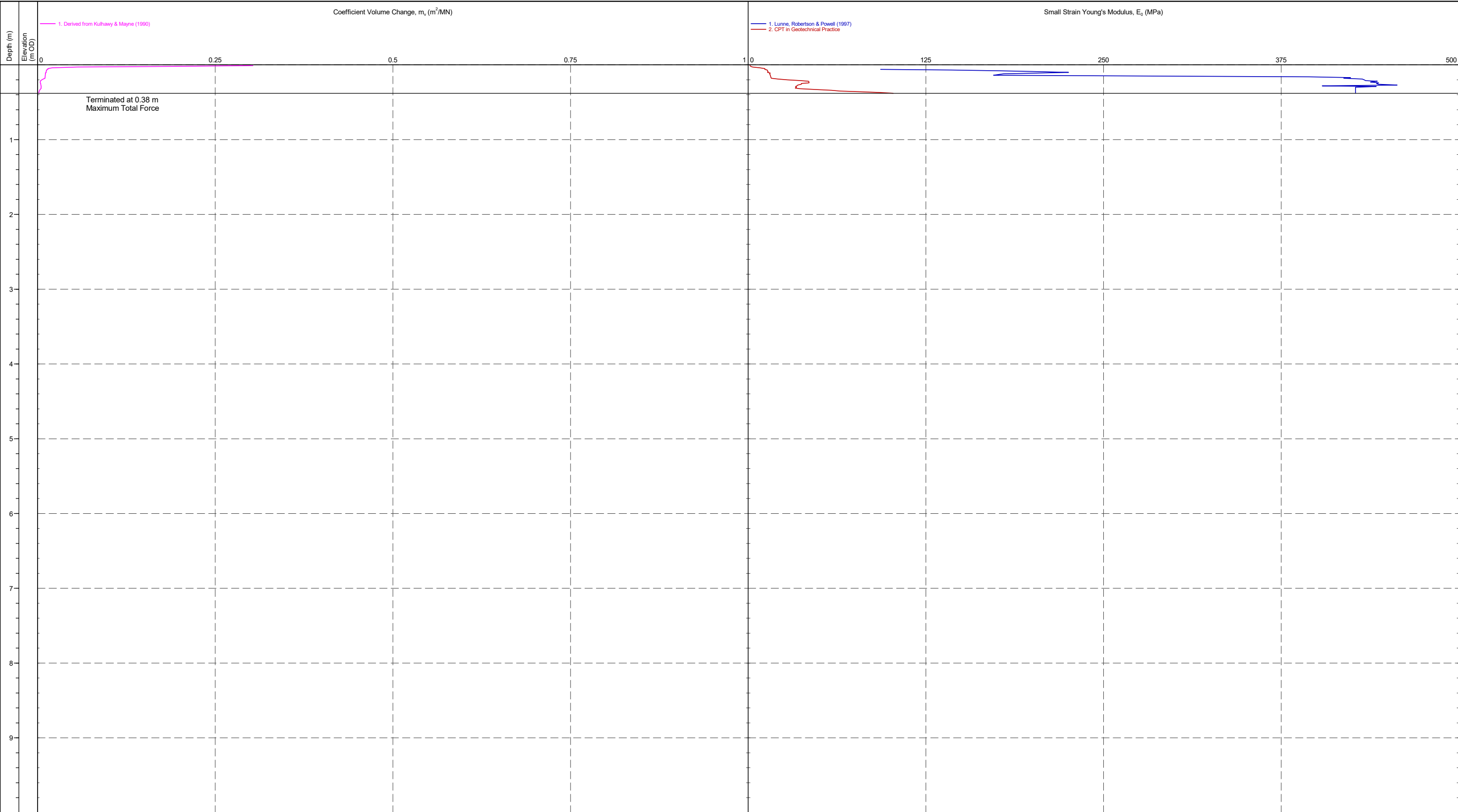




PointID

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>> 13/11/2024 10:32 10:03:00.09 D:\gel Lab and In Situ Tool - DGD Lib- Socotec 2.00.1 2022-12-02 Plot Socotec 2.00.1 2022-12-02

METHOD: Robertson 1990

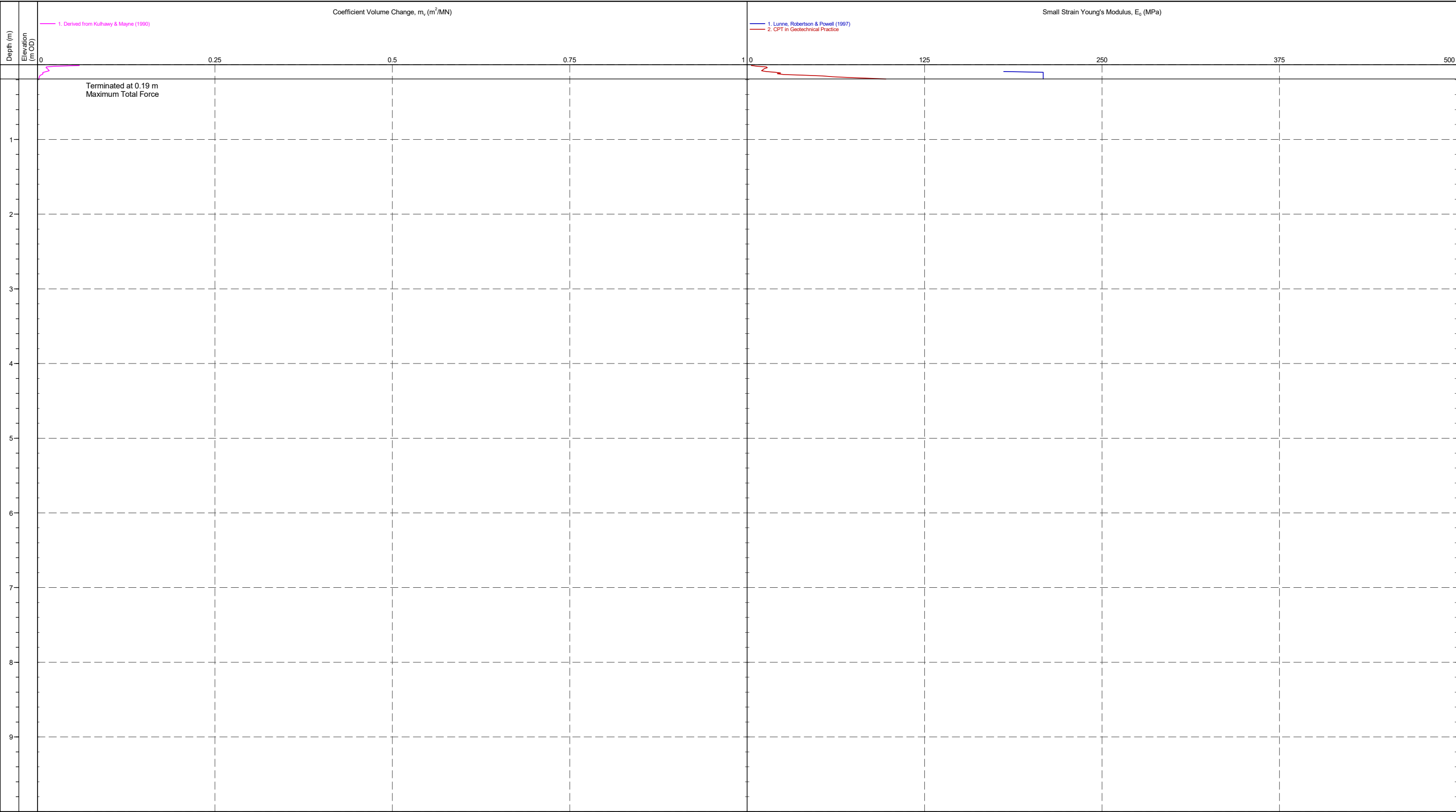
1 - Sensitive, fine grained	5 - SAND mixtures - silty SAND to sandy SILT	9 - Very stiff fine grained
2 - Organic soil - PEATS	6 - SANDS - clean SAND to silty SAND	
3 - CLAYS - CLAY to silty CLAY	7 - Gravelly SAND to SAND	
4 - SILT mixtures - clayey SILT to silty CLAY	8 - Very stiff SAND to clayey SAND	



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 :				



SOCOTEC 2.00.1 LIB, GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 13/11/2024 10:32 10.03.00.09 DatGel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Proj: 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 2B

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>> 13/11/2024 10:33 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Pij: Socotec 2.00.1 2022-12-02

METHOD: Robertson 1990

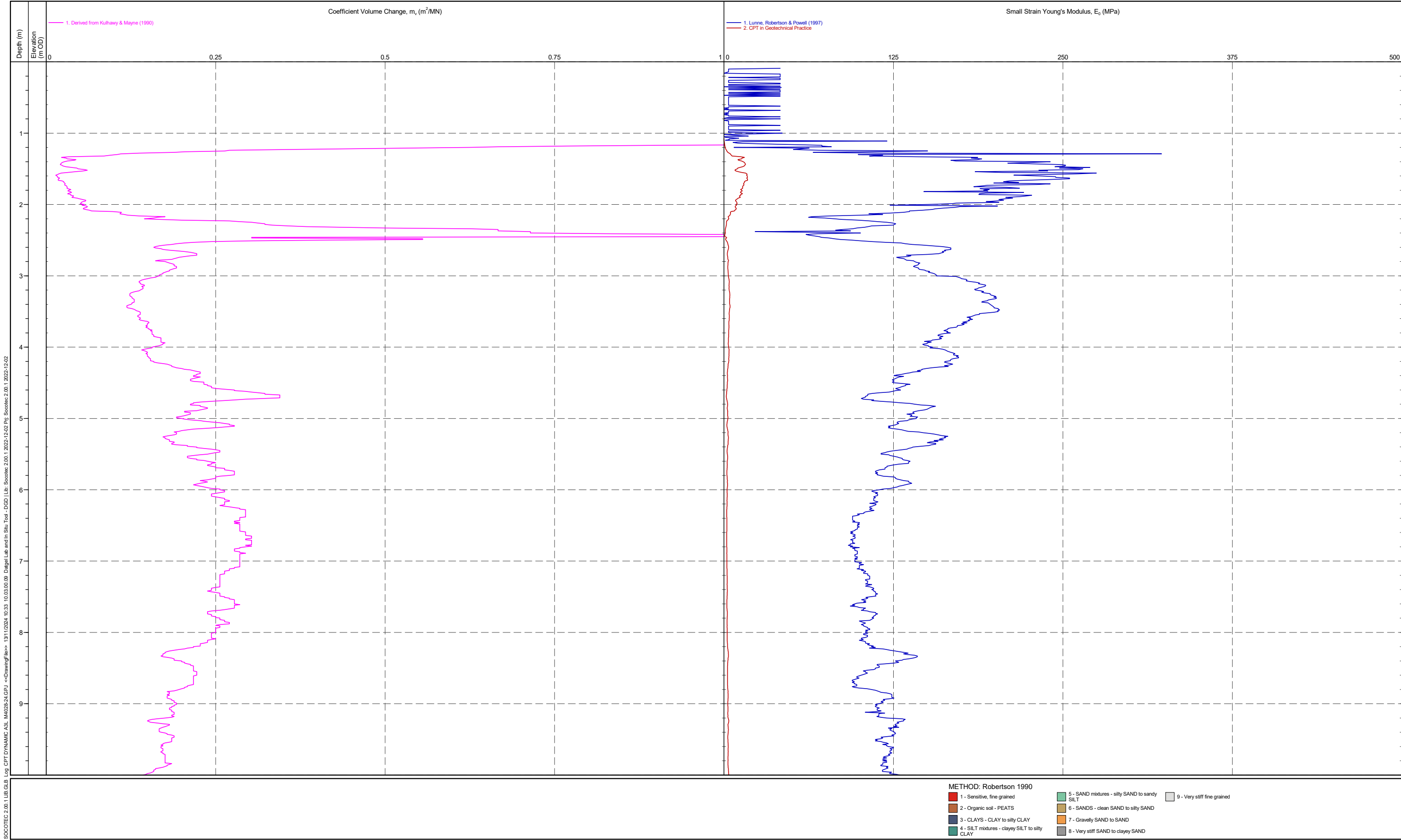
	1 - Sensitive, fine grained		5 - SAND mixtures - silty SAND to sandy SILT		9 - Very stiff fine grained
	2 - Organic soil - PEATS		6 - SANDS - clean SAND to silty SAND		
	3 - CLAYS - CLAY to silty CLAY		7 - Gravelly SAND to SAND		
	4 - SILT mixtures - clayey SILT to silty CLAY		8 - Very stiff SAND to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

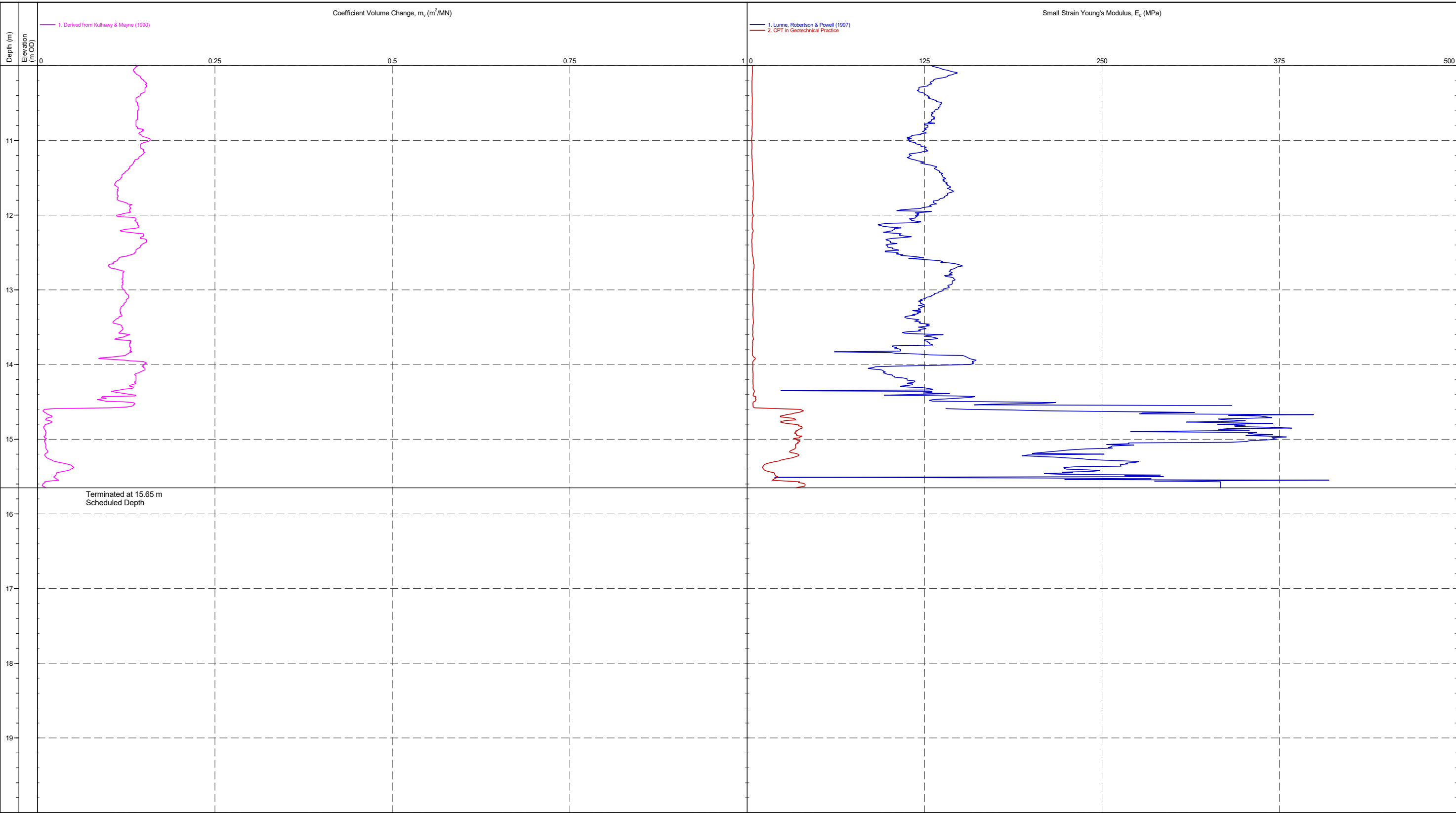




PointID

CPT 2C

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 2 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 :				



SOCOTEC 2.00.1 LIB, GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 13/11/2024 10:33 10.03.00.09 DatGel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Pjt: 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 3

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

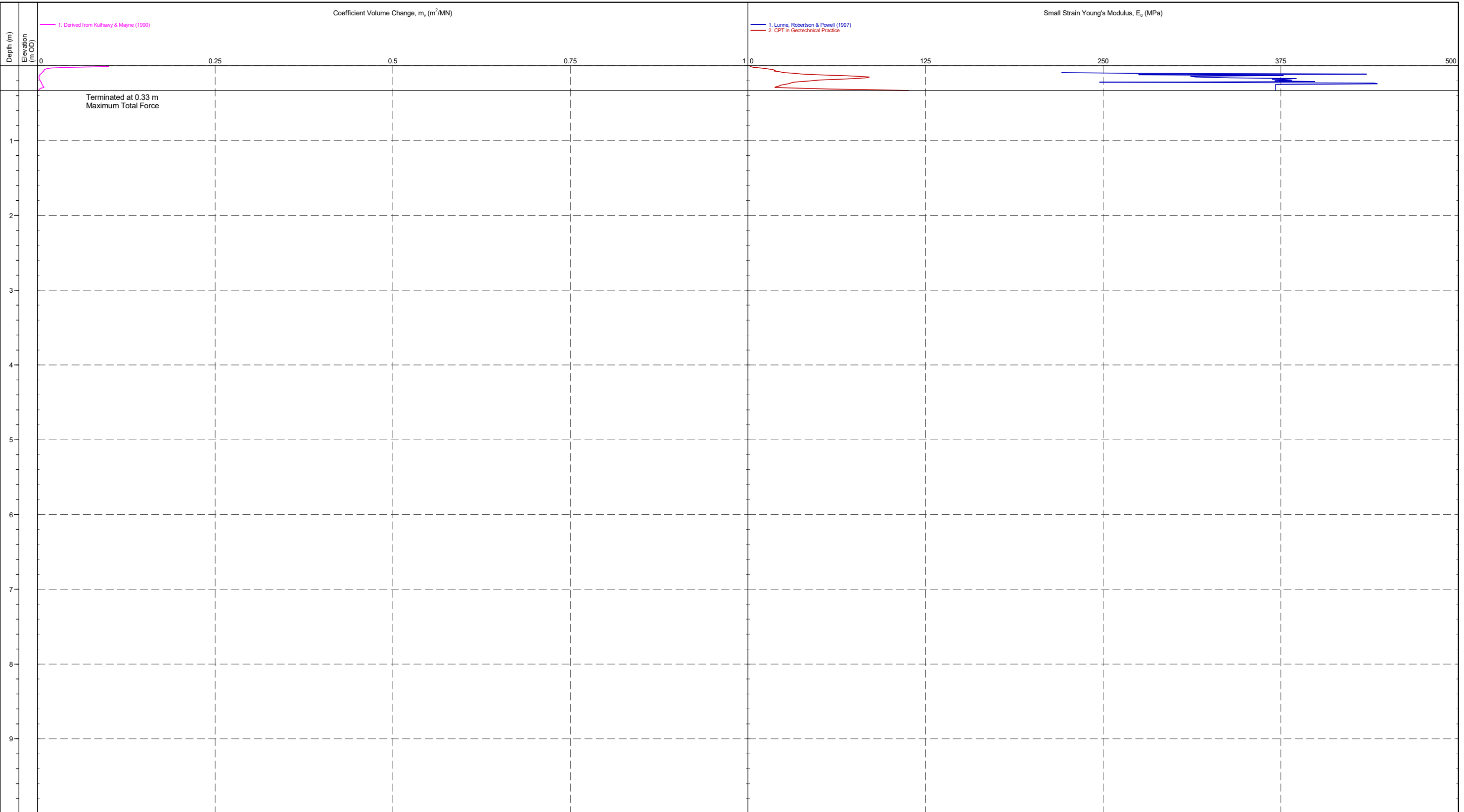
AREA :
EASTING :
NORTHING :
COORD. SYS.: OSGB
ELEVATION :

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



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 | |

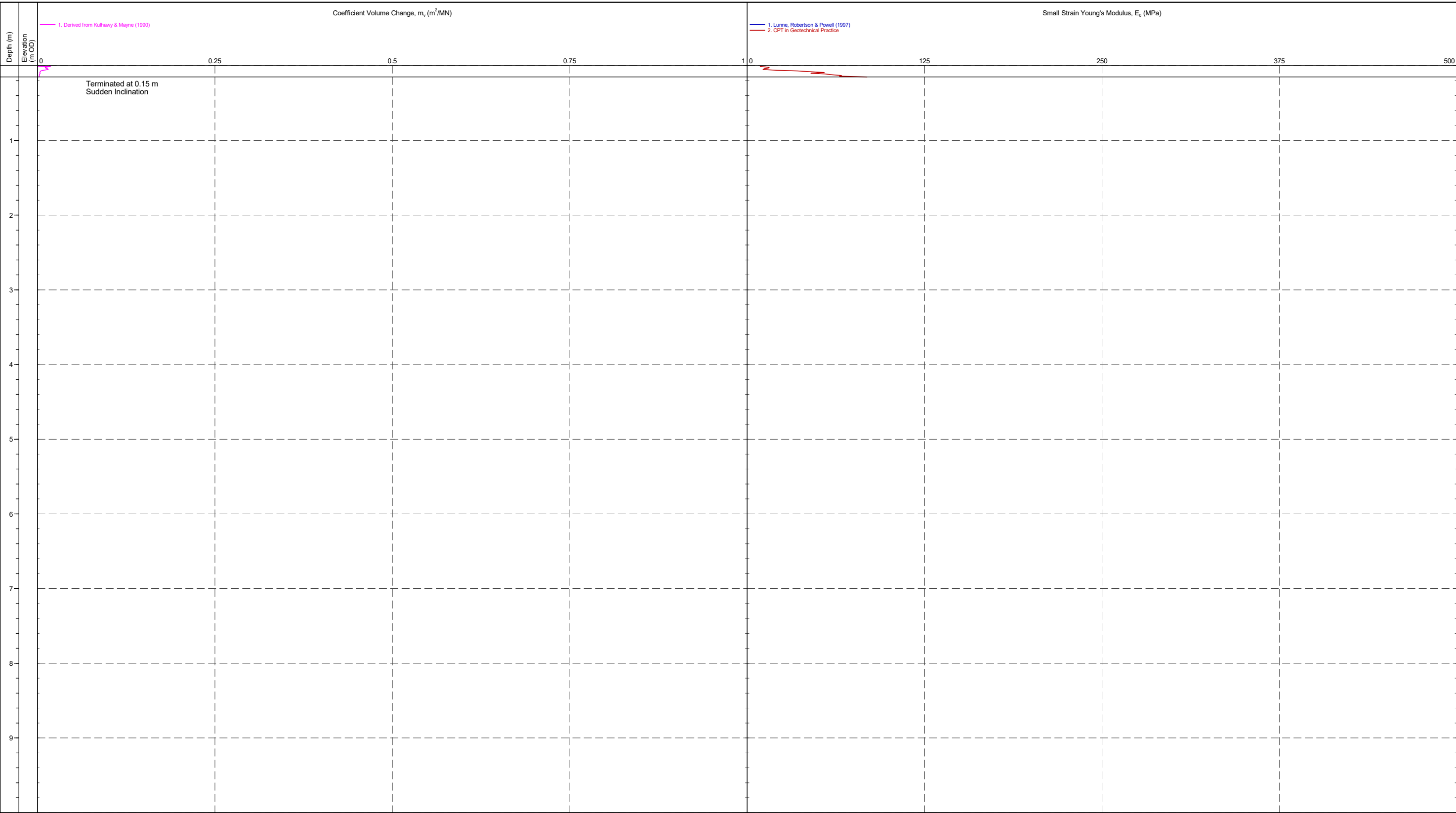


CPT LOG

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>> 13/11/2024 10:34 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Pij: Socotec 2.00.1 2022-12-02

METHOD: Robertson 1990

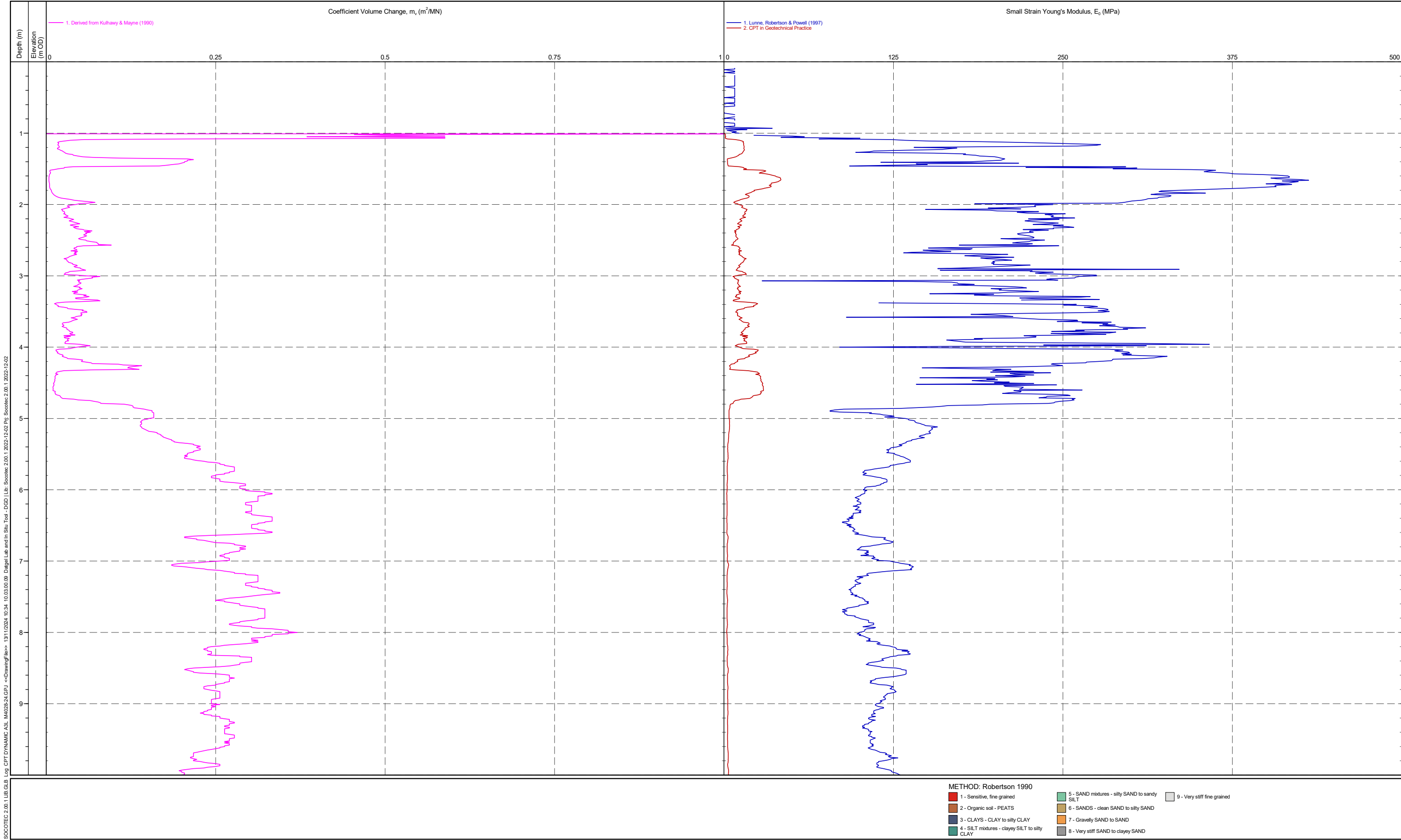
	1 - Sensitive, fine grained		5 - SAND mixtures - silty SAND to sandy SILT		9 - Very stiff fine grained
	2 - Organic soil - PEATS		6 - SANDS - clean SAND to silty SAND		
	3 - CLAYS - CLAY to silty CLAY		7 - Gravelly SAND to SAND		
	4 - SILT mixtures - clayey SILT to silty CLAY		8 - Very stiff SAND to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

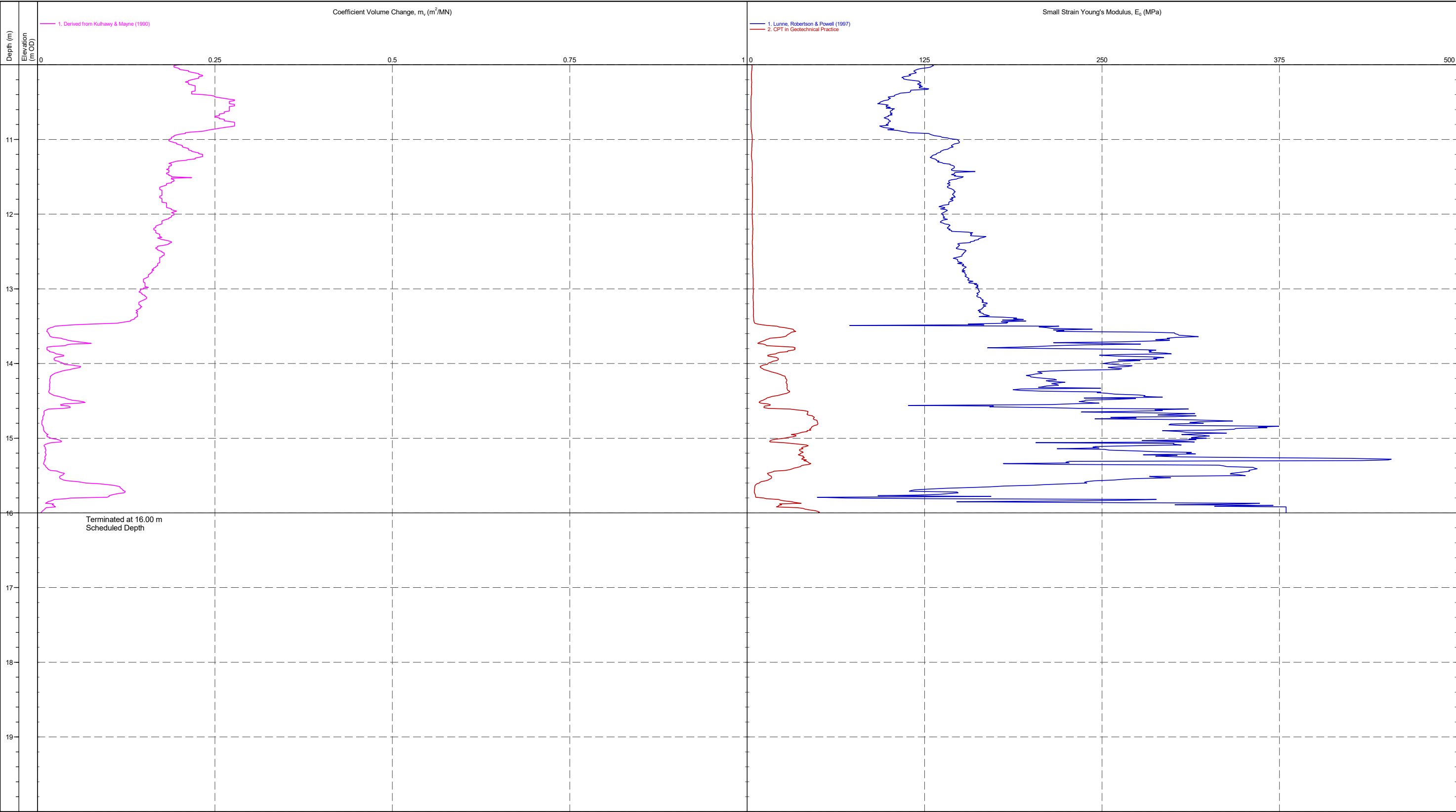




PointID

CPT 3B

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 2 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 :				



SOCOTEC 2.00.1 LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 13/11/2024 10:34 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Proj: Socotec 2.00.1 2022-12-02

METHOD: Robertson 1990

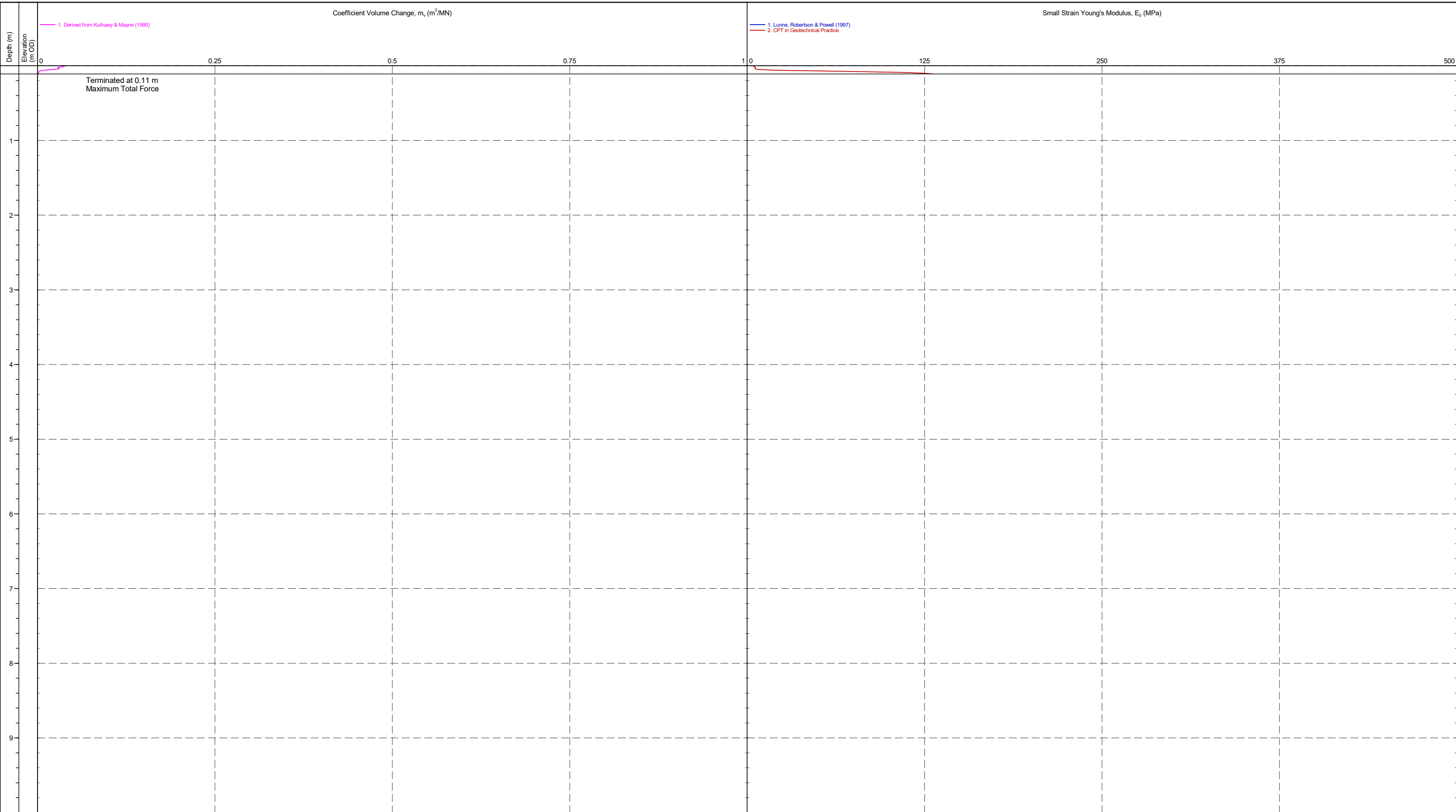
	1 - Sensitive, fine grained		5 - SAND mixtures - silty SAND to sandy SILT		9 - Very stiff fine grained
	2 - Organic soil - PEATS		6 - SANDS - clean SAND to silty SAND		
	3 - CLAYS - CLAY to silty CLAY		7 - Gravelly SAND to SAND		
	4 - SILT mixtures - clayey SILT to silty CLAY		8 - Very stiff SAND to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



SOCOTEC 2.00.1 LIB, GLB Log CPT DYNAMIC A3L M4028-24.GPJ <DrawingFile>> 13/11/2024 10:35 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Proj: Socotec 2.00.1 2022-12-02

METHOD: Robertson 1990

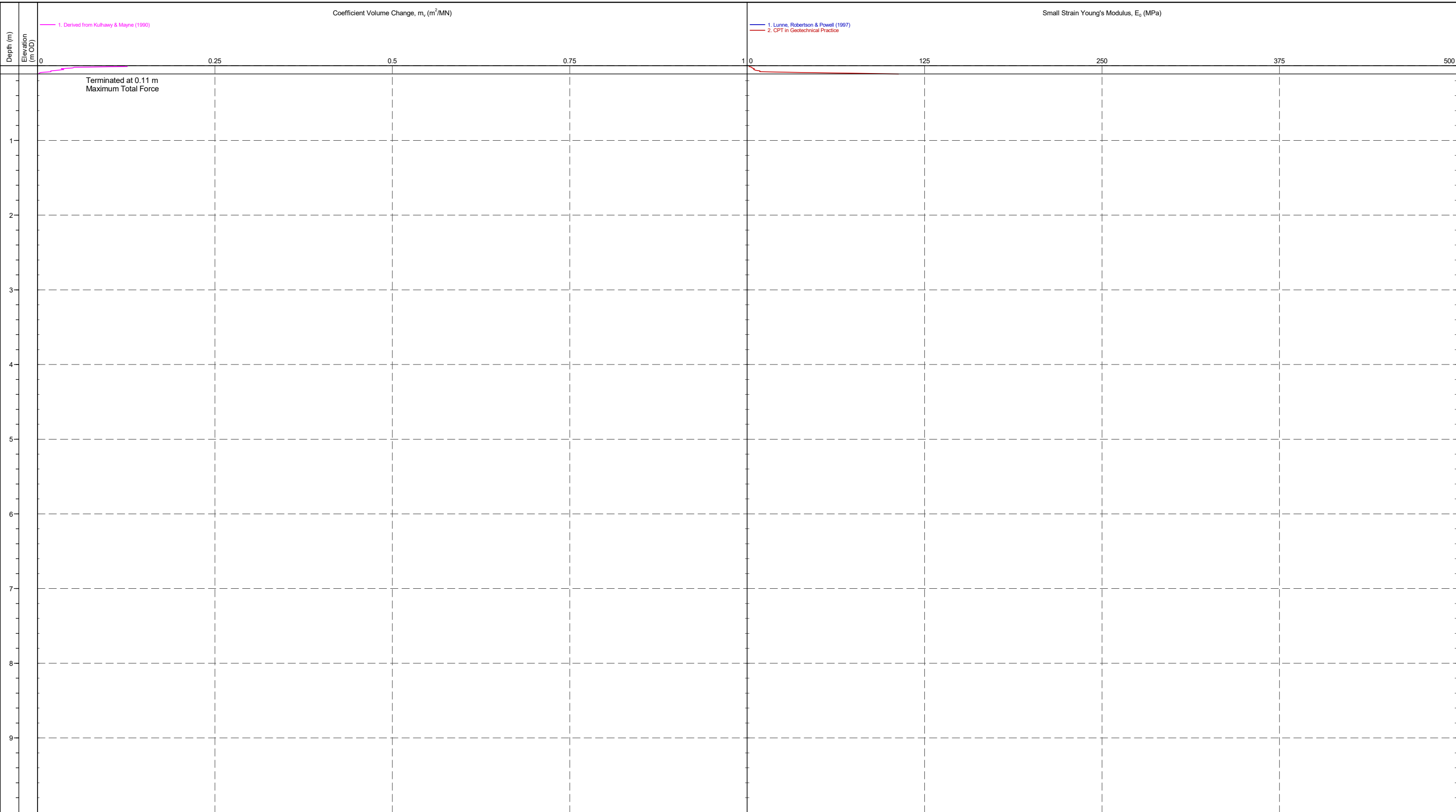
	1 - Sensitive, fine grained		5 - SAND mixtures - silty SAND to sandy SILT		9 - Very stiff fine grained
	2 - Organic soil - PEATS		6 - SANDS - clean SAND to silty SAND		
	3 - CLAYS - CLAY to silty CLAY		7 - Gravelly SAND to SAND		
	4 - SILT mixtures - clayey SILT to silty CLAY		8 - Very stiff SAND to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



PointID

CPT 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>> 13/11/2024 10:36 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Pij: Socotec 2.00.1 2022-12-02

METHOD: Robertson 1990

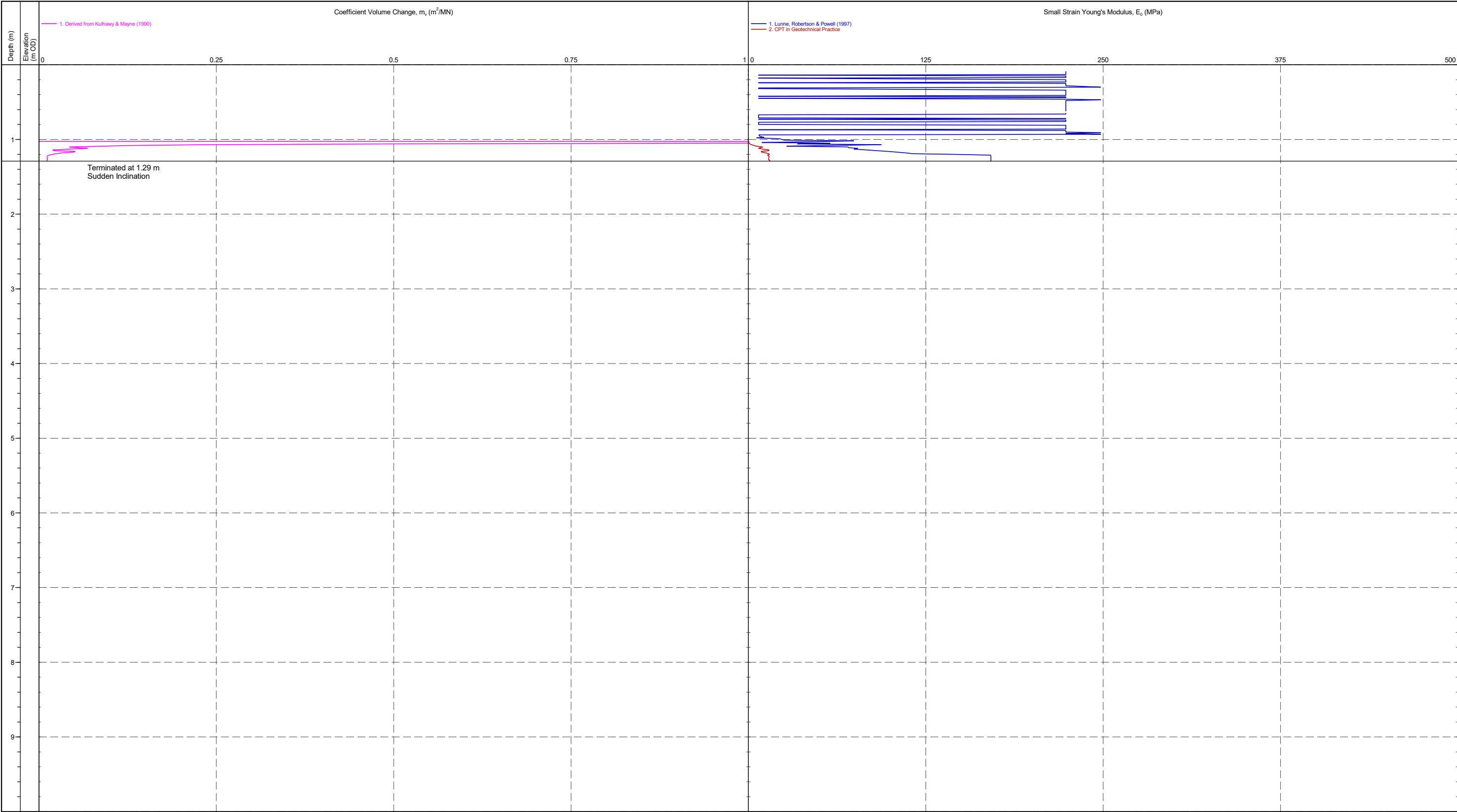
	1 - Sensitive, fine grained		5 - SAND mixtures - silty SAND to sandy SILT		9 - Very stiff fine grained
	2 - Organic soil - PEATS		6 - SANDS - clean SAND to silty SAND		
	3 - CLAYS - CLAY to silty CLAY		7 - Gravelly SAND to SAND		
	4 - SILT mixtures - clayey SILT to silty CLAY		8 - Very stiff SAND to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



PointID

CPT 4B

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 :				

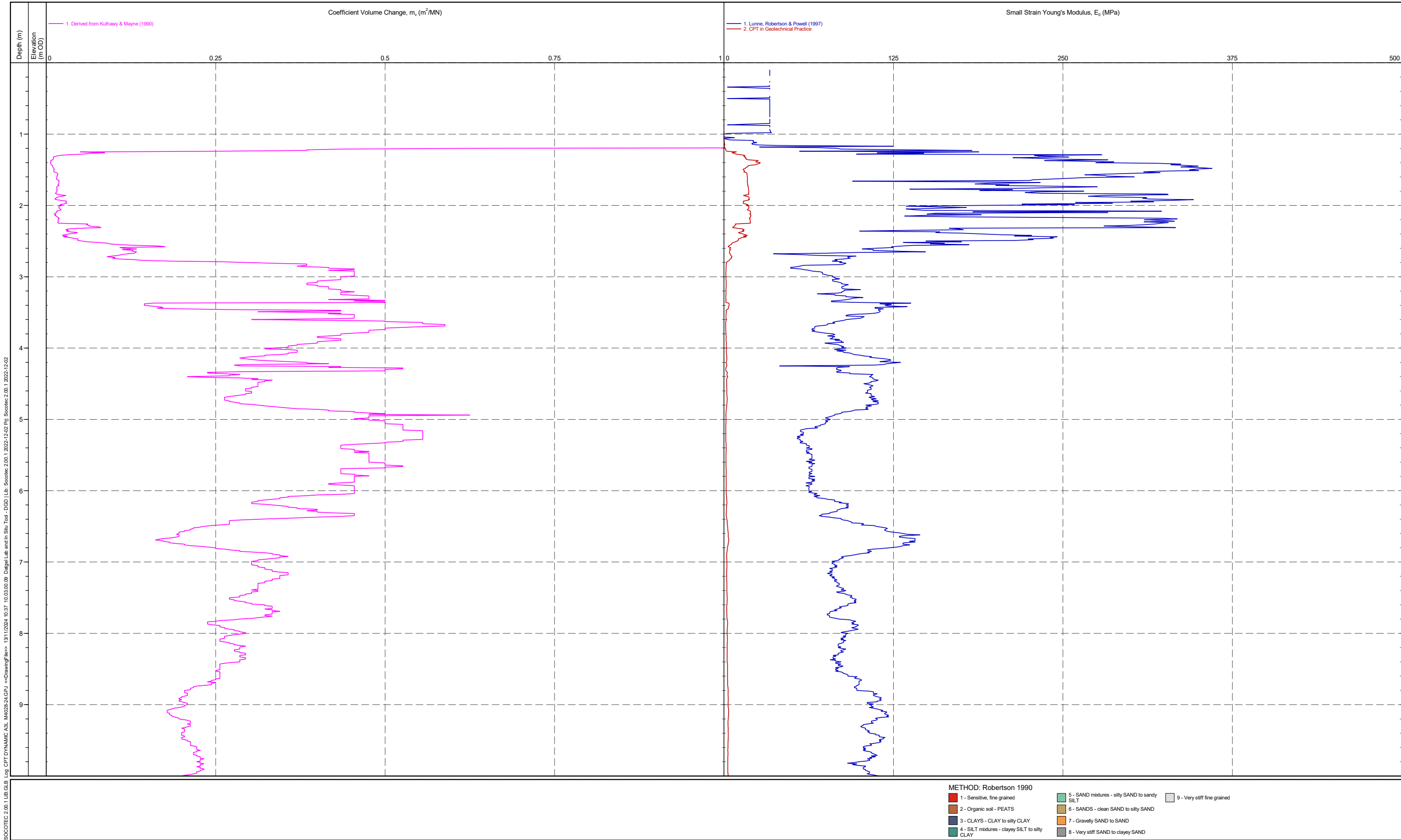




PointID

CPT 4C

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 :				

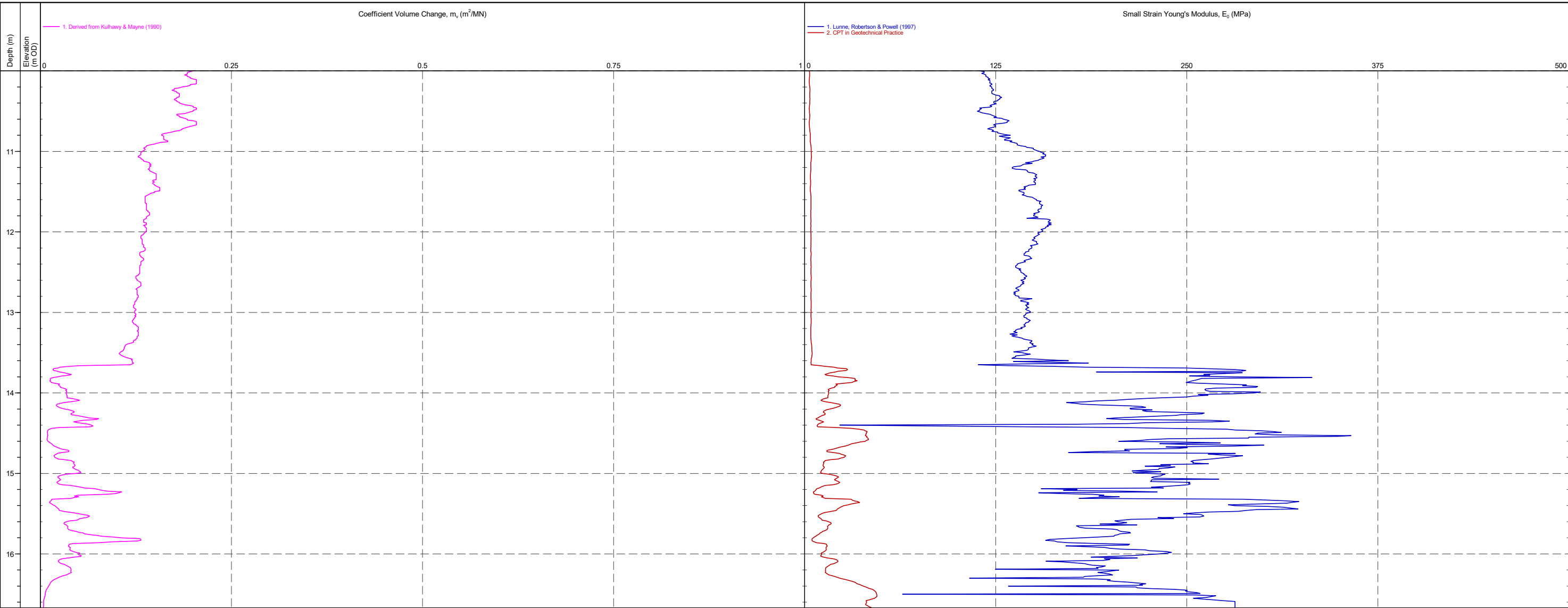




PointID

CPT 4C

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 2 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 :				



Terminated at 16.67 m
Scheduled Depth

METHOD: Robertson 1990

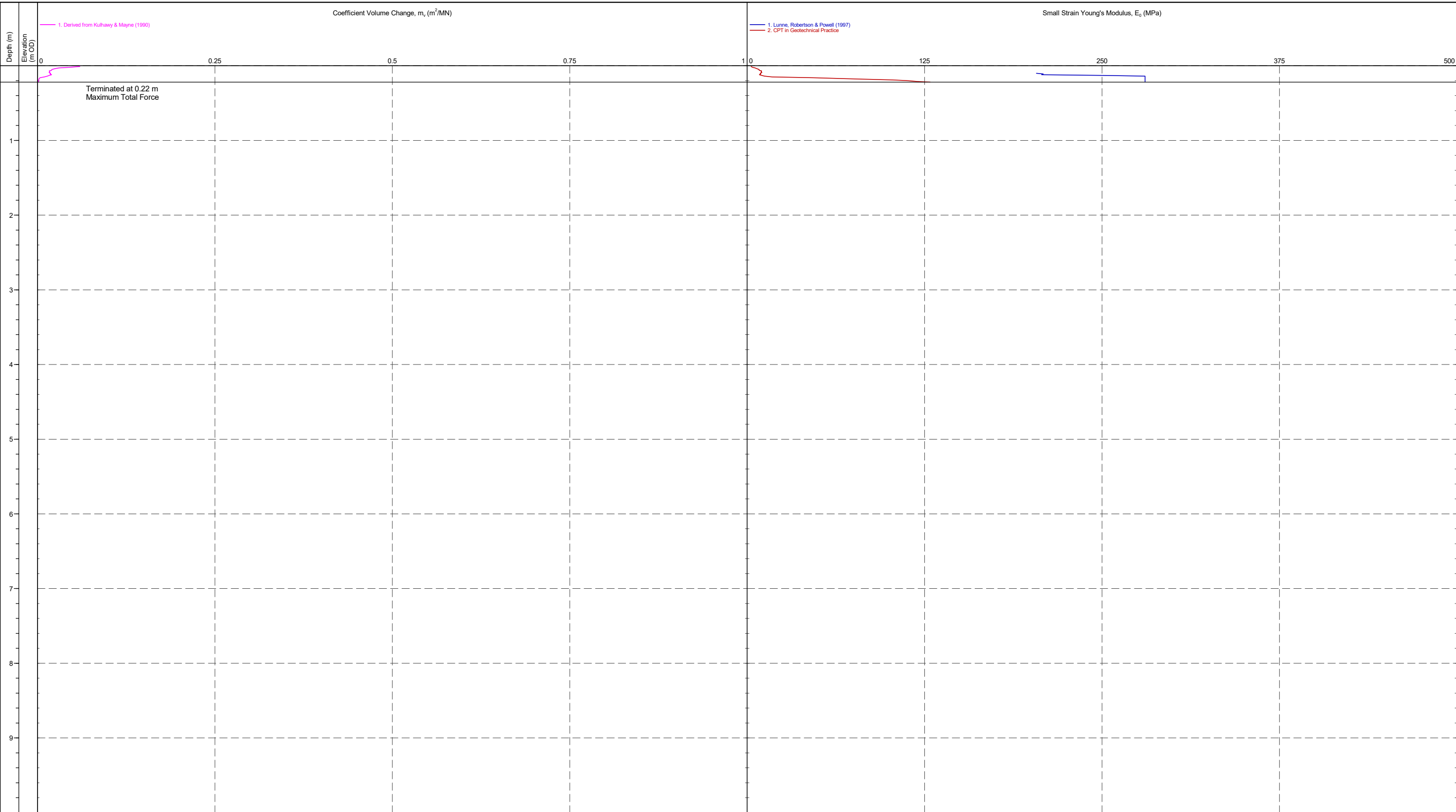
	1 - Sensitive, fine grained		5 - SAND mixtures - silty SAND to sandy SILT		9 - Very stiff fine grained
	2 - Organic soil - PEATS		6 - SANDS - clean SAND to silty SAND		
	3 - CLAYS - CLAY to silty CLAY		7 - Gravelly SAND to SAND		
	4 - SILT mixtures - clayey SILT to silty CLAY		8 - Very stiff SAND to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



PointID

CPT 5

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>> 13/11/2024 10:37 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Pij: Socotec 2.00.1 2022-12-02

METHOD: Robertson 1990

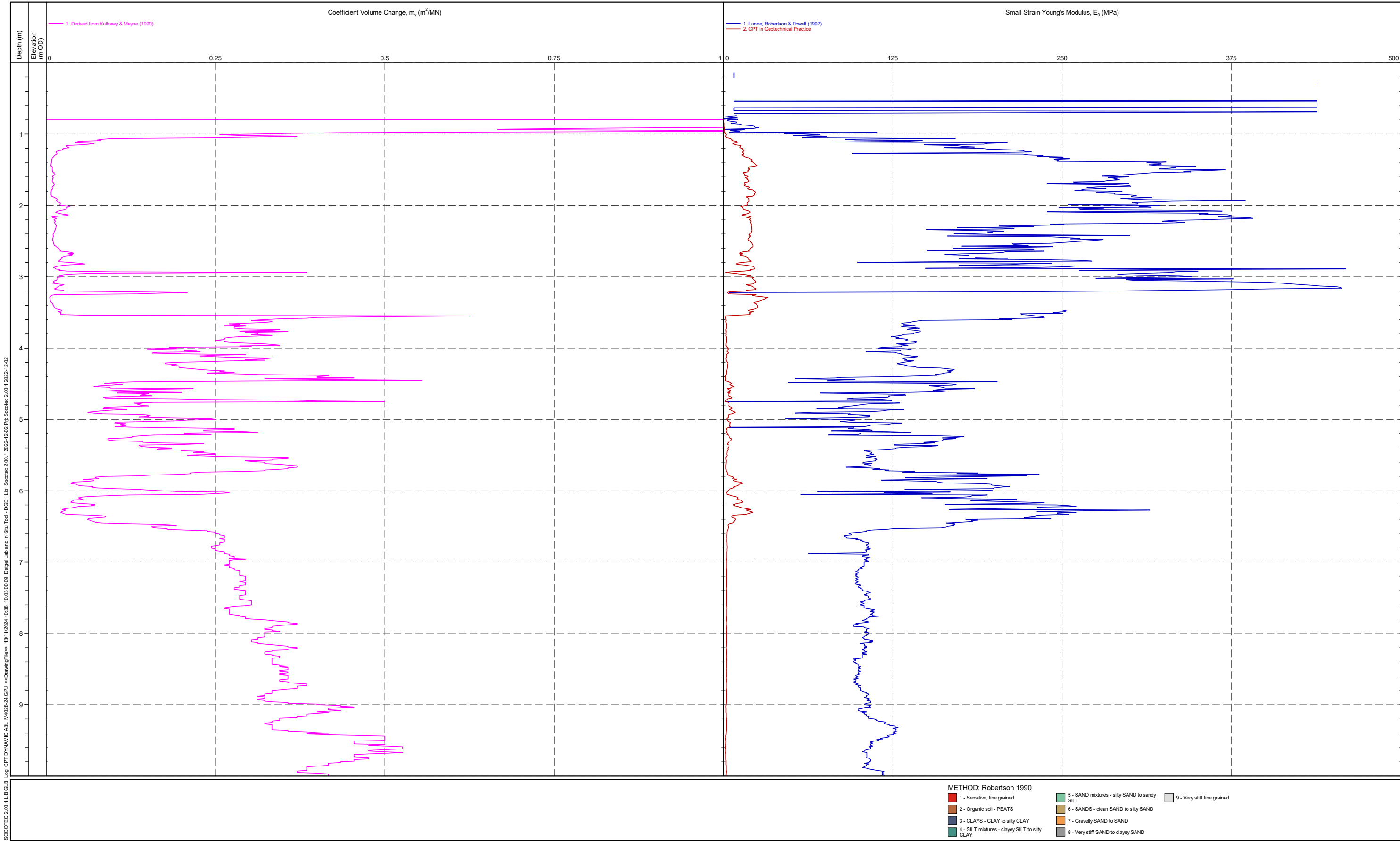
	1 - Sensitive, fine grained		5 - SAND mixtures - silty SAND to sandy SILT		9 - Very stiff fine grained
	2 - Organic soil - PEATS		6 - SANDS - clean SAND to silty SAND		
	3 - CLAYS - CLAY to silty CLAY		7 - Gravelly SAND to SAND		
	4 - SILT mixtures - clayey SILT to silty CLAY		8 - Very stiff SAND to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



PointID

CPT 5A

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 :				

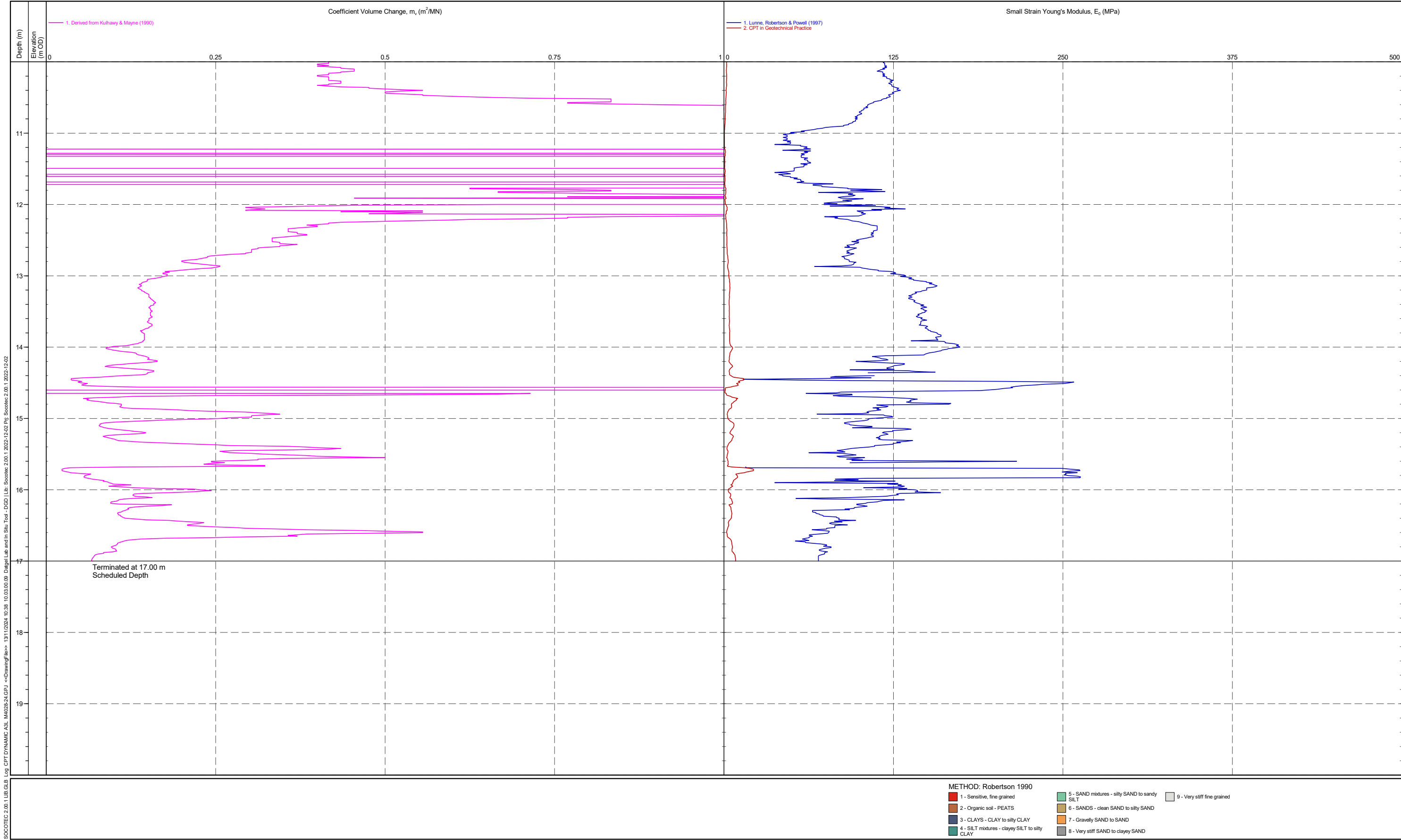




PointID

CPT 5A

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 2 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 :				



SOCOTEC 2.00.1.LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 13/11/2024 10:38 10:03:00.09 Diagam Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Plt: Socotec 2.00.1 2022-12-02



PointID

CPT 6

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>> 13/11/2024 10:39 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Pij Socotec 2.00.1 2022-12-02

METHOD: Robertson 1990

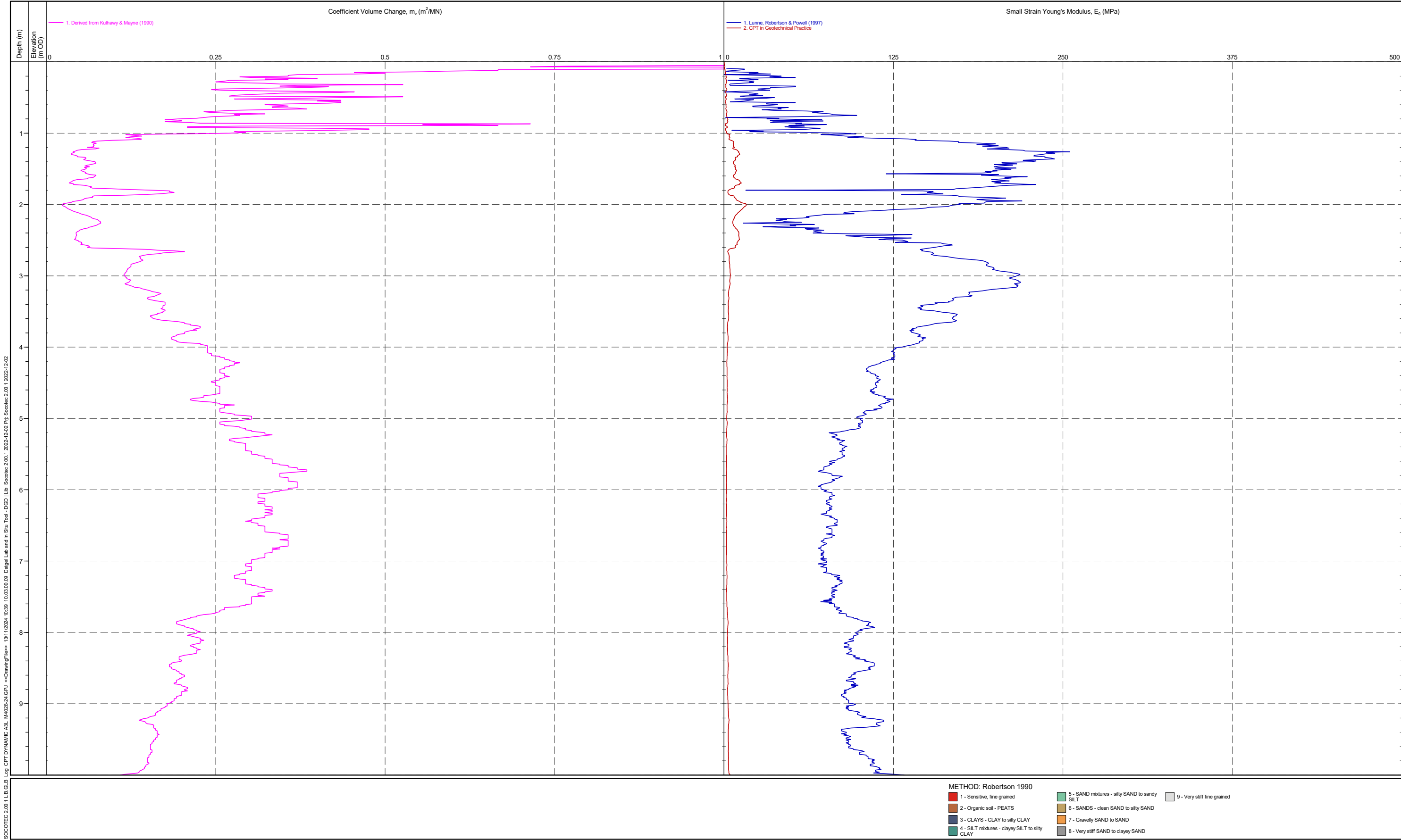
	1 - Sensitive, fine grained		5 - SAND mixtures - silty SAND to sandy SILT		9 - Very stiff fine grained
	2 - Organic soil - PEATS		6 - SANDS - clean SAND to silty SAND		
	3 - CLAYS - CLAY to silty CLAY		7 - Gravelly SAND to SAND		
	4 - SILT mixtures - clayey SILT to silty CLAY		8 - Very stiff SAND to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



PointID

CPT 6A

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 :				

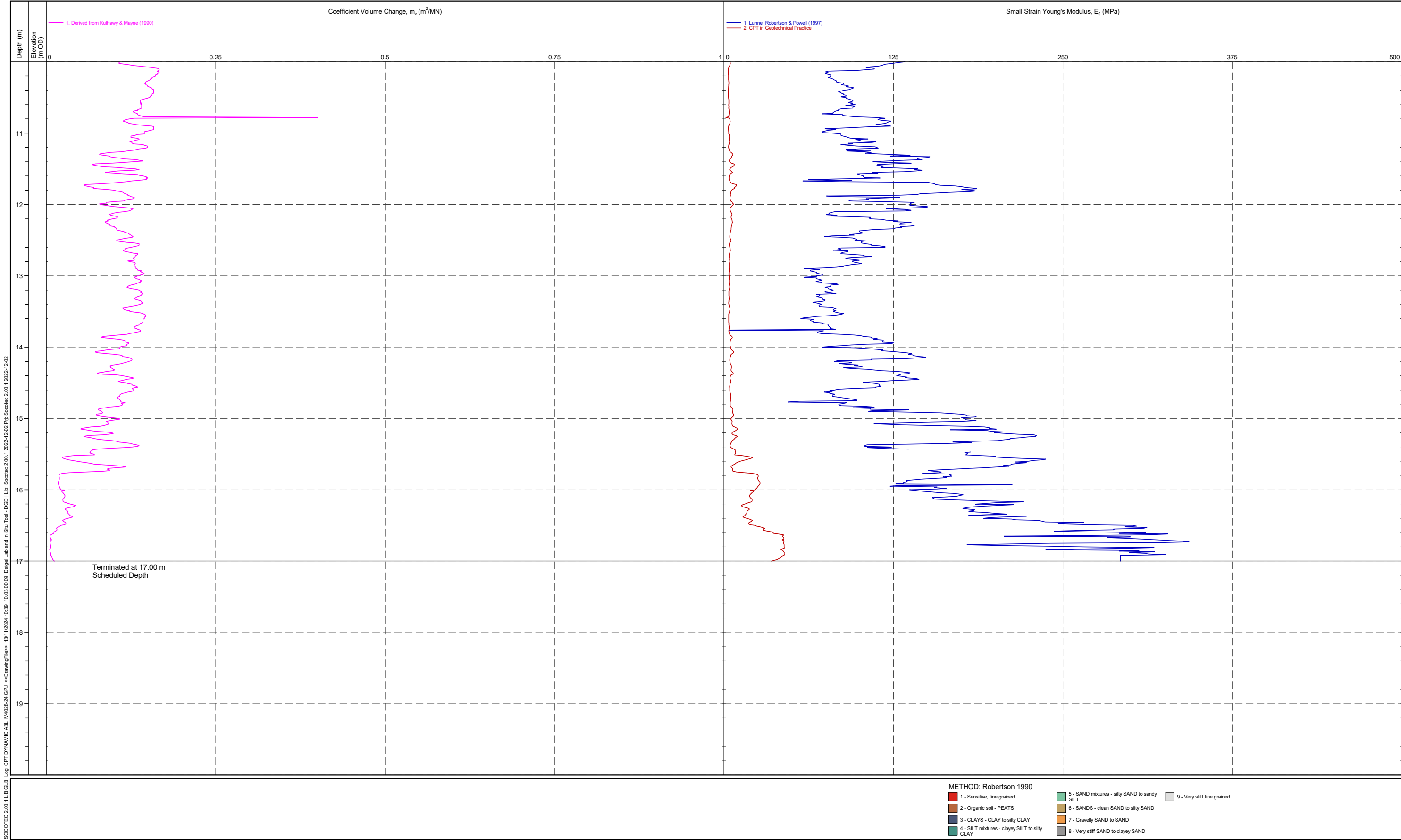




PointID

CPT 6A

CLIENT : Integral Geotechnique (Wales) Limited	AREA :	RIG : Geomil Panther 170	CHECKED BY : Sarah Clarke	REMARK	SHEET : 2 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 :				



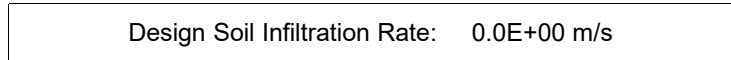
SOCOTEC 2.00.1.LIB.GLB Log CPT DYNAMIC A3L M4028-24.GPJ <<DrawingFile>> 13/11/2024 10:38 10:03:00.09 Diagel Lab and In Situ Tool - DGD | Lib: Socotec 2.00.1 2022-12-02 Plot: Socotec 2.00.1 2022-12-02

APPENDIX I

SOAKAWAY TEST RESULTS

14627 Jacks Pill, Usk Way

Remarks
Test abandoned due to rising water level resulting from perched groundwater inflow.

[illegible]

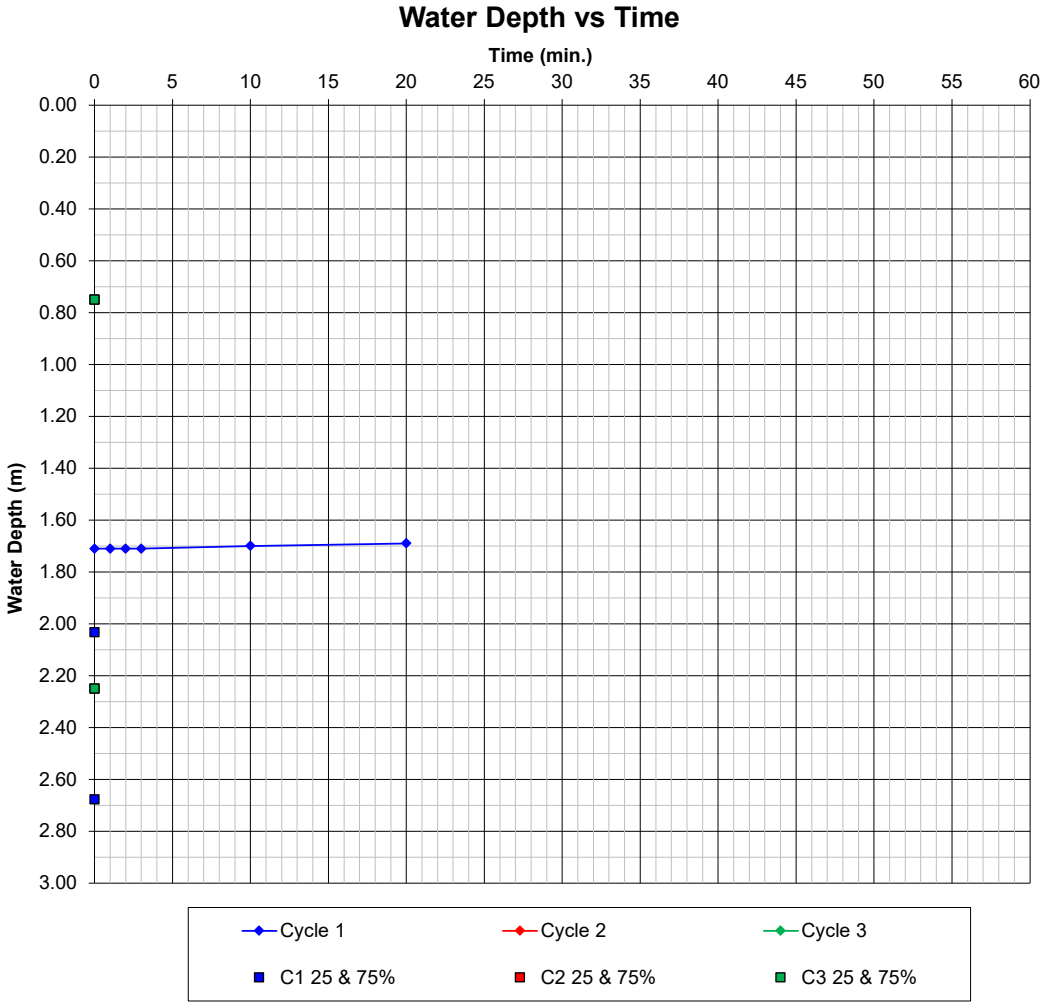
BRE365 SOIL INFILTRATION RATE TEST - TP4

14627 Jacks Pill, Usk Way

Trial Pit Information	
Length (m)	2.40
Width (m)	0.60
Depth (m)	3.00
Groundwater	Present
Weather Conditions	Overcast
Date	12-Oct-21

[illegible]

Final Excavation Depth (m)	Cycle 1	Cycle 2	Cycle 3
At end of testing cycle	3.00		
Water Depths (m)			
Water depth at start of test	1.71		
Water depth at end of test	1.71		
Effective depth (measured)	0.00		
% Effective storage depth	0.00		
Effective Storage Depths (m)			
Effective storage depth (100%)	1.29		
Effective storage depth (75%)	0.97		
Effective storage depth (50%)	0.65		
Effective storage depth (25%)	0.32		
Outflow Time (min)			
Time for measured outflow	n/a		
Time for 100% outflow	n/a		
Time for 75-25% outflow	n/a		
Volume of Outflow (m³)			
Over measured effective depth	0.00		
Over 100% effective depth	1.86		
From 75% - 25% effective depth	0.93		
Surface Area (m²)			
For 100% effective storage	9.18		
For 50% effective storage	5.31		
Over measured depth	1.44		
Soil Infiltration Rate (m/s)	Cycle 1	Cycle 2	Cycle 3
Over 100% effective depth	n/a		
Over measured depth	n/a		
Over 75% - 25% effective depth	n/a		



Design Soil Infiltration Rate: 0.0E+00 m/s

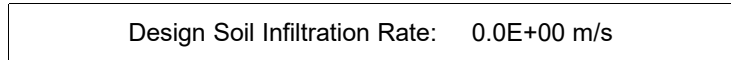
14627 Jacks Pill, Usk Way

Remarks
No infiltration recorded. Unable to calculate soil infiltration rate.

[illegible]

14627 Jacks Pill, Usk Way

Remarks
No infiltration recorded. Unable to calculate soil infiltration rate.

[illegible]

APPENDIX J

LABORATORY CHEMICAL TEST RESULTS (SOIL)



Jack Jones
Integral Geotechnique
Integral House
7 Beddau Way
Castlegate Business Park
CF83 2AX

t: 02920807991
f: 02920862176
e: jack@integralgeotec.com

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 21-16704

Replaces Analytical Report Number: 21-16704, issue no. 1
Additional analysis undertaken.

Project / Site name:	Usk Way	Samples received on:	15/10/2021
Your job number:	12923	Samples instructed on/ Analysis started on:	15/10/2021
Your order number:		Analysis completed by:	03/11/2021
Report Issue Number:	2	Report issued on:	03/11/2021
Samples Analysed:	2 leachate samples - 17 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049017	2049018	2049019	2049020	2049021
Sample Reference				TP1	TP1	TP2	TP2	TP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	2.70	0.60	2.20	1.30
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0800	0800	0830	0830	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	26	7.4	19	12
Total mass of sample received	kg	0.001	NONE	1.0	0.50	1.0	1.0	1.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	0.336
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	0.336

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.7	-	10.3	-	8.2
Total Cyanide	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	1200	-	3300	-	5000
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.090	-	0.26	-	2.0
Sulphide	mg/kg	1	MCERTS	5.2	-	49	-	110
Total Sulphur	mg/kg	50	MCERTS	860	-	1800	-	4800
Total Organic Carbon (TOC)	%	0.1	MCERTS	3.9	-	1.5	-	2.8
Loss on Ignition @ 450oC	%	0.2	MCERTS	17.2	-	5.3	-	7.2

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	-	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	-	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	-	0.50
Phenanthrene	mg/kg	0.05	MCERTS	1.3	-	1.3	-	1.4
Anthracene	mg/kg	0.05	MCERTS	0.36	-	0.34	-	0.42
Fluoranthene	mg/kg	0.05	MCERTS	2.0	-	1.7	-	2.4
Pyrene	mg/kg	0.05	MCERTS	1.9	-	1.6	-	2.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.5	-	1.3	-	1.7
Chrysene	mg/kg	0.05	MCERTS	1.3	-	0.84	-	1.4
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.2	-	0.87	-	1.3
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.50	-	0.49	-	0.91
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.83	-	0.70	-	1.0
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.58	-	0.45	-	0.81
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.20	-	< 0.05	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.60	-	0.48	-	0.81

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	12.2	-	10.1	-	15.2
-----------------------------	-------	-----	--------	------	---	------	---	------

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049017	2049018	2049019	2049020	2049021
Sample Reference				TP1	TP1	TP2	TP2	TP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	2.70	0.60	2.20	1.30
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0800	0800	0830	0830	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	69	-	25	-	29
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.6	-	0.84	-	1.2
Boron (water soluble)	mg/kg	0.2	MCERTS	1.6	-	3.2	-	3.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	-	2.9	-	3.1
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	-	< 4.0	-	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	34	-	310	-	32
Copper (aqua regia extractable)	mg/kg	1	MCERTS	140	-	290	-	300
Lead (aqua regia extractable)	mg/kg	1	MCERTS	280	-	230	-	450
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	-	< 0.3	-	1.6
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	49	-	37	-	35
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	47	-	77	-	32
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	330	-	970	-	610

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	31	< 2.0	46
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	9.4	< 8.0	140	< 8.0	290
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	45	< 8.0	230	< 8.0	540
TPH-CWG - Aliphatic >EC16 - EC35	mg/kg	10	MCERTS	55	< 10	370	< 10	830
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4	64	< 8.4	160
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	55	< 10	400	< 10	880
TPH-CWG - Aliphatic (EC5 - EC44)	mg/kg	10	NONE	55	< 10	460	< 10	1000

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	11	< 2.0	11
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	13	< 10	69	< 10	99
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	49	< 10	110	< 10	260
TPH-CWG - Aromatic >EC35 - EC40	mg/kg	10	NONE	11	< 10	29	< 10	84
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	13	< 8.4	43	< 8.4	110
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	62	< 10	190	< 10	370
TPH-CWG - Aromatic (EC5 - EC44)	mg/kg	10	NONE	75	< 10	230	< 10	490

TPH Total C5 - C44	mg/kg	10	NONE	130	< 10	700	< 10	1500
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Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049017	2049018	2049019	2049020	2049021
Sample Reference				TP1	TP1	TP2	TP2	TP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	2.70	0.60	2.20	1.30
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0800	0800	0830	0830	0900
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

VOCs

Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0

Analytical Report Number: 21-16704
Project / Site name: Usk Way

Lab Sample Number				2049017	2049018	2049019	2049020	2049021
Sample Reference				TP1	TP1	TP2	TP2	TP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	2.70	0.60	2.20	1.30
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0800	0800	0830	0830	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-	< 1.0

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049017	2049018	2049019	2049020	2049021
Sample Reference				TP1	TP1	TP2	TP2	TP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	2.70	0.60	2.20	1.30
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0800	0800	0830	0830	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

SVOCs

Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	-	0.50
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	1.3	-	-	-	1.4
Anthracene	mg/kg	0.05	MCERTS	0.36	-	-	-	0.42
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	2.0	-	-	-	2.4
Pyrene	mg/kg	0.05	MCERTS	1.9	-	-	-	2.4
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.5	-	-	-	1.7
Chrysene	mg/kg	0.05	MCERTS	1.3	-	-	-	1.4
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.2	-	-	-	1.3
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.50	-	-	-	0.91
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.83	-	-	-	1.0

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049017	2049018	2049019	2049020	2049021
Sample Reference				TP1	TP1	TP2	TP2	TP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	2.70	0.60	2.20	1.30
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0800	0800	0830	0830	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.58	-	-	-	0.81
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.20	-	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.60	-	-	-	0.81

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049017	2049018	2049019	2049020	2049021
Sample Reference				TP1	TP1	TP2	TP2	TP3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	2.70	0.60	2.20	1.30
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0800	0800	0830	0830	0900
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	-	-	-	0.032
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	-	-	-	0.013
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	-	-	-	0.013
PCB Congener 118	mg/kg	0.001	MCERTS	0.003	-	-	-	0.013
PCB Congener 138	mg/kg	0.001	MCERTS	0.003	-	-	-	0.011
PCB Congener 153	mg/kg	0.001	MCERTS	0.003	-	-	-	0.011
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	-	-	-	0.007

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	0.009	-	-	-	0.10
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U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049022	2049023	2049024	2049025	2049026
Sample Reference				TP3	TP4	TP5	TP6	TP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	0.40	0.50	0.30	1.00
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0900	0930	1000	1030	1100
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	23	7.6	8.7	5.0	9.4
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	1.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	Detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	0.001	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	0.001	-	-	-

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	9.8	9.9	10.4	9.4
Total Cyanide	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	-	5000	2800	3500	2300
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	0.40	0.28	0.18	0.38
Sulphide	mg/kg	1	MCERTS	-	130	30	130	140
Total Sulphur	mg/kg	50	MCERTS	-	2300	1600	2000	2200
Total Organic Carbon (TOC)	%	0.1	MCERTS	-	2.4	2.1	1.7	2.7
Loss on Ignition @ 450oC	%	0.2	MCERTS	-	6.0	6.3	3.8	11.4

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	0.81	< 0.05	< 0.05	3.0
Acenaphthylene	mg/kg	0.05	MCERTS	-	0.85	< 0.05	< 0.05	0.59
Acenaphthene	mg/kg	0.05	MCERTS	-	0.57	< 0.05	< 0.05	1.3
Fluorene	mg/kg	0.05	MCERTS	-	0.77	< 0.05	< 0.05	1.7
Phenanthrene	mg/kg	0.05	MCERTS	-	4.2	4.1	1.3	8.4
Anthracene	mg/kg	0.05	MCERTS	-	1.5	1.0	0.26	1.8
Fluoranthene	mg/kg	0.05	MCERTS	-	8.3	5.2	2.2	8.8
Pyrene	mg/kg	0.05	MCERTS	-	6.6	3.9	2.1	7.7
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	6.4	3.1	1.5	5.5
Chrysene	mg/kg	0.05	MCERTS	-	6.1	2.6	1.3	3.9
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	5.2	1.9	1.3	3.7
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	2.7	1.4	0.83	2.4
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	3.9	1.5	1.0	3.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	2.6	1.1	0.63	2.0
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	0.94	0.41	< 0.05	0.70
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	2.6	1.1	0.72	2.1

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	53.9	27.3	13.1	56.8
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Analytical Report Number: 21-16704
Project / Site name: Usk Way

Lab Sample Number				2049022	2049023	2049024	2049025	2049026
Sample Reference				TP3	TP4	TP5	TP6	TP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	0.40	0.50	0.30	1.00
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0900	0930	1000	1030	1100
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	23	30	14	100
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	1.4	1.1	0.93	0.97
Boron (water soluble)	mg/kg	0.2	MCERTS	-	2.5	3.4	7.4	1.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	45	1.4	6.3	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	-	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	69	51	920	64
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	240	130	320	330
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	370	220	670	930
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	2.7
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	26	26	56	47
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	39	42	170	47
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	730	280	3400	980

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	9.9	< 2.0	17
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-	98	21	190
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	-	260	110	310
TPH-CWG - Aliphatic >EC16 - EC35	mg/kg	10	MCERTS	< 10	-	360	130	500
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-	100	130	89
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	-	370	130	510
TPH-CWG - Aliphatic (EC5 - EC44)	mg/kg	10	NONE	< 10	-	480	260	600

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	3.2	< 2.0	8.1
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	-	54	12	96
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	-	190	200	210
TPH-CWG - Aromatic >EC35 - EC40	mg/kg	10	NONE	< 10	-	64	160	67
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-	93	270	120
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	-	240	210	320
TPH-CWG - Aromatic (EC5 - EC44)	mg/kg	10	NONE	< 10	-	340	480	440

TPH Total C5 - C44	mg/kg	10	NONE	< 10	-	810	750	1000
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Analytical Report Number: 21-16704
Project / Site name: Usk Way

Lab Sample Number				2049022	2049023	2049024	2049025	2049026
Sample Reference				TP3	TP4	TP5	TP6	TP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	0.40	0.50	0.30	1.00
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0900	0930	1000	1030	1100
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	-	-	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	-	-	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0

Analytical Report Number: 21-16704
Project / Site name: Usk Way

Lab Sample Number				2049022	2049023	2049024	2049025	2049026
Sample Reference				TP3	TP4	TP5	TP6	TP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	0.40	0.50	0.30	1.00
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0900	0930	1000	1030	1100
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049022	2049023	2049024	2049025	2049026
Sample Reference				TP3	TP4	TP5	TP6	TP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	0.40	0.50	0.30	1.00
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0900	0930	1000	1030	1100
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	3.0
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	0.59
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	1.3
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	1.7
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	8.4
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	1.8
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	8.8
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	7.7
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	5.5
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	3.9
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	3.7
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	2.4
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	3.1

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049022	2049023	2049024	2049025	2049026
Sample Reference				TP3	TP4	TP5	TP6	TP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	0.40	0.50	0.30	1.00
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0900	0930	1000	1030	1100
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	2.0
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	0.70
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	2.1

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049022	2049023	2049024	2049025	2049026
Sample Reference				TP3	TP4	TP5	TP6	TP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	0.40	0.50	0.30	1.00
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				0900	0930	1000	1030	1100
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-	0.008
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-	0.003
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-	0.003
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-	0.006
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-	0.004
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-	0.004
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-	0.029

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

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049027	2049028	2049029	2049030	2049031
Sample Reference				TP8	TP8	TP9	TP10	Trench 1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.00	0.40	0.50
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				1130	1130	1230	1300	1500
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Moisture Content	%	0.01	NONE	5.2	17	12	-	-
Total mass of sample received	kg	0.001	NONE	1.0	1.0	1.0	-	-

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	< 0.001	-	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	< 0.001	-	-	< 0.001

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	10.6	8.0	8.6	-	-
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	5200	6500	1200	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.20	2.5	0.11	-	-
Sulphide	mg/kg	1	MCERTS	18	340	2.1	-	-
Total Sulphur	mg/kg	50	MCERTS	2200	13000	800	-	-
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.9	3.7	5.1	-	-
Loss on Ignition @ 450oC	%	0.2	MCERTS	3.4	8.7	15.0	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.51	9.4	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.32	3.7	-	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.71	19	-	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.73	41	-	-
Phenanthrene	mg/kg	0.05	MCERTS	0.76	2.7	110	-	-
Anthracene	mg/kg	0.05	MCERTS	0.24	0.98	47	-	-
Fluoranthene	mg/kg	0.05	MCERTS	1.4	4.4	78	-	-
Pyrene	mg/kg	0.05	MCERTS	1.2	4.0	70	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.0	2.7	76	-	-
Chrysene	mg/kg	0.05	MCERTS	0.81	2.8	49	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.69	2.3	42	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.56	0.84	20	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.64	1.6	33	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.47	1.1	17	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.35	6.7	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.52	1.1	16	-	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	8.32	27.1	635	-	-
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Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049027	2049028	2049029	2049030	2049031
Sample Reference				TP8	TP8	TP9	TP10	Trench 1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.00	0.40	0.50
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				1130	1130	1230	1300	1500
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	32	39	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.80	1.0	1.5	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	9.5	2.3	1.2	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	7.7	2.9	1.5	-	-
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	940	47	27	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	280	300	260	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	420	850	670	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.7	< 0.3	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	52	46	38	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	170	41	45	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	4000	1100	230	-	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	39	2.5	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	310	17	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	920	39	-	-
TPH-CWG - Aliphatic >EC16 - EC35	mg/kg	10	MCERTS	-	1200	57	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	-	460	< 8.4	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	1300	59	-	-
TPH-CWG - Aliphatic (EC5 - EC44)	mg/kg	10	NONE	-	1700	59	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	7.2	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	10	62	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	150	280	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	540	320	-	-
TPH-CWG - Aromatic >EC35 - EC40	mg/kg	10	NONE	-	260	58	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	-	420	110	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	700	660	-	-
TPH-CWG - Aromatic (EC5 - EC44)	mg/kg	10	NONE	-	1100	770	-	-

TPH Total C5 - C44	mg/kg	10	NONE	-	2800	830	-	-
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Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049027	2049028	2049029	2049030	2049031
Sample Reference				TP8	TP8	TP9	TP10	Trench 1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.00	0.40	0.50
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				1130	1130	1230	1300	1500
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
Chloroethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	-
Bromomethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	< 1.0	-	-
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Trichloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	-
Benzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Dibromomethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
Toluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Styrene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Tribromomethane	µg/kg	1	NONE	-	< 1.0	< 1.0	-	-
o-Xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Bromobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-

Analytical Report Number: 21-16704
Project / Site name: Usk Way

Lab Sample Number				2049027	2049028	2049029	2049030	2049031
Sample Reference				TP8	TP8	TP9	TP10	Trench 1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.00	0.40	0.50
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				1130	1130	1230	1300	1500
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	< 1.0	-	-

Analytical Report Number: 21-16704
Project / Site name: Usk Way

Lab Sample Number				2049027	2049028	2049029	2049030	2049031
Sample Reference				TP8	TP8	TP9	TP10	Trench 1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.00	0.40	0.50
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				1130	1130	1230	1300	1500
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	-
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	< 0.2	-	-
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	0.51	9.4	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	< 0.1	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1	< 0.1	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	0.32	3.7	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	0.71	19	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
Fluorene	mg/kg	0.05	MCERTS	-	0.73	41	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	2.7	110	-	-
Anthracene	mg/kg	0.05	MCERTS	-	0.98	47	-	-
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	4.4	78	-	-
Pyrene	mg/kg	0.05	MCERTS	-	4.0	70	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	2.7	76	-	-
Chrysene	mg/kg	0.05	MCERTS	-	2.8	49	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	2.3	42	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	0.84	20	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	1.6	33	-	-

Analytical Report Number: 21-16704
Project / Site name: Usk Way

Lab Sample Number				2049027	2049028	2049029	2049030	2049031
Sample Reference				TP8	TP8	TP9	TP10	Trench 1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.00	0.40	0.50
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				1130	1130	1230	1300	1500
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	1.1	17	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	0.35	6.7	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	1.1	16	-	-

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049027	2049028	2049029	2049030	2049031
Sample Reference				TP8	TP8	TP9	TP10	Trench 1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	2.00	1.00	0.40	0.50
Date Sampled				12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
Time Taken				1130	1130	1230	1300	1500
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
PCBs by GC-MS								
PCB Congener 28	mg/kg	0.001	MCERTS	-	0.062	< 0.001	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	0.023	0.021	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	0.020	0.062	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	0.024	0.040	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	0.029	0.059	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	0.042	0.038	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	0.043	0.013	-	-
Total PCBs by GC-MS								
Total PCBs	mg/kg	0.007	MCERTS	-	0.24	0.23	-	-

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

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049032	2049033
Sample Reference				Trench 1	Trench 2
Sample Number				None Supplied	None Supplied
Depth (m)				2.00	1.10
Date Sampled				12/10/2021	12/10/2021
Time Taken				1500	1600
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	10
Total mass of sample received	kg	0.001	NONE	1.0	1.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Crocidolite
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.008	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	0.008	< 0.001

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	9.0	8.7
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	3400	1600
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.20	0.15
Sulphide	mg/kg	1	MCERTS	51	13
Total Sulphur	mg/kg	50	MCERTS	1600	950
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.6	1.7
Loss on Ignition @ 450°C	%	0.2	MCERTS	6.0	5.1

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	1.8	1.3
Anthracene	mg/kg	0.05	MCERTS	0.61	0.40
Fluoranthene	mg/kg	0.05	MCERTS	3.6	3.0
Pyrene	mg/kg	0.05	MCERTS	3.3	2.9
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.9	2.6
Chrysene	mg/kg	0.05	MCERTS	2.6	2.5
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	2.5	2.0
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.5	1.7
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.9	1.9
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.3	1.3
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.51	0.44
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.3	1.4

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	23.9	21.3
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Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049032	2049033
Sample Reference				Trench 1	Trench 2
Sample Number				None Supplied	None Supplied
Depth (m)				2.00	1.10
Date Sampled				12/10/2021	12/10/2021
Time Taken				1500	1600
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Heavy Metals / Metalloids					
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	32	32
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1	0.81
Boron (water soluble)	mg/kg	0.2	MCERTS	4.4	1.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	4.4	1.6
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	73	46
Copper (aqua regia extractable)	mg/kg	1	MCERTS	240	360
Lead (aqua regia extractable)	mg/kg	1	MCERTS	290	1100
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	59	31
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	35	33
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	890	680

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	5.5	2.8
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	60	50
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	160	110
TPH-CWG - Aliphatic >EC16 - EC35	mg/kg	10	MCERTS	220	160
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	61	36
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	230	160
TPH-CWG - Aliphatic (EC5 - EC44)	mg/kg	10	NONE	290	200

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	25	30
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	91	79
TPH-CWG - Aromatic >EC35 - EC40	mg/kg	10	NONE	34	25
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	76	53
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	120	110
TPH-CWG - Aromatic (EC5 - EC44)	mg/kg	10	NONE	190	160

TPH Total C5 - C44	mg/kg	10	NONE	480	360
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Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049032	2049033
Sample Reference				Trench 1	Trench 2
Sample Number				None Supplied	None Supplied
Depth (m)				2.00	1.10
Date Sampled				12/10/2021	12/10/2021
Time Taken				1500	1600
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
VOCs					
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049032	2049033
Sample Reference				Trench 1	Trench 2
Sample Number				None Supplied	None Supplied
Depth (m)				2.00	1.10
Date Sampled				12/10/2021	12/10/2021
Time Taken				1500	1600
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049032	2049033
Sample Reference				Trench 1	Trench 2
Sample Number				None Supplied	None Supplied
Depth (m)				2.00	1.10
Date Sampled				12/10/2021	12/10/2021
Time Taken				1500	1600
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
SVOCs					
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	1.8	1.3
Anthracene	mg/kg	0.05	MCERTS	0.61	0.40
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	3.6	3.0
Pyrene	mg/kg	0.05	MCERTS	3.3	2.9
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.9	2.6
Chrysene	mg/kg	0.05	MCERTS	2.6	2.5
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	2.5	2.0
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.5	1.7
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.9	1.9

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049032	2049033
Sample Reference				Trench 1	Trench 2
Sample Number				None Supplied	None Supplied
Depth (m)				2.00	1.10
Date Sampled				12/10/2021	12/10/2021
Time Taken				1500	1600
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.3	1.3
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.51	0.44
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.3	1.4

Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049032	2049033
Sample Reference				Trench 1	Trench 2
Sample Number				None Supplied	None Supplied
Depth (m)				2.00	1.10
Date Sampled				12/10/2021	12/10/2021
Time Taken				1500	1600
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
PCBs by GC-MS					
PCB Congener 28	mg/kg	0.001	MCERTS	0.003	< 0.001
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	0.003
PCB Congener 101	mg/kg	0.001	MCERTS	0.006	0.003
PCB Congener 118	mg/kg	0.001	MCERTS	0.004	0.003
PCB Congener 138	mg/kg	0.001	MCERTS	0.010	0.003
PCB Congener 153	mg/kg	0.001	MCERTS	0.010	0.004
PCB Congener 180	mg/kg	0.001	MCERTS	0.009	0.004

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	0.042	0.020
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U/S = Unsuitable Sample I/S = Insufficient Sample



Apex Testing Solutions Limited
Sturmi Way
Village Farm Industrial Estate
Pyle
Bridgend
CF33 6BZ

Attention: Laura Davies

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
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email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

CERTIFICATE OF ANALYSIS

Date of report Generation:	25 October 2021
Customer:	Apex Testing Solutions Limited
Sample Delivery Group (SDG):	211016-81
Your Reference:	D21558
Location:	
Report No:	618512
Order Number:	

We received 3 samples on Saturday October 16, 2021 and 3 of these samples were scheduled for analysis which was completed on Monday October 25, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 211016-81
Client Ref.: D21558

Report Number: 618512
Location:

Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
25167063	TP4		2.00	15/10/2021
25167064	TP5		2.00	15/10/2021
25167065	TP9		1.60	15/10/2021

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 211016-81
Client Ref.: D21558

Report Number: 618512
Location:

Superseded Report:

Results Legend



Test


No Determination
Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)

25167063
25167064
25167065

Customer
Sample Reference

TP4
TP5
TP9

AGS Reference

Depth (m)

2.00
2.00
1.60

Container

250g Amber Jar
(ALE210)
250g Amber Jar
(ALE210)
250g Amber Jar
(ALE210)

Sample Type

S
S
S

Anions by Kone (soil)

All

NDPs: 0
Tests: 3

X
X
X

pH

All

NDPs: 0
Tests: 3

X
X
X

Sample description

All

NDPs: 0
Tests: 3

X
X
X



CERTIFICATE OF ANALYSIS

Validated

SDG: 211016-81
Client Ref.: D21558

Report Number: 618512
Location:

Superseded Report:

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
25167063	TP4	2.00	Dark Brown	Sandy Clay Loam	Stones	None
25167064	TP5	2.00	Dark Brown	Sandy Clay	Stones	None
25167065	TP9	1.60	Dark Brown	Sandy Clay Loam	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

Validated

SDG: 211016-81
Client Ref.: D21558

Report Number: 618512
Location:

Superseded Report:

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM243		Mixed Anions In Soils By Kone

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden .



CERTIFICATE OF ANALYSIS

Validated

SDG: 211016-81
Client Ref.: D21558

Report Number: 618512
Location:

Superseded Report:

Test Completion Dates

Lab Sample No(s)	25167063	25167064	25167065
Customer Sample Ref.	TP4	TP5	TP9
AGS Ref.			
Depth	2.00	2.00	1.60
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (soil)	25-Oct-2021	25-Oct-2021	25-Oct-2021
pH	22-Oct-2021	22-Oct-2021	22-Oct-2021
Sample description	21-Oct-2021	21-Oct-2021	21-Oct-2021



CERTIFICATE OF ANALYSIS

SDG:	211016-81	Client Reference:	D21558	Report Number:	618512
Location:		Order Number:		Superseded Report:	

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
◆	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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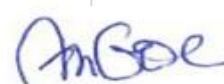
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e: reception@i2analytical.com

Analytical Report Number : 24-054153

Project / Site name:	Jacks Pill, Newport	Samples received on:	18/11/2024
Your job number:	14119	Samples instructed on/ Analysis started on:	18/11/2024
Your order number:	14119-AF	Analysis completed by:	21/11/2024
Report Issue Number:	1	Report issued on:	26/11/2024
Samples Analysed:	3 soil samples		



Signed: _____

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 24-054153
Project / Site name: Jacks Pill, Newport
Your Order No: 14119-AF

Lab Sample Number				380921	380922	380923
Sample Reference				BH101	BH101	BH101
Sample Number				None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A
Depth (m)				1.80	3.60	10.60
Date Sampled				14/11/2024	14/11/2024	14/11/2024
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status			

Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	16	12	11
Total mass of sample received	kg	0.1	NONE	0.5	0.5	0.5

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	5.6	8.3	8.7
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	65	19	50
Water Soluble SO ₄ 16hr extraction (2:1)	mg/l	1.25	MCERTS	32.3	9.64	24.9

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 24-054153
Project / Site name: Jacks Pill, Newport

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
380921	BH101	None Supplied	1.8	Brown clay with gravel
380922	BH101	None Supplied	3.6	Brown clay with gravel
380923	BH101	None Supplied	10.6	Brown sand with gravel

Analytical Report Number : 24-054153
Project / Site name: Jacks Pill, Newport

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

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

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

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

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

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Analytical Report Number : 24-050131

Replaces Analytical Report Number: 24-050131, issue no. 1

Additional analysis undertaken.

Asbestos Quantification added to samples 360349/351 & 352 as per client's request.

Project / Site name:	Jacks Pill, Newport	Samples received on:	28/10/2024
Your job number:	14380	Samples instructed on/ Analysis started on:	28/10/2024
Your order number:	14380 FG	Analysis completed by:	22/11/2024
Report Issue Number:	2	Report issued on:	29/11/2024
Samples Analysed:	4 soil samples - 2 leachate samples		

Signed:



Rachel Chappell
Key Account Manager
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 24-050131
Project / Site name: Jacks Pill, Newport
Your Order No: 14380 FG

Lab Sample Number	360349	360350	360351	360352
Sample Reference	TP01	TP03	TP05	TP06
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A
Depth (m)	0.50	0.40	0.40	0.30
Date Sampled	24/10/2024	24/10/2024	24/10/2024	24/10/2024
Time Taken	1100	1300	1500	1600
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Stone Content	%	0.1	NONE	30.8	56	44.2	47.5
Moisture Content	%	0.01	NONE	12	11	11	7.3
Total mass of sample received	kg	0.1	NONE	0.8	0.8	0.8	0.8

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Detected	Not-detected	Detected	Detected
Asbestos Analyst ID	N/A	N/A	N/A	SSZ	SSZ	SSZ	SSZ
Actinolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected
Amosite detected	Type	N/A	ISO 17025	Not-detected	-	Detected	Detected
Anthophyllite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected
Chrysotile detected	Type	N/A	ISO 17025	Detected	-	Not-detected	Detected
Crocidolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected
Tremolite detected	Type	N/A	ISO 17025	Not-detected	-	Not-detected	Not-detected

Asbestos % by hand picking/weighing	%	0.001	ISO 17025	< 0.001	-	< 0.001	0.001
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Asbestos Containing Material Types Detected (ACM)	Type	N/A	ISO 17025	Loose Fibres	-	Loose Fibres	Loose Fibres
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General Inorganics

pH (L099)	pH Units	N/A	MCERTS	8.1	8.2	8.2	8.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	1500	600	1600	1400
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	180	69	90	210
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0881	0.0344	0.0452	0.103
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	88.1	34.4	45.2	103
Sulphide	mg/kg	1	MCERTS	18	< 1.0	65	85
Total Sulphur	mg/kg	50	MCERTS	1100	410	1300	1100
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	4.2	3.2	4.3	2.2
Loss on Ignition @ 450°C	%	0.2	MCERTS	13	9.5	16	6.5

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
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Analytical Report Number: 24-050131
Project / Site name: Jacks Pill, Newport
Your Order No: 14380 FG

Lab Sample Number	360349	360350	360351	360352
Sample Reference	TP01	TP03	TP05	TP06
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A
Depth (m)	0.50	0.40	0.40	0.30
Date Sampled	24/10/2024	24/10/2024	24/10/2024	24/10/2024
Time Taken	1100	1300	1500	1600
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.24	0.39	0.11	11
Acenaphthylene	mg/kg	0.05	MCERTS	0.19	0.07	0.14	0.46
Acenaphthene	mg/kg	0.05	MCERTS	0.17	< 0.05	< 0.05	5.2
Fluorene	mg/kg	0.05	MCERTS	0.17	0.05	0.05	5.7
Phenanthrene	mg/kg	0.05	MCERTS	2.1	0.48	0.87	11
Anthracene	mg/kg	0.05	MCERTS	0.49	0.11	0.25	1.9
Fluoranthene	mg/kg	0.05	MCERTS	4.2	0.75	2.6	9.2
Pyrene	mg/kg	0.05	MCERTS	3.7	0.74	2.4	6.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.6	0.64	2.1	2.9
Chrysene	mg/kg	0.05	MCERTS	3	0.74	2.3	3.4
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	4.4	1.1	3	3.3
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	1.4	0.3	1.1	1
Benzo(a)pyrene	mg/kg	0.05	MCERTS	3	0.67	2.3	2
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.6	0.36	1.1	0.98
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.44	0.11	0.35	0.33
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.9	0.43	1.3	0.93

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	29.5	6.97	19.8	65.3
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	74	35	29	30
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.9	1.4	2.2	1.2
Boron (water soluble)	mg/kg	0.2	MCERTS	1.2	0.7	2.2	1.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	4.1	1.3	2	2.6
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	130	36	35	75
Copper (aqua regia extractable)	mg/kg	1	MCERTS	850	140	190	680
Lead (aqua regia extractable)	mg/kg	1	MCERTS	670	230	230	490
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	390	28	75	64
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	74	66	48	54
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	1200	360	640	740

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	2.6
TPHCWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	22
TPHCWG - Aliphatic >EC16 - EC35 _{EH_CU_1D_AL}	mg/kg	10	MCERTS	27	< 10	< 10	92
TPHCWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	27	< 8.0	< 8.0	69
TPHCWG - Aliphatic >EC35 - EC44 _{EH_CU_1D_AL}	mg/kg	8.4	NONE	14	< 8.4	< 8.4	18
TPHCWG - Aliphatic >EC5 - EC35 _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	27	< 10	< 10	94
TPHCWG - Aliphatic >EC5 - EC44 _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	41	< 10	< 10	110

Analytical Report Number: 24-050131
Project / Site name: Jacks Pill, Newport
Your Order No: 14380 FG

Lab Sample Number				360349	360350	360351	360352
Sample Reference				TP01	TP03	TP05	TP06
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A
Depth (m)				0.50	0.40	0.40	0.30
Date Sampled				24/10/2024	24/10/2024	24/10/2024	24/10/2024
Time Taken				1100	1300	1500	1600
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status				
TPHCWG - Aromatic >EC5 - EC7 HS_ID_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_ID_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_ID_AR	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_ID_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	3.1
TPHCWG - Aromatic >EC12 - EC16 EH_CU_ID_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	18
TPHCWG - Aromatic >EC16 - EC21 EH_CU_ID_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	36
TPHCWG - Aromatic >EC21 - EC35 EH_CU_ID_AR	mg/kg	10	MCERTS	27	< 10	26	33
TPHCWG - Aromatic >EC35 - EC40 EH_CU_ID_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC35 - EC44 EH_CU_ID_AR	mg/kg	8.4	NONE	< 8.4	< 8.4	16	< 8.4
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_ID_AR	mg/kg	10	NONE	27	< 10	26	90
TPHCWG - Aromatic >EC5 - EC44 EH_CU+HS_ID_AR	mg/kg	10	NONE	27	< 10	42	90
TPH Total >EC5 - EC44 EH_CU+HS_ID_TOTAL	mg/kg	10	NONE	68	< 10	42	200

VOCs

Chloromethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Chloroethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Bromomethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Vinyl Chloride	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Trichlorofluoromethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Trans 1,2-dichloroethylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,1-Dichloroethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
2,2-Dichloropropane	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Chloroform	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,1,1-Trichloroethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloroethane	µg/kg	7	MCERTS	< 7.0	< 7.0	< 7.0	< 7.0
1,1-Dichloropropene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Cis-1,2-dichloroethene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Carbontetrachloride	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichloropropane	µg/kg	6	MCERTS	< 6.0	< 6.0	< 6.0	< 6.0
Trichloroethene	µg/kg	10	MCERTS	< 10 **	< 10 **	< 10 **	< 10 **
Dibromomethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Bromodichloromethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Cis-1,3-dichloropropene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Trans-1,3-dichloropropene	µg/kg	10	MCERTS	< 10	< 10	< 10	< 10
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane	µg/kg	6	MCERTS	< 6.0	< 6.0	< 6.0	< 6.0
1,3-Dichloropropane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Dibromochloromethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dibromoethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,1,1,2-Tetrachloroethane	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0
Styrene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Bromoform	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0

Analytical Report Number: 24-050131
Project / Site name: Jacks Pill, Newport
Your Order No: 14380 FG

Lab Sample Number				360349	360350	360351	360352
Sample Reference				TP01	TP03	TP05	TP06
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A
Depth (m)				0.50	0.40	0.40	0.30
Date Sampled				24/10/2024	24/10/2024	24/10/2024	24/10/2024
Time Taken				1100	1300	1500	1600
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status				
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Isopropylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2,2-Tetrachloroethane	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Bromobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
n-Propylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
2-Chlorotoluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
4-Chlorotoluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,3,5-Trimethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
tert-Butylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trimethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	33
sec-Butylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,3-Dichlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
p-Isopropyltoluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,4-Dichlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dichlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Butylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,2-Dibromo-3-chloropropane	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0
1,2,4-Trichlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
Hexachlorobutadiene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0
1,2,3-Trichlorobenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0

SVOCs

Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	NONE	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	0.2	0.2	0.1	10
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	0.2	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	8.7

Analytical Report Number: 24-050131
Project / Site name: Jacks Pill, Newport
Your Order No: 14380 FG

Lab Sample Number				360349	360350	360351	360352
Sample Reference				TP01	TP03	TP05	TP06
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A
Depth (m)				0.50	0.40	0.40	0.30
Date Sampled				24/10/2024	24/10/2024	24/10/2024	24/10/2024
Time Taken				1100	1300	1500	1600
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status				
4-Chlorophenyl phenyl ether	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2
Azobenzene	mg/kg	0.3	NONE	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.30	< 0.30	< 0.30	< 0.30
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	1.5
Dibutyl phthalate	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	NONE	< 0.3	< 0.3	< 0.3	1
Butyl benzyl phthalate	mg/kg	0.3	NONE	< 0.3	< 0.3	< 0.3	< 0.3

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 52	mg/kg	0.001	MCERTS	< 0.001	< 0.001	0.003	< 0.001
PCB Congener 101	mg/kg	0.001	MCERTS	< 0.001	< 0.001	0.013	0.004
PCB Congener 118	mg/kg	0.001	MCERTS	< 0.001	< 0.001	0.016	0.004
PCB Congener 138	mg/kg	0.001	MCERTS	< 0.001	< 0.001	0.021	0.011
PCB Congener 153	mg/kg	0.001	MCERTS	< 0.001	< 0.001	0.011	0.007
PCB Congener 180	mg/kg	0.001	MCERTS	< 0.001	< 0.001	0.004	< 0.001
Total PCBs	mg/kg	0.007	MCERTS	< 0.007	< 0.007	0.067	0.026

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Analytical Report Number: 24-050131
Project / Site name: Jacks Pill, Newport
Your Order No: 14380 FG

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
360349	TP01	0.50	161	Loose Fibres	Chrysotile	< 0.001	< 0.001
360351	TP05	0.40	112	Loose Fibres	Amosite	< 0.001	< 0.001
360352	TP06	0.30	138	Loose Fibres	Amosite & Chrysotile	0.001	0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Analytical Report Number: 24-050131
Project / Site name: Jacks Pill, Newport

Your Order No: 14380 FG

Lab Sample Number				360349	360351
Sample Reference				TP01	TP05
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.50	0.40
Date Sampled				24/10/2024	24/10/2024
Time Taken				1100	1500
Analytical Parameter (Leachate Analysis)	Units	Test Limit of detection	Test Accreditation Status		

General Inorganics

pH (automated)	pH Units	N/A	ISO 17025	7.6	7.6
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10
Sulphate as SO ₄	µg/l	45	ISO 17025	3260	3340
Total Sulphur	µg/l	15	NONE	1100	1100
Sulphide	µg/l	5	NONE	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	7	7.6

Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10
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Speciated PAHs

Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	< 0.01	< 0.01
Fluorene	µg/l	0.01	NONE	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01
Pyrene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Chrysene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.16	NONE	< 0.16	< 0.16
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Analytical Report Number: 24-050131
Project / Site name: Jacks Pill, Newport

Your Order No: 14380 FG

Lab Sample Number				360349	360351
Sample Reference				TP01	TP05
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.50	0.40
Date Sampled				24/10/2024	24/10/2024
Time Taken				1100	1500
Analytical Parameter (Leachate Analysis)		Units	Test Limit of detection	Test Accreditation Status	

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	1.7	< 1.0
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	34	31
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	1.8	0.5
Copper (dissolved)	µg/l	0.7	ISO 17025	27	7.2
Lead (dissolved)	µg/l	1	ISO 17025	11	< 1.0
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	4	< 0.3
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	2.3	3.4
Zinc (dissolved)	µg/l	0.4	ISO 17025	35	10
Calcium (dissolved)	mg/l	0.012	ISO 17025	14	13

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 24-050131
Project / Site name: Jacks Pill, Newport

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
360349	TP01	None Supplied	0.5	Brown loam and sand with gravel and vegetation
360350	TP03	None Supplied	0.4	Brown loam and sand with gravel and vegetation
360351	TP05	None Supplied	0.4	Brown loam and gravel with clinker and vegetation
360352	TP06	None Supplied	0.3	Brown loam and sand with tar and vegetation

Analytical Report Number : 24-050131
Project / Site name: Jacks Pill, Newport

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references	HSE Report No: 83/1996, HSG 248 (2021), HSG 264 (2012) & SCA Blue Book (draft)	A006B	D	ISO 17025
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with hexane followed by GC-MS	In-house method based on USEPA 8082	L027B	D	MCERTS
Sulphide in leachate	Determination of sulphide in leachate by ion selective electrode	In-house method	L029-PL	W	NONE
Dissolved Organic Carbon in leachate	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES	In-house method	L038B	D	MCERTS
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025

Analytical Report Number : 24-050131
Project / Site name: Jacks Pill, Newport

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total Sulphur in leachates	Determination of total sulphur in leachates by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	NONE
Loss on ignition of soil @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	In-house method	L047-PL	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088-PL	D/W	MCERTS
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
Monohydric phenols in leachate	Determination of phenols in leachate by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in leachate	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
pH at 20°C in leachate (automated)	Determination of pH in leachate by electrometric measurement	In-house method	L099-PL	W	ISO 17025

Analytical Report Number : 24-050131
Project / Site name: Jacks Pill, Newport

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated PAHs and/or Semi-volatile organic compounds in leachate	SVOCs and PAHs in leachate	In-house method	L102B		NONE
NRA Leachate 10:1		In-house method based on interim NRA guidance (1994)	L020B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

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

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

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

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

- Quality control parameter has a high recovery (outside of limit); however the associated result is below the reporting limit, other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.

APPENDIX K

LABORATORY CHEMICAL TEST RESULTS (LEACHATE)



Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049034	2049035
Sample Reference				TP1	TP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.80	2.00
Date Sampled				12/10/2021	12/10/2021
Time Taken				0800	1130
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

General Inorganics

pH	pH Units	N/A	ISO 17025	7.9	8.2
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10
Sulphate as SO ₄	µg/l	100	ISO 17025	8430	71000
Total Sulphur	µg/l	15	NONE	2800	24000
Sulphide	µg/l	5	NONE	< 5.0	< 5.0
Total Organic Carbon (TOC)	mg/l	0.1	NONE	7.60	14.1
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	5.49	11.6

Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.2	NONE	< 0.2	< 0.2
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	5.4	< 1.0
Beryllium (dissolved)	µg/l	0.2	ISO 17025	0.7	0.2
Boron (dissolved)	µg/l	10	ISO 17025	45	180
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.4	< 0.4
Copper (dissolved)	µg/l	0.7	ISO 17025	12	6.3
Lead (dissolved)	µg/l	1	ISO 17025	3.7	4.6
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	7.1	7.6
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	15	19
Calcium (dissolved)	mg/l	0.012	ISO 17025	10	23



Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049034	2049035
Sample Reference				TP1	TP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.80	2.00
Date Sampled				12/10/2021	12/10/2021
Time Taken				0800	1130
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C35 - C44	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic (C5 - C44)	µg/l	10	NONE	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C35 - C40	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C35 - C44	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic (C5 - C44)	µg/l	10	NONE	< 10	< 10

TPH >C5 - C44	µg/l	10	NONE	< 10	< 10
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TPH Aliphatic (C16 - C35)	µg/l	10	NONE	< 10	< 10
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Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049034	2049035
Sample Reference				TP1	TP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.80	2.00
Date Sampled				12/10/2021	12/10/2021
Time Taken				0800	1130
Analytical Parameter (Leachate Analysis)				Units	Limit of detection Accreditation Status

VOCs

Chloromethane	µg/l	1	NONE	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0
Tribromomethane	µg/l	1	NONE	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0



Analytical Report Number: 21-16704
Project / Site name: Usk Way

Lab Sample Number				2049034	2049035
Sample Reference				TP1	TP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.80	2.00
Date Sampled				12/10/2021	12/10/2021
Time Taken				0800	1130
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0



Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049034	2049035
Sample Reference				TP1	TP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.80	2.00
Date Sampled				12/10/2021	12/10/2021
Time Taken				0800	1130
Analytical Parameter (Leachate Analysis)				Units	Limit of detection Accreditation Status

SVOCs

Aniline	µg/l	0.05	NONE	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	< 0.01	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	< 0.01	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01
Pyrene	µg/l	0.01	NONE	< 0.01	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Chrysene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01



Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049034	2049035
Sample Reference				TP1	TP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.80	2.00
Date Sampled				12/10/2021	12/10/2021
Time Taken				0800	1130
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01



Analytical Report Number: 21-16704

Project / Site name: Usk Way

Lab Sample Number				2049034	2049035
Sample Reference				TP1	TP8
Sample Number				None Supplied	None Supplied
Depth (m)				0.80	2.00
Date Sampled				12/10/2021	12/10/2021
Time Taken				0800	1130
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

PCBs by GC-MS

PCB Congener 28	µg/l	0.05	NONE	< 0.05	< 0.05
PCB Congener 52	µg/l	0.05	NONE	< 0.05	< 0.05
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02
PCB Congener 118	µg/l	0.05	NONE	< 0.05	< 0.05
PCB Congener 138	µg/l	0.05	NONE	< 0.05	< 0.05
PCB Congener 153	µg/l	0.05	NONE	< 0.05	< 0.05
PCB Congener 180	µg/l	0.05	NONE	< 0.05	< 0.05

PCBs by GC-MS

Total PCBs	µg/l	0.4	NONE	< 0.40	< 0.40
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 21-16704
Project / Site name: Usk Way
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
2049021	TP3	1.30	123	Hard/Cement Type Material	Chrysotile	0.336	0.336
2049023	TP4	0.40	142	Loose Fibres	Chrysotile	0.001	0.001
2049028	TP8	2.00	132	Loose Fibres	Chrysotile	< 0.001	< 0.001
2049031	Trench 1	0.50	132	Loose Fibres	Chrysotile	< 0.001	< 0.001
2049032	Trench 1	2.00	133	Loose Fibrous Debris	Chrysotile	0.008	0.008
2049033	Trench 2	1.10	129	Loose Fibres	Crocidolite	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Analytical Report Number : 21-16704

Project / Site name: Usk Way

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2049017	TP1	None Supplied	0.8	Brown loam and sand with gravel.
2049018	TP1	None Supplied	2.7	Brown clay and loam with gravel and vegetation.
2049019	TP2	None Supplied	0.6	Brown loam and clay with gravel.
2049020	TP2	None Supplied	2.2	Brown clay and sand with gravel.
2049021	TP3	None Supplied	1.3	Brown clay and loam with gravel.
2049022	TP3	None Supplied	3	Brown clay and loam with gravel.
2049023	TP4	None Supplied	0.4	Brown loam and sand with gravel.
2049024	TP5	None Supplied	0.5	Brown clay and sand with gravel.
2049025	TP6	None Supplied	0.3	Brown clay and sand with gravel.
2049026	TP7	None Supplied	1	Brown clay and sand with gravel.
2049027	TP8	None Supplied	0.5	Brown loam and sand with gravel.
2049028	TP8	None Supplied	2	Brown clay and sand with gravel and vegetation.
2049029	TP9	None Supplied	1	Brown clay and sand with gravel.
2049032	Trench 1	None Supplied	2	Brown clay and sand with gravel.
2049033	Trench 2	None Supplied	1.1	Brown sandy clay with gravel.

Analytical Report Number : 21-16704

Project / Site name: Usk Way

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPH7 (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Boron in leachate	Determination of boron in leachate. Sample acidified and followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in leachate	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
PCB's By GC-MS in leachate	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-UK	W	NONE

Analytical Report Number : 21-16704

Project / Site name: Usk Way

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
pH at 20oC in leachate	Determination of pH in leachate by electrometric measurement.	In house method.	L005-PL	W	ISO 17025
Sulphide in leachate	Determination of sulphide in leachate by ion selective electrode.	In-house method	L010-PL	W	NONE
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in leachates	Determination of total sulphur in leachates by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	NONE
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Semi-volatile organic compounds in leachate	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
Total cyanide in leachate	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon in leachate	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

Analytical Report Number : 21-16704

Project / Site name: Usk Way

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Volatile organic compounds in leachate	Determination of volatile organic compounds in leachate by headspace GC-MS	In-house method based on USEPA8260	L073B-PL	W	NONE
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Dissolved Organic Carbon in leachate	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L023-PL	W	NONE
TPH in (Leachate)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method, TPH with carbon banding.	L070-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025

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

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

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

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

Analytical Report Number: 24-050131
Project / Site name: Jacks Pill, Newport

Your Order No: 14380 FG

Lab Sample Number				360349	360351
Sample Reference				TP01	TP05
Sample Number				None Supplied	None Supplied
Depth (m)				0.50	0.40
Date Sampled				24/10/2024	24/10/2024
Time Taken				1100	1500
Analytical Parameter (Leachate Analysis)	Units	Test Limit of detection	Test Accreditation Status		

General Inorganics

pH (automated)	pH Units	N/A	ISO 17025	7.6	7.6
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10
Sulphate as SO ₄	µg/l	45	ISO 17025	3260	3340
Total Sulphur	µg/l	15	NONE	1100	1100
Sulphide	µg/l	5	NONE	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	7	7.6

Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10
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Speciated PAHs

Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	< 0.01	< 0.01
Fluorene	µg/l	0.01	NONE	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01
Pyrene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Chrysene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.16	NONE	< 0.16	< 0.16
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	1.7	< 1.0
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	34	31
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	1.8	0.5
Copper (dissolved)	µg/l	0.7	ISO 17025	27	7.2
Lead (dissolved)	µg/l	1	ISO 17025	11	< 1.0
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	4	< 0.3
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	2.3	3.4
Zinc (dissolved)	µg/l	0.4	ISO 17025	35	10
Calcium (dissolved)	mg/l	0.012	ISO 17025	14	13

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 24-050131

Project / Site name: Jacks Pill, Newport

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
360349	TP01	None Supplied	0.5	Brown loam and sand with gravel and vegetation
360350	TP03	None Supplied	0.4	Brown loam and sand with gravel and vegetation
360351	TP05	None Supplied	0.4	Brown loam and gravel with clinker and vegetation
360352	TP06	None Supplied	0.3	Brown loam and sand with tar and vegetation

Analytical Report Number : 24-050131
Project / Site name: Jacks Pill, Newport

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with hexane followed by GC-MS	In-house method based on USEPA 8082	L027B	D	MCERTS
Sulphide in leachate	Determination of sulphide in leachate by ion selective electrode	In-house method	L029-PL	W	NONE
Dissolved Organic Carbon in leachate	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES	In-house method	L038B	D	MCERTS
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
Total Sulphur in leachates	Determination of total sulphur in leachates by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	NONE
Loss on ignition of soil @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	In-house method	L047-PL	D	MCERTS

Analytical Report Number : 24-050131
Project / Site name: Jacks Pill, Newport

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088-PL	D/W	MCERTS
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
Monohydric phenols in leachate	Determination of phenols in leachate by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in leachate	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
pH at 20°C in leachate (automated)	Determination of pH in leachate by electrometric measurement	In-house method	L099-PL	W	ISO 17025
Speciated PAHs and/or Semi-volatile organic compounds in leachate	SVOCs and PAHs in leachate	In-house method	L102B		NONE
NRA Leachate 10:1		In-house method based on interim NRA guidance (1994)	L020B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

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

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

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

Analytical Report Number : 24-050131
Project / Site name: Jacks Pill, Newport

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

- Quality control parameter has a high recovery (outside of limit); however the associated result is below the reporting limit, other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.

APPENDIX L

LABORATORY CHEMICAL TEST RESULTS (GROUNDWATER)



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Analytical Report Number : 21-20551

Project / Site name:	Jacks Pill Land	Samples received on:	04/11/2021
Your job number:	12923	Samples instructed on/ Analysis started on:	04/11/2021
Your order number:		Analysis completed by:	11/11/2021
Report Issue Number:	1	Report issued on:	12/11/2021
Samples Analysed:	4 water samples		

Izabela Wójcik
Signed:

Izabela Wójcik
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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



Analytical Report Number: 21-20551
Project / Site name: Jacks Pill Land

Lab Sample Number				2070443	2070444	2070445	2070446
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/11/2021	02/11/2021	02/11/2021	02/11/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				

General Inorganics

pH	pH Units	N/A	ISO 17025	8.2	7.5	7.7	8.4
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
Sulphate as SO ₄	µg/l	45	ISO 17025	25800	116000	76900	88700
Total Sulphur	µg/l	15	NONE	8600	39000	26000	30000
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	10.3	12.9	14.6	6.52
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	10.4	13.1	15.0	6.65

Hardness - Total	3/l	1	ISO 17025	468	1000	583	361
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Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16
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Heavy Metals / Metalloids

Boron (dissolved)	µg/l	10	ISO 17025	760	1400	1500	470
Calcium (dissolved)	mg/l	0.012	ISO 17025	80	130	58	80
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0
Magnesium (dissolved)	mg/l	0.005	ISO 17025	65	160	110	39

Arsenic (dissolved)	µg/l	0.15	ISO 17025	19.0	44.9	27.7	16.3
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.08	0.06	0.02	0.14
Chromium (dissolved)	µg/l	0.2	ISO 17025	4.9	6.5	9.0	3.1
Copper (dissolved)	µg/l	0.5	ISO 17025	7.7	16	23	22
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	0.6
Mercury (dissolved)	µg/l	0.05	ISO 17025	0.52	0.05	< 0.05	0.60
Nickel (dissolved)	µg/l	0.5	ISO 17025	6.6	7.8	4.7	5.8
Selenium (dissolved)	µg/l	0.6	ISO 17025	6.9	19	13	5.4
Vanadium (dissolved)	µg/l	0.2	ISO 17025	11	24	22	9.8
Zinc (dissolved)	µg/l	0.5	ISO 17025	7.7	17	8.3	4.1



Analytical Report Number: 21-20551
Project / Site name: Jacks Pill Land

Lab Sample Number				2070443	2070444	2070445	2070446
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/11/2021	02/11/2021	02/11/2021	02/11/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)				Units	Limit of detection	Accreditation Status	

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10

VOCs

Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 21-20551
Project / Site name: Jacks Pill Land

Lab Sample Number				2070443	2070444	2070445	2070446
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/11/2021	02/11/2021	02/11/2021	02/11/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	< 0.14	< 0.14
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U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-20551
Project / Site name: Jacks Pill Land

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
PCB's By GC-MS in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-PL	W	NONE
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Total Sulphur in water	Determination of total sulphur in water by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025



Analytical Report Number : 21-20551
Project / Site name: Jacks Pill Land

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

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

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

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

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



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Analytical Report Number : 21-23538

Project / Site name:	Jacks Pill Land	Samples received on:	18/11/2021
Your job number:	12923	Samples instructed on/ Analysis started on:	18/11/2021
Your order number:		Analysis completed by:	26/11/2021
Report Issue Number:	1	Report issued on:	26/11/2021
Samples Analysed:	4 water samples		

Signed:

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

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

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

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

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

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



Analytical Report Number: 21-23538
Project / Site name: Jacks Pill Land

Lab Sample Number				2085832	2085833	2085834	2085835
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/11/2021	16/11/2021	16/11/2021	16/11/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				

General Inorganics

pH	pH Units	N/A	ISO 17025	7.5	7.5	7.8	7.9
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
Sulphate as SO ₄	µg/l	45	ISO 17025	18500	87800	73500	143000
Total Sulphur	µg/l	15	NONE	6200	29000	24000	48000
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	16.4	11.5	12.5	5.96
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	24.0	13.4	13.0	6.12

Hardness - Total	mg CaCO ₃ /l	1	ISO 17025	1010	922	546	508
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Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16
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Analytical Report Number: 21-23538
Project / Site name: Jacks Pill Land

Lab Sample Number				2085832	2085833	2085834	2085835
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/11/2021	16/11/2021	16/11/2021	16/11/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				

Heavy Metals / Metalloids

Boron (dissolved)	µg/l	10	ISO 17025	1200	1500	940	600
Calcium (dissolved)	mg/l	0.012	ISO 17025	80	110	55	89
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0
Copper (dissolved)	µg/l	0.7	ISO 17025	2.8	< 0.7	2.7	3.8
Magnesium (dissolved)	mg/l	0.005	ISO 17025	200	160	99	70

Arsenic (dissolved)	µg/l	0.15	ISO 17025	37.2	36.4	20.1	13.8
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.02	0.05	0.03	0.09
Chromium (dissolved)	µg/l	0.2	ISO 17025	9.2	6.4	6.1	4.2
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	0.4
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	0.21
Nickel (dissolved)	µg/l	0.5	ISO 17025	6.2	7.5	6.4	6.8
Selenium (dissolved)	µg/l	0.6	ISO 17025	13	12	8.3	9.5
Vanadium (dissolved)	µg/l	0.2	ISO 17025	18	18	15	7.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	12	8.7	7.2	9.1

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10



Analytical Report Number: 21-23538

Project / Site name: Jacks Pill Land

Lab Sample Number				2085832	2085833	2085834	2085835
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/11/2021	16/11/2021	16/11/2021	16/11/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)				Units	Limit of detection	Accreditation Status	

VOCs

Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0



Analytical Report Number: 21-23538
Project / Site name: Jacks Pill Land

Lab Sample Number				2085832	2085833	2085834	2085835
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				16/11/2021	16/11/2021	16/11/2021	16/11/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	< 0.14	< 0.14
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 21-23538

Project / Site name: Jacks Pill Land

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
PCB's By GC-MS in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-PL	W	NONE
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Total Sulphur in water	Determination of total sulphur in water by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025



Analytical Report Number : 21-23538

Project / Site name: Jacks Pill Land

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

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

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

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

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



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Analytical Report Number : 21-26711

Project / Site name:	Jacks Pill Land	Samples received on:	03/12/2021
Your job number:	12923	Samples instructed on/ Analysis started on:	03/12/2021
Your order number:		Analysis completed by:	14/12/2021
Report Issue Number:	1	Report issued on:	14/12/2021
Samples Analysed:	4 water samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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



Analytical Report Number: 21-26711
Project / Site name: Jacks Pill Land

Lab Sample Number				2103844	2103845	2103846	2103847
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/12/2021	01/12/2021	01/12/2021	01/12/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

pH	pH Units	N/A	ISO 17025	7.5	7.5	7.6	8.0
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
Sulphate as SO ₄	µg/l	45	ISO 17025	15400	65900	49300	122000
Total Sulphur	µg/l	15	NONE	5100	22000	16000	41000
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	16.4	13.6	14.1	6.73
Total Organic Carbon (TOC)	mg/l	0.1	ISO 17025	16.6	13.9	14.3	6.74

Hardness - Total	mgCaCO ₃ /l	1	ISO 17025	1090	967	393	517
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Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	21	< 10	< 10
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16
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Analytical Report Number: 21-26711
Project / Site name: Jacks Pill Land

Lab Sample Number				2103844	2103845	2103846	2103847
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/12/2021	01/12/2021	01/12/2021	01/12/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				

Heavy Metals / Metalloids

Boron (dissolved)	µg/l	10	ISO 17025	2400	1700	840	670
Calcium (dissolved)	mg/l	0.012	ISO 17025	80	110	66	86
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0
Magnesium (dissolved)	mg/l	0.005	ISO 17025	220	170	55	73

Arsenic (dissolved)	µg/l	0.15	ISO 17025	30.8	30.9	38.9	14.1
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.04	0.04	0.05
Chromium (dissolved)	µg/l	0.2	ISO 17025	10	7.1	4.6	4.0
Copper (dissolved)	µg/l	0.5	ISO 17025	12	17	10	8.2
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	0.13
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.2	7.3	4.7	6.7
Selenium (dissolved)	µg/l	0.6	ISO 17025	13	15	5.1	6.2
Vanadium (dissolved)	µg/l	0.2	ISO 17025	12	14	7.4	8.9
Zinc (dissolved)	µg/l	0.5	ISO 17025	7.9	5.5	7.7	6.9

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6 HS 1D AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 HS 1D AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 HS 1D AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 EH 1D AL #1 #2 MS	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 EH 1D AL #1 #2 MS	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 EH 1D AL #1 #2 MS	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 EH 1D AL #1 #2 MS	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) HS+EH 1D AL #1 #2 MS	µg/l	10	NONE	< 10	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7 HS 1D AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 HS 1D AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 HS 1D AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 EH 1D AR #1 #2 MS	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 EH 1D AR #1 #2 MS	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 EH 1D AR #1 #2 MS	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 EH 1D AR #1 #2 MS	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) HS+EH 1D AR #1 #2 MS	µg/l	10	NONE	< 10	< 10	< 10	< 10



Analytical Report Number: 21-26711
Project / Site name: Jacks Pill Land

Lab Sample Number				2103844	2103845	2103846	2103847
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/12/2021	01/12/2021	01/12/2021	01/12/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)				Units	Limit of detection	Accreditation Status	

VOCs

Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0

Analytical Report Number: 21-26711
Project / Site name: Jacks Pill Land

Lab Sample Number				2103844	2103845	2103846	2103847
Sample Reference				BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/12/2021	01/12/2021	01/12/2021	01/12/2021
Time Taken				1205	1225	1245	1315
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0

PCBs by GC-MS

PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02

PCBs by GC-MS

Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14	< 0.14	< 0.14
------------	------	------	------	--------	--------	--------	--------

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

Analytical Report Number : 21-26711

Project / Site name: Jacks Pill Land

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 dphenylcarbazine followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
PCB's By GC-MS in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-PL	W	NONE
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Total Sulphur in water	Determination of total sulphur in water by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total organic carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR analyser. Accredited matrices: SW PW GW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

Analytical Report Number : 21-26711

Project / Site name: Jacks Pill Land

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

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

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

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

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

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
_	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

APPENDIX M

LABORATORY GEOTECHNICAL TEST RESULTS

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS 1377:Part 2:1990. Clause 4.3/5.3/5.4

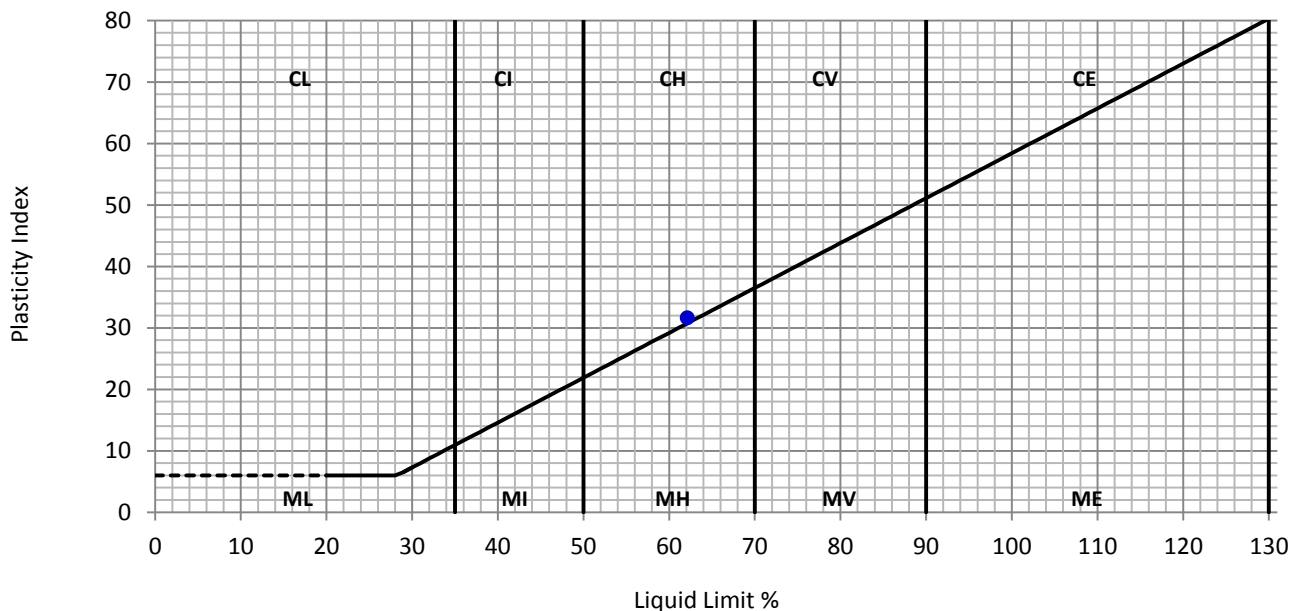
Project No:	D21558	Client:	Integral Geotechnique
Project Name:	12923 - Usk Way	Address:	Integral House 7 Beddau Way Castlegate Business Park Caerphilly CF83 8PH
ATS Sample No:	26047		

Site Ref / Hole ID:	TP4	Depth (m):	2.00
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Black slightly gravelly CLAY
Location in Works:	N/A	Material Source:	Site Generated
Date Sampled:		Material Supplier:	Site Generated
Sampled By:	Client	Specification:	BS1377
Date Received:	14 October 2021	Date Tested:	26 October 2021

Test Results

Liquid Limit	62	%
Plastic Limit	30	%
Plasticity Index	32	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	14 %



Remarks:

TEST REPORT
PARTICLE SIZE DISTRIBUTION ANALYSIS
BS1377:Part 2:1990

Project No: D21558
Project Name: 12923 - Usk Way
ATS Sample No: 26050

Client: Integral Geotechnique
Address: Integral House
 7 Beddau Way
 Castlegate Business Park
 Caerphilly
 CF83 8PH

Site Ref / Hole ID: TP5

Depth (m): 0.50

Sample No:

Sample Type: Disturbed

Sampling Certificate Received: No

Material Description: Brown silty sandy GRAVEL with medium cobble content

Location in Works: N/A

Material Source: Site Generated

Date Sampled:

Material Supplier: Site Generated

Sampled By: Client

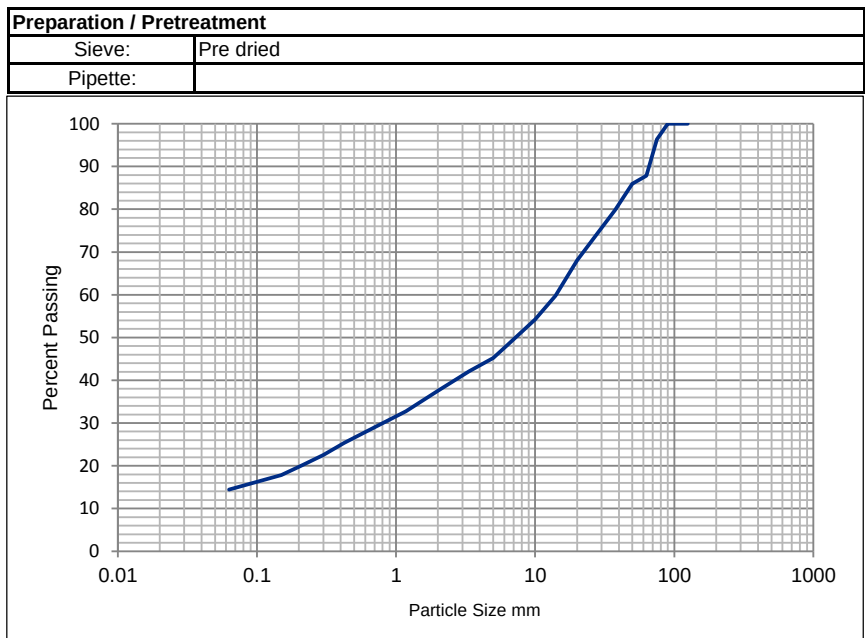
Specification: **BS1377**

Date Received: 14 October 2021

Date Tested: 26 October 2021

Test Results

Sieving	
Particle Size mm	% Passing
125	100
90	100
75	96
63	88
50	86
37.5	80
28	74
20	68
14	60
10	54
6.3	48
5.0	45
3.35	42
2.00	38
1.18	33
0.600	28
0.425	25
0.300	23
0.212	20
0.150	18
0.063	14



Sample Portions		Particle Density Mg/m3	Uniformity Coefficient D_{60} / D_{10}
Cobbles / Boulders	12	N/A	
Gravel	50		
Sand	23	Dry mass of sample, kg	
Silt / Clay	14	17.9	N/A

Remarks:

QA Ref.

BS1377 - 4
Rev. 2.0



Apex Testing Solutions

Sturmi Way, Village Farm Industrial Est, Pyle, Bridgend,
CF33 6BZ
Tel: 01656 746762 Fax: 01656 749096



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Approver

A Grogan

A Grogan, Laboratory Manager

Date

26/10/2021

Fig

PSD

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS 1377:Part 2:1990. Clause 4.3/5.3/5.4

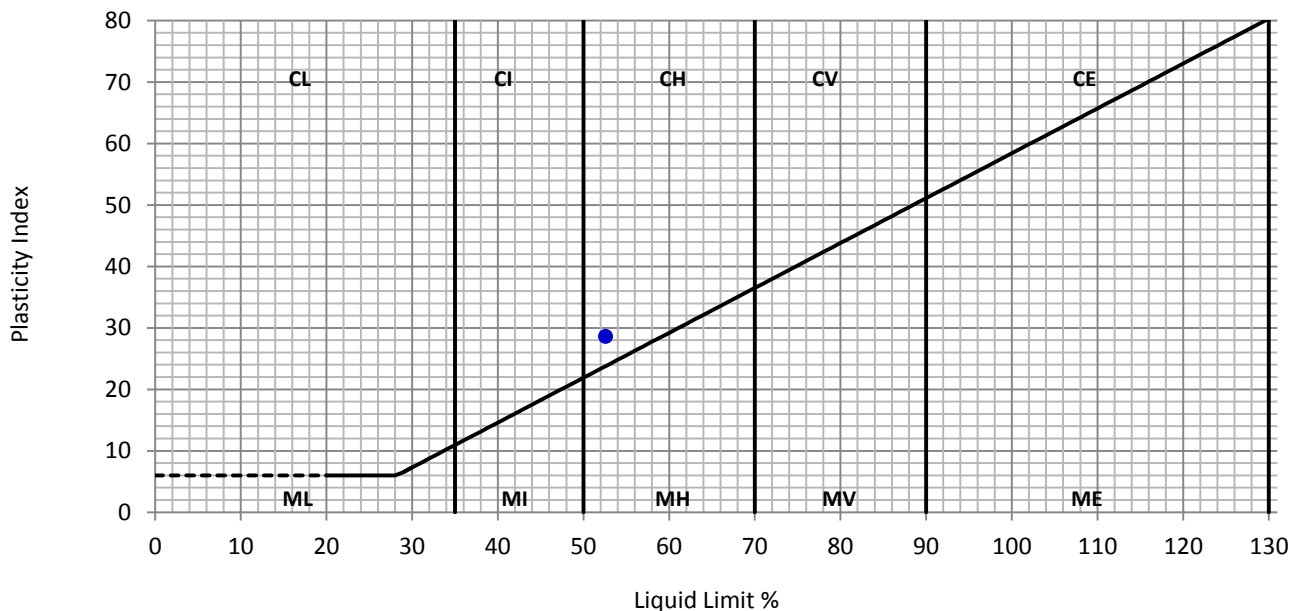
Project No:	D21558	Client:	Integral Geotechnique
Project Name:	12923 - Usk Way	Address:	Integral House 7 Beddau Way Castlegate Business Park Caerphilly CF83 8PH
ATS Sample No:	26048		

Site Ref / Hole ID:	TP5	Depth (m):	2.00
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Grey slightly gravelly CLAY
Location in Works:	N/A	Material Source:	Site Generated
Date Sampled:		Material Supplier:	Site Generated
Sampled By:	Client	Specification:	BS1377
Date Received:	14 October 2021	Date Tested:	26 October 2021

Test Results

Liquid Limit	53	%
Plastic Limit	24	%
Plasticity Index	29	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	10 %



Remarks:

TEST REPORT
PARTICLE SIZE DISTRIBUTION ANALYSIS
BS1377:Part 2:1990

Project No: D21558
Project Name: 12923 - Usk Way
ATS Sample No: 26051

Client: Integral Geotechnique
Address: Integral House
 7 Beddau Way
 Castlegate Business Park
 Caerphilly
 CF83 8PH

Site Ref / Hole ID: TP6

Depth (m): 0.50

Sample No:

Sample Type: Disturbed

Sampling Certificate Received: No

Material Description: Grey slightly silty sandy GRAVEL

Location in Works: N/A

Material Source: Site Generated

Date Sampled:

Material Supplier: Site Generated

Sampled By: Client

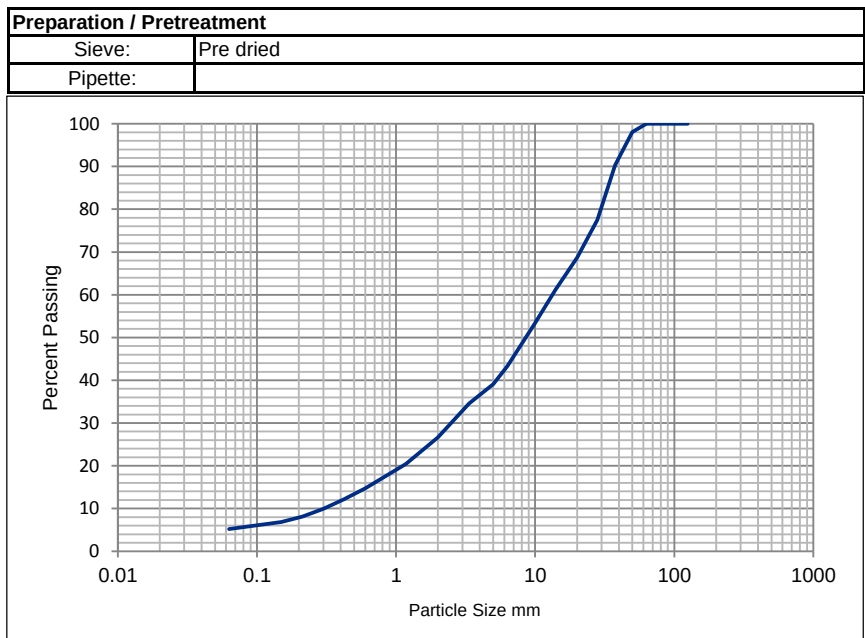
Specification: **BS1377**

Date Received: 14 October 2021

Date Tested: 26 October 2021

Test Results

Sieving	
Particle Size mm	% Passing
125	100
90	100
75	100
63	100
50	98
37.5	90
28	77
20	69
14	61
10	53
6.3	43
5.0	39
3.35	35
2.00	27
1.18	20
0.600	15
0.425	12
0.300	10
0.212	8
0.150	7
0.063	5



Sample Portions		Particle Density Mg/m3	Uniformity Coefficient D_{60} / D_{10}
Cobbles / Boulders	0	N/A	
Gravel	73		
Sand	21	Dry mass of sample, kg	
Silt / Clay	5	18.7	N/A

Remarks:

QA Ref.

BS1377 - 4
Rev. 2.0



Apex Testing Solutions

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Approver

A Grogan

A Grogan, Laboratory Manager

Date

26/10/2021

Fig

PSD

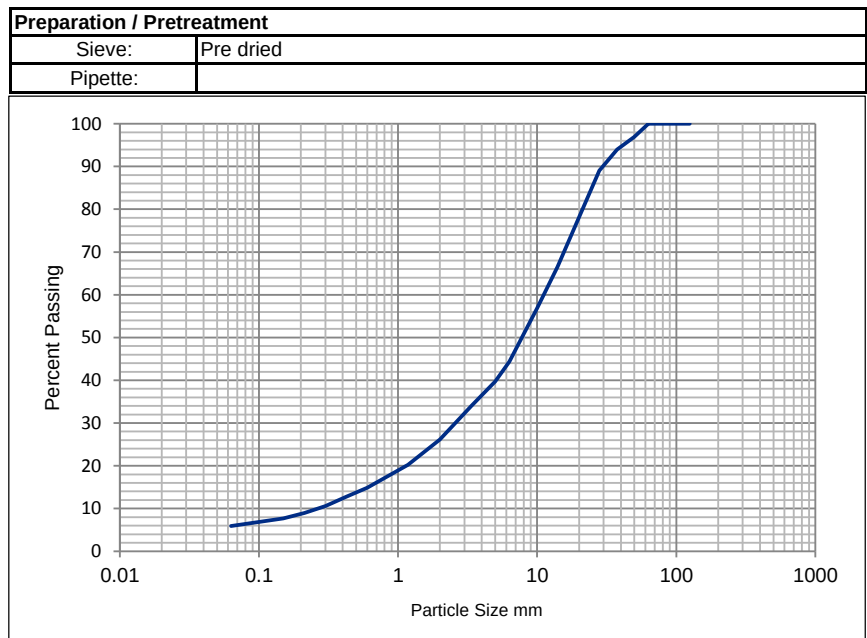
TEST REPORT
PARTICLE SIZE DISTRIBUTION ANALYSIS
BS1377:Part 2:1990

Project No:	D21558	Client:	Integral Geotechnique
Project Name:	12923 - Usk Way	Address	Integral House 7 Beddau Way Castlegate Business Park Caerphilly CF83 8PH
ATS Sample No:	26052		

Site Ref / Hole ID:	TP8	Depth (m):	0.50
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Brown silty sandy GRAVEL
Location in Works:	N/A	Material Source:	Site Generated
Date Sampled:		Material Supplier:	Site Generated
Sampled By:	Client	Specification:	BS1377
Date Received:	14 October 2021	Date Tested:	26 October 2021

Test Results

Sieving	
Particle Size mm	% Passing
125	100
90	100
75	100
63	100
50	97
37.5	94
28	89
20	78
14	67
10	57
6.3	44
5.0	40
3.35	34
2.00	26
1.18	20
0.600	15
0.425	13
0.300	11
0.212	9
0.150	8
0.063	6



Sample Portions		Particle Density Mg/m3	Uniformity Coefficient D_{60} / D_{10}
Cobbles / Boulders	0	N/A	
Gravel	74		
Sand	20	Dry mass of sample, kg	
Silt / Clay	6	21.7	N/A

Remarks:

QA Ref.

BS1377 - 4
Rev. 2.0



Apex Testing Solutions

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CF33 6BZ
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7771

Approver

A Grogan

A Grogan, Laboratory Manager

Date

26/10/2021

Fig

PSD

TEST REPORT
LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX
BS 1377:Part 2:1990. Clause 4.3/5.3/5.4

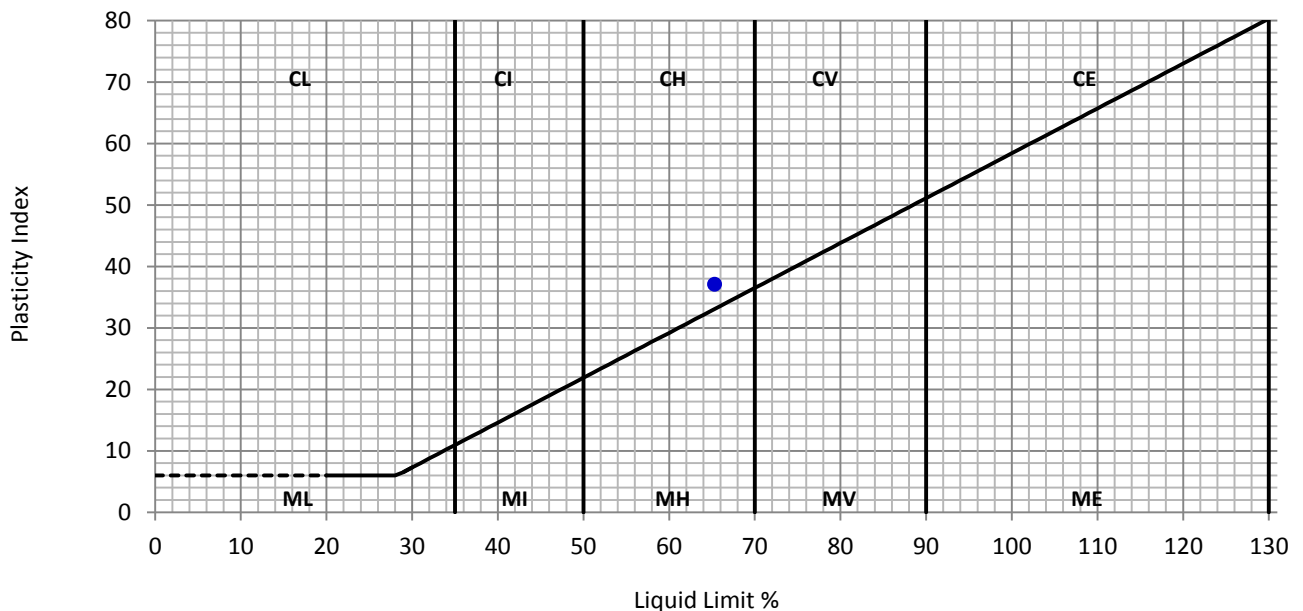
Project No:	D21558	Client:	Integral Geotechnique
Project Name:	12923 - Usk Way	Address:	Integral House 7 Beddau Way Castlegate Business Park Caerphilly CF83 8PH
ATS Sample No:	26049		

Site Ref / Hole ID:	TP9	Depth (m):	1.60
Sample No:		Sample Type:	Disturbed
Sampling Certificate Received:	No	Material Description:	Brown CLAY
Location in Works:	N/A	Material Source:	Site Generated
Date Sampled:		Material Supplier:	Site Generated
Sampled By:	Client	Specification:	BS1377
Date Received:	14 October 2021	Date Tested:	19 October 2021

Test Results

Liquid Limit	65	%
Plastic Limit	28	%
Plasticity Index	37	%

Preparation:	4.2.3 Natural Specimen
Proportion retained on 425µm sieve:	2 %



Remarks:



Results Summary

Apex Testing Solutions Limited

Sturmi Way
Village Farm Industrial Estate
Pyle
Bridgend
CF33 6BZ

Telephone: 01656 746762

E-mail: andrew.grogan@apex-drilling.com

laura.davis@apex-drilling.com

<u>Reporting Details</u>		<u>Key Information</u>	
Company Name:	Integral Geotechnique	Site Name:	Jacks Pill, Newport
Address:	7 Beddau Way Castlegate Business Park Caerphilly CF83 2AX	Job Number:	D24424
Contact Name:	A Figgis/Jack	Date Received:	08/11/2024
Contact Number:		Job Coordinator:	A. Grogan

Item No.	Tests Undertaken	Number of Tests
1	* Point Load Testing - ISRM Standard	16

Results Issued: 12/11/2024

Comments

Results herein relate only to samples received in the laboratory and where not sampled by Apex Testing Solutions personnel relate to the samples as received.

Where tests are UKAS accredited any Opinion and/or Interpretation expressed herein are outside the scope of the UKAS Accreditation. The reports shall not be reproduced in full without the written approval of the laboratory.

Please contact the job coordinator should any further information be required.

TEST REPORT
POINT LOAD INDEX TEST
ISRM: 1985

Project No: D24423
Project Name: 14380 - Jacks Pill, Newport

Client: Integral Geotechnique
Address: 7 Beddau Way
 Castlegate Business Park
 Caerphilly
 CF83 2AX

Borehole	Depth m	Sample Ref	Sample Type	Specimen Ref	Specimen Depth	Rock Type	Test Type see ISRM Fig 5 and 8		Failure Valid (Y/N)	Dimensions			LOAD P kN	De equivalent diameter, mm	Point Load Index Mpa $F=(De/50)^{0.45}$		Remarks
							Type (D, A, I, B)	Direction (L, P or U)		Lne mm	Dps' mm	W mm			I _s	I _{s(50)}	
BH1	22.85	1	C			Reddish brown Mudstone	D	L	Y	75	72	72	0.63	72.00	0.12	0.14	
	22.85						A	P	Y		55	72	0.83	71.01	0.17	0.19	
	28.50	2	C			Reddish brown Siltstone	D	U	Y	35	72	72	2.33	72.00	0.45	0.53	
	28.50						A	U	Y		42	72	2.27	62.05	0.59	0.65	
	29.50	3	C			Reddish brown Siltstone	D	U	Y	38	72	72	3.04	72.00	0.59	0.69	
	29.50						A	U	Y		35	72	6.03	56.64	1.88	1.99	
BH2	22.35	1	C			Grey Sandstone	D	U	Y	63	72	72	29.20	72.00	5.63	6.64	
	22.35						A	U	Y		56	72	33.43	71.65	6.51	7.66	
	23.60	2	C			Reddish brown conglomerate	D	U	Y	48	72	72	21.09	72.00	4.07	4.79	
	23.60						A	U	Y		54	72	15.08	70.36	3.05	3.55	
	27.20	3	C			Reddish brown Mudstone	D	U	Y	70	72	72	0.15	72.00	0.03	0.03	
	27.20						A	U	Y		45	72	0.13	64.23	0.03	0.03	
BH4	23.00	1	C			Reddish brown Siltstone	D	L	Y	36	72	72	2.60	72.00	0.50	0.59	
	23.00						A	P	Y		40	72	3.40	60.56	0.93	1.01	
	28.03	2	C			Reddish brown Mudstone	D	U	Y	25	72	72	1.08	72.00	0.21	0.25	
	28.03						A	U	Y		22	72	1.61	44.91	0.80	0.76	

All specimens tested as received water content unless shown otherwise

Test Type

D - Diametral, A - Axial, I - Irregular Lump, B - Block

Direction

U - Unknown or Random

L - Parallel to planes of weakness

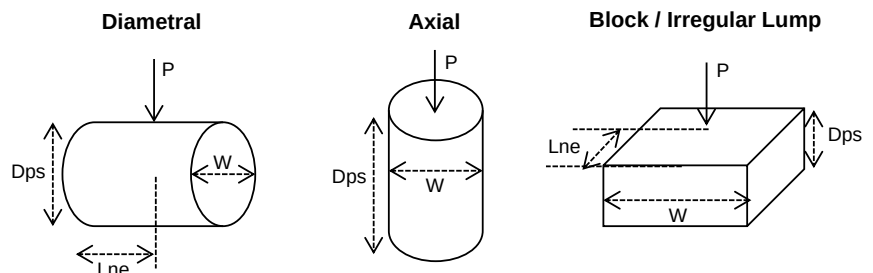
P - Perpendicular to planes of weakness

Dimensions

Dps' - Distance between platens at failure

Lne - Length from platens to nearest free end

W - Width of shortest dimension perpendicular to load, P



QA Ref.



Apex Testing Solutions

Sturmi Way, Village Farm Industrial Est, Pyle, Bridgend, CF33 6BZ

Tel: 01656 746762 Fax: 01656 749096

Approver

L Davis

Date

12/11/2024

Fig.

PLT 1

ISRM

Rev 2.0

L Davis, Quality Manager

APPENDIX N

IN-SITU GAS & GROUNDWATER MONITORING RESULTS

FIELD GAS MONITORING RESULTS

Job No.: 14627
 Site: Jacks Pill Newport
 Monitoring Date: 08.11.21
 Monitoring Round: 1

Monitoring Conditions

Weather: Very Light Rain
Ambient Temp: 12 °C
Instrument: GA5000

Barometric Pressure (mb)

On Arrival: 1021
During Monitoring: 1021
End of Monitoring: 1021

Location	Well Base Level (mbgl)	Water Level (mbgl)	Methane (CH ₄) %v/v		Methane % LEL		Oxygen (O ₂) %v/v		Carbon Dioxide (CO ₂) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H ₂ S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
			Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
BH 1	3.03	1.42	0.20	0.20	4.00	4.00	16.80	18.80	1.60	1.60	<1	<1	0.80	<0.1
BH 2	4.08	1.48	19.30	19.20	>100	>100	10.60	10.60	1.10	1.10	<1	<1	<0.3	0.10
BH 3	3.61	2.33	0.10	0.10	2.00	2.00	17.80	17.80	0.40	0.30	<1	<1	<0.3	<0.1
BH 4	4.59	2.68	2.40	2.40	48.00	48.00	6.30	6.90	1.90	1.90	<1	<1	<0.3	<0.1
Typical Instrument Accuracy: %CH₄ 0-70% +/- 0.5% CO 0-500ppm +/- 2% FS %CO₂ 0-60% +/- 0.5% H₂S 0-5000ppm +/- 2.0% FS %O₂ 0-25% +/- 1.0% Flow from borehole +/- 0.3l/h LEL = Lower Explosive Limit N/R = No Reading Taken FS = Full Scale														
Notes: 														

FIELD GAS MONITORING RESULTS

Job No.: 14627
 Site: Jacks Pill Newport
 Monitoring Date: 16.11.21
 Monitoring Round: 2

Monitoring Conditions

Weather: Light Rain
 Ambient Temp: 12 °C
 Instrument: GA5000

Barometric Pressure (mb)

On Arrival: 1022
 During Monitoring: 1022
 End of Monitoring: 1022

Location	Well Base Level (mbgl)	Water Level (mbgl)	Methane (CH ₄) %v/v		Methane % LEL		Oxygen (O ₂) %v/v		Carbon Dioxide (CO ₂) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H ₂ S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
			Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
BH 1	3.03	1.52	0.10	0.10	2.00	2.00	16.20	16.20	1.40	1.40	<1	<1	0.40	<0.1
BH 2	4.08	2.13	12.30	12.30	>100	>100	14.50	14.50	0.80	0.80	<1	<1	<0.3	<0.1
BH 3	3.61	2.24	0.10	0.10	2.00	2.00	18.50	18.50	0.20	0.20	<1	<1	<0.3	<0.1
BH 4	4.59	2.62	1.40	1.40	28.00	28.00	4.50	4.50	1.20	1.20	<1	<1	<0.3	<0.1
Typical Instrument Accuracy: %CH₄ 0-70% +/- 0.5% CO 0-500ppm +/- 2% FS %CO₂ 0-60% +/- 0.5% H₂S 0-5000ppm +/- 2.0% FS %O₂ 0-25% +/- 1.0% Flow from borehole +/- 0.3l/h LEL = Lower Explosive Limit N/R = No Reading Taken FS = Full Scale														
Notes: 														

FIELD GAS MONITORING RESULTS

Job No.: 14627
 Site: Jacks Pill Newpo
 Monitoring Date: 26.11.21
 Monitoring Round: 3

Monitoring Conditions

Weather: Sunny
 Ambient Temp: 6 °C
 Instrument: GA5000

Barometric Pressure (mb)

On Arrival: 981
 During Monitoring: 981
 End of Monitoring: 981

Location	Well Base Level (mbgl)	Water Level (mbgl)	Methane (CH ₄) %v/v		Methane % LEL		Oxygen (O ₂) %v/v		Carbon Dioxide (CO ₂) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H ₂ S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
			Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
BH 1	3.03	1.46	0.10	0.10	2.00	2.00	18.50	18.50	1.20	1.10	<1	<1	0.20	<0.1
BH 2	4.08	1.45	11.50	11.50	>100	>100	12.10	12.10	0.80	0.80	<1	<1	<0.3	<0.1
BH 3	3.61	2.17	0.10	0.10	2.00	2.00	18.80	19.20	0.20	0.20	<1	<1	<0.3	<0.1
BH 4	4.59	2.57	2.10	2.10	42.00	42.00	7.50	7.50	1.40	1.40	<1	<1	<0.3	<0.1
Typical Instrument Accuracy: %CH ₄ 0-70% +/- 0.5% CO 0-500ppm +/- 2% FS %CO ₂ 0-60% +/- 0.5% H ₂ S 0-5000ppm +/- 2.0% FS %O ₂ 0-25% +/- 1.0% Flow from borehole +/- 0.3l/h LEL = Lower Explosive Limit N/R = No Reading Taken FS = Full Scale														
Notes: 														

FIELD GAS MONITORING RESULTS

Job No.: 14627
 Site: Jacks Pill Newport
 Monitoring Date: 01.12.21
 Monitoring Round: 4

Monitoring Conditions

Weather: Cloudy
 Ambient Temp: 8 °C
 Instrument: GA5000

Barometric Pressure (mb)

On Arrival: 988
 During Monitoring: 988
 End of Monitoring: 988

Location	Well Base Level (mbgl)	Water Level (mbgl)	Methane (CH ₄) %v/v		Methane % LEL		Oxygen (O ₂) %v/v		Carbon Dioxide (CO ₂) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H ₂ S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
			Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
BH 1	3.03	1.91	0.10	0.10	2.00	2.00	19.60	19.60	0.80	0.80	<1	<1	0.10	<0.1
BH 2	4.08	2.14	8.80	8.80	>100	>100	15.10	15.10	0.60	0.60	<1	<1	<0.3	0.10
BH 3	3.61	2.47	0.30	0.30	6.00	6.00	17.20	17.20	0.30	0.20	<1	<1	<0.3	<0.1
BH 4	4.59	2.68	2.30	2.30	46.00	46.00	10.50	10.50	1.10	1.10	<1	<1	<0.3	<0.1
Typical Instrument Accuracy: %CH₄ 0-70% +/- 0.5% CO 0-500ppm +/- 2% FS %CO₂ 0-60% +/- 0.5% H₂S 0-5000ppm +/- 2.0% FS %O₂ 0-25% +/- 1.0% Flow from borehole +/- 0.3l/h LEL = Lower Explosive Limit N/R = No Reading Taken FS = Full Scale														
Notes: 														

FIELD GAS MONITORING RESULTS

Job No.: 14627
 Site: Jacks Pill Newport
 Monitoring Date: 15.12.21
 Monitoring Round: 5

Monitoring Conditions

Weather: Cloudy
 Ambient Temp: 9 °C
 Instrument: GA5000

Barometric Pressure (mb)

On Arrival: 1015
 During Monitoring: 1015
 End of Monitoring: 1015

Location	Well Base Level (mbgl)	Water Level (mbgl)	Methane (CH4) %v/v		Methane % LEL		Oxygen (O2) %v/v		Carbon Dioxide (CO2) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H2S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
			Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
BH 1	3.03	1.90	0.10	0.10	2.00	2.00	20.00	20.10	0.60	0.60	<1	<1	0.10	<0.1
BH 2	4.08	2.11	7.90	7.90	>100	>100	16.30	16.30	0.50	0.50	<1	<1	<0.3	<0.1
BH 3	3.61	2.42	0.20	0.20	4.00	4.00	16.70	16.90	0.20	0.20	<1	<1	<0.3	<0.1
BH 4	4.59	2.63	2.10	2.10	42.00	42.00	12.30	12.30	0.80	0.80	<1	<1	<0.3	0.10
Typical Instrument Accuracy: %CH₄ 0-70% +/- 0.5% CO 0-500ppm +/- 2% FS %CO₂ 0-60% +/- 0.5% H₂S 0-5000ppm +/- 2.0% FS %O₂ 0-25% +/- 1.0% Flow from borehole +/- 0.3l/h LEL = Lower Explosive Limit N/R = No Reading Taken FS = Full Scale														
Notes: 														

FIELD GAS MONITORING RESULTS

Job No.: 14627
 Site: Jacks Pill Newport
 Monitoring Date: 23.12.21
 Monitoring Round: 6

Monitoring Conditions

Weather: Cloudy
 Ambient Temp: 9 °C
 Instrument: GA5000

Barometric Pressure (mb)

On Arrival: 1008
 During Monitoring: 1008
 End of Monitoring: 1008

Location	Well Base Level (mbgl)	Water Level (mbgl)	Methane (CH4) %v/v		Methane % LEL		Oxygen (O2) %v/v		Carbon Dioxide (CO2) %v/v		Carbon Monoxide (CO) (ppm)	Hydrogen Sulphide (H2S) (ppm)	Peak Gas Flow (l/hr)	VOC Vapours (ppm>background)
			Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady				
BH 1	3.03	1.95	0.10	0.10	2.00	2.00	21.10	21.10	0.50	0.50	<1	<1	0.20	<0.1
BH 2	4.08	2.14	3.20	3.20	>100	>100	17.50	17.50	0.30	0.30	<1	<1	<0.3	<0.1
BH 3	3.61	2.48	0.10	0.10	2.00	4.00	17.90	17.90	0.20	0.20	<1	<1	<0.3	<0.1
BH 4	4.59	2.65	2.00	2.00	42.00	42.00	14.80	14.80	0.80	0.80	<1	<1	<0.3	0.10
Typical Instrument Accuracy: %CH ₄ 0-70% +/- 0.5% CO 0-500ppm +/- 2% FS %CO ₂ 0-60% +/- 0.5% H ₂ S 0-5000ppm +/- 2.0% FS %O ₂ 0-25% +/- 1.0% Flow from borehole +/- 0.3l/h LEL = Lower Explosive Limit N/R = No Reading Taken FS = Full Scale														
Notes: 														

APPENDIX O

SUMMARY OF CHEMICAL RESULTS – RE-ENGINEERED FILL

SUMMARY OF LABORATORY SOIL TEST RESULTS

METALS AND SEMI-METALS

Job No.: 14627
Site: Land at Usk Way, Newport
Soil Type: Re-engineered Fill
Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Arsenic (mg/kg)	Boron (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (Elemental) (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
3	TP2	0.60	25	3.2	0.84	2.9	310	< 4.0	290	230	< 0.3	37	< 1.0	77	970
7	TP4	0.40	23	2.5	1.4	45	69	< 4.0	240	370	< 0.3	26	< 1.0	39	730
8	TP5	0.50	30	3.4	1.1	1.4	51	< 4.0	130	220	< 0.3	26	< 1.0	42	280
9	TP6	0.30	14	7.4	0.93	6.3	920	< 4.0	320	670	< 0.3	56	< 1.0	170	3400
11	TP8	0.50	13	9.5	0.80	7.7	940	< 4.0	280	420	< 0.3	52	< 1.0	170	4000
14	TP10	0.40	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Trench 1	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-
Screening Criteria Value			37.0	290.0	1.7	11.0	-	6.0	2400.0	200.0	1.2	130.0	250.0	410.0	3700.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	-	S4UL	S4UL	C4SL	S4UL	S4UL	S4UL	S4UL	S4UL



SUMMARY OF LABORATORY SOIL TEST RESULTS

INORGANIC CHEMICALS & OTHERS

Job No.: 14627
 Site: Land at Usk Way, Newport
 Soil Type: Re-engineered Fill
 Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Cyanide (mg/kg)	Loss on ignition, dried solids (%)	Moisture content at 30 C (%)	Phenol (mg/kg)	pH (pH units)	Water Soluble Sulphate (g/l)	Sulphate Total as SO4 (mg/kg)	Sulphide (mg/kg)	Total Sulphur (mg/kg)	TOC by Ignition in O2 (%)	Equivalent SOM (%)	Asbestos in Soil	Asbestos Quantification (%)
3	TP2	0.60	< 1.0	5.3	7.4	< 1.0	10.3	0.26	3300	49	1800	1.5	2.58	Not-detected	#N/A
7	TP4	0.40	< 1.0	6.0	7.6	< 1.0	9.8	0.40	5000	130	2300	2.4	4.13	Detected	0.001
8	TP5	0.50	< 1.0	6.3	8.7	< 1.0	9.9	0.28	2800	30	1600	2.1	3.61	Not-detected	#N/A
9	TP6	0.30	< 1.0	3.8	5.0	< 1.0	10.4	0.18	3500	130	2000	1.7	2.92	Not-detected	#N/A
11	TP8	0.50	< 1.0	3.4	5.2	< 1.0	10.6	0.20	6200	18	2200	0.9	1.55	Not-detected	#N/A
14	TP10	0.40	-	-	-	-	-	-	-	-	-	-	<0.1	Not-detected	#N/A
15	Trench 1	0.50	-	-	-	-	-	-	-	-	-	-	<0.1	Detected	<0.001
Screening Criteria Value			34.0	-	-	200.0	-	-	-	-	-	-	-	-	0.001
Source of Screening Criteria Value			ATRISK	-	-	S4UL	-	-	-	-	-	-	-	-	IOM

SUMMARY OF LABORATORY SOIL TEST RESULTS
POLYAROMATIC HYDROCARBONS (PAH)

Job No.: 14627
Site: Land at Usk Way, Newport
Soil Type: Re-engineered Fill
Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(ghi)perylene (mg/kg)	Benzo(k)fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(ah)anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno(123cd)pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
3	TP2	0.60	< 0.05	< 0.05	0.34	1.3	0.70	0.87	0.48	0.49	0.84	< 0.05	1.7	< 0.05	0.45	< 0.05	1.3	1.6
7	TP4	0.40	0.57	0.85	1.5	6.4	3.9	5.2	2.6	2.7	6.1	0.94	8.3	0.77	2.6	0.81	4.2	6.6
8	TP5	0.50	< 0.05	< 0.05	1.0	3.1	1.5	1.9	1.1	1.4	2.6	0.41	5.2	< 0.05	1.1	< 0.05	4.1	3.9
9	TP6	0.30	< 0.05	< 0.05	0.26	1.5	1.0	1.3	0.72	0.83	1.3	< 0.05	2.2	< 0.05	0.63	< 0.05	1.3	2.1
11	TP8	0.50	< 0.05	< 0.05	0.24	1.0	0.64	0.69	0.52	0.56	0.81	< 0.05	1.4	< 0.05	0.47	< 0.05	0.76	1.2
14	TP10	0.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Trench 1	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Screening Criteria Value			510.0	420.0	5400.0	11.0	2.7	3.3	240.0	93.0	22.0	0.28	560.0	400.0	36.0	5.6	220.0	1200.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL

SUMMARY OF LABORATORY SOIL TEST RESULTS

PETROLEUM HYDROCARBONS

Job No.: 14627
 Site: Land at Usk Way, Newport
 Soil Type: Re-engineered Fill
 Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10- C12 EPH (mg/kg)	Aliphatic C12- C16 EPH (mg/kg)	Aliphatic C16-C35 EPH (mg/kg)	Aliphatic C35- C44 EPH (mg/kg)	Aromatic C5-C7 (mg/kg)	Aromatic C7-C8 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10- C12 EPH (mg/kg)	Aromatic C12- C16 EPH (mg/kg)	Aromatic C16- C21 EPH (mg/kg)	Aromatic C21- C35 EPH (mg/kg)	Aromatic C35- C40 EPH (mg/kg)
3	TP2	0.60	< 0.001	< 0.001	< 0.001	< 1.0	31	370	64	< 0.001	< 0.001	< 0.001	< 1.0	11	69	110	43
7	TP4	0.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	TP5	0.50	< 0.001	< 0.001	< 0.001	< 1.0	9.9	360	100	< 0.001	< 0.001	< 0.001	< 1.0	3.2	54	190	93
9	TP6	0.30	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	130	130	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	12	200	270
11	TP8	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	TP10	0.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Trench 1	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Screening Criteria Value			78.0	230.0	65.0	330.0	2400.0	92000.0	92000.0	0.2	290.0	83.0	180.0	330.0	540.0	1500.0	1500.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL

APPENDIX P

SUMMARY OF CHEMICAL RESULTS – MADE GROUND

SUMMARY OF LABORATORY SOIL TEST RESULTS

METALS AND SEMI-METALS

Job No.: 14627
 Site: Land at Usk Way, Newport
 Soil Type: Made Ground
 Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Arsenic (mg/kg)	Boron (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (Elemental) (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
1	TP1	0.80	69	1.6	1.6	< 0.2	34	< 4.0	140	280	< 0.3	49	< 1.0	47	330
4	TP2	2.20	-	-	-	-	-	-	-	-	-	-	-	-	-
5	TP3	1.30	29	3.4	1.2	3.1	32	< 4.0	300	450	1.6	35	< 1.0	32	610
10	TP7	1.00	100	1.7	0.97	< 0.2	64	< 4.0	330	930	2.7	47	< 1.0	47	980
12	TP8	2.00	32	2.3	1.0	2.9	47	< 4.0	300	850	0.7	46	< 1.0	41	1100
13	TP9	1.00	39	1.2	1.5	1.5	27	< 4.0	260	670	< 0.3	38	< 1.0	45	230
16	Trench 1	2.00	32	4.4	1.1	4.4	73	< 4.0	240	290	< 0.3	59	< 1.0	35	890
17	Trench 2	1.10	32	1.4	0.81	1.6	46	< 4.0	360	1100	< 0.3	31	< 1.0	33	680
Screening Criteria Value			37.0	290.0	1.7	11.0	-	6.0	2400.0	200.0	1.2	130.0	250.0	410.0	3700.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	-	S4UL	S4UL	C4SL	S4UL	S4UL	S4UL	S4UL	S4UL

SUMMARY OF LABORATORY SOIL TEST RESULTS

INORGANIC CHEMICALS & OTHERS

Job No.: 14627
 Site: Land at Usk Way, Newport
 Soil Type: Made Ground
 Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Cyanide (mg/kg)	Loss on ignition, dried solids (%)	Moisture content at 30 C (%)	Phenol (mg/kg)	pH (pH units)	Water Soluble Sulphate (g/l)	Sulphate Total as SO4 (mg/kg)	Sulphide (mg/kg)	Total Sulphur (mg/kg)	TOC by Ignition in O2 (%)	Equivalent SOM (%)	Asbestos in Soil	Asbestos Quantification (%)
1	TP1	0.80	< 1.0	17.2	12	< 1.0	8.7	0.090	1200	5.2	860	3.9	6.71	Not-detected	#N/A
4	TP2	2.20	-	-	19	-	-	-	-	-	-	-	<0.1	-	#N/A
5	TP3	1.30	< 1.0	7.2	12	< 1.0	8.2	2.0	5000	110	4800	2.8	4.82	Detected	0.336
10	TP7	1.00	< 1.0	11.4	9.4	< 1.0	9.4	0.38	2300	140	2200	2.7	4.64	Not-detected	#N/A
12	TP8	2.00	< 1.0	8.7	17	< 1.0	8.0	2.5	6500	340	13000	3.7	6.36	Detected	<0.001
13	TP9	1.00	< 1.0	15.0	12	< 1.0	8.6	0.11	1200	2.1	800	5.1	8.77	Not-detected	#N/A
16	Trench 1	2.00	< 1.0	6.0	11	< 1.0	9.0	0.20	3400	51	1600	1.6	2.75	Detected	0.008
17	Trench 2	1.10	< 1.0	5.1	10	< 1.0	8.7	0.15	1600	13	950	1.7	2.92	Detected	<0.001
Screening Criteria Value			34.0	-	-	200.0	-	-	-	-	-	-	-	-	0.001
Source of Screening Criteria Value			ATRISK	-	-	S4UL	-	-	-	-	-	-	-	-	IOM

SUMMARY OF LABORATORY SOIL TEST RESULTS

POLYAROMATIC HYDROCARBONS (PAH)

Job No.: 14627
 Site: Land at Usk Way, Newport
 Soil Type: Made Ground
 Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(ghi)perylene (mg/kg)	Benzo(k)fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(ah)anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno(123cd)pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
1	TP1	0.80	< 0.05	< 0.05	0.36	1.5	0.83	1.2	0.60	0.50	1.3	0.20	2.0	< 0.05	0.58	< 0.05	1.3	1.9
4	TP2	2.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	TP3	1.30	< 0.05	< 0.05	0.42	1.7	1.0	1.3	0.81	0.91	1.4	< 0.05	2.4	0.50	0.81	< 0.05	1.4	2.4
10	TP7	1.00	1.3	0.59	1.8	5.5	3.1	3.7	2.1	2.4	3.9	0.70	8.8	1.7	2.0	3.0	8.4	7.7
12	TP8	2.00	0.71	0.32	0.98	2.7	1.6	2.3	1.1	0.84	2.8	0.35	4.4	0.73	1.1	0.51	2.7	4.0
13	TP9	1.00	19	3.7	47	76	33	42	16	20	49	6.7	78	41	17	9.4	110	70
16	Trench 1	2.00	< 0.05	< 0.05	0.61	2.9	1.9	2.5	1.3	1.5	2.6	0.51	3.6	< 0.05	1.3	< 0.05	1.8	3.3
17	Trench 2	1.10	< 0.05	< 0.05	0.40	2.6	1.9	2.0	1.4	1.7	2.5	0.44	3.0	< 0.05	1.3	< 0.05	1.3	2.9
Screening Criteria Value			510.0	420.0	5400.0	11.0	2.7	3.3	240.0	93.0	22.0	0.28	560.0	400.0	36.0	5.6	220.0	1200.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL

SUMMARY OF LABORATORY SOIL TEST RESULTS

PETROLEUM HYDROCARBONS

Job No.: 14627
 Site: Land at Usk Way, Newport
 Soil Type: Made Ground
 Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10- C12 EPH (mg/kg)	Aliphatic C12- C16 EPH (mg/kg)	Aliphatic C16-C35 EPH (mg/kg)	Aliphatic C35- C44 EPH (mg/kg)	Aromatic C5-C7 (mg/kg)	Aromatic C7-C8 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10- C12 EPH (mg/kg)	Aromatic C12- C16 EPH (mg/kg)	Aromatic C16- C21 EPH (mg/kg)	Aromatic C21- C35 EPH (mg/kg)	Aromatic C35- C40 EPH (mg/kg)
1	TP1	0.80	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	55	< 8.4	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	13	49	13
4	TP2	2.20	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	< 10	< 8.4	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	< 10	< 10	< 8.4
5	TP3	1.30	< 0.001	< 0.001	< 0.001	< 1.0	46	830	160	< 0.001	< 0.001	< 0.001	< 1.0	11	99	260	110
10	TP7	1.00	< 0.001	< 0.001	< 0.001	< 1.0	17	500	89	< 0.001	< 0.001	< 0.001	< 1.0	8.1	96	210	120
12	TP8	2.00	< 0.001	< 0.001	< 0.001	< 1.0	39	1200	460	< 0.001	< 0.001	< 0.001	< 1.0	10	150	540	420
13	TP9	1.00	< 0.001	< 0.001	< 0.001	< 1.0	2.5	57	< 8.4	< 0.001	< 0.001	< 0.001	7.2	62	280	320	110
16	Trench 1	2.00	< 0.001	< 0.001	< 0.001	< 1.0	5.5	220	61	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	25	91	76
17	Trench 2	1.10	< 0.001	< 0.001	< 0.001	< 1.0	2.8	160	36	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	30	79	53
Screening Criteria Value			78.0	230.0	65.0	330.0	2400.0	92000.0	92000.0	0.2	290.0	83.0	180.0	330.0	540.0	1500.0	1500.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL

SUMMARY OF LABORATORY SOIL TEST RESULTS

Job No.: 14627
 Site: Land at Usk Way, Newport
 Soil Type: Made Ground
 Soil Organic Matter: 2.5%

PCBs

No.	Location	Depth (m)	PCB Congener 28 (mg/kg)	PCB Congener 52 (mg/kg)	PCB Congener 101 (mg/kg)	PCB Congener 118 (mg/kg)	PCB Congener 138 (mg/kg)	PCB Congener 153 (mg/kg)	PCB Congener 180 (mg/kg)	Total PCBs (mg/kg)
1	TP1	0.80	< 0.001	< 0.001	< 0.001	0.003	0.003	0.003	< 0.001	0.009
4	TP2	2.20	-	-	-	-	-	-	-	-
5	TP3	1.30	0.032	0.013	0.013	0.013	0.011	0.011	0.007	0.1
10	TP7	1.00	0.008	0.003	0.003	0.006	0.004	0.004	< 0.001	0.029
12	TP8	2.00	0.062	0.023	0.020	0.024	0.029	0.042	0.043	0.24
13	TP9	1.00	< 0.001	0.021	0.062	0.040	0.059	0.038	0.013	0.23
16	Trench 1	2.00	0.003	< 0.001	0.006	0.004	0.010	0.010	0.009	0.042
17	Trench 2	1.10	< 0.001	0.003	0.003	0.003	0.003	0.004	0.004	0.02
Screening Criteria Value										0.39
Source of Screening Criteria Value										RIVM, 2014

SUMMARY OF LABORATORY SOIL TEST RESULTS
METALS AND SEMI-METALS

Job No.: 14627
Site: Jacks Pill, Newport
Soil Type: Made Ground (2024 Supplemental Testing)
Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Arsenic (mg/kg)	Boron (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (Elemental) (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
1	TP01	0.50	74	1.2	1.9	4.1	130	< 1.8	850	670	< 0.3	390	< 1.0	74	1200
2	TP03	0.40	35	0.7	1.4	1.3	36	< 1.8	140	230	< 0.3	28	< 1.0	66	360
3	TP05	0.40	29	2.2	2.2	2	35	< 1.8	190	230	< 0.3	75	< 1.0	48	640
4	TP06	0.30	30	1.2	1.2	2.6	75	< 1.8	680	490	< 0.3	64	< 1.0	54	740
Screening Criteria Value			37.0	290.0	1.7	11.0	-	6.0	2400.0	200.0	1.2	130.0	250.0	410.0	3700.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	-	S4UL	S4UL	C4SL	S4UL	S4UL	S4UL	S4UL	S4UL



SUMMARY OF LABORATORY SOIL TEST RESULTS
INORGANIC CHEMICALS & OTHERS

Job No.: 14627
Site: Jacks Pill, Newport
Soil Type: Made Ground (2024 Supplemental Testing)
Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Cyanide (mg/kg)	Loss on ignition, dried solids (%)	Moisture content at 30 C (%)	Phenol (mg/kg)	pH (pH units)	Water Soluble Sulphate (g/l)	Sulphate Total as SO4 (mg/kg)	Sulphide (mg/kg)	Total Sulphur (mg/kg)	TOC by Ignition in O2 (%)	Equivalent SOM (%)	Asbestos in Soil	Asbestos Quantification (%)
1	TP01	0.50	< 1.0	13.00	12.00	< 1.0	8.10	0.088	1500.00	18.00	1100.00	4.20	7.22	Detected	<0.001
2	TP03	0.40	< 1.0	9.50	11.00	< 1.0	8.20	0.034	600.00	< 1.0	410.00	3.20	5.50	Not-detected	#N/A
3	TP05	0.40	< 1.0	16.00	11.00	< 1.0	8.20	0.045	1600.00	65.00	1300.00	4.30	7.40	Detected	<0.001
4	TP06	0.30	< 1.0	6.50	7.30	< 1.0	8.40	0.103	1400.00	85.00	1100.00	2.20	3.78	Detected	0.001
Screening Criteria Value			34.0	-	-	200.0	-	-	-	-	-	-	-	-	0.001
Source of Screening Criteria Value			ATRISK	-	-	S4UL	-	-	-	-	-	-	-	-	IOM



SUMMARY OF LABORATORY SOIL TEST RESULTS

POLYAROMATIC HYDROCARBONS (PAH)

Job No.: 14627
 Site: Jacks Pill, Newport
 Soil Type: Made Ground (2024 Supplemental Testing)
 Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(ghi)perylene (mg/kg)	Benzo(k)fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(ah)anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno(123cd)pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
1	TP01	0.50	0.17	0.19	0.49	2.6	3	4.4	1.9	1.4	3	0.44	4.2	0.17	1.6	0.24	2.1	3.7
2	TP03	0.40	< 0.05	0.07	0.11	0.64	0.67	1.1	0.43	0.3	0.74	0.11	0.75	0.05	0.36	0.39	0.48	0.74
3	TP05	0.40	< 0.05	0.14	0.25	2.1	2.3	3	1.3	1.1	2.3	0.35	2.6	0.05	1.1	0.11	0.87	2.4
4	TP06	0.30	5.2	0.46	1.9	2.9	2	3.3	0.93	1	3.4	0.33	9.2	5.7	0.98	11	11	6.4
Screening Criteria Value			510.0	420.0	5400.0	11.0	2.7	3.3	240.0	93.0	22.0	0.28	560.0	400.0	36.0	5.6	220.0	1200.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL

SUMMARY OF LABORATORY SOIL TEST RESULTS

PETROLEUM HYDROCARBONS

Job No.: 14627
Site: Jacks Pill, Newport
Soil Type: Made Ground (2024 Supplemental Testing)
Soil Organic Matter: 2.5%

No.	Location	Depth (m)	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10- C12 EPH (mg/kg)	Aliphatic C12- C16 EPH (mg/kg)	Aliphatic C16- C35 EPH (mg/kg)	Aliphatic C35- C44 EPH (mg/kg)	Aromatic C5-C7 (mg/kg)	Aromatic C7-C8 (mg/kg)	Aromatic C8- C10 (mg/kg)	Aromatic C10- C12 EPH (mg/kg)	Aromatic C12- C16 EPH (mg/kg)	Aromatic C16- C21 EPH (mg/kg)	Aromatic C21- C35 EPH (mg/kg)	Aromatic C35- C40 EPH (mg/kg)
1	TP01	0.50	< 0.010	< 0.010	< 0.010	< 1.0	< 2.0	27	14	< 0.010	< 0.010	< 0.020	< 1.0	< 2.0	< 10	27	< 10
2	TP03	0.40	< 0.010	< 0.010	< 0.010	< 1.0	< 2.0	< 10	< 8.4	< 0.010	< 0.010	< 0.020	< 1.0	< 2.0	< 10	< 10	< 10
3	TP05	0.40	< 0.010	< 0.010	< 0.010	< 1.0	< 2.0	< 10	< 8.4	< 0.010	< 0.010	< 0.020	< 1.0	< 2.0	< 10	26	< 10
4	TP06	0.30	< 0.010	< 0.010	< 0.010	< 1.0	2.6	92	18	< 0.010	< 0.010	< 0.020	3.1	18	36	33	< 10
Screening Criteria Value			78.0	230.0	65.0	330.0	2400.0	92000.0	92000.0	0.2	290.0	83.0	180.0	330.0	540.0	1500.0	1500.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL



SUMMARY OF LABORATORY SOIL TEST RESULTS

Job No.: 14627
Site: Jacks Pili, Newport
Soil Type: Made Ground (2024 Supplemental Testing)
Soil Organic Matter: 2.5%

VOLATILE ORGANIC COMPOUNDS (VOCs)

No.	Location	Depth (m)	1,2,4- Trihalobenzene mg
1	1700	0.50	0.02
2	1700	0.60	0.01
3	1700	0.70	0.01
4	1700	0.80	0.01
Screening Criteria Value			3000000
Source of Screening Criteria Value			CLARIS

VOLATILE ORGANIC COMPOUNDS (VOC)

SUMMARY OF LABORATORY SOIL TEST RESULTS

PCBs

Job No.: 14627
Site: Jacks Pill, Newport
Soil Type: Made Ground (2024 Supplemental Testing)
Soil Organic Matter: 2.5%

No.	Location	Depth (m)	PCB Congener 28 mg/kg	PCB Congener 52 mg/kg	PCB Congener 101 mg/kg	PCB Congener 118 mg/kg	PCB Congener 138 mg/kg	PCB Congener 153 mg/kg	PCB Congener 180 mg/kg	Total PCBs mg/kg
1	TP01	0.50	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.007
2	TP03	0.40	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.007
3	TP05	0.40	<0.001	0.003	0.013	0.016	0.021	0.011	0.004	0.067
4	TP06	0.30	<0.001	<0.001	0.004	0.004	0.011	0.007	<0.001	0.026
Screening Criteria Value										0.39
Source of Screening Criteria Value										RIVM, 2014

APPENDIX Q

SUMMARY OF CHEMICAL RESULTS – NATURAL GROUND

SUMMARY OF LABORATORY SOIL TEST RESULTS

PETROLEUM HYDROCARBONS

Job No.: 14627
Site: Jack's Pill, Usk Way, Newport
Soil Type: Natural Soils
Soil Organic Matter: 1%

No.	Location	Depth (m)	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10-C12 EPH (mg/kg)	Aliphatic C12-C16 EPH (mg/kg)	Aliphatic C16-C35 EPH (mg/kg)	Aliphatic C35-C44 EPH (mg/kg)	Aromatic C5-C7 (mg/kg)	Aromatic C7-C8 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10-C12 EPH (mg/kg)	Aromatic C12-C16 EPH (mg/kg)	Aromatic C16-C21 EPH (mg/kg)	Aromatic C21-C35 EPH (mg/kg)	Aromatic C35-C40 EPH (mg/kg)
2	TP1 (Natural)	2.70	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	< 10	< 8.4	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	< 10	< 10	< 8.4
6	TP3 (Natural)	3.00	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	< 10	< 8.4	< 0.001	< 0.001	< 0.001	< 1.0	< 2.0	< 10	< 10	< 8.4
Screening Criteria Value			42.0	100.0	27.0	130.0	1100.0	65000.0	65000.0	0.1	130.0	34.0	74.0	140.0	260.0	1100.0	1100.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL

APPENDIX R

SUMMARY OF LEACHATE RESULTS

**Summary of Leachate Results -
Jacks Pill, Usk Way**

14380

	Determinand	Unit	Sample Location				Guideline Value		
			TP1 @ 0.80m	TP8 @ 2.00m	TP01 @ 0.50m	TP05 @ 0.40m	MAC-EQS Other Surface Water C3 50 - <100mg/lCa CO3	Coastal and Estuarine AA-EQS	UK (England and Wales) Drinking Water Standards
Metals and Non-Metals	Arsenic	ug/l	5.40	< 1.0	1.70	< 1.0	-	25	10
	Beryllium	ug/l	0.70	0.20	< 0.2	< 0.2	-	-	-
	Boron	ug/l	45.00	180.00	34.00	31.00	-	7000	1000
	Cadmium	ug/l	< 0.08	< 0.08	< 0.08	< 0.08	-	0.2	5
	Calcium	mg/l	10.00	23.00	14.00	13.00	-	-	-
	Chromium	ug/l	0.40	< 0.4	1.80	0.50	32	0.6	50
	Copper	ug/l	12.00	6.30	27.00	7.20	-	13.8*	2000
	Cyanide	ug/l	< 10	< 10	< 10	< 10	5	1	50
	Lead	ug/l	3.70	4.60	11.00	< 1.0	14	1.3	10
	Mercury	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	0.07	-	1
	Nickel	ug/l	7.10	7.60	4.00	< 0.3	34	8.6	20
	pH	pH Units	7.90	8.20	7.60	7.60	-	-	-
	Selenium	ug/l	< 4.0	< 4.0	< 4.0	< 4.0	-	-	10
	Sulphate as SO4	ug/l	8430.00	71000.00	3260.00	3340.00	-	-	250000
	Sulphide	ug/l	< 5.0	< 5.0	< 5.0	< 5.0	-	-	-
PAH	Vanadium	ug/l	< 1.7	< 1.7	2.30	3.40	-	100	-
	Zinc	ug/l	15.00	19.00	35.00	10.00	-	6.8	5000
	Acenaphthene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Acenaphthylene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Anthracene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.1	0.1	-
	Benzo (a) anthracene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Benzo (g,h,i) perylene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.00082	-	-
	Benzo (a) pyrene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.027	0.00017	0.01
	Benzo (b) fluoranthene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.017	-	-
	Benzo (k) fluoranthene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.017	-	-
	Chrysene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Dibenz (a,h) anthracene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	-	3.76	-
	Fluoranthene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.12	0.0063	-
	Fluorene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Indeno (1,2,3) cd pyrene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	-	-	-
VPH/EPH	Naphthalene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	130	2	-
	Phenanthrene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Pyrene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	PAH, Total	ug/l	< 0.2	< 0.2	< 0.16	< 0.16	-	0.00017	0.1
	Aliphatic VPH >C5 - C6	ug/l	< 1.0	< 1.0			50	8	1
	Aliphatic VPH >C6 - C8	ug/l	< 1.0	< 1.0			50	8	1
	Aliphatic VPH >C8 - 10	ug/l	< 1.0	< 1.0			50	8	1
	Aliphatic EPH >C10 - C12	ug/l	< 10	< 10			50	8	1
	Aliphatic EPH >C12 - C16	ug/l	< 10	< 10			50	8	1
	Aliphatic EPH >C16 - C21	ug/l	< 10	< 10			50	8	1
	Aliphatic EPH >C21 - C35	ug/l	< 10	< 10			50	8	1
	Aliphatic EPH >C35 - C44	ug/l	< 10	< 10			50	8	1
	Aromatic VPH >C5 - C7	ug/l	< 1.0	< 1.0			50	8	1
	Aromatic VPH >C7 - C8	ug/l	< 1.0	< 1.0			50	8	1
	Aromatic VPH >C8 - C10	ug/l	< 1.0	< 1.0			50	8	1
	Aromatic EPH >C10 - C12	ug/l	< 10	< 10			50	8	1
	Aromatic EPH >C12 - C16	ug/l	< 10	< 10			50	8	1
	Aromatic EPH >C16 - C21	ug/l	< 10	< 10			50	8	1
	Aromatic EPH >C21 - C35	ug/l	< 10	< 10			50	8	1
	Aromatic EPH >C35 - C44	ug/l	< 10	< 10			50	8	1

Notes:

Benzo(a)pyrene is used as an indicator for PAH contamination.
EQS for Benzene used for all VPH/EPH compounds

All VOC/SVOC and PCB concentration are less than limits of detection.

Results exceeding the AA-EQS value, or the most conservative EQS/UKDWS guideline value where AA-EQS values are unavailable, are highlighted in **red bold type**
Results exceeding the AA-EQS value but below the site specific PNEC are highlighted in **blue bold type**

Sources:

MAC-EQS and AA-EQS values sourced from the Environment Agency/Water Framework Directive
Drinking Water Standards sourced from The Water Supply (Water Quality) Regulations 2018 Water, England and Wales: 2018 No.647 (W.121)

APPENDIX S

M-BAT ASSESSMENT LEACHATES

Metal Bioavailability Assessment Tool (M-BAT)

Back

Calculate

Clear Data

Calculate

Clear Data

[illegible]

Pb Screening Tool 1.0

Back

Calculate

Clear Data

[illegible]

APPENDIX T

SUMMARY OF GROUNDWATER TEST RESULTS

		Sample Location												Guideline Value			
Determinand	Unit	02/11/2021	02/11/2021	02/11/2021	02/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021	01/12/2021	01/12/2021	01/12/2021	01/12/2021	MAC-EQS Other Surface Water C3 50 - <100mg/lCa CO3	Coastal and Estuarine AA-EQS	UK (England and Wales) Drinking Water Standards	
		BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow	BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow	BH2 Deep	BH3 Deep	BH4 Deep	BH3 Shallow				
Metals and Non-Metals	Arsenic	ug/l	19.00	44.90	27.70	16.30	37.20	36.40	20.10	13.80	30.80	30.90	38.90	14.10	-	25	10
	Beryllium	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-	-	-
	Boron	ug/l	45.00	180.00	1500.00	470.00	1200.00	1500.00	940.00	600.00	2400.00	1700.00	840.00	670.00	-	7000	1000
	Cadmium	ug/l	0.08	0.06	0.02	0.14	0.02	0.05	0.03	0.09	< 0.02	0.04	0.04	0.05	-	0.2	5
	Calcium	mg/l	130.00	130.00	58.00	80.00	80.00	110.00	55.00	89.00	80.00	110.00	66.00	86.00	-	-	-
	Chromium	ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	32	0.6	50
	Copper	ug/l	7.7	16	23	22	2.8	< 0.7	2.7	3.8	12.00	17.00	10.00	8.20	-	17.25*	2000
	Cyanide	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	5	1	50
	Lead	ug/l	< 0.2	< 0.2	< 0.2	0.80	< 0.2	< 0.2	< 0.2	0.40	< 0.2	< 0.2	< 0.2	< 0.2	14	1.3	10
	Mercury	ug/l	0.52	0.05	< 0.05	0.80	< 0.05	< 0.05	< 0.05	0.21	< 0.05	< 0.05	< 0.05	0.13	0.07	-	1
	Nickel	ug/l	6.60	7.80	4.70	5.80	6.20	7.50	6.40	6.80	5.20	7.30	4.70	6.70	34	8.6	20
	pH	pH Units	8.20	7.50	7.70	8.40	7.50	7.50	7.80	7.90	7.50	7.50	7.80	8.00	-	-	-
	Selenium	ug/l	6.9	19	13	5.4	13	12	8.3	9.5	13.00	15.00	5.10	6.20	-	-	10
	Sulphate as SO4	ug/l	25800.00	116000.00	76900.00	88700.00	18500.00	87800.00	73500.00	143000.00	15400.00	65900.00	49300.00	122000.00	-	-	250000
	Sulphide	ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	-	-
	Vanadium	ug/l	11.00	24.00	22.00	9.80	18.00	18.00	15.00	7.60	12.00	14.00	7.40	8.90	-	100	-
	Zinc	ug/l	7.7	4.3	4.1	12	12	8.7	7.2	8.1	7.90	5.50	7.70	6.30	-	6.8	5000
PAH	Acenaphthene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Acenaphthylene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Anthracene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.1	0.1	-
	Benzo (a) anthracene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Benzo (g,h,i) perylene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.00082	-	-
	Benzo (i) pyrene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.027	0.00017	0.01
	Benzo (b) fluoranthene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.017	-	-
	Benzo (k) fluoranthene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.017	-	-
	Chrysene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Dibenz (a,h) anthracene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	3.76	-
	Fluoranthene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.12	0.0063	-
	Fluorene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Indeno (1,2,3) cd pyrene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	-	-
	Naphthalene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	130	2	-
	Phenanthrene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	Pyrene	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	5	-
	PAH, Total	ug/l	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	-	0.00017	0.1
VPH/EPH	Aliphatic VPH >C5 - C6	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	50	8	1
	Aliphatic VPH >C6 - C8	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	50	8	1
	Aliphatic VPH >C8 - 10	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	50	8	1
	Aliphatic EPH >C10 - C12	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50	8	1
	Aliphatic EPH >C12 - C16	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50	8	1
	Aliphatic EPH >C16 - C21	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50	8	1
	Aliphatic EPH >C21 - C35	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50	8	1
	Aliphatic EPH >C35 - C44	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50	8	1
	Aromatic VPH >C5 - C7	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	50	8	1
	Aromatic VPH >C7 - C8	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	50	8	1
	Aromatic VPH >C8 - C10	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	50	8	1
	Aromatic EPH >C10 - C12	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50	8	1
	Aromatic EPH >C12 - C16	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50	8	1
	Aromatic EPH >C16 - C21	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50	8	1
	Aromatic EPH >C21 - C35	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50	8	1
	Aromatic EPH >C35 - C44	ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	50	8	1

Notes:

Benzo(a)pyrene is used as an indicator for PAH contamination.

EQS for Benzene used for all VPHEPH compounds

*Copper Coastal EQS assumes DOC = <1mg/l. If >1mg/l EQS = ((DOC/2)+0.5)*2.677*(3.76)

All VOC/SVOC and PCB concentration are less than limits of detection.

Results exceeding the AA-EQS value, or the most conservative EQS/UKDWS guideline value where AA-EQS values are unavailable, are highlighted in **red bold type**Results exceeding the AA-EQS value but below the site specific PNEC are highlighted in **blue bold type**

Sources:

MAC-EQS and AA-EQS values sourced from the Environment Agency/Water Framework Directive

Drinking Water Standards sourced from The Water Supply (Water Quality) Regulations 2016 Water, England and Wales: 2018 No.647 (W.121)

APPENDIX U

M-BAT ASSESSMENT GROUNDWATER

Metal Bioavailability Assessment Tool (M-BAT)

Back

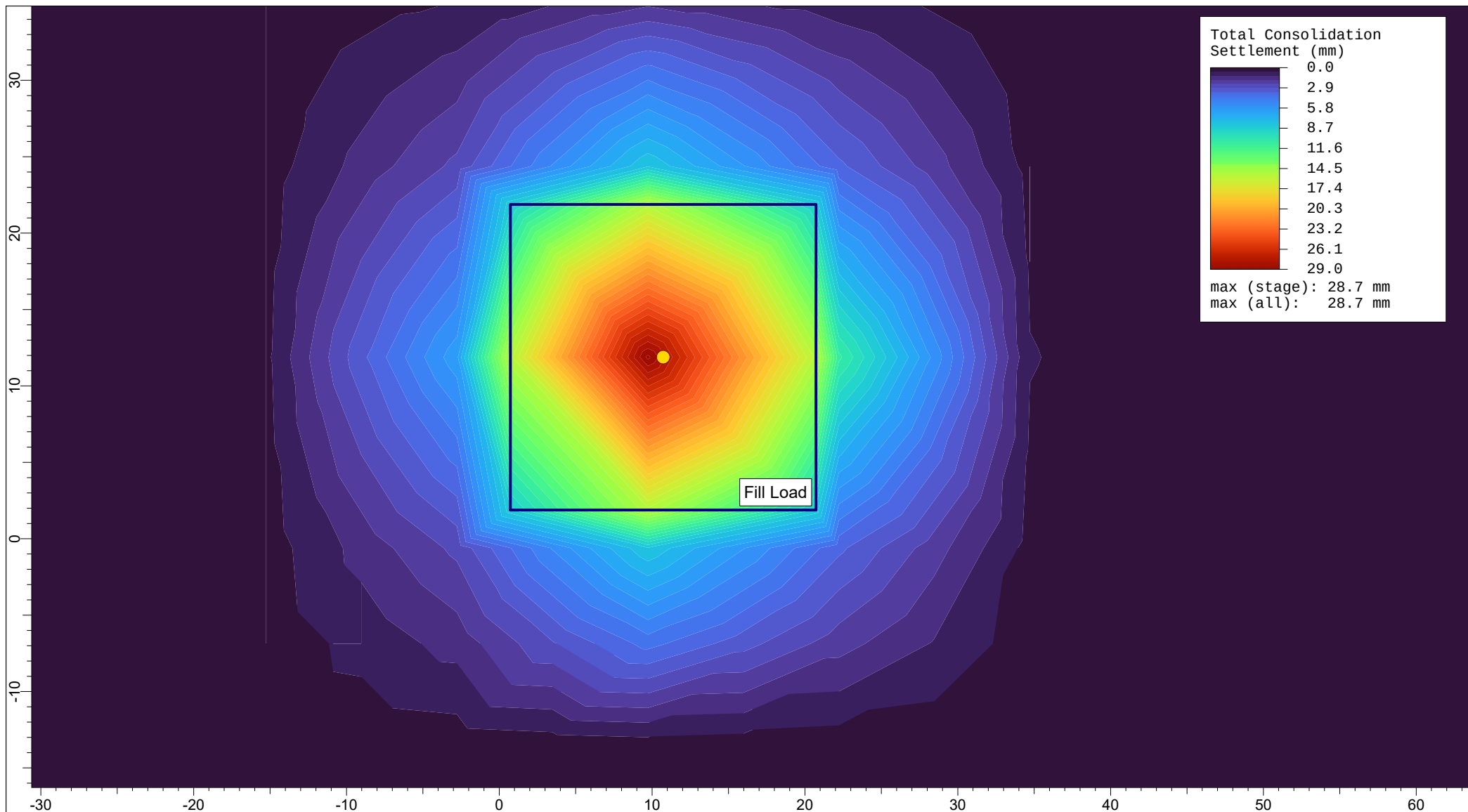
Calculate

Clear Data

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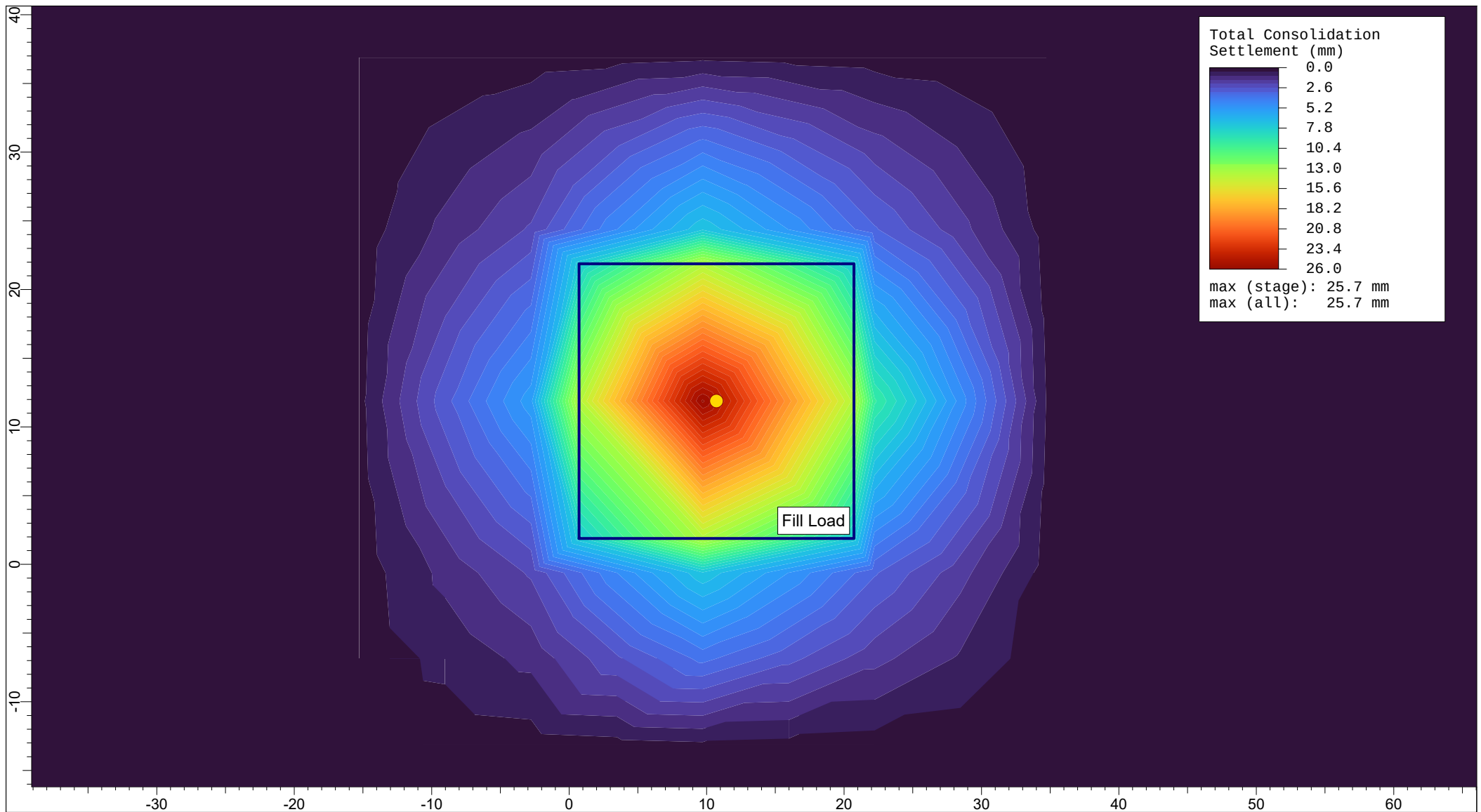
APPENDIX V

SETTLE3 MODEL RESULTS



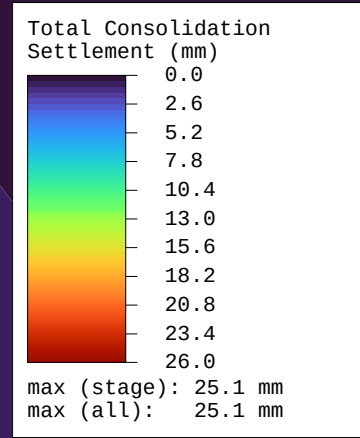
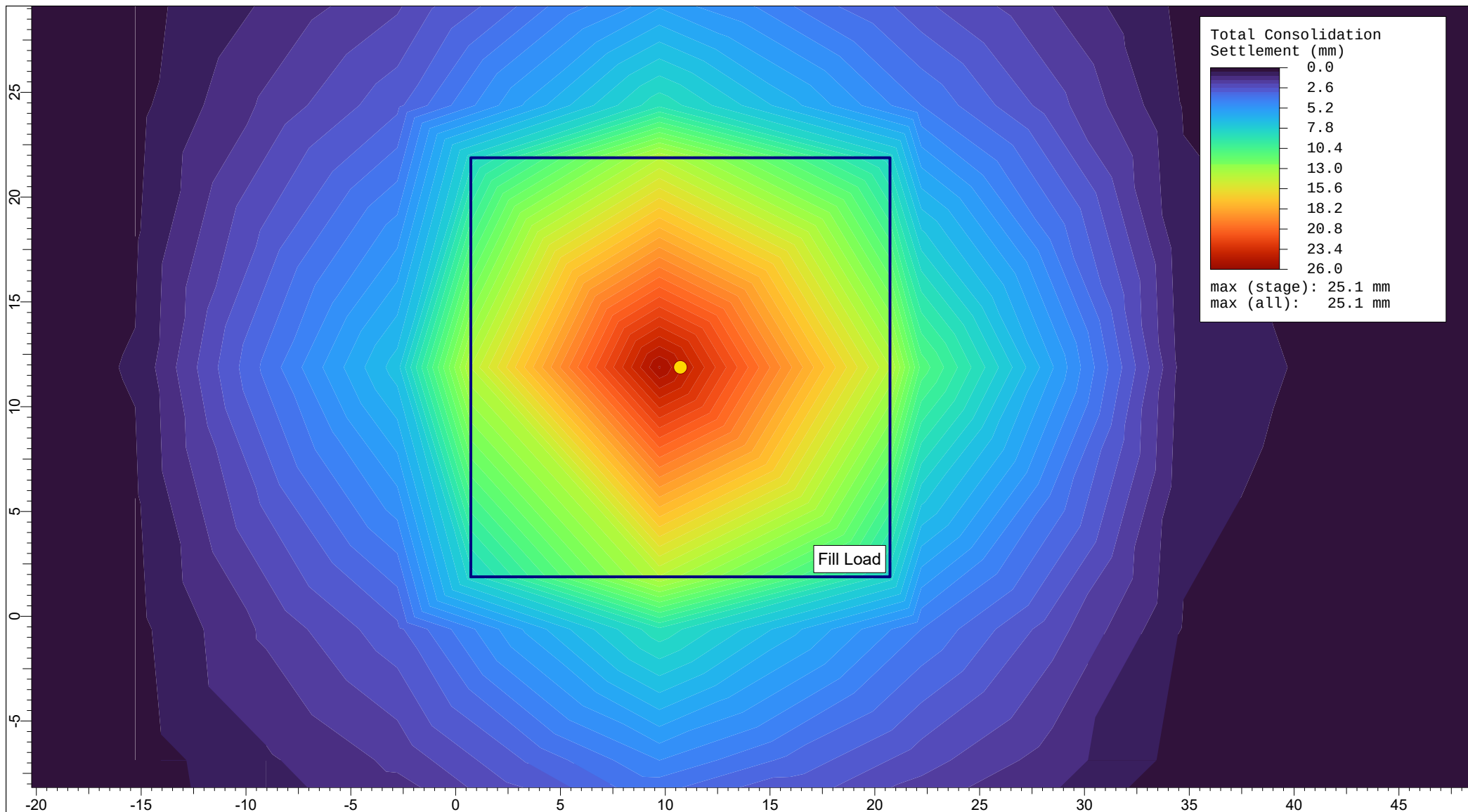
SETTLE3 5.023

Project		Jacks Pill	
Analysis Description		CPT1A Primary Consolidation Settlement	
Drawn By		JJ	Company Integral Geotechnique
Date		26/11/2024, 11:07:11	File Name Jacks Pill Settlement Models - CPT1A.s3z

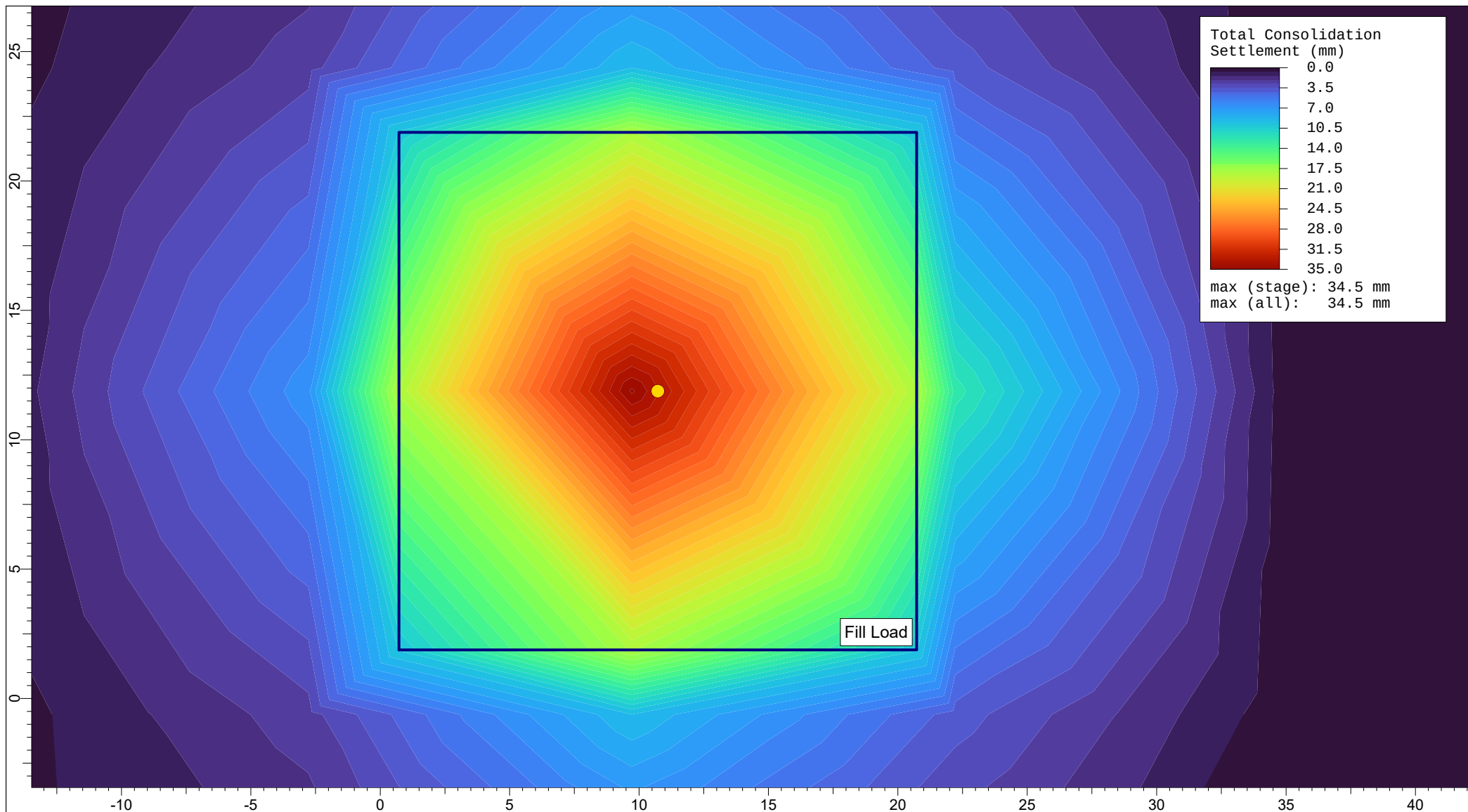


SETTLE3 5.023

Project	Jacks Pill		
Analysis Description	CPT2C Primary Consolidation Settlement		
Drawn By	JJ	Company	Integral Geotechnique
Date	26/11/2024, 11:07:11	File Name	Jacks Pill Settlement Models - CPT2C.s3z

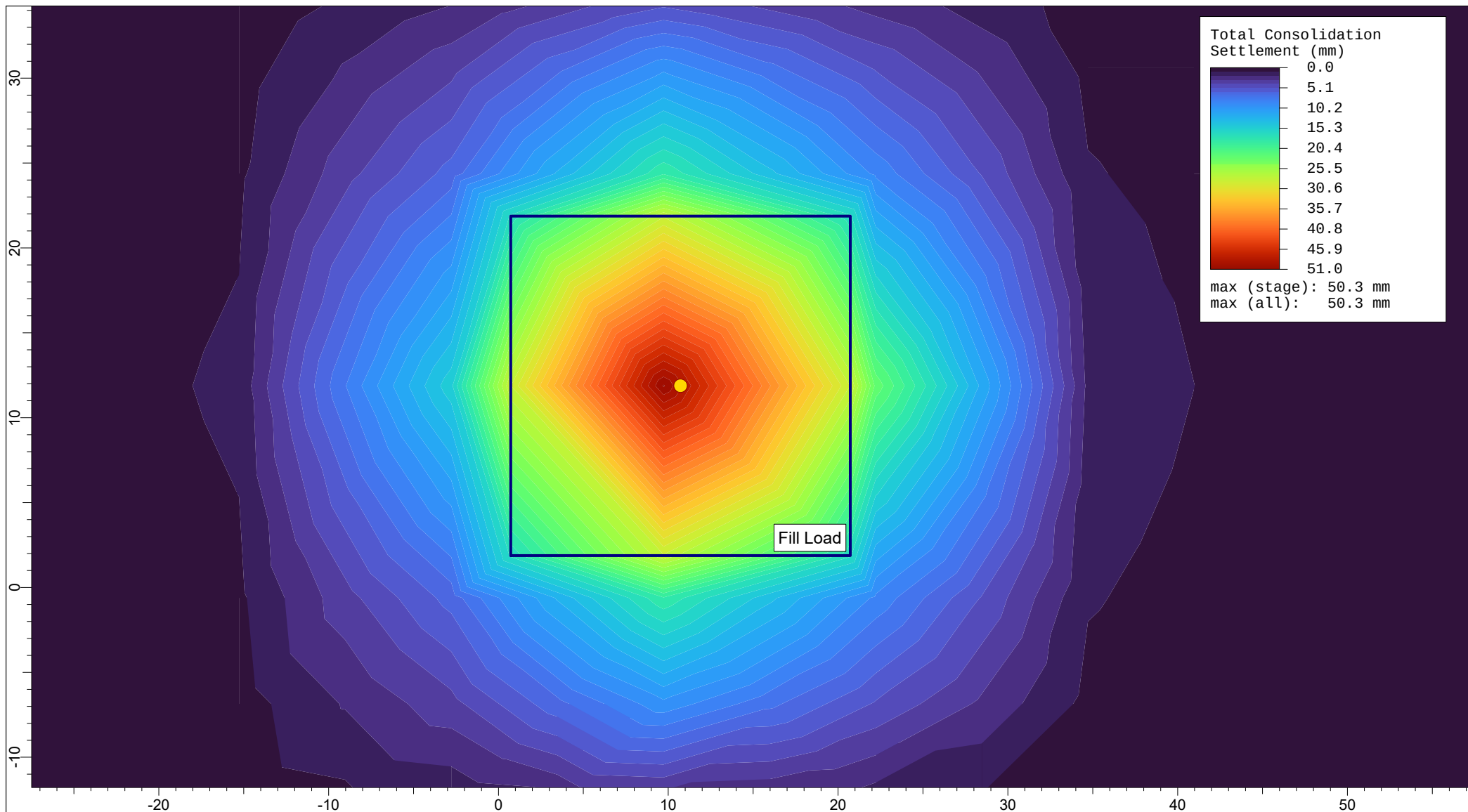


 rocscience	ProjectJacks Pill		
	Analysis DescriptionCPT3B Primary Consolidation Settlement		
	Drawn ByJJ	Company	Integral Geotechnique
	Date26/11/2024, 11:07:11	File Name	Jacks Pill Settlement Models - CPT3B.s3z



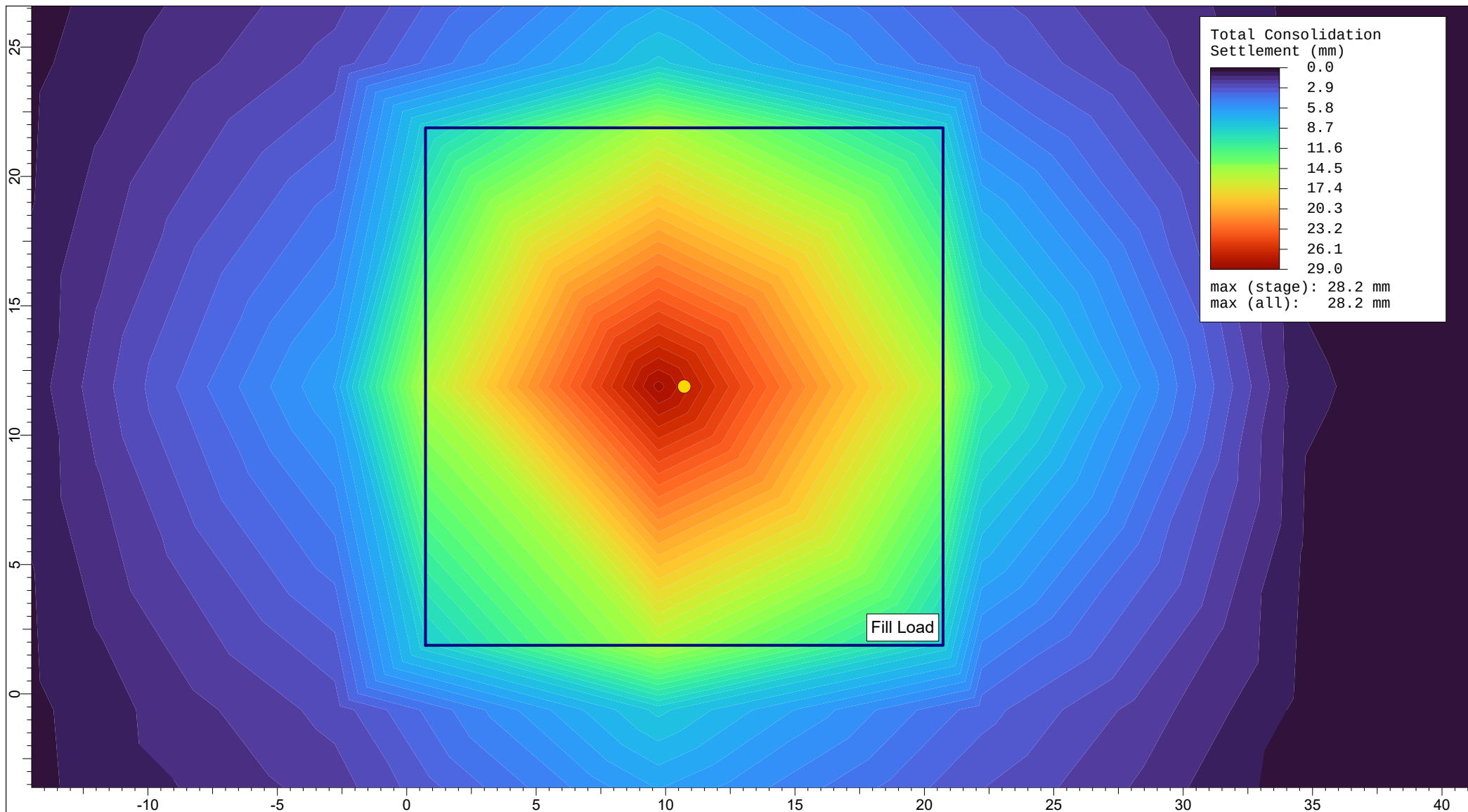
SETTLE3 5.023

Project	Jacks Pill		
Analysis Description	CPT4C Primary Consolidation Settlement		
Drawn By	JJ	Company	Integral Geotechnique
Date	26/11/2024, 11:07:11	File Name	Jacks Pill Settlement Models - CPT4C.s3z



SETTLE3 5.023

Project	Jacks Pill		
Analysis Description	CPT5A Primary Consolidation Settlement		
Drawn By	JJ	Company	Integral Geotechnique
Date	26/11/2024, 11:07:11	File Name	Jacks Pill Settlement Models - CPT5A.s3z



SETTLE3 5.023

Project	Jacks Pill		
Analysis Description	CPT6A Primary Consolidation Settlement		
Drawn By	JJ	Company	Integral Geotechnique
Date	26/11/2024, 11:07:11	File Name	Jacks Pill Settlement Models - CPT6A.s3z

FIGURES

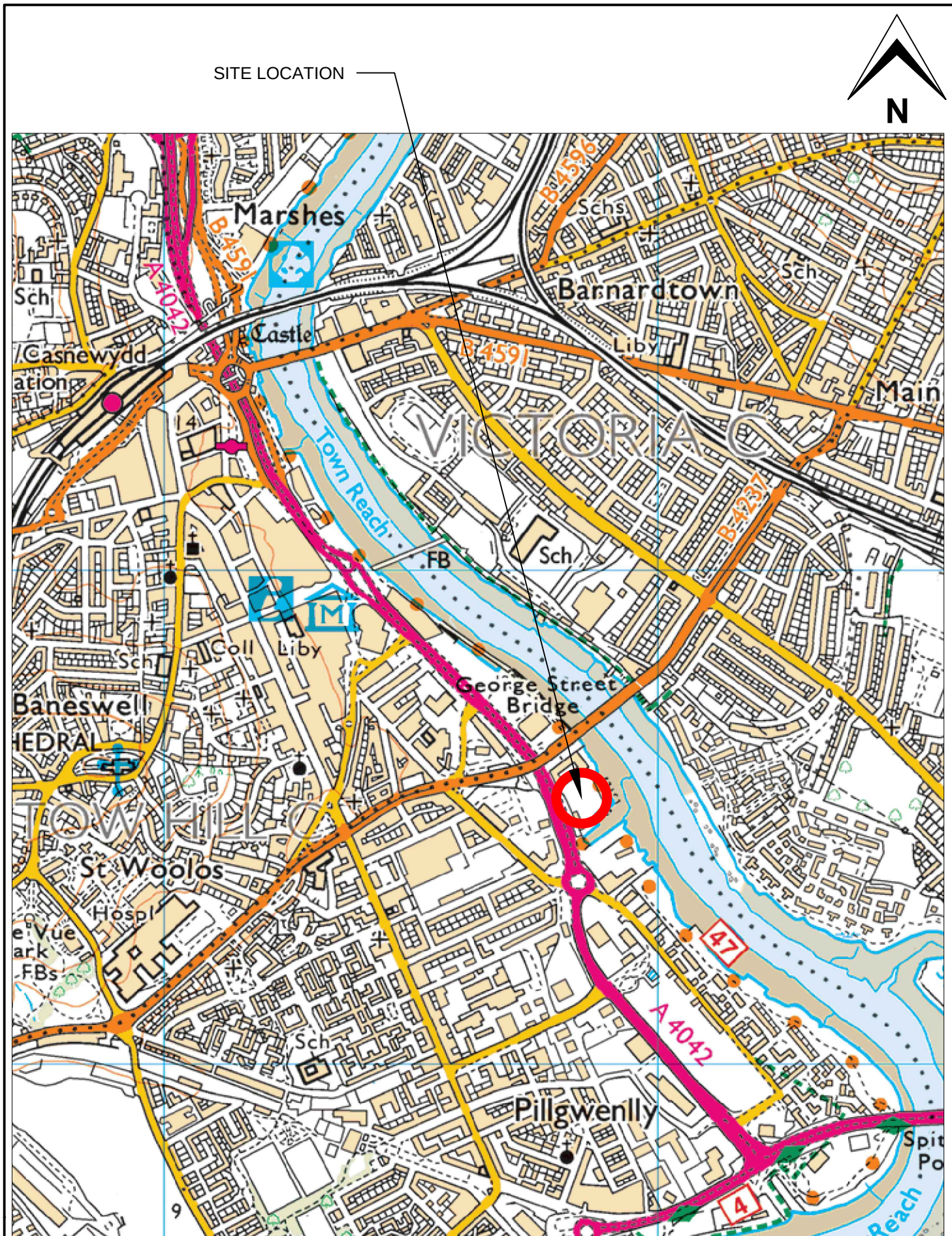


Figure 1: Site Location

Project: Jacks Pill Land, Usk Way, Newport

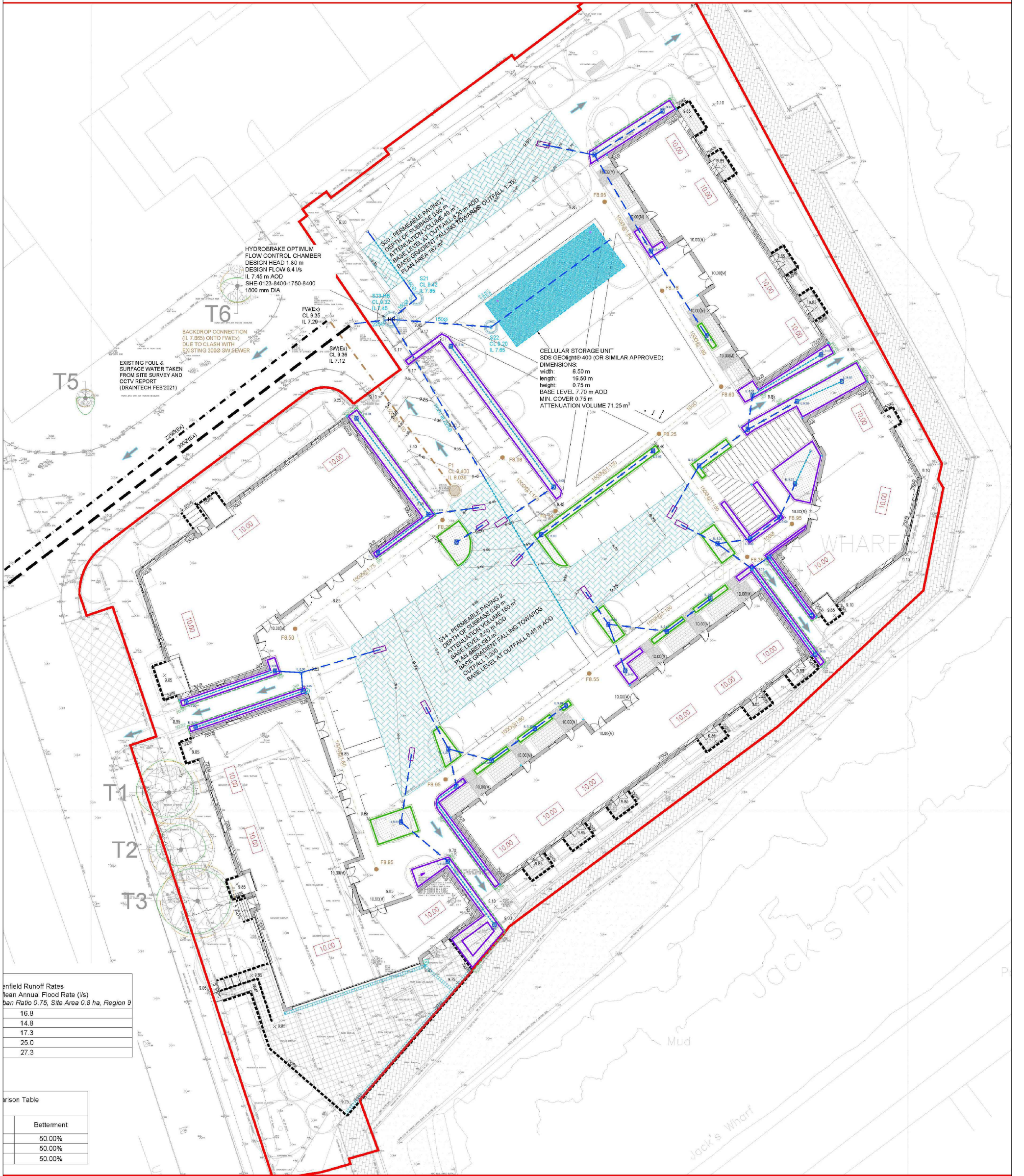
Job no.: 14627

Client: Hedyn

Scale: 1:10,000 at A4

Intégral
Géotechnique

Integral House,
7 Beddau Way,
Castlegate Business Park,
Caerphilly,
CF83 2AX.
Tel: 029 2080 7991



Field Runoff Rates
Mean Annual Flood Rate (l/s)
Rain Ratio 0.75, Site Area 0.9 ha, Region 9

16.8
14.8
17.3
25.0
27.3

Comparison Table

Butterment
50.00%
50.00%
50.00%

Figure 2: Proposed Development Layout

Project: Jacks Pill Land, Usk Way, Newport

Client: Hedyn

Job No.: 14627

Scale: NTS

Intégral
Géotechnique

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7 Beddau Way,
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