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JL/C6579/15383 Rev A

31 March 2026

Modulek
19 Bessemer Cl
Verwood
BH31 6AZ
Tansley

For the Attention of Bethany Pester

Dear Bethany,

Re: Wrexham FC Training Ground– Geotechnical Letter Report

We are writing to report on the findings of the intrusive ground investigation undertaken at the above site.

Background

Proposed Development
The proposed development is for a new first team pavilion, for which two potential locations have been proposed.

Current Site Description
The site is situated off Chester Road, Gresford, Wrexham, and is currently occupied by Colliers Park sports complex, with associated commercial buildings, hard standing car parks, storage compounds, and soft landscaped land.

Scope and Objectives
The site investigation documented within this letter report was carried out to assess the ground conditions within the area of the proposed pavilion areas. The factual information obtained from the ground investigation is summarised below.

BSL understand the client was looking to re-use a potential existing concrete slab and required further information, including slab thickness/geometry, reinforcement details, sub-base material, depth, and bearing strata geology, however this slab was not encountered during the site works, and therefore a standard programme of site investigation was undertaken.

Site Works

Four window sample boreholes were excavated to depths ranging from 4.40m to 5.45m bgl on the 26th February 2026. The locations were undertaken in order to establish general ground conditions on site, allow for SPTs to be undertaken, and obtain samples for geotechnical testing.

A second visit was undertaken on the 30th March 2026 where a further three window sample boreholes were excavated to depths ranging from 4.60m to 5.00m bgl, alongside two plate load tests being conducted. The window samples were undertaken in order to install gas and groundwater monitoring wells, and obtain samples for chemical testing, the results of which will be discussed in a separate report. The plate loads were undertaken in order to derive an equivalent CBR value in the subsoil directly beneath the hardstanding/topsoil.

The locations are shown on the Exploratory Hole Location Plan, drawing No. C6579/02. This drawing is included within Appendix C. The boreholes were logged by an experienced geo-environmental engineer in general accordance with BS 5930:2015+A1:2020 'Code of Practice for Site Investigations' and BS EN 14688-1:2018.

'Geotechnical Investigation and Testing – Identification and classification of soil'.

Ground Conditions

The window sample logs are presented in Appendix A and ground conditions are summarised below.

Made Ground Topsoil
Made Ground Topsoil was only recorded within WS03 and PL01 and comprised gravelly clayey sand with rootlets, and anthropogenic inclusions of gravel sized brick and pottery. This was encountered from ground level to between 0.30m and 0.45m bgl.

Hardstanding
Tarmacadam was recorded in WS01, WS02, WS03, WS101, WS102, WS103, PL01 and PL02 from between ground level and 0.45m to between 0.10m and 0.50m bgl.

Made Ground
General granular made ground was found throughout all exploratory holes, from between 0.10m and 2.00m to between 3.90m and 5.45m bgl. The made ground was comprised predominantly of sand and gravel with varying amounts of clay, sand, and gravel as minor constituents, and rare anthropogenic inclusions of brick, concrete, and slag.

Cohesive made ground was observed within WS01, WS101, WS102, and WS103 from between 2.00m and 3.90m to between 2.50m and 4.40m bgl, with a maximum thickness of 0.60m, comprising predominantly slightly sandy gravelly clay with rare anthropogenic inclusions of brick.

Reworked made ground was encountered in WS02, WS03, WS04, WS101, WS102, and WS103 from between 0.30m and 2.70m bgl, to between 2.50m and 5.45m bgl, comprising predominantly sand and gravel with varying amounts of clay, sand, and gravel as minor constituents. It was noted that a large proportion of the gravel consisted of poor quality coal fragments.

Groundwater
Groundwater was only encountered within WS03 on the first visit, with slight seepage being noted from 1.20m bgl. During the second visit groundwater was encountered within WS101 (0.70m bgl), WS102 (4.20m bgl), and WS103 (3.60m bgl).

Sampling and In Situ Testing

Sampling

Representative bulk samples were obtained to a maximum depth of 5.00m bgl. Selected samples were scheduled for testing at an approved laboratory in accordance with BS 1377 'Method of Test for Soils for Civil Engineering Purposes' and BS EN ISO 17892- Parts 1-12:2018 'Geotechnical investigation and testing. Laboratory testing of soil'.

In Situ Standard Penetration Tests

Standard Penetration Tests (SPTs) were carried out within the window sample boreholes at regular 1.00m intervals, starting from the base of the hand excavated pits at 1.20m bgl. The results of the individual blows and the N-values are recorded on the Exploratory Hole Logs in Appendix A.

All SPT N values are uncorrected. Density and strength descriptors are reported in accordance with the guidelines stated in BS 5930:2015+A1:2020, incorporating requirements of BS EN ISO 14688-1:2002, BS EN ISO 14688-2:2004 and BS EN ISO 14689-1:2003.

In Situ CBR Testing

The in situ CBR testing results are summarised in the table below:

Method	Location	Stratum Type	CBR (%)	Modulus Subgrade Reaction K^{762} (kN/m^2/mm)
Plate Load Test	PL01	Sl gravelly sl clayey SAND	2.5	39.8
	PL02	Sandy GRAVEL	19.3	129.2

The full test results are presented in Appendix B.

Permeability Test Results (Boreholes)

The results of permeability testing in boreholes using falling head/rising head methods are presented in the table below. These were carried out in general accordance with BS 5930 & BS 22282.

Location	Response Zone (m)	Stratum Type	Hydraulic Conductivity (m/sec)
WS101	1.00 – 5.00	Granular Made Ground	4.83×10^{-4}
WS102	1.00 – 5.00	Granular Made Ground	1.05×10^{-3}
WS103	1.00 – 5.00	Granular Made Ground	4.02×10^{-5}

Laboratory Analysis

The following tests were scheduled for geotechnical purposes:

Description	No. of Samples
Moisture Content	2
PSD – Dry Sieve	2
Compaction 4.5kg	2
CBR in lab: at received MC	2

The geotechnical laboratory testing results are presented in Appendix B.

Particle Size Distribution (PSD) Analyses

Two PSD tests were undertaken on samples of the made ground from WS01 (0.1 – 0.5m bgl) and WS04 (0.5 – 1.2m bgl). The findings indicate the made ground is primarily granular and varies between a silty sandy gravel and a silty very sandy gravel.

Particle size distribution testing indicates that sample WS01 falls within the grading limits for Class 1B and also within the limits for Classes 6F1 and 6F2 of the Specification for Highway Works (Series 601). Sample WS04 falls within the grading limits for Class 1B and Class 6F1.

Compaction Testing

Compaction testing carried out on samples of the made ground indicate Optimum Moisture Contents (OMC) of between 7.6% and 8.9%, with corresponding Maximum Dry Density (MDD) values between 2.02 Mg/m^3 and 2.10 Mg/m^3.

Method	Location	Depth (m)	Brief Stratum Description	PD[1] (Mg/m^3)	MDD[2] (Mg/m^3)	IMC[3] (%)	OMC[4] (%)
4.5 kg compaction effort	WS02	0.4 – 1.0	MG: Silty sandy GRAVEL	2.60	2.10	3.6	7.6
	WS03	0.3 – 1.0	MG: Silty sandy GRAVEL	2.60	2.02	4.7	8.9

[1] PD – Particle Density, [2] MDD – Maximum Dry Density, [3] IMC – initial Moisture Content, [4] *OMC – Optimum Moisture Content

Recorded water contents range from 3.4% to 14%, with an average of 7.5%, indicating that they are 'dry' of OMC.

Laboratory CBR Results

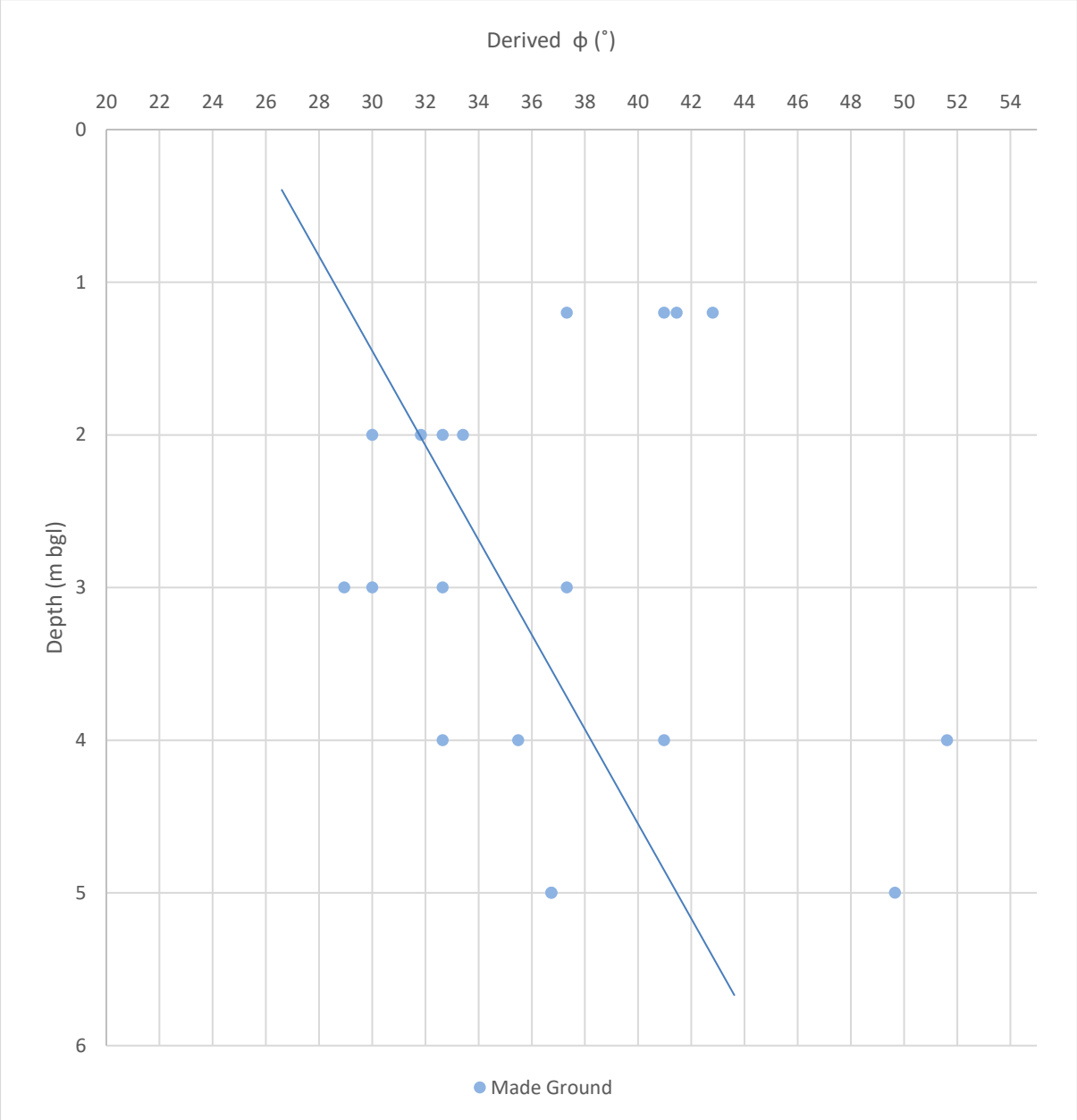
The laboratory California Bearing Ratio (CBR) results are summarised in the table below:

Method	Location	Depth (m)	Brief Stratum Description	CBR (%)	Moisture Content (%)
Laboratory CBR on recompacted sample (4.5 kg compaction effort at received MC)	WS01	0.8 – 2.0	MG: Silty sandy GRAVEL	31.8	14
	WS04	0.15 – 0.5	MG: Silty sandy GRAVEL	24.8	3.4

Geotechnical Assessment

The relevant test results from the prior section have been evaluated to derive geotechnical soil parameters for the site. The testing shows the shallow made ground material to be generally consistent in composition and grading. Given this consistency, the made ground across the site can be treated as typical granular material for the purposes of further geotechnical assessment.

A depth (m bgl) vs the angle of shearing resistance (ϕ') graph is provided below to provide a profile of the granular materials underlying the site.



The above graph shows a general increase in soils density as depth increases.

Characteristic Values

Characterisation of the geotechnical parameters above has been undertaken to obtain characteristic values, which are a cautious estimate of the values affecting the occurrence of the limit state, taking into consideration typical minimum foundation depths for cohesive and granular soils.

The minimum founding depth in granular soils is typically 0.45 m bgl. However, due to the more heterogeneous nature of the made ground across the site, a more conservative minimum founding depth of 0.75 m bgl has been adopted where appropriate.

The characteristic ϕ' value in the granular deposits as read from the depth vs ϕ' graph above at 1.00m bgl is interpreted to be 29° for Ultimate Limit State conditions.

Foundations

The development will comprise a two storey pavilion and is considered to be classed as Geotechnical Category 2 in accordance with Eurocode 7. Preliminary design by calculation has been undertaken to determine the design resistance of the bearing strata in the following section.

A proposed structural load of 246kN/m^2 has been provided to BSL by the client.

This assessment is based on the existing ground levels and does not take into consideration any cut/fill exercise, which should be considered at the detailed design stage.

The most suitable foundations for the proposed structure at the site are likely to be pad foundations placed within the made ground sandy gravel strata The minimum founding depth in granular soils is typically 0.45m bgl. However, due to the more heterogeneous nature of the made ground across the site, and the higher nature of the provided structural loads, a more conservative minimum founding depth of 1.00m bgl has been adopted. Where footings are taken below the minimum founding depths, they should extend a minimum of 100mm into the specified bearing stratum.

At this depth, for a pad footing of approximately 1.50m width and breadth, above the groundwater table, an allowable bearing capacity not exceeding 265kN/m^2 should be assumed for the made ground sandy gravel. This adopts a factor of safety of 3 which should limit settlements to within acceptable limits. If subsequent groundwater monitoring determines that the groundwater table lies shallower than this depth, an allowable bearing capacity not exceeding 205kN/m^2 should be assumed for the made ground sandy gravel. In this instance, the foundation would have to be deepened, or the pad width increased, to meet the required load capacity.

It should also be noted that the maximum penetration recorded from both lab CBR tests was 7.5mm, with the in-situ testing being even less, between 1.97mm and 2.95mm indicating that limited settlement of shallow foundations should be anticipated.

Floor slabs

For granular soils, a minimum ventilation void of 150mm should be provided below the underside of precast concrete suspended floors.

Site Drainage

The tests undertaken across the site indicate good drainage conditions. Based on the infiltration rates obtained, on the order of 10^{-3} to 10^{-5} m/s, it is likely that drainage to soakaways will be feasible at the site. We recommend the design of soakaway drainage is carried out in accordance with BRE 365 and CIRIA C753. Consideration should also be given to future maintenance, where infiltration capacity can be reduced as a result of blinding through ingress of fines.

Note the base of any soakaway incorporated into the future development of the site is required to be at least 1m above the water table. Observed groundwater levels ranged between 0.70m and 4.20m bgl across the site.

If drainage to soakaways is to be considered, it is suggested that this is discussed with the Local Authority at the earliest opportunity, to confirm the adequacy of proposed testing and to allow their inspection of any test results.

Geotechnical Summary and Conclusion

Based on the site investigation works and geotechnical lab testing detailed within this report, the ground conditions within the area of the proposed pavilion areas have been assessed, a summary of which is provided below:

- No concrete slab was encountered on site and therefore cannot be considered for use in foundation design.
- The site is generally underlain by deep granular made ground, encountered to the base of all exploratory holes.
- Laboratory testing indicates that the made ground is relatively consistent in composition and grading.
- A minimum founding depth of 1.00m has been suggested, at which an allowable bearing capacity not exceeding 265kN/m^2 should be assumed for pad footings of 1m width if it is deemed no groundwater is present.
- A minimum ventilation void of 150mm should be provided below the underside of precast concrete suspended floors.
- Drainage to soakaways is likely to be feasible.

We trust the above meets your requirements. If you have any queries, then please do not hesitate to contact the undersigned.

Yours sincerely,

For Brownfield Solutions Ltd

Produced by:

[redacted]

J J Lloyd
BSc (Hons) FGS
Graduate Geo-Environmental Consultant

Checked and approved by:

[redacted]

BSc (Hons) MIEnvSc FGS
Senior Geo-Environmental Consultant

Enc Appendix A – Exploratory Hole Logs
Appendix B – Geotechnical Laboratory Testing Results
Appendix C – Exploratory Hole Location Plan

APPENDIX A

Exploratory Hole Logs

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Borehole Log

Window Sampler No.
WS01
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.10-0.50	B		0.10			MADE GROUND: Tarmacadam.
								MADE GROUND: Grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete and limestone.
		0.50-0.80	B		0.50			MADE GROUND: Brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of brick, concrete, and sandstone.
		0.80-2.00	B		0.80			*Becoming orangish brown from 0.70m bgl.*
								MADE GROUND: Dark brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and rare brick.
		1.20	SPT	N=26 (5,6/6,5,7,8)				
		2.00	SPT	N=9 (1,2/2,2,3,2)				
		3.00	SPT	N=15 (1,0/3,4,4,4)				
					3.50			MADE GROUND: Reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone and rare coal.
		4.00	SPT	N≥50 (1,2/50 for 255mm)	3.90			MADE GROUND: Dark brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, coal, and rare brick.
					4.40			End of Borehole at 4.40m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. No groundwater encountered.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

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Borehole Log

Window Sampler No.: **WS02**

Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type:** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale:** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged:** JL / **Checked:** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.10-0.40	B		0.10			MADE GROUND: Tarmacadam.
		0.40-1.00	B		0.40			MADE GROUND: Grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete and limestone.
		1.00-1.40	B		1.00			MADE GROUND: Brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of brick, concrete, and sandstone.
		1.20	SPT	N=15 (3,3/4,3,4,4)				
		1.40-2.00	B		1.40			MADE GROUND: Light brown slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse of sandstone, mudstone, and rare brick.
		2.00	SPT	N=7 (4,3/2,2,1,2)				MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and rare brick.
					2.20			MADE GROUND: Dark reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		3.00-4.00	B		3.00			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		3.00	SPT	N=4 (1,1/1,1,1,1)				
		4.00	SPT	N=22 (5,4/3,4,8,7)	4.00			MADE GROUND: Brown fine to coarse SAND. (REWORKED)
					4.40			MADE GROUND: Dark reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and concrete.
		5.00	SPT	N=44 (10,10/10,11,11,12)				
					5.45			End of Borehole at 5.45m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. No groundwater encountered.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

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Borehole Log

Window Sampler No.
WS03
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.30-1.00	B		0.30			MADE GROUND: Grass over dark brown slightly gravelly slightly clayey SAND with moderate rootlet content. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, coal, brick, and pottery.
								MADE GROUND: Reddish brown slightly sandy clayey GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of mudstone, sandstone, and rare quartz. (REWORKED)
	▽	1.20	SPT	N=23 (3,4/4,6,6,7)				
		1.40-2.00	B		1.40			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		2.00-2.70	B		2.00			MADE GROUND: Reddish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, coal, and rare slag.
		2.00	SPT	N=8 (3,3/2,2,2,2)				
		3.00	SPT	N=5 (2,1/1,1,1,2)				
					3.70			MADE GROUND: Yellowish brown sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone and mudstone. (REWORKED)
					3.90			MADE GROUND: Reddish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, coal, and rare slag.
		4.00	SPT	N=12 (4,3/2,3,3,4)				
		5.00	SPT	N=14 (2,4/4,3,4,3)				
					5.45			End of Borehole at 5.45m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. Groundwater encountered from 1.20m bgl.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

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Borehole Log

Window Sampler No.
WS04
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.15-0.50	B		0.15			MADE GROUND: Tarmacadam.
								MADE GROUND: Light grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete and limestone.
		0.50-1.20	B		0.50			MADE GROUND: Reddish brown slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone and rare coal. (REWORKED)
		1.20-1.70 1.20	B SPT	N=22 (6,6/7,6,4,5)	1.20			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					1.70			MADE GROUND: Reddish brown slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of mudstone and sandstone. (REWORKED)
		2.00-3.50 2.00	B SPT	N=5 (3,2/1,1,2,1)	2.00			MADE GROUND: Dark grey slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		3.00	SPT	N=8 (4,3/2,2,2,2)				
					3.50			MADE GROUND: Reddish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, and coal. (REWORKED)
		4.00-5.00 4.00	B SPT	N=8 (4,3/2,2,2,2)				
		5.00	SPT	N=14 (3,4/4,3,4,3)				
					5.45			End of Borehole at 5.45m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. No groundwater encountered.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
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HSV = Hand Shear Vane

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Trial Pit Log

No.
PL01
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** TP
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:25
CLIENT:	MODULEK	**DATES:**	30/03/26 - 30/03/26

Logged	Checked
JL	JM

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
				0.45			MADE GROUND: Grass over dark brown slightly gravelly slightly clayey SAND with moderate rootlet content. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, coal, brick, and pottery. (TOPSOIL)
				0.50			MADE GROUND: Tarmacadam.
							End of Trial Pit at 0.50m

1.0
2.0
3.0
4.0
5.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. No groundwater encountered.
3. Excavation sides stable.
4. Backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

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Trial Pit Log

No.
PL02
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** TP
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:25
CLIENT:	MODULEK	**DATES:**	30/03/26 - 30/03/26

Logged	Checked
JL	JM

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
				0.10			MADE GROUND: Tarmacadam.
				0.20			MADE GROUND: Light yellowish brown and grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete, sandstone, and limestone.
							End of Trial Pit at 0.20m

1.0
2.0
3.0
4.0
5.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. No groundwater encountered.
3. Excavation sides stable.
4. Backfilled with arisings upon completion.

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D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

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Borehole Log

Window Sampler No.
WS01
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.10-0.50	B		0.10			MADE GROUND: Tarmacadam.
								MADE GROUND: Grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete and limestone.
		0.50-0.80	B		0.50			MADE GROUND: Brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of brick, concrete, and sandstone.
		0.80-2.00	B		0.80			*Becoming orangish brown from 0.70m bgl.*
								MADE GROUND: Dark brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and rare brick.
		1.20	SPT	N=26 (5,6/6,5,7,8)				
		2.00	SPT	N=9 (1,2/2,2,3,2)				
		3.00	SPT	N=15 (1,0/3,4,4,4)				
					3.50			MADE GROUND: Reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone and rare coal.
		4.00	SPT	N≥50 (1,2/50 for 255mm)	3.90			MADE GROUND: Dark brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, coal, and rare brick.
					4.40			End of Borehole at 4.40m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. No groundwater encountered.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.: **WS02**

Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type:** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale:** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged:** JL / **Checked:** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.10-0.40	B		0.10			MADE GROUND: Tarmacadam.
		0.40-1.00	B		0.40			MADE GROUND: Grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete and limestone.
		1.00-1.40	B		1.00			MADE GROUND: Brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of brick, concrete, and sandstone.
		1.20	SPT	N=15 (3,3/4,3,4,4)				
		1.40-2.00	B		1.40			MADE GROUND: Light brown slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse of sandstone, mudstone, and rare brick.
		2.00	SPT	N=7 (4,3/2,2,1,2)				MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and rare brick.
					2.20			MADE GROUND: Dark reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		3.00-4.00	B		3.00			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		3.00	SPT	N=4 (1,1/1,1,1,1)				
		4.00	SPT	N=22 (5,4/3,4,8,7)	4.00			MADE GROUND: Brown fine to coarse SAND. (REWORKED)
					4.40			MADE GROUND: Dark reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and concrete.
		5.00	SPT	N=44 (10,10/10,11,11,12)				
					5.45			End of Borehole at 5.45m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. No groundwater encountered.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS03
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.30-1.00	B		0.30			MADE GROUND: Grass over dark brown slightly gravelly slightly clayey SAND with moderate rootlet content. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, coal, brick, and pottery.
								MADE GROUND: Reddish brown slightly sandy clayey GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of mudstone, sandstone, and rare quartz. (REWORKED)
	▽	1.20	SPT	N=23 (3,4/4,6,6,7)				
		1.40-2.00	B		1.40			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		2.00-2.70	B		2.00			MADE GROUND: Reddish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, coal, and rare slag.
		2.00	SPT	N=8 (3,3/2,2,2,2)				
		3.00	SPT	N=5 (2,1/1,1,1,2)				
					3.70			MADE GROUND: Yellowish brown sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone and mudstone. (REWORKED)
					3.90			MADE GROUND: Reddish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, coal, and rare slag.
		4.00	SPT	N=12 (4,3/2,3,3,4)				
		5.00	SPT	N=14 (2,4/4,3,4,3)				
					5.45			End of Borehole at 5.45m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. Groundwater encountered from 1.20m bgl.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS04
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.15-0.50	B		0.15			MADE GROUND: Tarmacadam.
								MADE GROUND: Light grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete and limestone.
		0.50-1.20	B		0.50			MADE GROUND: Reddish brown slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone and rare coal. (REWORKED)
		1.20-1.70 1.20	B SPT	N=22 (6,6/7,6,4,5)	1.20			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					1.70			MADE GROUND: Reddish brown slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of mudstone and sandstone. (REWORKED)
		2.00-3.50 2.00	B SPT	N=5 (3,2/1,1,2,1)	2.00			MADE GROUND: Dark grey slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		3.00	SPT	N=8 (4,3/2,2,2,2)				
					3.50			MADE GROUND: Reddish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, and coal. (REWORKED)
		4.00-5.00 4.00	B SPT	N=8 (4,3/2,2,2,2)				
		5.00	SPT	N=14 (3,4/4,3,4,3)				
					5.45			End of Borehole at 5.45m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. No groundwater encountered.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS101
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:**	30/03/26 - 30/03/26

Logged	Checked
JL	JM

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.15-0.40	ES		0.15			MADE GROUND: Tarmacadam.
		0.40-0.70	ES		0.40			MADE GROUND: Light grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete, sandstone, and limestone.
	▽				0.70			MADE GROUND: Greyish brown slightly sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of quartzite, sandstone, coal, and concrete.
								MADE GROUND: Reddish brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, and coal. (REWORKED)
					1.30			MADE GROUND: Dark grey slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and rare wood. (REWORKED)
					2.50			MADE GROUND: Dark grey slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					3.00			MADE GROUND: Dark grey slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					3.60			MADE GROUND: Reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, coal, and rare concrete.
								Becoming slightly gravelly from 4.60m bgl.
					5.00			End of Borehole at 5.00m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL Engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. Groundwater encountered from 0.70m bgl.
4. Installation to 5.00m bgl: 1.00m plain 35mm PVC, 4.00m slotted 35mm PVC upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS102
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** -	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.15-0.50	ES		0.15			MADE GROUND: Tarmacadam.
		0.50-1.20	ES		0.50			MADE GROUND: Light grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete, sandstone, and limestone.
								MADE GROUND: Dark brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and brick.
					2.70			
					2.80			MADE GROUND: Light pinkish brown slightly sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone. (REWORKED)
					3.20			MADE GROUND: Dark brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and brick.
								MADE GROUND: Dark brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and rare brick.
					3.80			
					4.00			MADE GROUND: Light pinkish brown slightly sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone. (REWORKED)
	▽							MADE GROUND: Dark brown sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					4.60			End of Borehole at 4.60m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL Engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. Groundwater encountered from 4.20m bgl.
4. Installation to 4.60m bgl: 1.00m plain 35mm PVC, 3.60m slotted 35mm PVC upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS103
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** -	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.10-0.60	ES		0.10			MADE GROUND: Tarmacadam.
								MADE GROUND: Light yellowish brown and grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete, sandstone, and limestone.
		0.60-0.90	ES		0.60			MADE GROUND: Greyish brown sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of sandstone and concrete.
					0.90			MADE GROUND: Reddish brown slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone. (REWORKED)
					1.50			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					2.00			MADE GROUND: Grey and light grey slightly sandy CLAY. Sand is fine to coarse. (REWORKED)
					2.50			MADE GROUND: Dark reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, rare quartzite, and rare brick.
					5.00			End of Borehole at 5.00m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL Engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. Groundwater encountered from 3.60m bgl.
4. Installation to 5.00m bgl: 1.00m plain 35mm PVC, 4.00m slotted 35mm PVC upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Trial Pit Log

No.
PL01
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** TP
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:25
CLIENT:	MODULEK	**DATES:**	30/03/26 - 30/03/26

Logged	Checked
JL	JM

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
				0.45			MADE GROUND: Grass over dark brown slightly gravelly slightly clayey SAND with moderate rootlet content. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, coal, brick, and pottery. (TOPSOIL)
				0.50			MADE GROUND: Tarmacadam.
							End of Trial Pit at 0.50m

1.0
2.0
3.0
4.0
5.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. No groundwater encountered.
3. Excavation sides stable.
4. Backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Trial Pit Log

No.
PL02
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** TP
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:25
CLIENT:	MODULEK	**DATES:**	30/03/26 - 30/03/26

Logged	Checked
JL	JM

Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
	Depth (m)	Type	Results				
				0.10			MADE GROUND: Tarmacadam.
				0.20			MADE GROUND: Light yellowish brown and grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete, sandstone, and limestone.
							End of Trial Pit at 0.20m

1.0
2.0
3.0
4.0
5.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. No groundwater encountered.
3. Excavation sides stable.
4. Backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS01
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.10-0.50	B		0.10			MADE GROUND: Tarmacadam.
								MADE GROUND: Grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete and limestone.
		0.50-0.80	B		0.50			MADE GROUND: Brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of brick, concrete, and sandstone.
		0.80-2.00	B		0.80			*Becoming orangish brown from 0.70m bgl.*
								MADE GROUND: Dark brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and rare brick.
		1.20	SPT	N=26 (5,6/6,5,7,8)				
		2.00	SPT	N=9 (1,2/2,2,3,2)				
		3.00	SPT	N=15 (1,0/3,4,4,4)				
					3.50			MADE GROUND: Reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone and rare coal.
		4.00	SPT	N≥50 (1,2/50 for 255mm)	3.90			MADE GROUND: Dark brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, coal, and rare brick.
					4.40			End of Borehole at 4.40m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. No groundwater encountered.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.: **WS02**

Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type:** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale:** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged:** JL / **Checked:** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.10-0.40	B		0.10			MADE GROUND: Tarmacadam.
		0.40-1.00	B		0.40			MADE GROUND: Grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete and limestone.
		1.00-1.40	B		1.00			MADE GROUND: Brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of brick, concrete, and sandstone.
		1.20	SPT	N=15 (3,3/4,3,4,4)				
		1.40-2.00	B		1.40			MADE GROUND: Light brown slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse of sandstone, mudstone, and rare brick.
		2.00	SPT	N=7 (4,3/2,2,1,2)				MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and rare brick.
					2.20			MADE GROUND: Dark reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		3.00-4.00	B		3.00			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		3.00	SPT	N=4 (1,1/1,1,1,1)				
		4.00	SPT	N=22 (5,4/3,4,8,7)	4.00			MADE GROUND: Brown fine to coarse SAND. (REWORKED)
					4.40			MADE GROUND: Dark reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and concrete.
		5.00	SPT	N=44 (10,10/10,11,11,12)				
					5.45			End of Borehole at 5.45m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. No groundwater encountered.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS03
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.30-1.00	B		0.30			MADE GROUND: Grass over dark brown slightly gravelly slightly clayey SAND with moderate rootlet content. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, coal, brick, and pottery.
								MADE GROUND: Reddish brown slightly sandy clayey GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of mudstone, sandstone, and rare quartz. (REWORKED)
	▽	1.20	SPT	N=23 (3,4/4,6,6,7)				
		1.40-2.00	B		1.40			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		2.00-2.70	B		2.00			MADE GROUND: Reddish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, coal, and rare volcanics. (REWORKED)
		2.00	SPT	N=8 (3,3/2,2,2,2)				
		3.00	SPT	N=5 (2,1/1,1,1,2)				
					3.70			MADE GROUND: Yellowish brown sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone and mudstone. (REWORKED)
					3.90			MADE GROUND: Reddish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, coal, and rare volcanics. (REWORKED)
		4.00	SPT	N=12 (4,3/2,3,3,4)				
		5.00	SPT	N=14 (2,4/4,3,4,3)				
					5.45			End of Borehole at 5.45m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. Groundwater encountered from 1.20m bgl.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS04
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** 26/02/26	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.15-0.50	B		0.15			MADE GROUND: Tarmacadam.
								MADE GROUND: Light grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete and limestone.
		0.50-1.20	B		0.50			MADE GROUND: Reddish brown slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone and rare coal. (REWORKED)
		1.20-1.70 1.20	B SPT	N=22 (6,6/7,6,4,5)	1.20			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					1.70			MADE GROUND: Reddish brown slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of mudstone and sandstone. (REWORKED)
		2.00-3.50 2.00	B SPT	N=5 (3,2/1,1,2,1)	2.00			MADE GROUND: Dark grey slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
		3.00	SPT	N=8 (4,3/2,2,2,2)				
					3.50			MADE GROUND: Reddish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, and coal. (REWORKED)
		4.00-5.00 4.00	B SPT	N=8 (4,3/2,2,2,2)				
		5.00	SPT	N=14 (3,4/4,3,4,3)				
					5.45			End of Borehole at 5.45m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. No groundwater encountered.
4. Hole backfilled with arisings upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS101
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:**	30/03/26 - 30/03/26

Logged	Checked
JL	JM

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.15-0.40	ES		0.15			MADE GROUND: Tarmacadam.
		0.40-0.70	ES		0.40			MADE GROUND: Light grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete, sandstone, and limestone.
	▽				0.70			MADE GROUND: Greyish brown slightly sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of quartzite, sandstone, coal, and concrete.
								MADE GROUND: Reddish brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of mudstone, sandstone, and coal. (REWORKED)
					1.30			MADE GROUND: Dark grey slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and rare wood. (REWORKED)
					2.50			MADE GROUND: Dark grey slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					3.00			MADE GROUND: Dark grey slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					3.60			MADE GROUND: Reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, coal, and rare concrete.
								Becoming slightly gravelly from 4.60m bgl.
					5.00			End of Borehole at 5.00m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL Engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. Groundwater encountered from 0.70m bgl.
4. Installation to 5.00m bgl: 1.00m plain 35mm PVC, 4.00m slotted 35mm PVC upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS102
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** -	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.15-0.50	ES		0.15			MADE GROUND: Tarmacadam.
		0.50-1.20	ES		0.50			MADE GROUND: Light grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete, sandstone, and limestone.
								MADE GROUND: Dark brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and brick.
					2.70			
					2.80			MADE GROUND: Light pinkish brown slightly sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone. (REWORKED)
					3.20			MADE GROUND: Dark brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and brick.
								MADE GROUND: Dark brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, and rare brick.
					3.80			
					4.00			MADE GROUND: Light pinkish brown slightly sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone. (REWORKED)
	▽							MADE GROUND: Dark brown sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					4.60			End of Borehole at 4.60m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL Engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. Groundwater encountered from 4.20m bgl.
4. Installation to 4.60m bgl: 1.00m plain 35mm PVC, 3.60m slotted 35mm PVC upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

BROWNFIELD SOLUTIONS LTD

Borehole Log

Window Sampler No.
WS103
Sheet 1 of 1

PROJECT NO:	C6579	**CO-ORDS:**	**Hole Type** WS
PROJECT NAME:	WREXHAM FC TRAINING GROUND	**LEVEL:**	**Scale** 1:30
CLIENT:	MODULEK	**DATES:** -	**Logged** JL / **Checked** JM

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
		0.10-0.60	ES		0.10			MADE GROUND: Tarmacadam.
								MADE GROUND: Light yellowish brown and grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of concrete, sandstone, and limestone.
		0.60-0.90	ES		0.60			MADE GROUND: Greyish brown sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular fine to coarse of sandstone and concrete.
					0.90			MADE GROUND: Reddish brown slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone. (REWORKED)
					1.50			MADE GROUND: Dark grey slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, and coal. (REWORKED)
					2.00			MADE GROUND: Grey and light grey slightly sandy CLAY. Sand is fine to coarse. (REWORKED)
					2.50			MADE GROUND: Dark reddish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded fine to coarse of sandstone, mudstone, coal, rare quartzite, and rare brick.
					5.00			End of Borehole at 5.00m

1.0 2.0 3.0 4.0 5.0 6.0

Remarks

1. Service clearance undertaken by BSL Engineer using CAT & Genny.
2. Hand dug inspection pit to 1.20m bgl.
3. Groundwater encountered from 3.60m bgl.
4. Installation to 5.00m bgl: 1.00m plain 35mm PVC, 4.00m slotted 35mm PVC upon completion.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB = Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

APPENDIX B

Geotechnical Laboratory Testing Results

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client Brownfield Solutions Ltd

Address William Smith House
173-183 Witton Street
Northwich
Cheshire
CW9 5LP

Contract C6579

Job Number MRN 26012/9
Date of Issue 23 March 2026

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

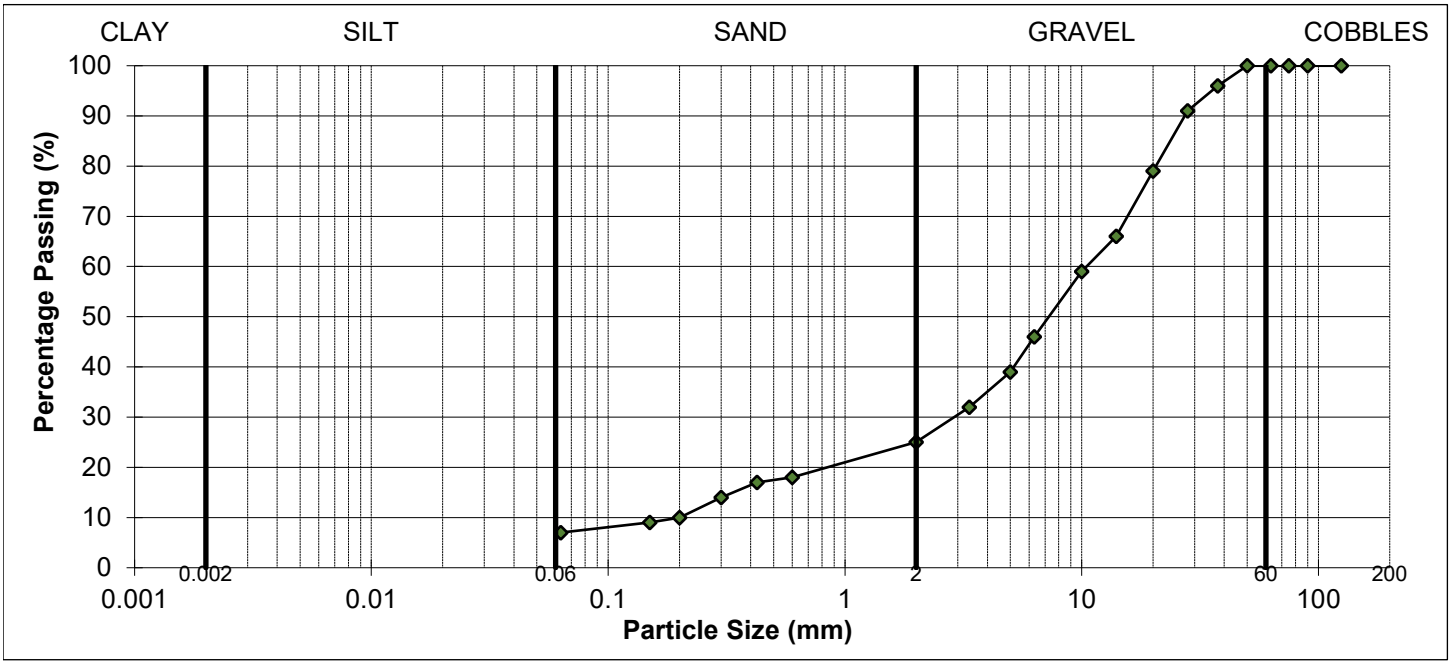
PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Brownfield Solutions Ltd
SITE	C6579
JOB NUMBER	MRN 26012/9

SAMPLE LABEL	WS01 0.1-0.5m	DATE SAMPLED	26-Feb-26
LAB SAMPLE No	6042701	DATE RECEIVED	03-Mar-26
DATE TESTED	05-Mar-26	SAMPLED BY	Client

MATERIAL	Grey brown silty sandy GRAVEL		
ADVISED SOURCE	Site Won	AS RECEIVED WATER CONTENT (%)	4.2

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		6.3	46	
90	100		5	39	
75	100		3.35	32	
63	100		2	25	
50	100		0.6	18	
37.5	96		0.425	17	
28	91		0.3	14	
20	79		0.2	10	
14	66		0.15	9	
10	59		0.063	7	



SOIL FRACTIONS			
COBBLES	0	SAND	18%
GRAVEL	75%	SILT / CLAY	7%

REMARKS

SIGNED [redacted]

NAME O.P. Davies BA (Hons) (Director / Head of Laboratory) DATE 23-Mar-26

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
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UKAS TESTING 1580

TEST CERTIFICATE

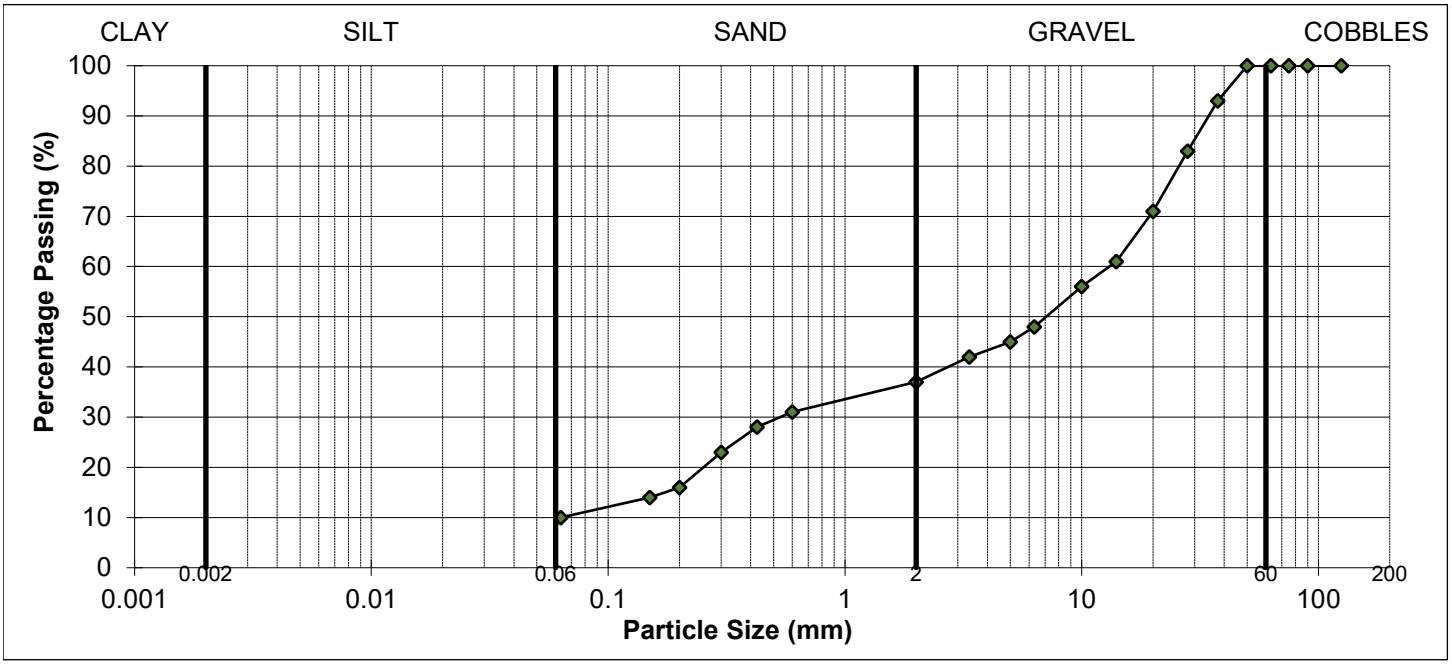
PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4:2016
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	Brownfield Solutions Ltd
SITE	C6579
JOB NUMBER	MRN 26012/9

SAMPLE LABEL	WS04 0.5-1.2m	DATE SAMPLED	26-Feb-26
LAB SAMPLE No	6042702	DATE RECEIVED	03-Mar-26
DATE TESTED	05-Mar-26	SAMPLED BY	Client

MATERIAL	Grey brown silty very sandy GRAVEL		
ADVISED SOURCE	Site Won	AS RECEIVED WATER CONTENT (%)	8.5

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		6.3	48	
90	100		5	45	
75	100		3.35	42	
63	100		2	37	
50	100		0.6	31	
37.5	93		0.425	28	
28	83		0.3	23	
20	71		0.2	16	
14	61		0.15	14	
10	56		0.063	10	



SOIL FRACTIONS			
COBBLES	0	SAND	27%
GRAVEL	63%	SILT / CLAY	10%

REMARKS

SIGNED [redacted]

NAME O.P. Davies BA (Hons)
(Director / Head of Laboratory)

DATE 23-Mar-26

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DRY DENSITY/WATER CONTENT RELATIONSHIP 4.5kg RAMMER
BS 1377-2:2022 Cl.11
PARTICLE DENSITY METHOD BS 1377-2:2022 Cl.9.2

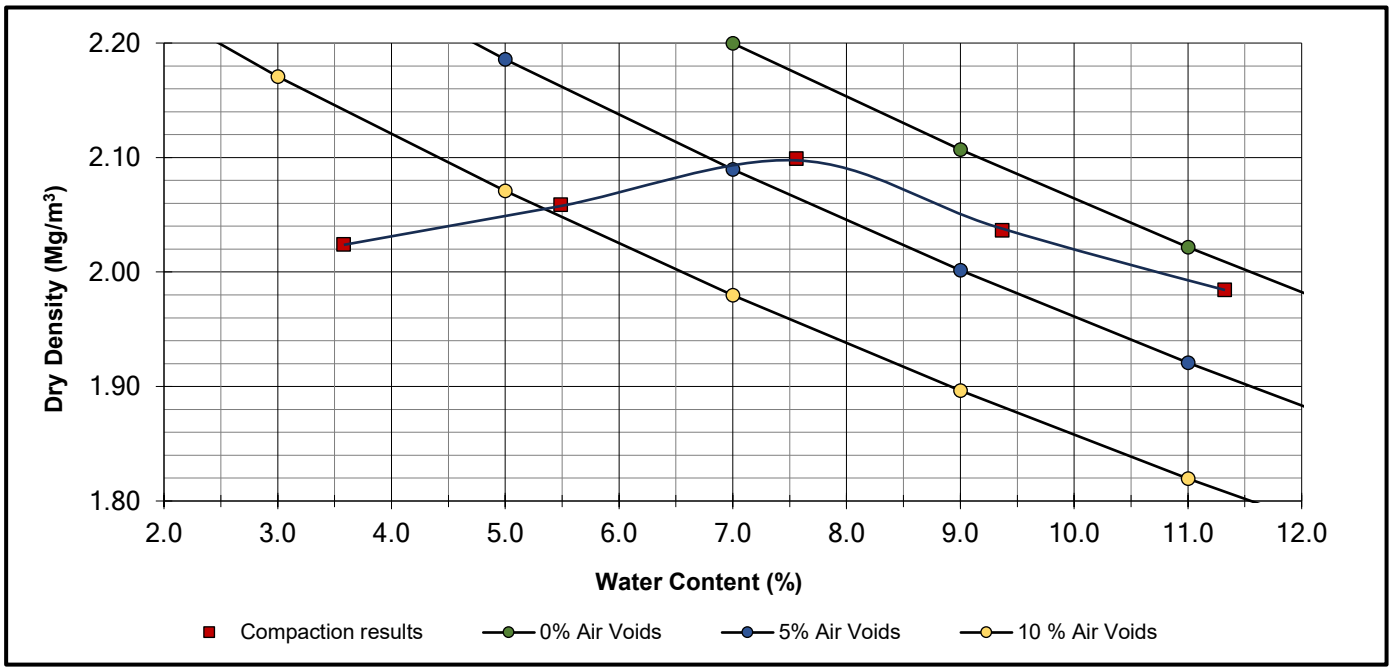
CLIENT	Brownfield Solutions Ltd
SITE	C6579
JOB NUMBER	MRN 26012/9

SAMPLE LABEL	WS02 0.4-1.0m	DATE SAMPLED	26-Feb-26
SAMPLE NUMBER	6042703	DATE RECEIVED	03-Mar-26
DATE TESTED	13-Mar-26	SAMPLED BY	Client

MATERIAL	Grey brown silty sandy GRAVEL
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

RETAINED 37.5mm	6 %	GRADING ZONE	ZONE 5	MOULD SIZE	CBR
RETAINED 20mm	24 %	PARTICLE DENSITY	2.60 Mg/m3	(Assumed)	

POINT NUMBER	WATER CONTENT (%)	DRY DENSITY (Mg/m^3)
1	3.6	2.024
2	5.5	2.059
3	7.6	2.099
4	9.4	2.036
5	11.3	1.984



OPTIMUM WATER CONTENT	**7.6**	(%)
MAXIMUM DRY DENSITY	**2.10**	(Mg/m^3)

REMARKS

NAME O.P. Davies BA (Hons) SIGNED [redacted] DATE 23-Mar-26
(Director / Head of Laboratory)

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DRY DENSITY/WATER CONTENT RELATIONSHIP 4.5kg RAMMER
BS 1377-2:2022 Cl.11
PARTICLE DENSITY METHOD BS 1377-2:2022 Cl.9.2

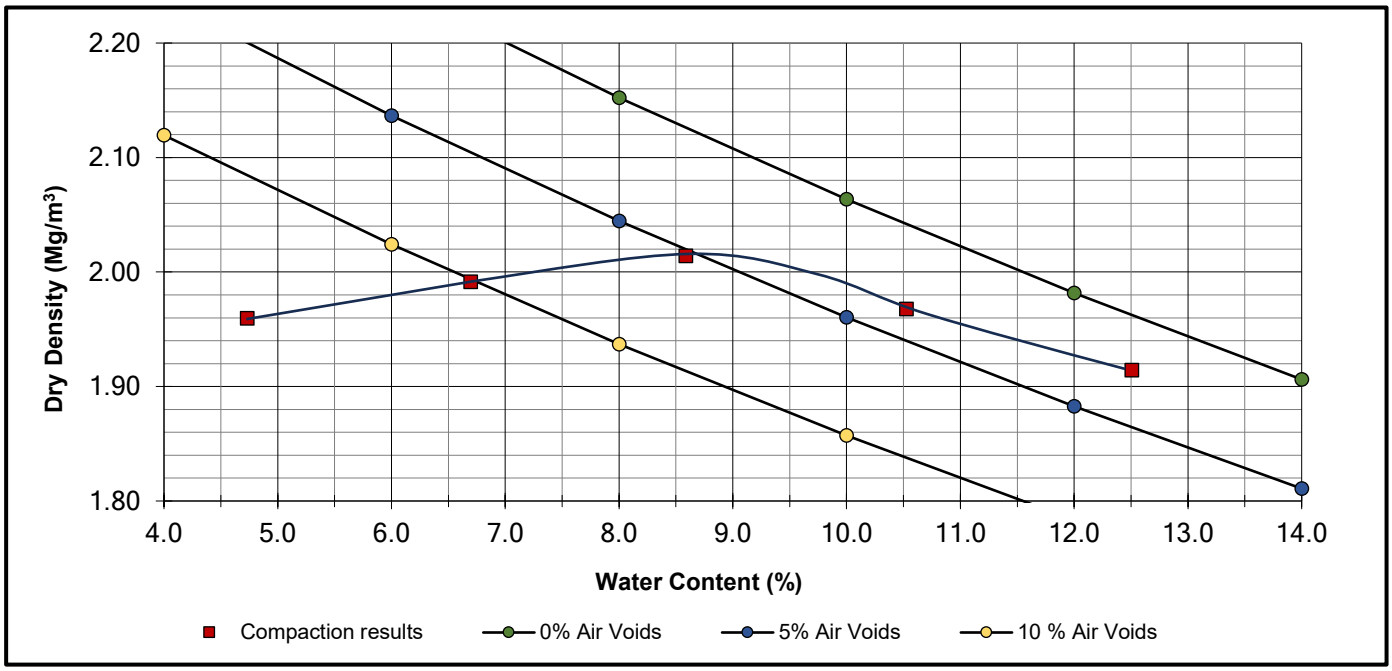
CLIENT	Brownfield Solutions Ltd
SITE	C6579
JOB NUMBER	MRN 26012/9

SAMPLE LABEL	WS03 0.3-1.0m	DATE SAMPLED	26-Feb-26
SAMPLE NUMBER	6042704	DATE RECEIVED	03-Mar-26
DATE TESTED	13-Mar-26	SAMPLED BY	Client

MATERIAL	Grey brown silty sandy GRAVEL
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

RETAINED 37.5mm	3 %	GRADING ZONE	ZONE 4	MOULD SIZE	CBR
RETAINED 20mm	25 %	PARTICLE DENSITY	2.60 Mg/m3	(Assumed)	

POINT NUMBER	WATER CONTENT (%)	DRY DENSITY (Mg/m^3)
1	4.7	1.960
2	6.7	1.991
3	8.6	2.014
4	10.5	1.968
5	12.5	1.914



OPTIMUM WATER CONTENT	**8.9**	(%)
MAXIMUM DRY DENSITY	**2.02**	(Mg/m^3)

REMARKS

NAME O.P. Davies BA (Hons) SIGNED [redacted] DATE 23-Mar-26
(Director / Head of Laboratory)

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
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UKAS TESTING 1580

TEST CERTIFICATE

CALIFORNIA BEARING RATIO (CBR)
BS 1377-2:2022 Cl. 15
DETERMINATION OF WATER CONTENT - BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

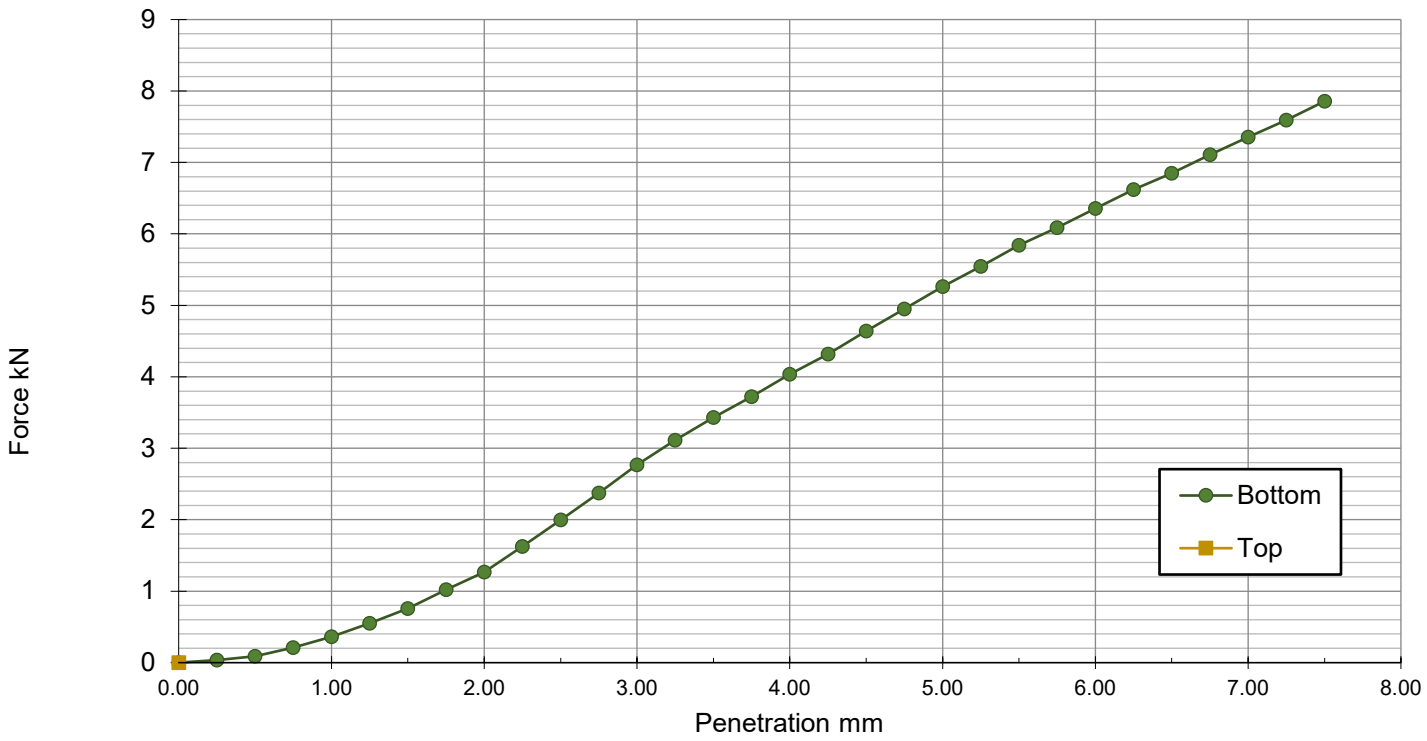
CLIENT	Brownfield Solutions Ltd
SITE	C6579
JOB NUMBER	MRN 26012/9

SAMPLE LABEL	WS01 0.8-2.0m	DATE SAMPLED	26-Feb-26
LAB SAMPLE No	6042705	DATE RECEIVED	03-Mar-26
DATE TESTED	16-Mar-26	SAMPLED BY	Client

MATERIAL	Grey brown silty sandy GRAVEL
ADVISED SOURCE	Site Won

INITIAL CONDITIONS

PRE-TREATMENT		Dynamic Compaction, Specified Effort, Vibrating Hammer			
GREATER THAN 20 mm REMOVED		24 %			
BULK DENSITY	2.00 Mg/m3	WATER CONTENT	14.0 %	DRY DENSITY	1.76 Mg/m3
TEST CONDITION	UNSOAKED	MEASURED SWELL	0 mm	SURCHARGE	2 kg



CBR VALUE

Top	N/A	%
Bottom	31.8	%

ORIGIN CORRECTION

Top	N/A	mm
Bottom	1.00	mm

FINAL MOISTURE CONTENT

Top	N/A	%
Bottom	14.0	%

REMARKS

NAME O.P. Davies BA (Hons) SIGNED [redacted] DATE 23-Mar-26
(Director / Head of Laboratory)

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

CALIFORNIA BEARING RATIO (CBR)
BS 1377-2:2022 Cl. 15
DETERMINATION OF WATER CONTENT - BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

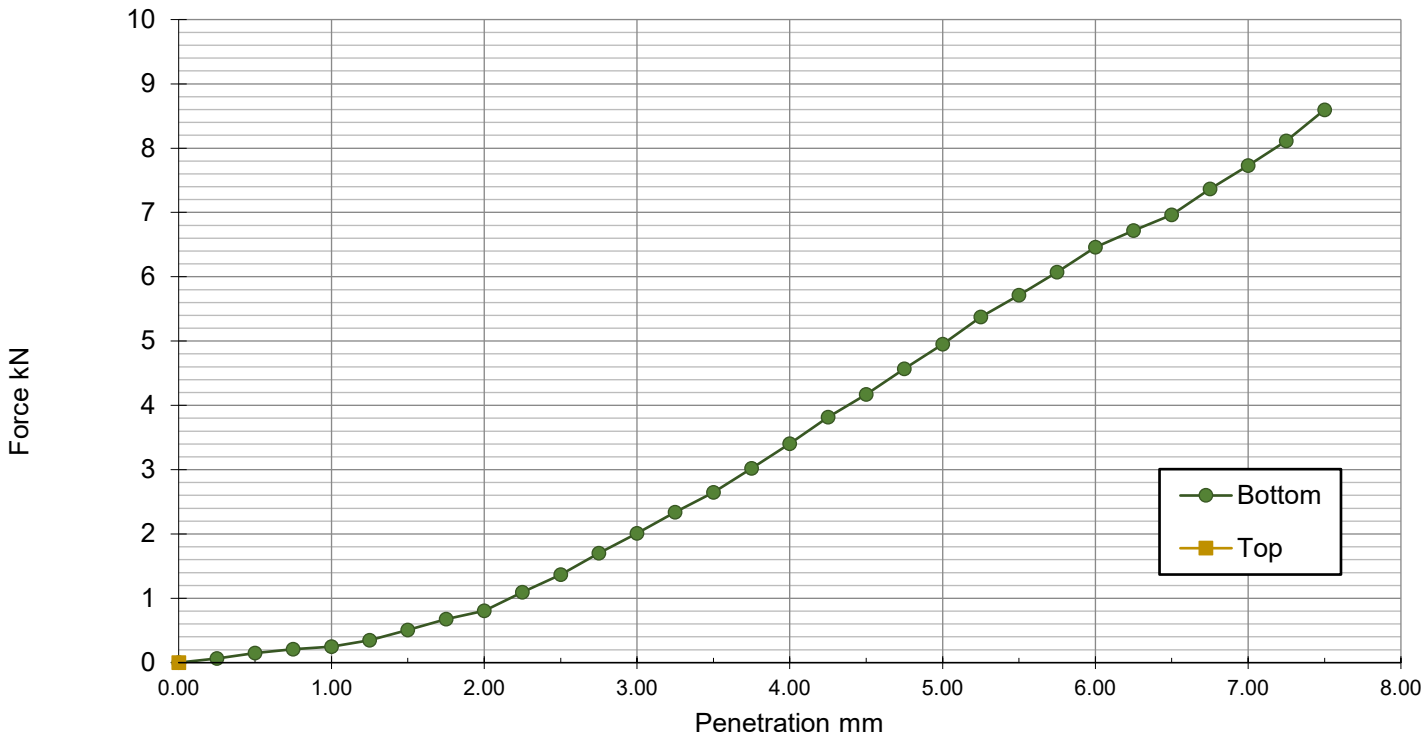
CLIENT	Brownfield Solutions Ltd
SITE	C6579
JOB NUMBER	MRN 26012/9

SAMPLE LABEL	WS04 0.15-0.5m	DATE SAMPLED	26-Feb-26
LAB SAMPLE No	6042706	DATE RECEIVED	03-Mar-26
DATE TESTED	16-Mar-26	SAMPLED BY	Client

MATERIAL	Grey brown silty sandy GRAVEL
ADVISED SOURCE	Site Won

INITIAL CONDITIONS

PRE-TREATMENT		Dynamic Compaction, Specified Effort, Vibrating Hammer			
GREATER THAN 20 mm REMOVED		27 %			
BULK DENSITY	2.09 Mg/m3	WATER CONTENT	3.4 %	DRY DENSITY	2.02 Mg/m3
TEST CONDITION	UNSOAKED	MEASURED SWELL	0 mm	SURCHARGE	2 kg



CBR VALUE

Top	N/A	%
Bottom	24.8	%

ORIGIN CORRECTION

Top	N/A	mm
Bottom	N/A	mm

FINAL MOISTURE CONTENT

Top	N/A	%
Bottom	3.4	%

REMARKS

NAME O.P. Davies BA (Hons) (Director / Head of Laboratory) SIGNED [redacted] DATE 23-Mar-26

BROWNFIELD SOLUTIONS

www.brownfield-solutions.com
(+44) 0800 044 8025
info@brownfield-solutions.co.uk

Determination of Equivalent CBR Value by Plate Load Test

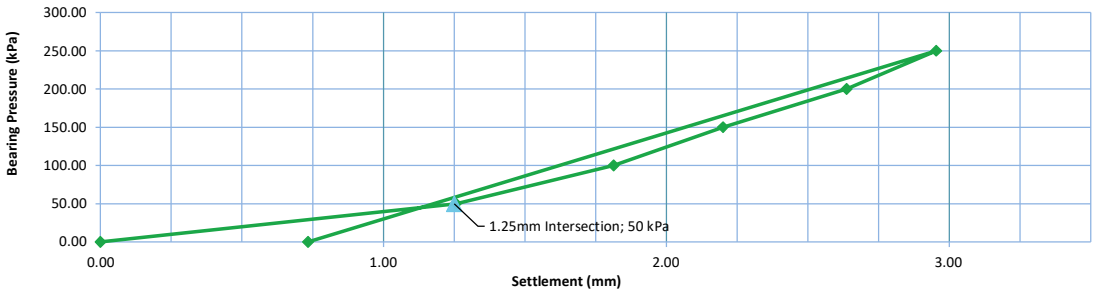
BS1377: Part 9 and IAN 73/06

Client	MODULEK	**Test Position**	**PL01**
Site Name	SITE, LOCATION		
Job Number	C6579	**OS Co-ordinates**	
Date Tested	30/03/2026	**Level (mAOD)**	
Depth (mm)	0.15	**Formation Description:**	MADE GROUND (GRANULAR)

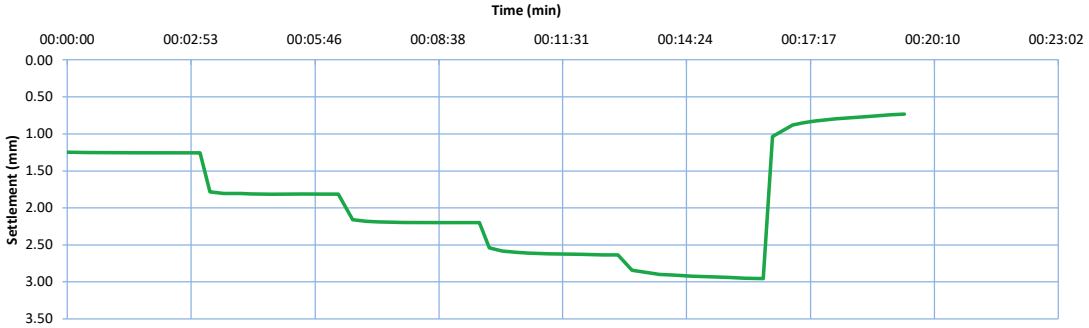
Plate Ø (mm)	450
Plate Area (m^2)	0.159
Max Applied Force (kPa)	250.0
Kentledge	Tracked
Moisture Content (%)	
Max Settlement (mm)	2.953

Load Phase	Bearing Pressure (kPa)	Average Plate Settlement (mm)
	0.00	0.00
1	50.00	1.26
2	100.00	1.81
3	150.00	2.20
4	200.00	2.64
5	250.00	2.95
Unload	0.00	0.73

Load vs Settlement Data



Time vs Settlement Data



Settlement required for CBR Value 1.25mm

Load at 1.25mm settlement (kPa)	50
k (Modulus of subgrade reaction $KN/m^2/mm$)	39.8
k_{762} (Modulus of subgrade reaction $KN/m^2/mm$)	24.7
Equivalent CBR Value (%)	**2.5**

Tester: TW **Checked By:** JM

Date Checked: 30/03/2026 **Signature:** [redacted]

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www.brownfield-solutions.com
(+44) 0800 044 8025
info@brownfield-solutions.co.uk

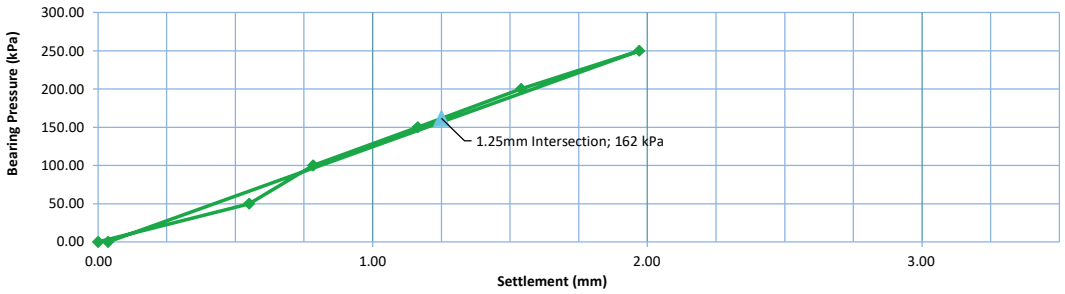
Determination of Equivalent CBR Value by Plate Load Test

BS1377: Part 9 and IAN 73/06

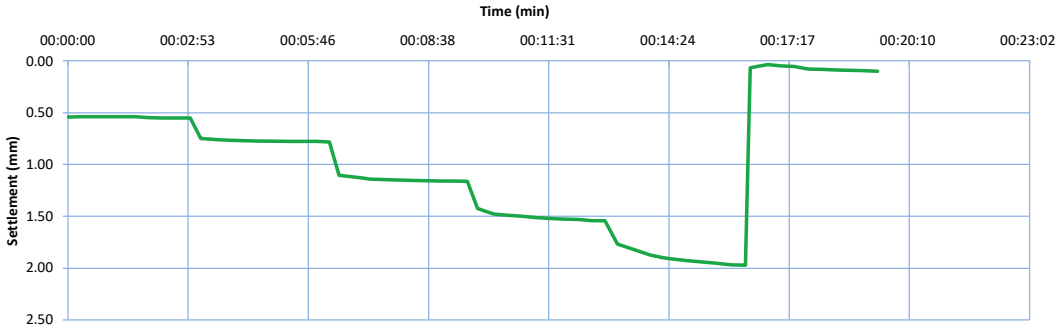
Client	MODULEK	**Test Position**	**PL02**
Site Name	SITE, LOCATION		
Job Number	C6579	**OS Co-ordinates**	
Date Tested	30/03/2026	**Level (mAOD)**	
Depth (mm)	0.15	**Formation Description:**	MADE GROUND (GRANULAR)

			Bearing Pressure (kPa)	Average Plate Settlement (mm)
Plate Ø (mm)	450			
Plate Area (m^2)	0.159	**Load Phase**	0.00	0.00
Max Applied Force (kPa)	250.0	**1**	50.00	0.55
Kentledge	Tracked	**2**	100.00	0.78
Moisture Content (%)		**3**	150.00	1.16
Max Settlement (mm)	1.970	**4**	200.00	1.54
		5	250.00	1.97
		Unload	0.00	0.04

Load vs Settlement Data



Time vs Settlement Data



Settlement required for CBR Value 1.25mm

Load at 1.25mm settlement (kPa)	162
k (Modulus of subgrade reaction $KN/m^2/mm$)	129.2
k_{762} (Modulus of subgrade reaction $KN/m^2/mm$)	80.3
Equivalent CBR Value (%)	**19.3**

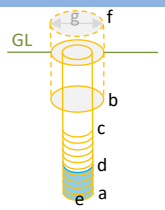
Tester: TW **Checked By:** JM

Date Checked: 15/04/2026 **Signature:** [redacted]

Falling Head Permeability Test	MODULEK	Date of Test: 31/03/2026
	WREXHAM FC TRAINING GROUND	Logged By: JL
WS103	C6579	Checked By: JM

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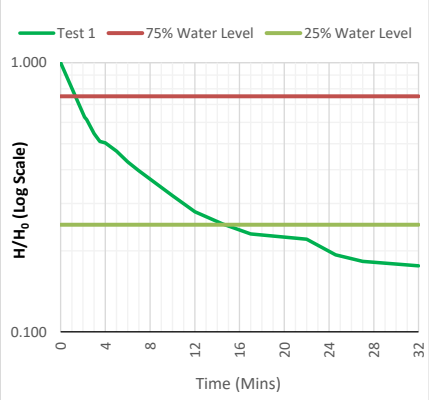
Dimensions (mm)	Test 1	Test 2	Test 3
Bottom of Borehole (a)	5000		
Bottom of Casing (b)			
Top of Filter Material (c)	1000		
Initial Groundwater Level or Base of Hole (d)	4780		
Centre of Piezometer Tip (e)			
Height of Casing/Standpipe Above Surface (f)			
Diameter of Casing/Standpipe (g)	100		
Length of Filter (above GW table/base of hole)	3780		



Site Recorded Data

Test 1				Test 2				Test 3			
Time (mins)	Depth to water (mm)	Head of water (mm)	Head Ratio H/H_0	Time (mins)	Depth to water (mm)	Head of water (mm)	Head Ratio H/H_0	Time (mins)	Depth to water (mm)	Head of water (mm)	Head Ratio H/H_0
0.00	1880	2900	1.000								
2.00	2900	1880	0.648								
2.15	2960	1820	0.628								
2.33	3000	1780	0.614								
2.66	3100	1680	0.579								
3.00	3200	1580	0.545								
3.50	3300	1480	0.510								
4.00	3320	1460	0.503								
5.00	3420	1360	0.469								
6.00	3540	1240	0.428								
7.00	3630	1150	0.397								
10.00	3850	930	0.321								
12.00	3970	810	0.279								
14.50	4050	730	0.252								
17.00	4110	670	0.231								
22.00	4140	640	0.221								
24.58	4220	560	0.193								
27.00	4250	530	0.183								
32.00	4270	510	0.176								

Data Analysis



Falling Head Permeability Test	MODULEK	Date of Test: 31/03/2026	BROWNFIELD SOLUTIONS LTD
	WREXHAM FC TRAINING GROUND	Logged By: JL	
WS103	C6579	Checked By: JM	

Calculation of Intake Factor (F)

		Test 1	Test 2	Test 3
m^2	Cross sectional area of base	0.008		
m	Diameter	0.100		
m	Length	3.780		
	Intake Factor Scenario	Soil flush with bottom in uniform soil		
	Intake Factor, F	**0.275**	-	-

Soil Infiltration Rate Calculation

		Test 1	Test 2	Test 3
75% Effective Level	Head (m)	2.175		
	Depth to water (m bgl)	2.605		
	Time (mins)	1		
	Time (sec)	60		
25% effective Level	Head (m)	0.725		
	Depth to water (m bgl)	4.055		
	Time (mins)	14		
	Time (sec)	840		
m (bgl)	Initial groundwater level	4.78		
m (bgl)	At time (t_1) Depth to water	2.605		
seconds	t_1	90		
m (bgl)	Depth of water H_1	2.175		
m (bgl)	At time (t_2) Depth to water	4.055		
seconds	t_2	870		
m (bgl)	Depth of water H_2	0.725		

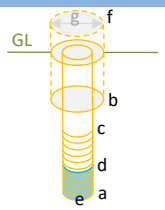
$$Permeability = k = \frac{A}{F(t_2 - t_1)} Log_e \frac{H_1}{H_2}$$

	Test 1	Test 2	Test 3
Permeability, k (m/s)	**4.02E-05**	-	-

Falling Head Permeability Test	MODULEK	Date of Test: 31/03/2026
	WREXHAM FC TRAINING GROUND	Logged By: JL
WS102	C6579	Checked By: JM

BROWNFIELD SOLUTIONS LTD

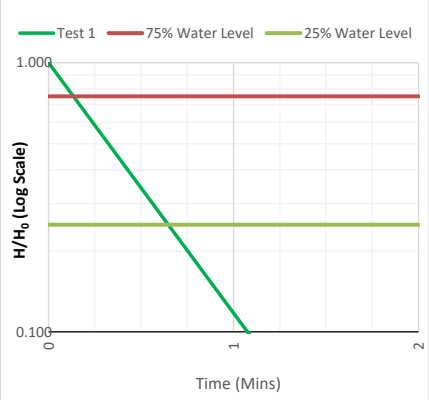
Dimensions (mm)	Test 1	Test 2	Test 3
Bottom of Borehole (a)	5000		
Bottom of Casing (b)			
Top of Filter Material (c)	1000		
Initial Groundwater Level or Base of Hole (d)	4540		
Centre of Piezometer Tip (e)			
Height of Casing/Standpipe Above Surface (f)			
Diameter of Casing/Standpipe (g)	100		
Length of Filter (above GW table/base of hole)	3540		



Site Recorded Data

Test 1				Test 2				Test 3			
Time (mins)	Depth to water (mm)	Head of water (mm)	Head Ratio H/H_0	Time (mins)	Depth to water (mm)	Head of water (mm)	Head Ratio H/H_0	Time (mins)	Depth to water (mm)	Head of water (mm)	Head Ratio H/H_0
0.00	1640	2900	1.000								
2.00	4500	40	0.014								

Data Analysis



Falling Head Permeability Test	MODULEK	Date of Test: 31/03/2026	BROWNFIELD SOLUTIONS LTD
	WREXHAM FC TRAINING GROUND	Logged By: JL	
WS102	C6579	Checked By: JM	

Calculation of Intake Factor (F)

		Test 1	Test 2	Test 3
m^2	Cross sectional area of base	0.008		
m	Diameter	0.100		
m	Length	3.540		
	Intake Factor Scenario	Soil flush with bottom in uniform soil		
	Intake Factor, F	**0.275**	-	-

Soil Infiltration Rate Calculation

		Test 1	Test 2	Test 3
75% Effective Level	Head (m)	2.175		
	Depth to water (m bgl)	2.365		
	Time (mins)	0		
	Time (sec)	0		
25% effective Level	Head (m)	0.725		
	Depth to water (m bgl)	3.815		
	Time (mins)	1		
	Time (sec)	60		
m (bgl)	Initial groundwater level	4.54		
m (bgl)	At time (t_1) Depth to water	2.365		
seconds	t_1	7		
m (bgl)	Depth of water H_1	2.175		
m (bgl)	At time (t_2) Depth to water	3.815		
seconds	t_2	37		
m (bgl)	Depth of water H_2	0.725		

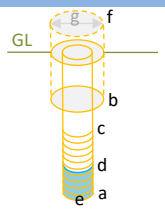
$$Permeability = k = \frac{A}{F(t_2 - t_1)} Log_e \frac{H_1}{H_2}$$

	Test 1	Test 2	Test 3
Permeability, k (m/s)	**1.05E-03**	-	-

Falling Head Permeability Test	MODULEK	Date of Test: 31/03/2026
	WREXHAM FC TRAINING GROUND	Logged By: JL
WS101	C6579	Checked By: JM

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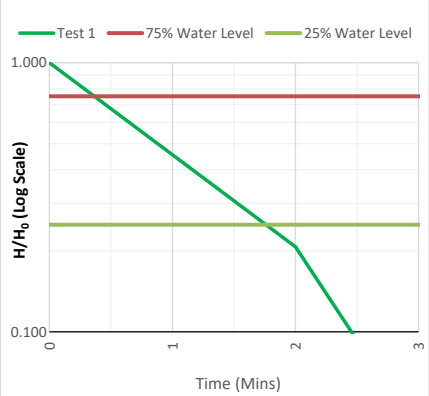
Dimensions (mm)	Test 1	Test 2	Test 3
Bottom of Borehole (a)	5000		
Bottom of Casing (b)			
Top of Filter Material (c)	1000		
Initial Groundwater Level or Base of Hole (d)	4700		
Centre of Piezometer Tip (e)			
Height of Casing/Standpipe Above Surface (f)			
Diameter of Casing/Standpipe (g)	100		
Length of Filter (above GW table/base of hole)	3700		



Site Recorded Data

Test 1				Test 2				Test 3			
Time (mins)	Depth to water (mm)	Head of water (mm)	Head Ratio H/H_0	Time (mins)	Depth to water (mm)	Head of water (mm)	Head Ratio H/H_0	Time (mins)	Depth to water (mm)	Head of water (mm)	Head Ratio H/H_0
0.00	1800	2900	1.000								
2.00	4100	600	0.207								
2.50	4430	270	0.093								
3.00	4500	200	0.069								
4.00	4550	150	0.052								
5.00	4610	90	0.031								
6.00	4640	60	0.021								
7.00	4670	30	0.010								
8.00	4700	0	0.000								

Data Analysis



Falling Head Permeability Test	MODULEK	Date of Test: 31/03/2026	BROWNFIELD SOLUTIONS LTD
	WREXHAM FC TRAINING GROUND	Logged By: JL	
WS101	C6579	Checked By: JM	

Calculation of Intake Factor (F)

		Test 1	Test 2	Test 3
m^2	Cross sectional area of base	0.008		
m	Diameter	0.100		
m	Length	3.700		
	Intake Factor Scenario	Soil flush with bottom in uniform soil		
	Intake Factor, F	**0.275**	-	-

Soil Infiltration Rate Calculation

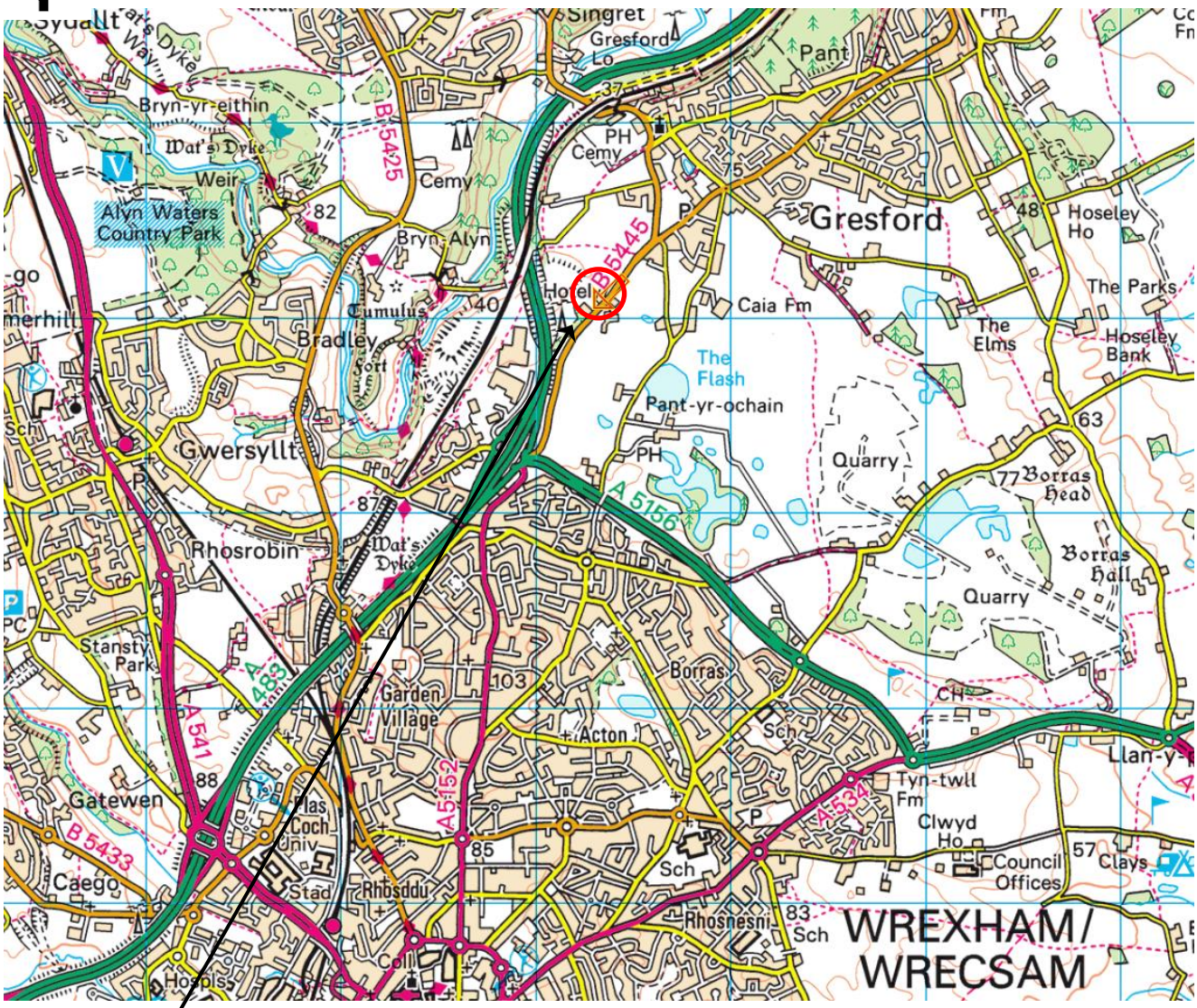
		Test 1	Test 2	Test 3
75% Effective Level	Head (m)	2.175		
	Depth to water (m bgl)	2.525		
	Time (mins)	1		
	Time (sec)	30		
25% effective Level	Head (m)	0.725		
	Depth to water (m bgl)	3.975		
	Time (mins)	2		
	Time (sec)	90		
m (bgl)	Initial groundwater level	4.70		
m (bgl)	At time (t_1) Depth to water	2.525		
seconds	t_1	40		
m (bgl)	Depth of water H_1	2.175		
m (bgl)	At time (t_2) Depth to water	3.975		
seconds	t_2	105		
m (bgl)	Depth of water H_2	0.725		

$$Permeability = k = \frac{A}{F(t_2 - t_1)} Log_e \frac{H_1}{H_2}$$

	Test 1	Test 2	Test 3
Permeability, k (m/s)	**4.83E-04**	-	-

APPENDIX C

Exploratory Hole Location Plan



SITE LOCATION

NEAREST POSTCODE: LL12 8PW

SITE ENTRANCE. WHAT THREE WORDS /// marble.extra.deflection



REV	DATE	DESCRIPTION	BY	CKD

BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

CLIENT
MODULEK

PROJECT TITLE
WREXHAM FC TRAINING GROUND

DRAWING TITLE
SITE LOCATION PLAN

DRAWING No.	REVISION	SCALE	DATE
C6579/01	-	NTS	24/02/26

DRAWN BY	CHECKED BY
MO	JM



KEY

PROPOSED OUTLINE 1

PROPOSED OUTLINE 2

WINDOW SAMPLE BOREHOLE
WSXX

PLATE LOAD TEST
PLXX

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS REPORTS. THIS DRAWING IS COPYRIGHT OF BSL.
3. DRAWING NOT FOR CONSTRUCTION PURPOSES.

REV	DATE	DESCRIPTION	BY	CKD

BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

CLIENT
MODULEK

PROJECT TITLE
WREXHAM FC TRAINING GROUND

DRAWING TITLE
EXPLORATORY HOLE PLAN

DRAWING No.	REVISION	SCALE	DATE
C6579/02	A	NTS	12/03/26

DRAWN BY	CHECKED BY
JL	JM