26CGH049/SI/2026/JS/L1/Rev1

3rd September 2026

FAO Norman Kelly
Unit 20
St Asaph Business Park
St Asaph
Denbighshire
LL17 0LJ

Dear Norman

INITIAL GROUND INVESTIGATION (GI) WORKS – ABEREGELE PHASE 6

1. Introduction

Betts Geo were commissioned by Castle Green Homes to undertaken an initial GI at the site. At the request of the client, the fieldwork comprised of four (4 No) trial pits.

The site red edge is shown below;



2. Site Location

The site is located north of St George Road, Abergele, LL22 9AU. The coordinates on the National Grid Reference are 295399, 377016. The site is approximately 4.16ha in total.

Old Marsh Farm Barns
Welsh Road, Sealand
Flintshire CH5 2LY
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www.betts-associates.co.uk

Betts Geo Environmental Ltd trading as Betts Geo Environmental. Registered in England and Wales No. 5927295

3. Desk Study Report

Betts Geo have undertaken a Desk Study for the site (report ref: 26CGH049/DS). This report should be referred to for full details, however a summary can be provided below.

Site Description
The site is an irregular parcel of land which rises to the south and appears to be used for rough grazing although no livestock were present at the time of walkover. An area of exposed soil is present in the south adjacent to the site entrance and suggests the landowner may have placed some material in the vicinity. Overhead cables extend through the centre of the site in a northeast to southwest direction, connecting to the adjacent hotel.

Site History
The site remains historically undeveloped apart from a change in the field boundaries over the course of the historic maps and a former footpath that ran along the centre of site between 1872 – 1961.

Documented Site Geology
The site is documented to comprise superficial deposits of Glacial Till – sandy gravelly CLAY and bedrock deposits of both Limestone (majority of site) and Mudstone, Siltstone and Sandstone (north eastern corner of site). There is also a fault line recorded 2m E of the site.

Radon
The Groundsure Report indicates that the site lies within a low radon risk area where between <1-3% of homes are above the action level. However, the Radon UK mapping also shows the site lies within a 3-10% risk area and therefore basic Radon protection is required in the construction of new residential dwellings as a worst case scenario.

It is advised that a site-specific Radon report is obtained from the BGS to confirm if Radon protection is required on site based on the conflicting information above. Betts Geo can obtain this report if deemed required.

Contamination Summary
From the initial contamination conceptual model undertaken as part of the Desk Study, the site was assessed as being at a **Low – Low/Moderate** risk for contamination and ground gas (mainly from possible fill used to level the ground for the alteration of field boundaries over time).

4. Scope of Works – Betts Geo Fieldwork

Ground investigation work was carried out on the 4th August 2026 and comprised of the following (at the request of the Castle Green Homes);

- Four (4 No) machine dug trial holes to a maximum depth of 2.90mbgl using a JCB 3CX.
- Eight (8 No) chemical samples – seven (7 No) from the trial pits and one (1 No) from the material that appeared to have been spread at the site entrance.
- Two (2 No) geotechnical samples were taken and scheduled for 4 pt Atterberg testing, pH & 2:1 water soluble sulphates.

Services are present onsite. Prior to any intrusive works, each location was checked for services using a cable avoidance tool (CAT) and review of statutory service plans. An extract showing the location of the exploratory hole locations can be seen overleaf.

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5. Ground Conditions

The exploratory holes were logged by a Betts Engineer in general accordance with the recommendations of BS5930:1999+A2:2010 Detailed descriptions, together with relevant comments, are given in the exploratory hole logs included the Appendix.

Ground conditions comprised of topsoil in all locations (dark brown sandy CLAY) to a maximum depth of 0.30mbgl overlying a stiff to very stiff sandy gravelly CLAY with frequent bands of medium dense to dense very clayey fine to coarse SANDS between 0.40mbgl – 1.90mbgl.

The base of the CLAY was not bottomed out, with the deepest trial pit terminated at 2.90mbgl.

All exploratory holes were recorded as stable and dry.

6. Visual and Olfactory Evidence

No evidence of any visual and/or olfactory evidence was noted during the excavation of these trial holes.

It was previously noted within the Desk Study that the farmer may have spread some sort of material on site near the site entrance. This material did look natural with no evidence of any anthropogenic debris. A chemical sample was taken from this material and further information can be found in Section 9 below.

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7. Obstructions

No obstructions were encountered during the excavation of these trial holes.

8. Groundwater – Fieldwork

No groundwater was encountered during the excavation of these trial holes.

9. Soils Contamination Summary

Eight (8 No) chemical samples were taken across the GI work – seven (7 No) from the trial pits and one (1 No) from the material that appeared to have been spread at the site entrance. These were screened for heavy metals, TPH's, PAH's and asbestos.

All results have been screened against LQM S4UL residential with homegrown produce guidance. All determinants for fell below the residential home grown produce guidance levels within all samples tested. No asbestos was detected.

As no significant contamination was identified across the site during the initial GI, it is likely that no remedial cover systems will be required (subject to any further necessary GI). A 300mm growing medium (comprising 150mm topsoil/150mm subsoil) should be applied across garden/POS areas as per NHBC guidance.

10. Groundwater/Surface Water and Aquifer Risk

No significant risk to groundwaters are anticipated due to the lack of any significant contamination on site to date and the cohesive clay superficial geology preventing any downward migration pathways.

11. Ground Gas Risk Assessment

No gas/groundwater monitoring wells were installed as part of the initial GI. Based on the strata encountered in the exploratory holes undertaken to date, there is deemed to be a low risk of ground gas production on site, however further GI should be undertaken at a later date to confirm.

Furthermore, given the presence of sands bands of circa 1m thickness within the clay, groundwater monitoring would be beneficial to full understand ground conditions.

Basic Radon protection measures may be required across site given the conflicting information within the Groundsure data set and the Radon UK mapping. It is advised that a site-specific Radon report is obtained from the BGS to confirm - Betts Geo can obtain this report if required.

12. Piped Drinking Water Supplies

Based on the results of the contamination testing to date, barrier pipe is not anticipated to be required on site. However, further testing and a relevant pipeline risk assessment may be required by third parties to confirm.

13. Geotechnical Assessment

- All excavations should be planned and due consideration should be given to providing temporary support or suitable battering. Excavations in close proximity to mains services will need to ensure that the excavation

walls are stable or appropriately battered to a safe angle. Localised land drainage is also likely given the sites use as arable land.

- No groundwater was encountered during these trial pits therefore it is only likely that pumping/shuttering will be necessary during excavations of foundation trenches during wet weather and to deeper excavations for sewers. Groundwater well installation & monitoring is advised as part of additional GI given the presence of sand bands circa 1m thick within the clay.
- Based on the stiff clays and dense sands encountered at shallow depth across the site, it is likely that strip foundations/reinforced strip foundations can be utilised across site with the following allowable bearing capacities – stiff to very stiff CLAY: 150kN/m2 and dense SAND – 100kN/m2. This should limit total foundation settlement to less than 15mm for foundation widths of up to 1m. If shallow groundwater is encountered on site, then allowable bearing capacities should be reduced by half.
- Deepening of foundations is accordance with the NHBC standards will be required where foundations are within the zone of influence of existing or proposed trees and proposed shrub planting and shrinkable soils are encountered at foundation level.
- Where foundations are within the influence of trees and are deeper than 1.5mbgl, a suitable compressible material or void will be required. Where foundations require deepening to greater than 2.5mbgl, they must be designed by an engineer as specified in NHBC Technical Requirement R5.
- Suspended floor construction e.g. either in-situ RC slabs or black and beam flooring are recommended as per NHBC guidance.
- Two plasticity tests were undertaken during the initial GI. Low to moderate plasticity clays were encountered on site and as such foundations should be designed accordingly.
- It is considered for concrete design purposes that natural ground conditions and static groundwater conditions are applicable. A design class of DS-1 and an ACEC class of AC-1s is recommended across site based on the results of the initial GI.
- A CBR value of 2-3% on the clay is anticipated however, confirming in-situ CBRs should be undertaken once layouts are known. Placement of geotextiles within the areas of roads/parking could also be designed to minimise the subgrade thickness.

We trust that this information is satisfactory and should you require any further clarification, please do not hesitate to contact me.

Yours sincerely

Jenny Skues
Senior Geo-Environmental Engineer
BETTS GEO ENVIRONMENTAL

Appendix –
Betts Exploratory Hole Location Plan
Betts Exploratory Hole Logs
Betts Contamination & Geotechnical Results

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Site Location Plan - 19-08-2026

Project Name	Project No.	Start Date	End Date
Abergele Area 6	26CGH049	2026-08-04	2026-08-04

Client	Consultant	Contractor
Castle Green Homes	Betts Geo	



0 20m 40m 60m 80m

1:2179 approx. when printed at A4
1cm = approx. 21.79m
Do not scale from this drawing.

N

Description
Exploratory Hole Location Plan - Satellite Imagery

Key

TP - Trial Pit

BETTS GEO
CONSULTING ENGINEERS

Key to exploratory hole symbols and abbreviations

SAMPLE TYPES

ACM - Asbestos sample
AMAL - Amalgamated sample
B - Bulk disturbed sample
BLK - Block sample
C - Core sample
CBR - CBR test sample
D - Disturbed sample
ES - Environmental sample
EW - Environmental water sample
G - Gas sample
J - Jar sample
L - Liner sample
TW - Pushed thin wall sample
U - Undisturbed sample
UT - Undisturbed thin wall sample
W - Water sample

IN-SITU TESTS

HV - Hand shear vane
HV(r) - Hand shear vane residual
PID - Photo ionisation detector
PP - Hand penetrometer
SPT - Standard penetration test
SPT(C) - SPT using cone

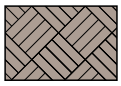
GROUNDWATER

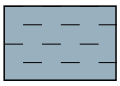
Groundwater strike
Groundwater rest level

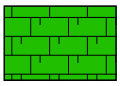
ROTARY CORE DETAILS

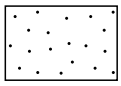
TCR - Total core recovery (%)
SCR - Solid core recovery (%)
RQD - Rock quality designation (%)
FI - Fracture index
NI - Non-intact core
AZCL - Assumed zone of core loss

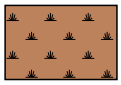
LEGEND

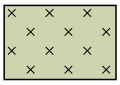

Topsoil

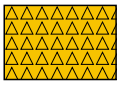

Clay

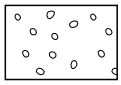

Chalk

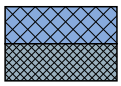

Sand backfill

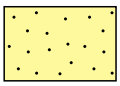

Peat

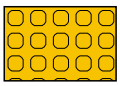

Silt

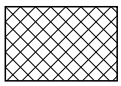

Breccia

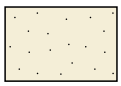

Gravel backfill

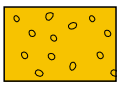

Made ground [cohesive]


Sand

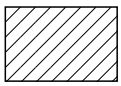

Conglomerate

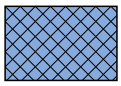

Arisings

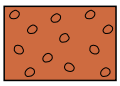

Concrete

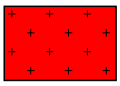

Gravel

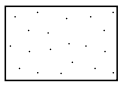

Metamorphic

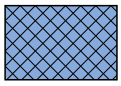

Bentonite

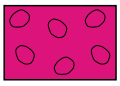

Wood


Cobbles


Igneous

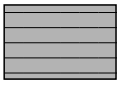

Concrete


Brick


Boulders

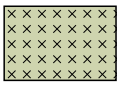

Grout


Bituminous material

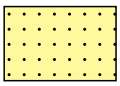

Mudstone


Plain pipe

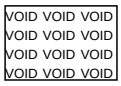

Gypsum


Siltstone

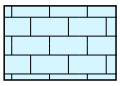

Coal


Sandstone


Slotted pipe



Void


Limestone

Trial Pit

TP1

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	295388.00	377085.00		1:25

Project Name	Project No.	Start Date	End Date
Abergele Area 6	26CGH049	2026-08-04	2026-08-04

Client
Castle Green Homes

Consultant
Betts Geo

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.20	ES			(0.30) 0.30		TOPSOIL Grass over dark brown sandy CLAY [TOPSOIL]
		0.50	ES			(0.30) 0.60		Stiff brown very sandy CLAY. Occasional sandy pockets.
		1.50	D			(1.80) 2.40		Very stiff dark brown occasionally grey slightly gravelly CLAY
								End of Trial Pit at 2.40m

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Termiated at target depth.
No visual or olfactory evidence of contamination.
Dry.

Method, Plant, Stability, Dimensions
0.00 - 2.40m TP
Stable

Logger
J Skues

Trial Pit

TP2

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	295444.00	377045.00		1:25

Project Name	Project No.	Start Date	End Date
Abergele Area 6	26CGH049	2026-08-04	2026-08-04

Client
Castle Green Homes

Consultant
Betts Geo

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.10	ES			(0.25) 0.25		TOPSOIL Grass over dark brown sandy CLAY [TOPSOIL]
						(0.65) 0.90		Stiff brown very sandy CLAY
		1.00	ES			(1.00) 1.90		Dense red brown very clayey fine-coarse SAND
		2.00	D			(0.50) 2.40		Very stiff to hard dark brown CLAY
								End of Trial Pit at 2.40m

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Termiated at target depth.
No visual or olfactory evidence of contamination.
Dry.

Method, Plant, Stability, Dimensions
0.00 - 2.40m TP
Stable

Logger
J Skues

Trial Pit

TP3

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	295367.00	376966.00		1:25

Project Name	Project No.	Start Date	End Date
Abergele Area 6	26CGH049	2026-08-04	2026-08-04

Client
Castle Green Homes

Consultant
Betts Geo

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.10	ES			(0.20) 0.20		TOPSOIL Grass over dark brown sandy CLAY. Relic roots [TOPSOIL]
						(0.20) 0.40		Stiff brown very sandy CLAY
		0.40	ES			(1.10) 1.50		Dense red brown very clayey fine-coarse SAND
						(1.40) 2.90		Very stiff dark brown occasionally grey mottled slightly gravelly CLAY. Occasional large cobbles / small boulders present with depth. *Possible grey weathered bedrock - within clay matrix. (2.60 - 2.90m)*
								End of Trial Pit at 2.90m

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Termiated at target depth.
No visual or olfactory evidence of contamination.
Dry.

Method, Plant, Stability, Dimensions
0.00 - 2.90m TP
Stable

Logger
J Skues

Trial Pit

TP4

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
TP	295383.00	376878.00		1:25

Project Name	Project No.	Start Date	End Date
Abergele Area 6	26CGH049	2026-08-04	2026-08-04

Client
Castle Green Homes

Consultant
Betts Geo

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.20) 0.20		TOPSOIL Grass over dark brown sandy CLAY [TOPSOIL]
						(0.30) 0.50		Stiff brown very sandy CLAY
						(0.40) 0.90		Very stiff red brown occasionally grey mottled slightly gravelly CLAY
		1.50	ES			(0.80) 1.70		Medium dense brown clayey fine-coarse SAND. Frequent clay pockets.
						(1.20) 2.90		Very stiff red brown occasionally grey mottlet gravelly sandy CLAY
								End of Trial Pit at 2.90m

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Termiated at target depth.
No visual or olfactory evidence of contamination.
Dry.

Method, Plant, Stability, Dimensions
0.00 - 2.90m TP
Stable

Logger
J Skues

SUMMARY OF CONTAMINATION ANALYSIS: METALS

BETTS GEO
CONSULTING ENGINEERS

Project Name 0
Project No 0
Date 26/09704/1

SOIL TYPE	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES
SAMPLE LOCATION	TP1	TP1	TP2	TP2	TP3	TP3	TP4	S1
DEPTH (m)	0.20	0.50	0.10	1.00	0.10	0.40	1.50	0.20
pH	8	8.2	7.96	8.59	7.23	8.52	8.31	7.02
Sulphate (water sol 2:1)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.08
Organic matter	1.66	0.41	2.17	0.22	2.52	<0.14	0.23	5.88
Arsenic	6	5	6	5	6	3	4	6
Cadmium	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Copper	14	21	15	16	13	25	17	16
Chromium (hexavalent)	<1	<1	<1	<1	<1	<1	<1	<1
Lead	65	15	22	7	44	18	17	49
Mercury	0.26	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Nickel	21	36	24	25	18	32	28	20
Selenium	<1	<1	<1	<1	<1	<1	<1	<1
Zinc	43	51	45	35	47	53	48	61
Asbestos in Soil	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Matrix	0	0	0	0	0	0	0	0
Quantification	0	0	0	0	0	0	0	0
Organic matter	1.66	0.41	2.17	0.22	2.52	<0.14	0.23	5.88

Metals	Mean Value Test *	Range		LQM 2009	DEFRA C4SL 2017
	US_{95}	Largest Value (mg/kg)	Smallest Value (mg/kg)	With Homegrown Produce (1% SOM)	
pH	8.36	8.59	7.02		-
Sulphate (water sol 2:1)	0.04	0.08	<0.01		-
Organic matter	2.96	5.88	<0.14		
Arsenic	5.88	6.00	3.00	**37**	**37**
Cadmium	1.00	<1.0	<1.0	**11**	**22.1**
Copper	19.79	25.00	13.00	**2400**	-
Chromium (hexavalent)	1.00	<1	<1	**6**	**20.5**
Lead	43.29	65.00	7.00		**200**
Mercury	0.20	0.26	<0.17	**11**	-
Nickel	29.64	36.00	18.00	**130**	
Selenium	1.00	<1	<1	**250**	-
Zinc	52.98	61.00	35.00	**3700**	-

NOTE:
Any individual results and mean value tests above SGVs are shown RED highlighted.
Any outlier values which exceed relevant SGVs are shown in red

* - The calculations for the mean value test include outliers

**- Results for this determinand are assessed with no background levels taken into account

Results are expressed as mg/kg unless otherwise stated

ALL RESULTS PRESENTED ARE ASSESSED UNDER THE COMBINED CLEA ASSESSMENT CRITERION AS OUTLINED WITHIN SR4 ASSUMING **NO** FREE PRODUCT WAS OBSERVED DURING FIELDWORK- SEE 'GUIDANCE NOTES ON CONTAMINATION'.

LQM CIEH 2009 (+Nickel update 2105) guidance levels used. C4SL levels also referred to where necessary. LQM profiling tool should be used in order for Benzo(a)Pyrene to be used as a surrogate marker..
NAD - NO ASBESTOS DETECTED

TS - Topsoil, MG - Made Ground and N - Natural Ground

BETTS GEO
CONSULTING ENGINEERS

SUMMARY OF CONTAMINATION ANALYSIS: TPH

Project Name 0
Project No 0
Date 26/09704/1

SOIL TYPE	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES
SAMPLE LOCATION	TP1	TP1	TP2	TP2	TP3	TP3	TP4	S1
DEPTH (m)	0.20	0.50	0.10	1.00	0.10	0.40	1.50	0.20
Ali >C5-C6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ali >C6-C8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ali >C8-C10	<1	<1	<1	<1	<1	<1	<1	<1
Ali >C10-C12	<1	<1	<1	<1	<1	<1	<1	<1
Ali >C12-C16	<1	<1	<1	<1	<1	<1	<1	<1
Ali >C16-C21	<1	<1	<1	<1	<1	<1	<1	<1
Ali >C21-C35	2	<1	2	<1	2	<1	<1	4
Total Aliphatics	2	<1	2	<1	2	<1	<1	4
Aro >C5-C7	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aro >C7-C8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aro >C8-C10	<1	<1	<1	<1	<1	<1	<1	<1
Aro >C10-C12	<1	<1	<1	<1	<1	<1	<1	<1
Aro >C12-C16	<1	<1	<1	<1	<1	<1	<1	<1
Aro >C16-C21	<1	<1	<1	<1	<1	<1	<1	<1
Aro >C21-C35	<1	<1	<1	<1	<1	<1	<1	<1
Total Aromatics	<1	<1	<1	<1	<1	<1	<1	<1
TPH (Ali & Aro)	2	<1	2	<1	2	<1	<1	4
BTEX - Benzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BTEX - Toluene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BTEX - Ethyl Benzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BTEX - m & p Xylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BTEX - o Xylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MTBE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Organic Matter	1.66	0.41	2.17	0.22	2.52	<0.14	0.23	5.88

TPH	Mean Value Test *	Range		LQM S4UL 2009		
	US_{95}	Largest Value (mg/kg)	Smallest Value (mg/kg)	1% SOM	2.5% SOM	6% SOM
Ali >C5-C6	0.01	<0.01	<0.01	42	78	160
Ali >C6-C8	0.01	<0.01	<0.01	100	230	530
Ali >C8-C10	1.00	<1	<1	27	35	150
Ali >C10-C12	1.00	<1	<1	130	330	760
Ali >C12-C16	1.00	<1	<1	1100	2400	4300
Ali >C16-C21	1.00	<1	<1	65000	92000	110000
Ali >C21-C35	2.44	4.00	<1			
Total Aliphatics	2.44	4.00	<1			
Aro >C5-C7	0.01	<0.01	<0.01	70	140	300
Aro >C7-C8	0.01	<0.01	<0.01	130	290	660
Aro >C8-C10	1.00	<1	<1	34	83	190
Aro >C10-C12	1.00	<1	<1	74	180	380
Aro >C12-C16	1.00	<1	<1	140	330	660
Aro >C16-C21	1.00	<1	<1	260	540	930
Aro >C21-C35	1.00	<1	<1	1100	1500	1700
Total Aromatics	1.00	<1	<1			
TPH (Ali & Aro)	2.44	4.00	<1			
BTEX - Benzene	0.01	<0.01	<0.01	0.087	0.17	0.37
BTEX - Toluene	0.01	<0.01	<0.01	130	290	660
BTEX - Ethyl Benzene	0.01	<0.01	<0.01	47	110	260
BTEX - m & p Xylene	0.01	<0.01	<0.01	115	370	890
BTEX - o Xylene	0.01	<0.01	<0.01	60	140	330
MTBE	0.01	<0.01	<0.01	47	110	260

Results expressed as mg/kg air dried unless otherwise stated.

* - The calculations for the mean value test include outliers

NOTES:

LQM CIEH 2009 (+Nickel update 2105) guidance levels used. C4SL levels also referred to where necessary. LQM profiling tool should be used in order for Benzo(a)Pyrene to be used as a surrogate marker..
NAD - NO ASBESTOS DETECTED

SUMMARY OF CONTAMINATION ANALYSIS: PAH

Project Name 0
Project No 0
Date 26/09704/1

SOIL TYPE	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES
SAMPLE LOCATION	TP1	TP1	TP2	TP2	TP3	TP3	TP4	S1
DEPTH (m)	0.20	0.50	0.10	1.00	0.10	0.40	1.50	0.20
Acenaphthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Anthracene	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Benzo(a)pyrene	<0.04	<0.04	<0.04	<0.04	0.04	<0.04	<0.04	<0.04
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(ghi)perylene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
Chrysene	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
Dibenzo(ah)anthracene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Fluoranthene	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Fluorene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(123-cd)pyrene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Naphthalene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Phenanthrene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Pyrene	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
Organic Matter	1.66	0.41	2.17	0.22	2.52	<0.14	0.23	5.88

PAH	Mean Value Test *	Range		LQM S4UL 2009		
	US_{95}	Largest Value (mg/kg)	Smallest Value (mg/kg)	1% SOM	2.5% SOM	6% SOM
Acenaphthene	0.01	<0.01	<0.01	210	510	1100
Acenaphthylene	0.01	<0.01	<0.01	170	420	920
Anthracene	0.02	<0.02	<0.02	2400	5400	11000
Benzo(a)anthracene	0.04	<0.04	<0.04	7.2	11	13
Benzo(a)pyrene	0.04	0.04	<0.04	2.2	2.7	3
Benzo(b)fluoranthene	0.05	<0.05	<0.05	2.6	3.3	3.7
Benzo(ghi)perylene	0.05	<0.05	<0.05	320	340	350
Benzo(k)fluoranthene	0.07	<0.07	<0.07	77	93	100
Chrysene	0.06	<0.06	<0.06	15	22	27
Dibenzo(ah)anthracene	0.04	<0.04	<0.04	0.24	0.28	0.3
Fluoranthene	0.08	<0.08	<0.08	280	560	890
Fluorene	0.01	<0.01	<0.01	170	400	860
Indeno(123-cd)pyrene	0.03	<0.03	<0.03	27	36	41
Naphthalene	0.03	<0.03	<0.03	2.3	5.6	13
Phenanthrene	0.03	<0.03	<0.03	95	220	440
Pyrene	0.07	<0.07	<0.07	620	1200	2000

Results expressed as mg/kg air dried unless otherwise stated.

* - The calculations for the mean value test include outliers

NOTES:

LQM CIEH 2009 (+Nickel update 2105) guidance levels used. C4SL levels also referred to where necessary. LQM profiling tool should be used in order for Benzo(a)Pyrene to be used as a surrogate marker..
NAD - NO ASBESTOS DETECTED

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 26/09704
Issue Number: 1 **Date:** 01 September, 2026

Client:
Betts Geo Environmental
Block D
Parkway Business Centre
Deeside Industrial Estate
Flintshire
CH5 2LE

Project Manager: Betts Geolab/Jenny Skues/Kristian Bennet
Project Name: Abergele PH 6
Project Ref: 26CGH049
Order No: BG6429
Date Samples Received: 05/08/26
Date Instructions Received: 06/08/26
Date Analysis Completed: 01/09/26

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 26/09704

Client Project Name: Abergele PH 6

Client Project Ref: 26CGH049

Lab Sample ID	26/09704/1	26/09704/2	26/09704/3	26/09704/4	26/09704/5	26/09704/6	26/09704/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP1	TP2	TP2	TP2	TP3			
Depth to Top	0.20	0.50	1.50	0.10	1.00	2.00	0.10			
Depth To Bottom										
Date Sampled	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26			
Sample Type	SOIL - ES	SOIL - ES	SOIL - D	SOIL - ES	SOIL - ES	SOIL - D	SOIL - ES			
Sample Matrix Code	4AE	6E	6A	4AE	6A	6A	4AE			
% Stones >10mm$_A$	8.7	<0.1	<0.1	<0.1	<0.1	<0.1	2.8	% w/w	0.1	A-T-044
pH$_D^{M\#}$	8.00	8.20	8.44	7.96	8.59	8.38	7.23	pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	g/l	0.01	A-T-026s
Organic Matter$_D^{M\#}$	1.66	0.41	-	2.17	0.22	-	2.52	% w/w	0.14	A-T-032s
Arsenic$_D^{M\#}$	6	5	-	6	5	-	6	mg/kg	1	A-T-024s
Cadmium$_D^{M\#}$	<1.0	<1.0	-	<1.0	<1.0	-	<1.0	mg/kg	1	A-T-024s
Copper$_D^{M\#}$	14	21	-	15	16	-	13	mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-040s
Lead$_D^{M\#}$	65	15	-	22	7	-	44	mg/kg	1	A-T-024s
Mercury$_D$	0.26	<0.17	-	<0.17	<0.17	-	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D^{M\#}$	21	36	-	24	25	-	18	mg/kg	1	A-T-024s
Selenium$_D^{M\#}$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-024s
Zinc$_D^{M\#}$	43	51	-	45	35	-	47	mg/kg	1	A-T-024s
VPH total (>C5-C10)	<1.00	<1.00	-	<1.00	<1.00	-	<1.00	mg/kg	1	Calc-stone+moi s
(1.01) Item 1a Moisture Content of Soil (Oven Dried Method)$_A^{\#}$	-	-	Appended	-	-	Appended	-			Subcon IFA
(1.02) Item 2.4 4 Point Liquid & Plastic Limit by Cone Penetrometer$_A^{\#}$	-	-	Appended	-	-	Appended	-			Subcon IFA

Envirolab Job Number: 26/09704

Client Project Name: Abergele PH 6

Client Project Ref: 26CGH049

Lab Sample ID	26/09704/1	26/09704/2	26/09704/3	26/09704/4	26/09704/5	26/09704/6	26/09704/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP1	TP2	TP2	TP2	TP3			
Depth to Top	0.20	0.50	1.50	0.10	1.00	2.00	0.10			
Depth To Bottom										
Date Sampled	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26			
Sample Type	SOIL - ES	SOIL - ES	SOIL - D	SOIL - ES	SOIL - ES	SOIL - D	SOIL - ES			
Sample Matrix Code	4AE	6E	6A	4AE	6A	6A	4AE			
Asbestos in Soil (inc. matrix)^										
Asbestos in soil$_D^{\#}$	NAD	NAD	-	NAD	NAD	-	NAD			A-T-045
Asbestos Matrix (visual)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_D$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_D$	N/A	N/A	-	N/A	N/A	-	N/A			A-T-045

Envirolab Job Number: 26/09704

Client Project Name: Abergele PH 6

Client Project Ref: 26CGH049

Lab Sample ID	26/09704/1	26/09704/2	26/09704/3	26/09704/4	26/09704/5	26/09704/6	26/09704/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP1	TP2	TP2	TP2	TP3			
Depth to Top	0.20	0.50	1.50	0.10	1.00	2.00	0.10			
Depth To Bottom										
Date Sampled	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26			
Sample Type	SOIL - ES	SOIL - ES	SOIL - D	SOIL - ES	SOIL - ES	SOIL - D	SOIL - ES			
Sample Matrix Code	4AE	6E	6A	4AE	6A	6A	4AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	-	<0.04	<0.04	-	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	-	<0.04	<0.04	-	0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	-	<0.07	<0.07	-	<0.07	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	-	<0.06	<0.06	-	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	-	<0.04	<0.04	-	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	-	<0.08	<0.08	-	<0.08	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01^U	<0.01^U	-	<0.01^U	<0.01^U	-	<0.01^U	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	-	<0.03	<0.03	-	<0.03	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	-	<0.03	<0.03	-	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	-	<0.03	<0.03	-	<0.03	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	-	<0.07	<0.07	-	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	-	<0.08	<0.08	-	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 26/09704

Client Project Name: Abergele PH 6

Client Project Ref: 26CGH049

Lab Sample ID	26/09704/1	26/09704/2	26/09704/3	26/09704/4	26/09704/5	26/09704/6	26/09704/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP1	TP1	TP1	TP2	TP2	TP2	TP3			
Depth to Top	0.20	0.50	1.50	0.10	1.00	2.00	0.10			
Depth To Bottom										
Date Sampled	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26	04-Aug-26			
Sample Type	SOIL - ES	SOIL - ES	SOIL - D	SOIL - ES	SOIL - ES	SOIL - D	SOIL - ES			
Sample Matrix Code	4AE	6E	6A	4AE	6A	6A	4AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	2	<1	-	2	<1	-	2	mg/kg	1	A-T-055s
Total Aliphatics$_A$	2	<1	-	2	<1	-	2	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	<1	-	<1	<1	-	<1	mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	<1	-	<1	<1	-	<1	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	2	<1	-	2	<1	-	2	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 26/09704

Client Project Name: Abergele PH 6

Client Project Ref: 26CGH049

Lab Sample ID	26/09704/8	26/09704/9	26/09704/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP3	TP4	S1							
Depth to Top	0.40	1.50	0.20							
Depth To Bottom										
Date Sampled	04-Aug-26	04-Aug-26	04-Aug-26							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	4A	5	4AE							
% Stones >10mm$_A$	<0.1	<0.1	<0.1					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.52	8.31	7.02					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	<0.01	<0.01	0.08					g/l	0.01	A-T-026s
Organic Matter$_D$$^{M\#}$	<0.14	0.23	5.88					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	3	4	6					mg/kg	1	A-T-024s
Cadmium$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	25	17	16					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	18	17	49					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	32	28	20					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	53	48	61					mg/kg	1	A-T-024s
VPH total (>C5-C10)	<1.00	<1.00	<1.00					mg/kg	1	Calc-stone+moi s

Envirolab Job Number: 26/09704

Client Project Name: Abergele PH 6

Client Project Ref: 26CGH049

Lab Sample ID	26/09704/8	26/09704/9	26/09704/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP3	TP4	S1							
Depth to Top	0.40	1.50	0.20							
Depth To Bottom										
Date Sampled	04-Aug-26	04-Aug-26	04-Aug-26							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	4A	5	4AE							
Asbestos in Soil (inc. matrix)^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD							A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-							A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-							A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A							A-T-045

Envirolab Job Number: 26/09704

Client Project Name: Abergele PH 6

Client Project Ref: 26CGH049

Lab Sample ID	26/09704/8	26/09704/9	26/09704/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP3	TP4	S1							
Depth to Top	0.40	1.50	0.20							
Depth To Bottom										
Date Sampled	04-Aug-26	04-Aug-26	04-Aug-26							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	4A	5	4AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	<0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	<0.06	<0.06	<0.06					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01^U	<0.01^U	<0.01^U					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.01	A-T-019s

Envirolab Job Number: 26/09704

Client Project Name: Abergele PH 6

Client Project Ref: 26CGH049

Lab Sample ID	26/09704/8	26/09704/9	26/09704/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP3	TP4	S1							
Depth to Top	0.40	1.50	0.20							
Depth To Bottom										
Date Sampled	04-Aug-26	04-Aug-26	04-Aug-26							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	4A	5	4AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	<1	<1	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	<1	<1	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Total Aromatics$_A$	<1	<1	<1					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	<1	<1	4					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s

Report Notes

General

•This report shall not be reproduced, except in full, without written approval from Envirolab.
•The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
•The results reported herein relate only to the material supplied to the laboratory.
•The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
•Analytical results reflect the quality of the sample at the time of analysis only.
•Opinions and Interpretations expressed are outside our scope of accreditation.
•A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
•If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
•Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "D" on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript "^"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
Subscript "@"	Result is an opinion
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.
Stones etc. are not removed from the sample prior to analysis
"Trace Asbestos Identified" will be reported if there is not enough present to verify the type.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25^0C / 11550µS/cm @ 20^0C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Betts Geo Environmental, Block D, Parkway Business Centre, Deeside Industrial Estate, Flintshire, CH5 2LE

Project: Abergele PH 6

Clients Project No: 26CGH049

Project No: 26/09704

Date Received: 06/08/2026 (am)

Cool Box Temperatures (°C): 15.9

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	26/09704/1	26/09704/2	26/09704/3	26/09704/4	26/09704/5	26/09704/6	26/09704/7	26/09704/8	26/09704/9	26/09704/10
Client Sample No										
Client Sample ID/Depth	TP1 0.20m	TP1 0.50m	TP1 1.50m	TP2 0.10m	TP2 1.00m	TP2 2.00m	TP3 0.10m	TP3 0.40m	TP4 1.50m	S1 0.20m
Date Sampled	04/08/26	04/08/26	04/08/26	04/08/26	04/08/26	04/08/26	04/08/26	04/08/26	04/08/26	04/08/26
A-T-019s	11/08/2026	11/08/2026		11/08/2026	11/08/2026		11/08/2026	11/08/2026	11/08/2026	11/08/2026
A-T-022s	11/08/2026	11/08/2026		11/08/2026	11/08/2026		11/08/2026	11/08/2026	11/08/2026	11/08/2026
A-T-024s	12/08/2026	12/08/2026		12/08/2026	12/08/2026		12/08/2026	12/08/2026	12/08/2026	12/08/2026
A-T-026s	13/08/2026	13/08/2026	13/08/2026	13/08/2026	13/08/2026	13/08/2026	13/08/2026	13/08/2026	13/08/2026	13/08/2026
A-T-031s	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026
A-T-032s	17/08/2026	17/08/2026		17/08/2026	17/08/2026		17/08/2026	17/08/2026	17/08/2026	17/08/2026
A-T-040s	13/08/2026	13/08/2026		13/08/2026	13/08/2026		13/08/2026	13/08/2026	13/08/2026	13/08/2026
A-T-044	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026	12/08/2026
A-T-045	07/08/2026	07/08/2026		07/08/2026	07/08/2026		07/08/2026	07/08/2026	07/08/2026	07/08/2026
A-T-055s	11/08/2026	11/08/2026		11/08/2026	11/08/2026		11/08/2026	11/08/2026	11/08/2026	11/08/2026
Calc-As Recd	11/08/2026	11/08/2026		11/08/2026	11/08/2026		11/08/2026	11/08/2026	11/08/2026	11/08/2026
Calc-stone+mois	11/08/2026	11/08/2026		11/08/2026	11/08/2026		11/08/2026	11/08/2026	11/08/2026	11/08/2026

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

IAN FARMER ASSOCIATES

Unit 4, Faraday Close, Pattinson North Industrial Estate, Washington, NE38 8QJ Tel: 0191 482 8500
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Envirolab Ltd
Housesteads
Off Stockport Road
Hattersley
SK14 3QU

F.A.O.

Final Test Report - 2283038 / 1

Site:	26CGH049
Job Number:	2283038
Originating Client:	Envirolab Ltd
Originating Reference:	2283038
Date Sampled:	Not Given
Date Scheduled:	17/08/2026
Date Testing Started:	21/08/2026
Date Testing Finished:	26/08/2026

Previous Reports		Amendments	Date Issued

Amendments:

Authorised By:

Tim Robinson
Quality Supervisor

Report Issue Date: 28/08/2026

Constructionline Part of Capita plc

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Newcastle upon Tyne (0191) 482 8500. Motherwell (01698) 230231. Warrington (01925) 855440. Washington (0191) 482 8500.

AGS

IAN FARMER ASSOCIATES

Laboratory Test Report 2283038 / 1

Site: 26CGH049 **Job Number:** 2283038

Client: Envirolab Ltd **Page:** 2

Determination of Moisture Content, Liquid Limit and Plastic Limit and Derivation of Plasticity and Liquidity Index

Borehole / Trial Pit	Depth (m)	Sample	Natural Moisture Content %	Natural - Stones removed by hand Sieved - Washed on 425 µm sieve			Liquid Limit %	Plastic Limit %	Plasticity Index %	Liquidity Index	Class	Description / Remarks
				Natural / Sieved	Percentage Passing %	Moisture Content %						
TP1	1.50		20	Natural	100	20	45	21	24	-0.04	CI	Brown slightly gravelly CLAY
TP2	2.00		16	Natural	94	17	38	19	19	-0.12	CI	Brown slightly gravelly CLAY

Method of Preparation: BS 1377 : Part 1 : 1990 : Clause 7 Preparation of disturbed samples for testing
BS 1377 : Part 1 : 2016 : Clause 8.4.3 Preparation of samples for plasticity tests
BS 1377 : Part 2 : 1990 : Clause 4.2 Preparation of samples for plastic limit tests

Method of Test: BS 1377 : Part 2 : 1990 : Clause 3.2 Determination of moisture content
BS 1377 : Part 2 : 1990 : Clause 4.3 or 4.4 Determination of the liquid limit
BS 1377 : Part 2 : 1990 : Clause 5.3 Determination of the plastic limit and plasticity index

UKAS TESTING 1464

Results reported relate only to the samples tested.

IAN FARMER ASSOCIATES

Final Test Report - 2283038 / 1

Site:	26CGH049
Job Number:	2283038
Originating Client:	Envirolab Ltd

All opinions and interpretations contained within this report are outside of our Scope of Accreditation.

This test report shall not be reproduced, except in full and only with the written permission of Ian Farmer Associates Ltd.

Samples will be retained for 28 days from date of issue of the final test report before being disposed of, unless we receive written instruction to the contrary.

Report End

Report Issue Date: 28/08/2026