ADDITIONAL PHASE II SITE INVESTIGATION AND CONTROLLED WATER RISK ASSESSMENT ON LAND AT WREXHAM SOLAR FARM WREXHAM

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1.0 INTRODUCTION

1.1 Instruction

1.1.1 GeoCon Site Investigations Ltd (GeoCon) have been commissioned by Innova Renewables Developments Ltd ("the client") to undertake additional Phase II Geoenvironmental Site Investigation and Controlled Water Risk Assessment on land at Wrexham Solar Farm, Wrexham.

1.1.2 It is understood that this is required following the results of a Phase I Preliminary Risk Assessment and a Phase II Site Investigation carried out by GeoCon in December 2023 and April 2024 respectively which should be referred to in conjunction with this report.

1.1.3 It is understood that additional Phase II Site Investigation is required by the local authority to confirm risks to surface water and groundwater from the site to assist with a planning application for a proposed commercial / industrial development at the site.

1.1.4 This report is therefore provided to establish the potential for contamination at the site as a result of current and historic land uses both on site and within influencing distance of the site, to understand the type nature and extent of contamination present.

1.1.5 This report is written in accordance with the guidance set out in Land Contamination Risk Management (LCRM), Guiding Principles for Land Contamination (GPLC) 1 – 3, and the National Planning Policy Framework (NPPF).

1.2 Scope of Works

1.2.1 Prior to commencing the site works the proposed scope of investigation was as follows, however the proposed scope will be subject to change dependent upon site conditions, access, restrictions and obstructions. The actual works undertaken following the completion of the site works and any on site amendments are detailed in section 3.0.

- Nine dynamic sample boreholes to a nominal depth of up to 5.00mbgl or refusal.
- Insitu environmental sampling including collecting surface water samples from the adjacent river.
- Full supervision of all works by engineering geologist including sampling and detailed geotechnical descriptions to BS5930, EN ISO 14688-1 EN ISO 14688-2 and EN ISO 14689 of all strata types encountered within the exploratory holes.
- The installation of nine groundwater monitoring wells to a nominal depth of 5.00mbgl.
- Subsequent groundwater monitoring on one occasions.
- A suite of chemical laboratory analysis.
- Production of an interpretative report including Generic Quantitative Risk Assessment (GQRA) and updated Conceptual Site Model (CSM).

1.3 Previous Investigations

1.3.1 GeoCon have previously completed the following reports for the site.

- Phase I Preliminary Risk Assessment in December 2023
- Phase II Site Investigation in April 2024

1.4 Reliance and Limitations

1.4.1 This report has been prepared using published information and information provided by the Client and their professional advisers which has been made available to GeoCon at the time of writing only. GeoCon accepts no liability for any changes resulting from new information which has become available since this time.

1.4.2 This report is provided for the sole use of the client and their professional advisors and is confidential to them unless agreed otherwise in writing. This report may only be used and relied on once the work has been paid for in full.

1.4.3 GeoCon owes no duty of care and has no liability to any third party who is not authorised by GeoCon to use this report. Any unauthorised third parties using information contained in this report do so at their own risk.

1.4.4 This assessment has been carried out to determine the potential risks posed to future end users, along with other key receptors, resulting from potential contamination at the site, based on the proposed development. Should any revisions in the development proposals result in a change any assessment parameters detailed in this report, a re-assessment of the risk should be carried out.

1.4.5 Whilst this report may reference observations made regarding the presence of features/ issues such as invasive species, ACM, site drainage and evidence of structural abnormalities, this report does not constitute specialist surveys on these matters. Should further specialist surveys be carried out in this regard, the findings of these should be reported to GeoCon so that we may determine if this has any impact on the findings of this report.

1.4.6 The assessment and interpretation of the factual data obtained as part of this Phase II Site Investigation has been undertaken in accordance with standard consulting practice and with current national and international guidance.

1.4.7 This report presents the observations made during the Phase II Site Investigation and the factual data obtained. The conclusions and recommendations in this report are limited to those which can be made based on the findings of the survey and information provided by third parties. GeoCon assumes all third party data to be true and correct. No responsibility can be accepted by GeoCon for inaccuracies in the information provided by any other party.

1.4.8 This report is written in the context of an agreed scope of works and should not be used in a different context. Furthermore, new information, improved practices, and changes in legislation may require the reinterpretation of the report in whole or in part after its original issue. GeoCon reserve the right to alter their conclusions and recommendations in the light of further information that may become available. This report is provided for the sole use of the client and their professional advisers and is confidential to them unless agreed otherwise in writing.

1.4.9 Ground conditions can be variable and change rapidly, especially in areas of Made Ground, however it is assumed that the ground conditions encountered and observed are typical and representative of the site as a whole. Most specifically with regard to this limited investigation, the ground conditions have been determined from a limited number of exploratory holes formed across the site, therefore only a small percentage of the total area of the site has been investigated. Interpolation between exploratory holes has enabled a general picture of the subsurface conditions to be produced. Conclusions drawn from the ground investigation should be read in this context. GeoCon cannot accept responsibility for any situations resulting from locally unforeseen ground conditions occurring between exploratory holes.

1.4.10 In addition, subsurface conditions including contaminant concentrations and groundwater levels may vary spatially with time. This factor should be given due consideration in the event that the information contained within this report is used after any significant period of time has elapsed.

2.0 SITE LOCATION AND DESCRIPTION

2.1 Site Location

2.1.1 The site is located at land adjacent to Williams Farm Solar, Wrexham, at approximate National Grid Reference NGR: 337930:348420 (centre of the site).

2.1.2 A site location plan is presented as Drawing No. GSI 2006/01 in Appendix A.

2.2 Site Description

2.2.1 The site is an irregular shaped piece of land with an approximate area of 9.63Ha. The site begins to the west with a narrow corridor of land stretching eastwards from the entrance of the site. The site become wider to the east and opens up to the north and east and south.

2.2.2 The topography of the site generally slopes towards the north and the river channel on the northern boundary with localised undulations present.

2.2.3 The site is predominantly undeveloped agricultural grazing land, with small derelict bricked buildings located in the eastern portion of the site which have become overgrown with vegetation and rubble. Small amounts of fly tipping is present in small localised areas on the site including timber, plastics and car tyres. The structures on site show evidence of connected electric and power, and manhole covers along the connecting perimeter of site. An electric substation is present on the site boundary to the adjacent Solar Farm. Overhead power lines are in the west of site. The access track in the east of site is of poor condition. Ground conditions during the site walkover indicated soft and boggy ground with the most impacted area identified in the north of site located closer to the River Clywedog. The river at the northern extents has mature trees present along the low banks of the river channel. Standing surface water was also present towards this area.

2.2.4 An approximate distribution of the surface covering is given below in Table 2.1: Site Surface Covering.

Table 2.1: Site Surface Covering

Type of Surface Cover	Distribution (%)
Soft Ground (grassed and landscaped areas)	85
Hardstanding	0
Roadways	5
Buildings	10
Water (ponds, streams)	0

2.2.5 The site is bound by the River Clywedog northwest, fence line, hedges and established trees to the east. The south and west of site is bound by the adjacent fence line of Williams Solar Farm.

2.2.6 Access to the site is via unnamed road off the east of Bedwell Road.

2.2.7 A selection of photographs from the site walkover are presented as GSI 2006/02 in Appendix A.

2.3 Surrounding Area

2.3.1 The current surrounding land use to the site is generally grassland and agricultural properties in all directions, with the solar farm present adjacent to the site to the immediate south, and the meandering River channel to the north.

2.3.2 The topography of the surrounding area is sloping down towards the north; contour maps show a slight decline in elevation to the west.

2.4 Future Site Usage

2.4.1 It is currently proposed to construct additional extension to the preexisting solar farm development adjacent to the site, referenced WR-EX-258-06-01 and contained with Appendix A. The development contains a number of structures in Field 1B and 1C, with access roadway infrastructure proposed and the open areas of the site populated with rows of solar panels installed.

2.4.2 This assessment has been carried out with reference to this proposed development plan as provided by the client, any changes to the proposed development may result in this assessment requirement updating.

3.0 GROUND INVESTIGATION

3.1 General

3.1.1 The intrusive investigation was carried out on the 3rd July 2025 with an additional borehole on the 17th October 2025.

3.1.2 The specification and scope of works for the ground investigation has been provided by the client.

3.1.3 The final scope of the ground investigation was as per the scope of works as defined in section 1.2.

3.1.4 The ground investigation was carried out to determine the geoenvironmental properties of the groundwater beneath the site for a proposed commercial / industrial end use development at the site.

3.1.5 The locations of the exploratory holes were specified by the client and were positioned to gain key information beneath the site in relation to the proposed development.

3.1.6 All locations were checked against buried service location plans and then scanned with a Cable Avoidance Tool (CAT) and Genny prior to excavation, and a permit to dig was then issued. Each location was then continued by hand down to a minimum of 1.20mbgl to clear any buried services or other subsurface obstructions. All locations were then checked again with a Cable Avoidance Tool (CAT) at the base of the hand excavated inspection pit by GeoCon prior to commencement of drilling.

3.1.7 All access permissions were arranged by the client prior to the ground investigation commencing.

3.1.8 An exploratory hole location plan is presented in Appendix A as drawing number GSI 2006/02.

3.2 Dynamic Sample Boreholes

3.2.1 Nine dynamic sample boreholes were drilled at the site referenced DS01 to DS09 and were drilled to a depth of 5.00mbgl.

3.2.2 The Dynamic sample boreholes were drilled using a tracked Dynamic sample rig in order to facilitate geoenvironmental sampling and to gain an understanding of the environmental properties of the soils and groundwater beneath the site, and to facilitate the installation of groundwater monitoring standpipes.

3.2.3 The dynamic sample boreholes were drilled using 100mm diameter barrel reducing in size with depth. to achieve the target depths.

3.2.4 All dynamic sample borehole logs are presented in Appendix B.

3.3 Sampling and Insitu Testing

3.3.1 The environmental and geotechnical sampling regime and insitu testing regime included the following:

- Environmental samples for subsequent chemical analysis were taken from each strata type, with a minimum of three samples taken from the upper 1.00 m, then at 1.00 m intervals in Made Ground with a minimum of one sample from the natural strata.
- Groundwater samples for subsequent chemical analysis were taken from any exploratory holes where sufficient groundwater was available to collect a sample.

3.3.2 In addition to the above standard sampling Soil samples were collected for environmental analysis by the engineering geologist on site based on physical and visual inspection.

3.3.3 All samples were stored in pre-chilled cool-boxes prior to immediate dispatch to laboratory. Where there has been a delay in transporting the samples to the laboratory, samples have been kept in a cool

dark storage unit inside cool boxes packed with ice, which is regularly replaced to maintain sample quality.

3.3.4 The environmental samples were subsequently transported to a chemical laboratory in plastic tubs, glass jars and soils vials. The geotechnical samples were subsequently transported to a geotechnical laboratory in prepared bulk bags and plastic tubs.

3.3.5 Groundwater samples were collected in a range of glass jars and plastic bottles with all necessary preservatives where required, and were subsequently transported to a chemical laboratory.

3.4 Installations and Backfill

3.4.1 All nine of the dynamic sample were installed with ground water monitoring standpipes. The details of the gas and ground water monitoring standpipes are summarised below in Table 3.1: Groundwater Monitoring Installations:

Table 3.1: Groundwater Monitoring Installations

BH ID	Installation Depth (mbgl)	Response Zone (mbgl)	Installation Date	Strata	Comments
DS01	5.00	1.00 – 4.00	03/07/2025	Till	NA
DS02	5.00	1.00 – 4.00	03/07/2025	Till	NA
DS03	5.00	1.00 – 4.00	03/07/2025	Till	NA
DS04	5.00	1.00 – 4.00	03/07/2025	Till	NA
DS05	5.00	1.00 – 4.00	03/07/2025	Till	NA
DS06	5.00	1.00 – 4.00	03/07/2025	Till	NA
DS07	5.00	1.00 – 4.00	03/07/2025	Till	NA
DS08	5.00	1.00 – 4.00	03/07/2025	Till	NA
DS09	3.00	1.00 – 4.00	31/10/2025	Till	NA

3.4.2 Full details of the installations and backfill are presented on the relevant exploratory hole logs.

3.4.3 All monitoring standpipes are constructed using 50mm slotted pipe with a Geosock filter and gravel surround medium within the response zone, and 50mm plain pipe with a bentonite seal above the response zone (minimum 0.50m thick).

3.5 Groundwater

3.5.1 Where groundwater was encountered a waiting period of 20 minutes was allowed to monitor any change (rise or fall) in the levels of each groundwater strike.

3.6 Geoenvironmental Monitoring

Groundwater Monitoring

3.6.1 Groundwater monitoring has been carried out from the monitoring installations using a standard dip meter on two occasions to establish the standing water levels beneath the site, and facilitate groundwater sampling.

Groundwater Sampling

3.6.2 Samples of groundwater were taken to facilitate chemical testing.

3.6.3 Samples were taken using a standard water bailer.

3.7 Laboratory testing

3.7.1 Chemical laboratory testing was subsequently carried out on selected samples of soil. Further details of the chemical laboratory testing are given within section 5.0 – Chemical Testing and Results.

3.7.2 All chemical laboratory testing has been scheduled by GeoCon.

3.8 Restrictions

3.8.1 No restrictions were encountered during this site investigation that would have prevented parts of the site being accessed and consequently resulting in any of the exploratory locations being abandoned.

4.0 GROUND CONDITIONS

4.1 Published Geology

4.1.1 The British Geological Survey shows the site to be underlain by the geological succession outlined below in Table 4.1: Published Geology/

Table 4.1: Published Geology

Geology	Description /strata	BGS General Description (Lexicon)
Artificial	Landscaped Ground	Artificially Modified Ground
Superficial	Till and Alluvium	Gravel, Sand, Clay and Silt
Bedrock	Kinnerton Sandstone Formation	Sandstone

4.2 General

4.2.1 A generalised summary of the ground conditions encountered, depths to base, and thickness recorded from the exploratory hole records is presented below in Table 4.2: Summary of Ground Conditions.

Table 4.2: Summary of Ground Conditions

Geology / Strata	Depth (mbgl)				Thickness (m)		Locations encountered
	Top		Base		Min	Max	
	Min	Max	Min	Max			
Made Ground	0.00	-	0.20	0.80	0.20	0.80	DS02, DS03, DS08
Topsoil	0.00	-	0.05	0.30	0.05	0.30	DS01, DS04, DS05, DS06, DS07
Clay	0.05	0.80	1.50	5.45	1.30	5.40	All locations
Sand	0.20	1.50	0.50	2.40	0.30	0.90	DS02, DS05

Groundwater	Strike depth (mbgl)		Rest Level (mbgl)		Locations encountered	Comments
	Min	Max	Min	Max		
Strike	-	4.23	1.55	-	DS05	NA
SWL at end of borehole	-	-	1.55	-	DS05	NA
Seepage	-	-	-	-	Not Encountered	NA

4.2.2 The general ground conditions encountered have been summarised below.

4.2.3 Detailed strata descriptions are presented on the dynamic sample borehole logs presented in Appendix B.

4.2.4 The actual ground conditions encountered across the site were uniform and comprised Made Ground, topsoil, clay and sand.

4.3 Made Ground

4.3.1 Made Ground was encountered in DS02, DS03, and DS08 from ground level to depths of between 0.20 and 0.80mbgl.

4.3.2 The Made Ground generally comprised reworked topsoil and gravelly sand.

Reworked Topsoil:

4.3.3 Reworked topsoil was encountered in DS02, DS03, and DS08 from ground level to depths of between 0.20 and 0.30mbg and generally comprised clayey slightly gravelly fine to medium sand.

Granular Made Ground:

4.3.4 Granular Made Ground materials were encountered in DS08, from beneath the reworked topsoil to a depth of 0.80mbgl and generally comprised slightly clayey gravelly fine to medium sand with fragments of brick.

4.4 Topsoil

4.4.1 Topsoil was encountered in DS01, DS04, DS05, DS06, and DS07 from ground level to depths of between 0.05 and 0.30mbgl and generally comprised clayey slightly gravelly fine to medium sand.

4.5 Superficial Deposits

4.5.1 Clay deposits were encountered in all exploratory hole locations directly beneath the Topsoil and Made Ground deposits and were proven to a depth of 5.45mbgl and generally comprised firm to very stiff slightly sandy slightly gravelly clay.

4.5.2 Sand deposits were encountered in DS02 and DS05 directly beneath between the clay deposits and were proven to a depth of 2.40mbgl and generally comprised medium dense slightly clayey slightly gravelly fine to medium sand.

4.5.3 These soils are considered to represent Alluvium.

4.6 Bedrock

4.6.1 Bedrock was not encountered during this ground investigation.

4.7 Groundwater

4.7.1 Groundwater was encountered in one of the eight exploratory holes formed across the site. Further details are as follows:-

- DS05: Strike at 4.23mbgl rising to 3.22mbgl after 60 minutes, further rising to 1.55mbgl after 240 minutes.

4.7.2 Standing water levels were recorded at the end of each borehole. Further details are as follows:-

- DS05 – SWL at 1.55mbgl.

4.8 Groundwater Monitoring

4.8.1 A groundwater monitoring regime was carried out at the site to establish the ground water levels beneath the site, which included monitoring on two occasions. Table 4.3: Groundwater Monitoring Results, below presents the details of the groundwater monitoring regime. All boreholes were purged and developed accordingly to prior to the groundwater monitoring.

Table 4.3: Groundwater Monitoring Results

Exploratory Hole ID	Base of Hole (mbgl)	Standing Water Level (SWL) (mbgl)	
		Date of Visit	
		22/07/2025	17/10/2025
DS01	5.00	1.92	1.86
DS02	5.00	2.01	1.95
DS03	5.00	1.98	1.90
DS04	5.00	2.97	2.84
DS05	5.00	2.13	2.01

DS06	5.00	Dry	Dry
DS07	5.00	1.78	1.70
DS08	5.00	1.10	0.70
DS09	3.00	1.98	1.90

N/R = Not recorded

4.8.2 Samples of groundwater were taken from all locations for subsequent chemical analysis.

4.9 Obstructions

4.9.1 No obstructions were encountered during this ground investigation.

5.0 CHEMICAL TESTING AND RESULTS

5.1 General

5.1.1 All samples were sent to a UKAS accredited chemical testing laboratory, and MCERTS were used where available. The analytical strategy focussed on a general suite of potential contaminants and the analytical suites are summarised in Table 5.1: Summary of Chemical Testing Suite.

5.1.2 All soil leachate testing has been prepared as 10:1 ratio to understand the leachability of contaminants from the soils in relation to their impact on controlled water receptors.

5.1.3 All chemical testing results are presented in Appendix C.

Table 5.1: Summary of Chemical Testing Suite

Testing	Comment	No. of groundwater samples analysed
GeoCon Standard Suite: (heavy metals & inorganics, speciated PAH, and asbestos screen)	General analysis of groundwater beneath the site to achieve general site coverage, and targeting former uses on site and off site within influencing distance	16 (over two sampling rounds)
GeoCon Hydrocarbon Suite: (Speciated TPH CWG, BTEX and MTBE)	General analysis of groundwater beneath the site to achieve general site coverage, and targeting former uses on site and off site within influencing distance	16 (over two sampling rounds)
GeoCon Glycols Suite:	General analysis of groundwater beneath the site to achieve general site coverage, and targeting former uses on site and off site within influencing distance	16 (over two sampling rounds)
Explosive Suite: including TNT	General analysis of groundwater beneath the site to achieve general site coverage, and targeting former uses on site and off site within influencing distance	10

5.2 Chemical Testing Results – Surface Water and Groundwater

5.2.1 Only detectable concentrations of contaminants reported above the laboratory detection limits are presented overleaf in Tables 5.2 to 5.4. The tables present the results as follows:

- Table 5.2: Summary of Surface Water Chemical Testing Results – July 2025
- Table 5.3: Summary of Groundwater Chemical Testing Results – July 2025

- Table 5.4: Summary of Surface Water Chemical Testing Results – October 2025
- Table 5.5: Summary of Groundwater Chemical Testing Results – October 2025

5.2.2 All other samples recorded contaminant concentrations below laboratory detection limits. Where no screening criteria is available these results are discussed in section 6.2.

5.2.3 All groundwater chemical testing results have initially been compared to Drinking Water Standards (DWS) and WHO Screening Values to assess risk to groundwater, and Environmental Quality Standards (EQS) to assess risk to surface water. Any compound concentrations which exceed the DWS or WHO screening value are highlighted in bold and any compound concentrations which exceed the EQS screening value are underlined. All other chemicals analysed not listed in the table recoded levels below the limits of detection.

Table 5.2: Summary of Surface Water Chemical Testing Results – July 2025

Determinand	No. Of samples analysed	Screening value (where applicable) (µg/l)			Determinand concentration range above detection (µg/l)		No of Samples exceeding screening value
Summary of Groundwater results		**DWS**	**EQS**	**WHO**	**Min**	**Max**	
Lead	2	10	20	10	1	1	0
Phenanthrene	2	NSV	NSV	NSV	BD	0.01	NA
1,2-butanediol (1,2-butylene glycol)	2	NSV	NSV	NSV	BD	2.7	NA
1,2-propanediol (1,2-propylene glycol)	2	NSV	NSV	NSV	BD	2.8	NA
1,3-butanediol (1,3-butylene glycol)	2	NSV	NSV	NSV	BD	2.6	NA
1,3-propanediol (1,3-propylene glycol)	2	NSV	NSV	NSV	BD	2.7	NA
1,4-butanediol (tetramethylene glycol)	2	NSV	NSV	NSV	BD	2.7	NA
1,5-pentanediol (pentamethylene glycol)	2	NSV	NSV	NSV	BD	2.6	NA
ethanediol (ethylene glycol)	2	NSV	NSV	NSV	BD	3.0	NA
2,2'-oxydiethanol (diethylene glycol)	2	NSV	NSV	NSV	BD	2.5	NA
2,2'-(ethylenedioxy)diethanol (triethylene glycol)	2	NSV	NSV	NSV	BD	2.6	NA
2-butoxyethanol (butyl glycol)	2	NSV	NSV	NSV	BD	3.0	NA
3,3'-oxydipropanol (dipropylene glycol)	2	NSV	NSV	NSV	BD	2.7	NA
2-isopropoxyethanol (isopropyl glycol)	2	NSV	NSV	NSV	BD	3.7	NA
2-methoxyethyl acetate	2	NSV	NSV	NSV	BD	3.8	NA
2-butoxyethyl acetate	2	NSV	NSV	NSV	BD	3.2	NA
2-(2-butoxyethoxy)ethanol (butyl diglycol, DEGBE)	2	NSV	NSV	NSV	BD	2.7	NA

BD = Below Detection

NSV = No Screening Value Available

** = Hardness Dependent*

Table 5.3: Summary of Groundwater Chemical Testing Results – July 2025

Determinand	No. Of samples analysed	Screening value (where applicable) (µg/l)			Determinand concentration range above detection (µg/l)		No of Samples exceeding screening value
Summary of Groundwater results		**DWS**	**EQS**	**WHO**	**Min**	**Max**	
Arsenic	4	10	50	10	BD	2	0
Cadmium	4	5	5	3	BD	0.3	0
Copper*	4	2000	8	2000	BD	17	3
Chromium	4	50	20	50	BD	14	0
Lead	4	10	20	10	1	73	**1**
Mercury	4	1	1	1	BD	0.1	0
Nickel	4	20	40	70	BD	5	0
Selenium	4	10	NSV	10	BD	2	0

Zinc	4	5000	50	3000	5	30	0
Acenaphthene	4	NSV	NSV	NSV	BD	0.08	NA
Anthracene	4	NSV	0.02	NSV	BD	0.07	2
Benzo(a)anthracene	4	NSV	NSV	NSV	BD	0.11	NA
Benzo(a)pyrene	4	0.01	0.27	0.01	BD	0.07	**2**
Benzo(b)fluoranthene	4	0.1	0.03	NSV	BD	0.09	2
Benzo(ghi)perylene	4	0.1	0.00082	NSV	BD	0.03	2
Benzo(k)fluoranthene	4	0.1	0.017	NSV	BD	0.04	2
Chrysene	4	NSV	NSV	NSV	BD	0.1	NA
Dibenzo(ah)anthracene	4	NSV	NSV	NSV	BD	0.01	NA
Fluoranthene	4	NSV	0.02	NSV	BD	0.74	2
Fluorene	4	NSV	NSV	NSV	BD	0.04	NA
Indeno(123-cd)pyrene	4	0.1	NSV	NSV	BD	0.03	NA
Phenanthrene	4	NSV	NSV	NSV	BD	0.13	NA
Pyrene	4	NSV	NSV	NSV	BD	0.44	NA
Total PAH	4	0.1	NSV	NSV	BD	1.75	NA
TPH CWG Aro >C16-C21	4	NSV	NSV	100	BD	21	0
TPH CWG Aro >C21-C35	4	NSV	NSV	90	BD	30	0
Total Aromatics	4	NSV	NSV	90	BD	51	0
Total TPH (Ali & Aro)	4	NSV	NSV	NSV	BD	51	0
1,2-butanediol (1,2-butylene glycol)	4	NSV	NSV	NSV	BD	BD	NA
1,2-propanediol (1,2-propylene glycol)	4	NSV	NSV	NSV	BD	BD	NA
1,3-butanediol (1,3-butylene glycol)	4	NSV	NSV	NSV	BD	BD	NA
1,3-propanediol (1,3-propylene glycol)	4	NSV	NSV	NSV	BD	BD	NA
1,4-butanediol (tetramethylene glycol)	4	NSV	NSV	NSV	BD	BD	NA
1,5-pentanediol (pentamethylene glycol)	4	NSV	NSV	NSV	BD	BD	NA
ethanediol (ethylene glycol)	4	NSV	NSV	NSV	BD	BD	NA
2,2'-oxydiethanol (diethylene glycol)	4	NSV	NSV	NSV	BD	BD	NA
2,2'-(ethylenedioxy)diethanol (triethylene glycol)	4	NSV	NSV	NSV	BD	BD	NA
2-butoxyethanol (butyl glycol)	4	NSV	NSV	NSV	BD	BD	NA
3,3'-oxydipropanol (dipropylene glycol)	4	NSV	NSV	NSV	BD	BD	NA
2-isopropoxyethanol (isopropyl glycol)	4	NSV	NSV	NSV	BD	BD	NA
2-methoxyethyl acetate	4	NSV	NSV	NSV	BD	BD	NA
2-butoxyethyl acetate	4	NSV	NSV	NSV	BD	BD	NA
2-(2-butoxyethoxy)ethanol (butyl diglycol, DEGBE)	4	NSV	NSV	NSV	BD	BD	NA

BD = Below Detection

NSV = No Screening Value Available

** = Hardness Dependent*

Table 5.4: Summary of Surface Water Chemical Testing Results – October 2025

Determinand	No. Of samples analysed	Screening value (where applicable) (µg/l)			Determinand concentration range above detection (µg/l)		No of Samples exceeding screening value
Summary of Groundwater results		**DWS**	**EQS**	**WHO**	**Min**	**Max**	
Cadmium	2	5	5	3	0.2	0.2	0
Lead	2	10	20	10	2.8	3.4	0
Zinc	2	5000	50	3000	45	51	1
1,2-butanediol (1,2-butylene glycol)	2	NSV	NSV	NSV	BD	BD	NA
1,2-propanediol (1,2-propylene glycol)	2	NSV	NSV	NSV	BD	BD	NA
1,3-butanediol (1,3-butylene glycol)	2	NSV	NSV	NSV	BD	BD	NA
1,3-propanediol (1,3-propylene glycol)	2	NSV	NSV	NSV	BD	BD	NA
1,4-butanediol (tetramethylene glycol)	2	NSV	NSV	NSV	BD	BD	NA
1,5-pentanediol (pentamethylene glycol)	2	NSV	NSV	NSV	BD	BD	NA
ethanediol (ethylene glycol)	2	NSV	NSV	NSV	BD	BD	NA
2,2'-oxydiethanol (diethylene glycol)	2	NSV	NSV	NSV	BD	BD	NA
2,2'-(ethylenedioxy)diethanol (triethylene glycol)	2	NSV	NSV	NSV	BD	BD	NA
2-butoxyethanol (butyl glycol)	2	NSV	NSV	NSV	BD	BD	NA
3,3'-oxydipropanol (dipropylene glycol)	2	NSV	NSV	NSV	BD	BD	NA
2-isopropoxyethanol (isopropyl glycol)	2	NSV	NSV	NSV	BD	BD	NA
2-methoxyethyl acetate	2	NSV	NSV	NSV	BD	BD	NA
2-butoxyethyl acetate	2	NSV	NSV	NSV	BD	BD	NA
2-(2-butoxyethoxy)ethanol (butyl diglycol, DEGBE)	2	NSV	NSV	NSV	BD	BD	NA
HMX	2	NSV	NSV	NSV	BD	BD	NA
RDX	2	NSV	NSV	NSV	BD	BD	NA
EGDN	2	NSV	NSV	NSV	BD	BD	NA
Tetryl	2	NSV	NSV	NSV	BD	BD	NA
NG	2	NSV	NSV	NSV	BD	BD	NA
TNT	2	NSV	NSV	NSV	BD	BD	NA
2,6-DNT	2	NSV	NSV	NSV	BD	BD	NA
2,4-DNT	2	NSV	NSV	NSV	BD	BD	NA
PETN	2	NSV	NSV	NSV	BD	BD	NA
Picrite	2	NSV	NSV	NSV	BD	BD	NA
Picric Acid	2	NSV	NSV	NSV	BD	BD	NA

BD = Below Detection

NSV = No Screening Value Available

** = Hardness Dependent*

Table 5.5: Summary of Groundwater Chemical Testing Results – October 2025

Determinand	No. Of samples analysed	Screening value (where applicable) (µg/l)			Determinand concentration range above detection (µg/l)		No of Samples exceeding screening value
Summary of Groundwater results		**DWS**	**EQS**	**WHO**	**Min**	**Max**	
Phenols - Total by HPLC	8	0.5	30	NSV	BD	0.02	0
Arsenic	8	10	50	10	BD	6	0
Cadmium	8	5	5	3	0.2	7.5	1
Copper*	8	2000	20	2000	BD	110	5
Chromium	8	50	20	50	BD	18	0
Lead	8	10	20	10	21.3	997	**8** / 7
Nickel	8	20	40	70	4	51	**3** / 1
Selenium	8	10	-	10	BD	4	0
Zinc	8	5000	50	3000	23	379	7
Benzo(a)pyrene	8	0.01	0.27	0.01	BD	0.03	**2**
Benzo(b)fluoranthene	8	0.1	0.017	NSV	BD	0.05	2
Benzo(ghi)perylene	8	0.1	0.0007	NSV	BD	0.02	1
Benzo(k)fluoranthene	8	0.1	0.0082	NSV	BD	0.02	2
Chrysene	8	NSV	NSV	NSV	BD	0.04	NA
Fluoranthene	8	NSV	0.12	NSV	BD	0.06	0
Indeno(123-cd)pyrene	8	0.1	NSV	NSV	BD	0.02	0
Naphthalene	8	NSV	130	NSV	BD	0.03	0
Pyrene	8	NSV	NSV	NSV	BD	0.05	NA
Total PAH	8	0.1	NSV	NSV	BD	0.32	**2**
TPH CWG Aro >C16-C21	8	NSV	NSV	100	BD	27	0
TPH CWG Aro >C21-C35	8	NSV	NSV	90	BD	10	0
Total Aromatics	8	NSV	NSV	90	BD	32	0
Total TPH (Ali & Aro)	8	NSV	NSV	NSV	BD	32	NA
1,2-butanediol (1,2-butylene glycol)	8	NSV	NSV	NSV	BD	BD	NA
1,2-propanediol (1,2-propylene glycol)	8	NSV	NSV	NSV	BD	BD	NA
1,3-butanediol (1,3-butylene glycol)	8	NSV	NSV	NSV	BD	BD	NA
1,3-propanediol (1,3-propylene glycol)	8	NSV	NSV	NSV	BD	BD	NA
1,4-butanediol (tetramethylene glycol)	8	NSV	NSV	NSV	BD	BD	NA
1,5-pentanediol (pentamethylene glycol)	8	NSV	NSV	NSV	BD	BD	NA
ethanediol (ethylene glycol)	8	NSV	NSV	NSV	BD	BD	NA
2,2'-oxydiethanol (diethylene glycol)	8	NSV	NSV	NSV	BD	BD	NA
2,2'-(ethylenedioxy)diethanol (triethylene glycol)	8	NSV	NSV	NSV	BD	BD	NA
2-butoxyethanol (butyl glycol)	8	NSV	NSV	NSV	BD	BD	NA

3,3'-oxydipropanol (dipropylene glycol)	8	NSV	NSV	NSV	BD	BD	NA
2-isopropoxyethanol (isopropyl glycol)	8	NSV	NSV	NSV	BD	BD	NA
2-methoxyethyl acetate	8	NSV	NSV	NSV	BD	BD	NA
2-butoxyethyl acetate	8	NSV	NSV	NSV	BD	BD	NA
2-(2-butoxyethoxy)ethanol (butyl diglycol, DEGBE)	8	NSV	NSV	NSV	BD	BD	NA
HMX	8	NSV	NSV	NSV	BD	BD	NA
RDX	8	NSV	NSV	NSV	BD	BD	NA
EGDN	8	NSV	NSV	NSV	BD	BD	NA
Tetryl	8	NSV	NSV	NSV	BD	BD	NA
NG	8	NSV	NSV	NSV	BD	BD	NA
TNT	8	NSV	NSV	NSV	BD	BD	NA
2,6-DNT	8	NSV	NSV	NSV	BD	BD	NA
2,4-DNT	8	NSV	NSV	NSV	BD	BD	NA
PETN	8	NSV	NSV	NSV	BD	BD	NA
Picrite	8	NSV	NSV	NSV	BD	BD	NA
Picric Acid	8	NSV	NSV	NSV	BD	BD	NA

BD = Below Detection

NSV = No Screening Value Available

** = Hardness Dependent*

6.0 GENERIC QUANTITATIVE RISK ASSESSMENT (GQRA)

6.1 Criteria for interpretation

6.1.1 The regime for contaminated land was set out in Part IIA of the Environmental Protection Act (EPA) 1990, as inserted by S.57 of The Environment Act 1995 and came into effect in England on 1st April 2000 as The Contaminated Land (England) Regulations 2000 (SI 2000/227). These regulations were subsequently updated with the provision of The Contaminated Land (England) Regulations 2006 (SI 2006/1380), which consolidated the previous regulations and amendments and added in provisions regarding radioactive contaminated land. These regulations came into force on 4th August 2006. This modified the wording for "Contaminated Land" under Part IIA of the EPA. Section 78A (2) defines contaminated land as "land which appears to be in such a condition, by reason of substances in, on or under the land, that:

- significant harm is being caused, or there is a significant possibility of significant harm being caused (SPOSH);

Controlled Water Receptors

6.1.2 An initial Generic Quantitative Risk Assessment (GQRA) for controlled waters has been undertaken by comparison of the groundwater analytical results with published guidance criteria. These can be classified as Generic Assessment Criteria (GAC) or Soil Screening Values (SSV's) and are widely referred to by consultants, Regulatory Authorities and other professionals within the industry and include the following:

- UK Drinking Water Standards
- Environmental Quality Standards
- WHO

6.1.3 Further detailed quantitative risk assessment (DQRA) may be required.

6.2 Risk to Controlled Waters

Groundwater

6.2.1 The Environment Agency aquifer classification scheme indicates that the superficial aquifer designation for east and south area of the site is classed as Secondary Undifferentiated aquifer and the designation for north and west site area is classed as Secondary A aquifer. The underlying bedrock aquifer is classed as Principal Aquifer.

6.2.2 There are no public drinking water abstractions within 1000m of the site; however, the site is located within two Source Protection Zones (SPZ) – Zone II Outer Protection Zone, and a Zone III total catchment, and there is a Zone 1 Inner Protection Zone is located approximately 308m to the northeast.

6.2.3 The nearest public drinking water abstraction is located approximately 1897m to the south of the site.

6.2.4 The potential contaminants identified on the site from the Phase I PRA included heavy metals, metalloids and inorganics; PAH's; leachable contamination, hydrocarbons & organic contamination; volatiles; and PCB's.

6.2.5 Historically the site and immediate surrounding area was a Royal Ordnance Factory during the period of WW2 from the Phase I PRA. This would be associated with buildings, processes and materials related with explosive operations. From a review of the historical maps, the factory for the manufacture or processing of explosives that is likely to contain residues of explosive are located offsite, north of the river. The contaminants of concern specifically associated with these activities are glycols and

trinitrotoluene (TNT) and their breakdown products. Appendix D shows the historical layout of the former Royal Ordnance Factory in relation to the site location.

6.2.6 A Phase II Site Investigation was then completed by GeoCon in April 2024 which concluded that, based on the results of the soil testing, the generally impermeable geology beneath the site, and considering that natural attenuation, dilution and dispersion will take place, the risks to groundwater and drinking waters are considered to be **Very low** at this stage.

6.2.7 It is understood that the local authority have requested a Controlled Water Risk Assessment is completed for the site to confirm chemical concentrations within the groundwater beneath the site, and whether a risk to groundwater is present.

6.2.8 The results of the groundwater samples showed that the majority of the chemical determinands analysed recorded levels below the DWS and WHO screening criteria with the exception of lead, anthracene, and Benzo(a)pyrene (July 2025), lead, nickel, benzo(a)pyrene, and total PAH sum of four (October 2025).

6.2.9 In addition, the following determinants were recorded above the detection limits, however no screening criteria is currently available: Acenaphthene, Benzo(a)anthracene, Chrysene, Dibenzo(ah)anthracene, Fluorene, Indeno(123-cd)pyrene, Phenanthrene, Pyrene, 1,2-butanediol (1,2-butylene glycol), 1,2-propanediol (1,2-propylene glycol), 1,3-butanediol (1,3-butylene glycol), 1,3-propanediol (1,3-propylene glycol), 1,4-butanediol (tetramethylene glycol), 1,5-pentanediol (pentamethylene glycol), ethanediol (ethylene glycol), 2,2'-oxydiethanol (diethylene glycol), 2,2'-(ethylenedioxy)diethanol (triethylene glycol), 2-butoxyethanol (butyl glycol), 3,3'-oxydipropanol (dipropylene glycol), 2-isopropoxyethanol (isopropyl glycol), 2-methoxyethyl acetate, 2-butoxyethyl acetate, and 2-(2-butoxyethoxy)ethanol (butyl diglycol, DEGBE).

6.2.10 Results for the explosive suite including TNT, are all below the limits of detection in October 2025 for all groundwater samples. TNT and associated explosive suite compounds are not considered to be a risk on site.

<u>Surface Water</u>

6.2.11 The River Clywedog borders the site to the north, flowing west to east. There are no surface water abstraction points within 1000m.

6.2.12 The results of the surface water samples showed that all chemical determinants analysed recorded levels below the DWS and WHO screening criteria for both July and October 2025 sampling rounds. In the July 2025 sampling event, levels of glycols were recorded above the detection limits for the downstream sample; all other glycol suite compounds analysed recorded levels below detection from the upstream sample. By the October 2025 sampling event, all glycols were below the detection limit.

6.2.13 Results for the explosive suite including TNT, are all below the limits of detection in October 2025 for all surface water samples.

6.2.14 The potential contaminants identified on this site include heavy metals, metalloids and inorganics; PAH's; leachable contamination, hydrocarbons & organic contamination; volatiles; and PCB's.

6.2.15 A Phase II Site Investigation was then completed by GeoCon in April 2024 which concluded that, based on the results of the soil testing, the generally impermeable geology beneath the site, and considering that natural attenuation, dilution and dispersion will take place, the risks to surface water are considered to be **Very low** at this stage.

6.2.16 It is understood that the local authority have requested a Controlled Water Risk Assessment is completed for the site to confirm chemical concentrations within the groundwater beneath the site, and whether a risk to groundwater is present.

6.2.17 The results of the groundwater samples showed that the majority of the chemical determinands analysed recorded levels below the EQS screening criteria for the above end use with the exception of copper, lead, anthracene, Benzo(b)fluoranthene, Benzo(ghi)perylene, Benzo(k)fluoranthene, and Fluoranthene, (1st batch), and cadmium, copper, lead, zinc, Benzo(b)fluoranthene, and benzo(k)fluoranthene (2nd batch).

6.2.18 The results of the surface water samples showed that all chemical determinands analysed recorded levels below the DWS and WHO screening criteria with the exception of zinc. Levels of glycols were recorded above the detection limits from the upstream sample; all glycols analysed recorded levels below detection from the downstream sample.

6.2.19 In addition, elevated levels of Acenaphthene, Benzo(a)anthracene, Chrysene, Indeno(123-cd)pyrene, Pyrene, 1,2-butanediol (1,2-butylene glycol), 1,2-propanediol (1,2-propylene glycol), 1,3-butanediol (1,3-butylene glycol), 1,3-propanediol (1,3-propylene glycol), 1,4-butanediol (tetramethylene glycol), 1,5-pentanediol (pentamethylene glycol), ethanediol (ethylene glycol), 2,2'-oxydiethanol (diethylene glycol), 2,2'-(ethylenedioxy)diethanol (triethylene glycol), 2-butoxyethanol (butyl glycol), 3,3'-oxydipropanol (dipropylene glycol), 2-isopropoxyethanol (isopropyl glycol), 2-methoxyethyl acetate, 2-butoxyethyl acetate, and 2-(2-butoxyethoxy)ethanol (butyl diglycol, DEGBE) were recorded above detection limits where no screening criteria is currently available.

6.3 Conclusions and Recommendations

Conclusions - Groundwater

6.3.1 The concentration of the compounds recorded above the detection limits are generally considered to be minor with the exception of lead which recorded higher concentrations for select locations in the groundwater on site.

6.3.2 The results of the surface water samples showed that all chemical determinands analysed recorded levels below the DWS and WHO screening criteria.

6.3.3 This shows that contamination is not present in the adjacent river, and therefore it is very unlikely that any contamination from the site is affecting the adjacent surface water course.

6.3.4 Levels of glycols were recorded above the detection limits from the downstream sample; all glycols analysed recorded levels below detection from the upstream sample. Given the groundwater samples on site have no detections of glycols, the glycols within the river are not considered to be arising from the site, instead they are most likely arising from the former ordnance factory located off site, north of the River (Appendix D).

6.3.5 Therefore, based on the above information, the results of the surface water and groundwater testing, the generally impermeable geology beneath the site, and considering that natural attenuation, dilution and dispersion will take place, the risks to groundwater and drinking waters are considered to be **very low** at this stage.

Conclusions - Surface Water

6.3.6 The concentration of the compounds recorded above the detection limits are generally considered to be minor with the exception of lead which recorded higher concentrations.

6.3.7 The results of the surface water samples showed that all chemical determinands analysed recorded levels below the EQS screening criteria.

6.3.8 This shows that contamination is not present in the adjacent river, and therefore it is very unlikely that any contamination from the site is affecting the adjacent surface water course.

6.3.9 Levels of glycols were recorded above the detection limits from the downstream sample; all glycols analysed recorded levels below detection from the upstream sample. Given the glycols are below the limit of detection for all locations on site, this indicates that any glycols present in the river are not arising from the site, and are most likely arising from the former ordnance factory present on the opposite side of the river to the north.

6.3.10 Therefore, based on the above information, the results of the surface water and groundwater testing, the generally impermeable geology beneath the site, and considering that natural attenuation, dilution and dispersion will take place, the risks to surface waters are considered to be **very low** at this stage.

Recommendations

6.3.11 Considering the above no further action is recommended and the site is deemed suitable for use.

6.4 Updated Conceptual Site Model (CSM)

6.4.1 Following the results of the site investigation and above assessment, an updated Conceptual Site Model (CSM) has been produced overleaf as Table 6.3: Updated Conceptual Site Model (CSM).

Table 6.3: Updated Conceptual Site Model (CSM)

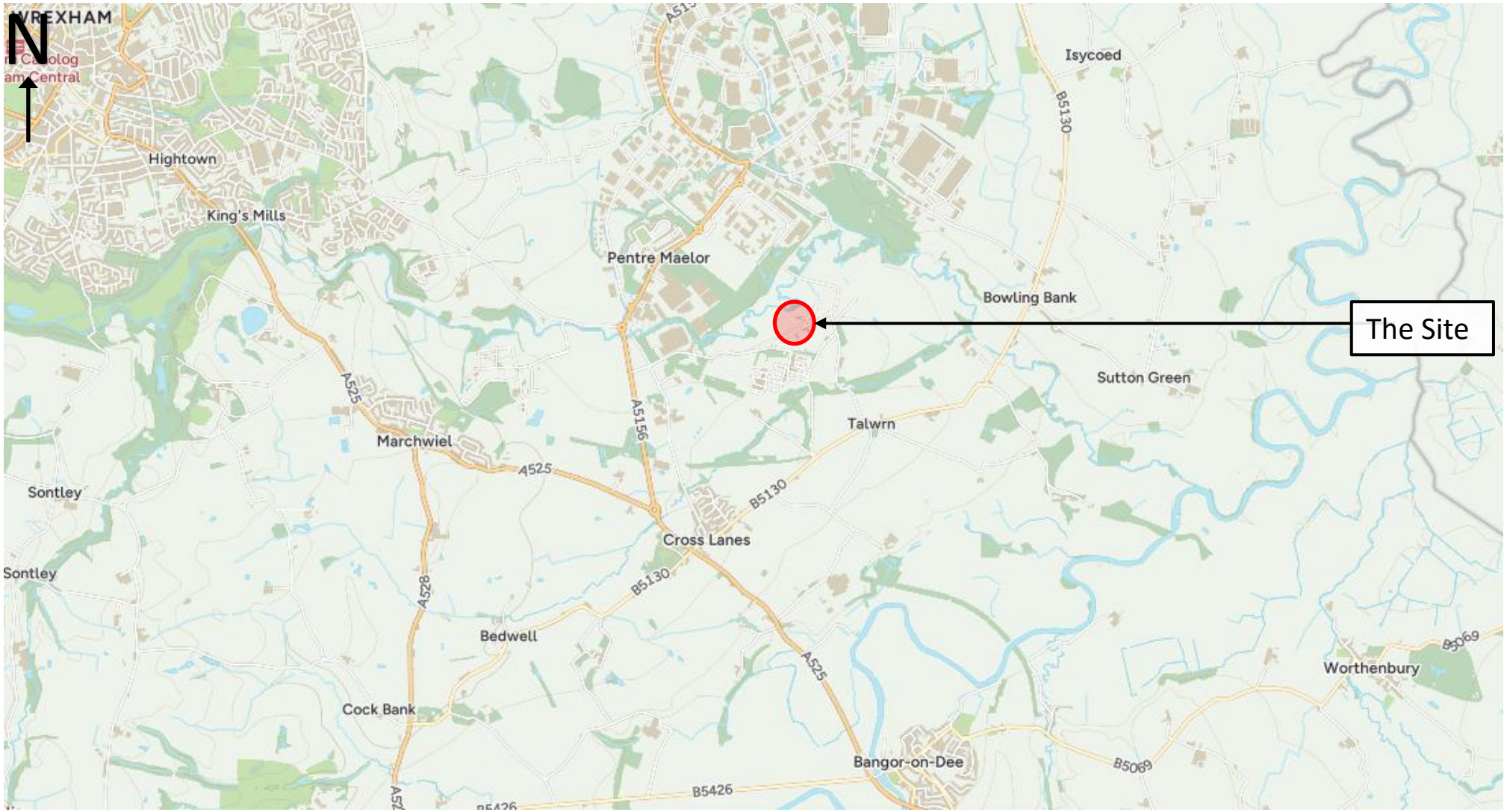
Potential Sources	Contaminants of Concern	Potential Pathway	Potential Receptor	Potential Pollutant Linkage	Probability	Consequence	Risk Classification	Action / Mitigation / Justification
Made Ground on site Current and former land uses on site	Heavy metals, sulphates and inorganics PAH's Mobile organic contamination Glycols	Lateral and vertical migration and leaching of contaminants into local groundwater	**Underlying Aquifer** (Potable water)	Inactive	Unlikely	Mild	**Very low**	Results of the site investigation confirm that determinands analysed recorded low levels above the relevant drinking water standards, however they are not present within the surface water samples taken from the adjacent river; therefore, considering that natural attenuation, dilution and dispersion will take place and the generally impermeable geology beneath the site, which would provide suitable protection to the underlying aquifer. No further action required.
Made Ground on site Current and former land uses on site	Heavy metals, sulphates and inorganics PAH's Mobile organic contamination Glycols	Lateral and vertical migration and leaching of contaminants into surface water bodies via permeable strata and features.	Local **water courses** and associated flora and fauna	Inactive	Unlikely	Mild	**Very low**	Results of the site investigation confirm that determinands analysed recorded low levels above the relevant EQS screening criteria, however they are not present within the surface water samples taken from the adjacent river; therefore, considering that natural attenuation, dilution and dispersion will take place and the generally impermeable geology beneath the site, it is very unlikely that any contamination within the groundwater on the site will affect the nearby surface water courses.

7.0 REFERENCES

- *Atkins: AtRisk Soil Screening Values and Water Screening Values*
- *Bowles, J. E. (1996): Foundation analysis and design, McGraw-Hill, New York*
- *British Geological Survey (BGS): 1:50'000 geological maps of the area*
- *British Geological Survey (BGS): Open geoscience online mapping tool*
- *BS 5930: Code of Practice for Site Investigation Amendment 2*
- *BS 10175: Code of Practice for the Investigation of Potentially Contaminated Sites*
- *BRE 211 Radon: Guidance on protective measures for new buildings*
- *BRE 365: Soakaway Design*
- *BRE 410 (2004): Working platforms for tracked plant: Good practice guide to the design, installation, maintenance and repair of ground-supported working platforms, BRE Press, Garston*
- *Cheshire Brine Subsidence Compensation Board: Cheshire Salt Search*
- *CIRIA 552: Contaminated Land Risk Assessment; A Guide to Good Practice 2001*
- *CIRIA 665: Assessing the Risks Posed by Hazardous Ground Gases for Buildings 2007*
- *CIRIA 758D: Abandoned Mine Workings Manual*
- *Coal Authority: Coal authority mining report and Cheshire brine subsidence report*
- *Contaminated Land: Applications in Real Environments (CL:AIRE): 'The Soil Generic Assessment Criteria for Human Health Risk Assessment' GAC's*
- *David Norbury: Soil and Rock Descriptions in Engineering Practice*
- *Defra C4SL's: Development of Category 4 Screening Levels for assessment of land affected by contamination Department of the Environment: DOE industry profiles*
- *EN ISO 14688-1: Geotechnical investigation and testing -- Identification and classification of soil -- Part 1: Identification and description*
- *EN ISO 14688-2: Geotechnical investigation and testing -- Identification and classification of soil -- Part 2: Principles for a classification*
- *EN ISO 14689: Geotechnical investigation and testing -- Identification and classification of rock -- Part 1: Identification and description*
- *Environment Agency (EA): EA Online & What's in my back yard*
- *Environment Agency (EA): Soil Guideline Values (SGVs)*
- *Environment Agency (EA): Waste Management Paper WM3.1 June 2018 edition "Guidance on the Classification and Assessment of Waste"*
- *HazWasteOnline*
- *International Society of Rock Mechanics (ISRM): Commission on Testing Methods (1985) Suggested Method for Determining Point Load Strength, Int. J. Rock Mech. Min. Sci. and Geomech. Abstr. 22, 1985, pp.51-60*
- *Land Contamination Risk Management (LCRM), Guiding Principles for Land Contamination (GPLC) 1 – 3*
- *Land Quality Management (LQM): Generic Screening Criteria (GACs)*
- *Landmark: Envirocheck report and Envirocheck analysis online historical mapping tool*
- *National Planning Policy Framework (NPPF)*
- *Ordnance survey: OS Landranger map for the area; OS open data online mapping tool*
- *R&D Publication CLR 8: Assessment of risks to human health from land contamination*
- *R&D Publication CLR 10: The Contaminated Land Exposure Model (CLEA)*
- *R&D Publication CLR 11: Model Procedure for the Management of Contaminated Land DEFRA 2004*
- *Stroud M.A: The standard penetration test in insensitive clays, Proceedings of the European Symposium on Penetration Testing, Stockholm, 1975, Vol 2,pp 367 – 75*
- *UK Specification for Ground Investigation Third Edition 2022*

APPENDIX A

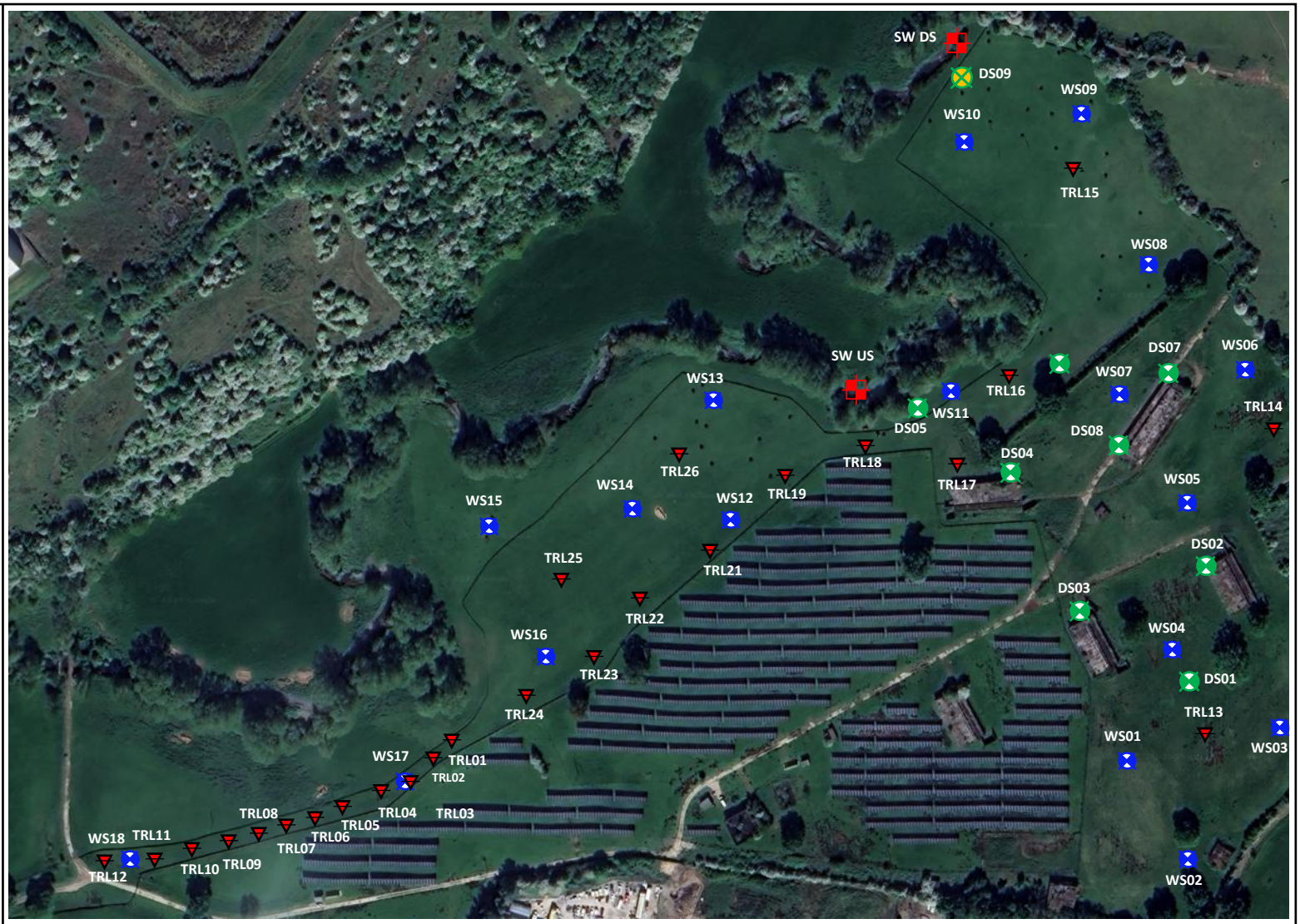
DRAWINGS



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PROJECT ID	DRAWING NUMBER	SCALE
GSI 2006 Wrexham Solar Farm	GSI 2006/01	N.T.S
TITLE	**DATE**	**DRAWN BY**
Site Location Plan	November 2025	AS

N



Legend:

- Dynamic Sample location (1st Visit)
- Dynamic Sample location (2nd Visit with install)
- Dynamic Sample location (3rd Visit no install)
- Surface Water sample location (3rd Visit)
- TRL DCP Location (3rd Visit)

GEOCON®

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PROJECT ID	DRAWING NUMBER	SCALE
GSI 2006 Wrexham Solar Farm	GSI 2006/02	N.T.S
TITLE	**DATE**	**DRAWN BY**
Exploratory Hole Location Plan	November 2025	AS

APPENDIX B

DYNAMIC SAMPLE BOREHOLE LOGS

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DYNAMIC SAMPLE BOREHOLE LOG

GEOCON

Project				DYNAMIC SAMPLE BOREHOLE No
Solar Farm, Wrexham				**DS01**
Project ID: GSI 2006	Date: 03-07-25 03-07-25	Ground Level (m):	Co-Ordinates:	
Contractor: N/A				Sheet: 1 of 1

SAMPLES & TESTS				STRATA					
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument & Backfill
0.10	ES					0.20	TOPSOIL: Grass over brown clayey slightly gravelly fine to medium SAND with frequent rootlets. Gravel is subangular to subrounded fine to medium limestone and sandstone.	TS	
0.30	ES					(0.90)	Stiff brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium limestone. (ALLUVIUM)	ALV	
0.90	ES					1.10			
1.20	SPT	N12				1.30	Stiff brown mottled grey and dark grey sandy CLAY. (ALLUVIUM)	ALV	
1.50	ES					(0.70)	Stiff brown mottle grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine limestone.	ALV	
2.00	SPT	N20				2.00	Very stiff brown mottled grey slightly sandy CLAY.		
						(1.00)		ALV	
3.00	SPT	N26				3.00	Very stiff brown slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium limestone.		
4.00	SPT	N20				(2.45)		ALV	
5.00	SPT	N25				5.45			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Depth	From	To	Hours	From	To	Location cleared of buried services using CAT & Genny. Service inspection pit excavated to 1.20mbgl. No groundwater encountered.

All dimensions in metres Scale 1:37.5	Client: Innova	Method / Plant Used: Competitor Dart	Logged By: DE

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DYNAMIC SAMPLE BOREHOLE LOG

GEOCON

Project				DYNAMIC SAMPLE BOREHOLE No
Solar Farm, Wrexham				**DS02**
Project ID: GSI 2006	Date: 03-07-25 03-07-25	Ground Level (m):	Co-Ordinates:	
Contractor: N/A				Sheet: 1 of 1

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument & Backfill
0.10	ES					0.20	MADE GROUND: Grass over brown clayey slightly gravelly fine to medium SAND with frequent rootlets. Gravel is subangular to subrounded fine to medium limestone, sandstone and brick. (TOPSOIL)	MG	
0.30	ES					(0.30) 0.50	Brown very clayey gravelly fine to medium SAND. Gravel is subangular to subrounded fine to medium limestone and sandstone. (ALLUVIUM)	ALV	
0.80	ES						Stiff brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium limestone. (ALLUVIUM)		
1.20	SPT	N21					1.20 Becomes very stiff.		
2.00	ES					(2.80)		ALV	
2.00	SPT	N18							
3.00	SPT	N27				3.30			
						(0.70) 4.00	Very stiff silty CLAY with frequent relic rootlets. (ALLUVIUM)	ALV	
4.00	SPT	N23					Very stiff brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium limestone. (ALLUVIUM)		
5.00	SPT	N25				(1.45) 5.45		ALV	

Boring Progress and Water Observations

Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Depth

Chiselling

From	To	Hours

Water Added

From	To

GENERAL REMARKS

Location cleared of buried services using CAT & Genny. Service inspection pit excavated to 1.20mbgl. No groundwater encountered.

All dimensions in metres Scale 1:37.5	Client: Innova	Method / Plant Used: Competitor Dart	Logged By: DE

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DYNAMIC SAMPLE BOREHOLE LOG

GEOCON

Project				DYNAMIC SAMPLE BOREHOLE No
Solar Farm, Wrexham				**DS03**
Project ID: GSI 2006	Date: 03-07-25 03-07-25	Ground Level (m):	Co-Ordinates:	
Contractor: N/A				Sheet: 1 of 1

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument & Backfill
0.10	ES					(0.30) 0.30	MADE GROUND: Grass over brown clayey slightly gravelly fine to medium SAND with frequent rootlets. Gravel is subangular to subrounded fine to medium limestone, sandstone, brick and conrete. (TOPSOIL)	MG	
0.40	ES						Firm brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium limestone and sandstone. (ALLUVIUM)		
0.70	ES						0.50 - 0.60 Becomes sandy.		
1.20	SPT	N20				(1.70)	1.50 Lens of sand.	ALV	
						2.00	1.90 Lens of sand.		
2.00	SPT	N20					Very stiff brown mottled grey slightly sandy CLAY.		
2.50	ES								
3.00	SPT	N19				(3.45)		ALV	
4.00	SPT	N24							
5.00	SPT	N22				5.45			

Boring Progress and Water Observations

Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Depth

Chiselling

From	To	Hours

Water Added

From	To

GENERAL REMARKS

Location cleared of buried services using CAT & Genny. Service inspection pit excavated to 1.20mbgl. No groundwater encountered.

All dimensions in metres Scale 1:37.5	Client: Innova	Method / Plant Used: Competitor Dart	Logged By: DE

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DYNAMIC SAMPLE BOREHOLE LOG

GEOCON

Project				DYNAMIC SAMPLE BOREHOLE No
Solar Farm, Wrexham				**DS04**
Project ID: GSI 2006	Date: 03-07-25 03-07-25	Ground Level (m):	Co-Ordinates:	
Contractor: N/A				Sheet: 1 of 1

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument & Backfill
0.10	ES					0.15	TOPSOIL: Grass over brown clayey slightly gravelly fine to medium SAND with frequent rootlets. Gravel is subangular to subrounded fine to medium limestone and sandstone.	TS	
0.20	ES						Firm to very stiff brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium limestone. (ALLUVIUM)		
0.90	ES					(1.65)		ALV	
1.20	SPT	N18							
						1.80			
2.00	SPT	N19					Very stiff brown mottled grey slightly sandy CLAY. (ALLUVIUM)		
3.00	ES					(2.40)		ALV	
3.00	SPT	N22					3.50 Becomes brown.		
4.00	SPT	N25							
						4.20			
							Very stiff brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine limestone. (ALLUVIUM)		
						(1.25)		ALV	
5.00	SPT	N24							
						5.45			

Boring Progress and Water Observations					
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Depth

Chiselling			Water Added	
From	To	Hours	From	To

GENERAL REMARKS

Location cleared of buried services using CAT & Genny. Service inspection pit excavated to 1.20mbgl. No groundwater encountered.

All dimensions in metres Scale 1:37.5	Client: Innova	Method / Plant Used: Competitor Dart	Logged By: DE

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DYNAMIC SAMPLE BOREHOLE LOG

GEOCON

Project				DYNAMIC SAMPLE BOREHOLE No
Solar Farm, Wrexham				DS05
Project ID: GSI 2006	Date: 04-07-25 04-07-25	Ground Level (m):	Co-Ordinates:	
Contractor: N/A				Sheet: 1 of 1

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument & Backfill
0.10	ES					0.20	TOPSOIL: Grass over brown clayey slightly gravelly fine to medium SAND with frequent rootlets. Gravel is subangular to subrounded fine to medium limestone and sandstone.	TS	
0.40	ES					(1.30)	Firm to stiff brown mottled orangish brown sandy slightly gravelly CLAY. Gravel is subangular to subrouneded fine limestone and coal. (ALLUVIUM)	ALV	
1.00	ES								
1.20	SPT	N10	1			1.50			
2.00	SPT	N10				(0.90)	Medium dense brown slighlty clayey slightly gravelly fine to medium SAND. Gravel is subangular to subrounded fine to medium limestone and sandstone. (ALLUVIUM)	ALV	
3.00	SPT	N28	2			2.40	Very stiff brown mottled orangish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine limestone. (ALLUVIUM)		
4.00	SPT	N29	3			(3.05)		ALV	
5.00	SPT	N27				5.45			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Depth	From	To	Hours	From	To	Location cleared of buried services using CAT & Genny. Service inspection pit excavated to 1.20mbgl.

All dimensions in metres Scale 1:37.5	Client: Innova	Method / Plant Used: Competitor Dart	Logged By: DE

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DYNAMIC SAMPLE BOREHOLE LOG

GEOCON

Project				DYNAMIC SAMPLE BOREHOLE No
Solar Farm, Wrexham				**DS06**
Project ID: GSI 2006	Date: 04-07-25 04-07-25	Ground Level (m):	Co-Ordinates:	
Contractor: N/A				Sheet: 1 of 1

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument & Backfill
						0.05	TOPSOIL: Grass over brown clayey gravelly fine to medium SAND with frequent rootlets. Gravel is subangular to subrounded fine to medium limestone and sandstone.	TS	
0.20	ES						Firm to stiff brown mottled grey slightly sandy slihtly gravelly CLAY. Gravel is subangular to subrounded fine to medium limestone. (ALLUVIUM)		
0.40	ES								
0.80	ES								
1.20	SPT	N18				(2.25)		ALV	
1.50	ES								
2.00	SPT	N17				2.30			
							Very stiff brown slightly sandy CLAY. (ALLUVIUM)		
3.00	SPT	N17							
						(3.15)		ALV	
4.00	SPT	N23							
5.00	SPT	N27				5.45			

Boring Progress and Water Observations					
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Depth

Chiselling			Water Added	
From	To	Hours	From	To

GENERAL REMARKS

Location cleared of buried services using CAT & Genny. Service inspection pit excavated to 1.20mbgl. No groundwater encountered.

All dimensions in metres Scale 1:37.5	Client: Innova	Method / Plant Used: Competitor Dart	Logged By: DE

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DYNAMIC SAMPLE BOREHOLE LOG

GEOCON

Project				DYNAMIC SAMPLE BOREHOLE No
Solar Farm, Wrexham				**DS07**
Project ID: GSI 2006	Date: 04-07-25 04-07-25	Ground Level (m):	Co-Ordinates:	
Contractor: N/A				Sheet: 1 of 1

SAMPLES & TESTS				STRATA					
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument & Backfill
0.10	ES					(0.30) 0.30	TOPSOIL: Grass over brown clayey slightly gravelly fine to medium SAND with frequent rootlets. Gravel is subangular to subrounded fine to medium limestone and sandstone.	TS	
0.40	ES						Stiff to very firm brown mottled orangish brown sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium limestone and sandstone. (ALLUVIUM)		
0.80	ES						0.70 Becomes brown mottled grey.		
1.20	SPT	N17				(1.90)		ALV	
2.00	SPT	N27				2.20			
							Very stiff brown mottled grey slightly sandy CLAY. (ALLUVIUM)		
3.00	SPT	N24				(1.30) 3.50		ALV	
							Very stiff slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine limestone. (ALLUVIUM)		
4.00 4.00	ES SPT	N24				(1.95)		ALV	
5.00	SPT	N27				5.45			

Boring Progress and Water Observations					
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Depth

Chiselling			Water Added	
From	To	Hours	From	To

GENERAL REMARKS

Location cleared of buried services using CAT & Genny. Service inspection pit excavated to 1.20mbgl. No groundwater encountered.

All dimensions in metres Scale 1:37.5	Client: Innova	Method / Plant Used: Competitor Dart	Logged By: DE

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DYNAMIC SAMPLE BOREHOLE LOG

GEOCON

Project				DYNAMIC SAMPLE BOREHOLE No
Solar Farm, Wrexham				**DS08**
Project ID: GSI 2006	Date: 04-07-25 04-07-25	Ground Level (m):	Co-Ordinates:	
Contractor: N/A				Sheet: 1 of 1

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument & Backfill
						0.20	MADE GROUND: Grass over brown clayey slightly gravelly fine to medium SAND with frequent rootlets. Gravel is subangular to subrounded fine to medium limestone and sandstone. (TOPSOIL)	MG	
0.30	ES					(0.60)	MADE GROUND: Brown slightly clayey gravelly fine to medium SAND. Gravel is angular to subrounded fine to coarse limestone, sandstone, mudstone and brick.	MG	
0.60	ES					0.80			
0.90	ES						Firm to very stiff brown mottled grey slightly sandy slightly gravely CLAY. Gravel is subangular to subrounded fine limestone. (ALLUVIUM)		
1.20	SPT	N20							
2.00	SPT	N30							
3.00	SPT	N28				(4.65)		ALV	
4.00	SPT	N28							
5.00	ES								
5.00	SPT	N27				5.45			

Boring Progress and Water Observations					
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Depth

Chiselling			Water Added	
From	To	Hours	From	To

GENERAL REMARKS

Location cleared of buried services using CAT & Genny. Service inspection pit excavated to 1.20mbgl. No groundwater encountered.

All dimensions in metres Scale 1:37.5	Client: Innova	Method / Plant Used: Competitor Dart	Logged By: DE

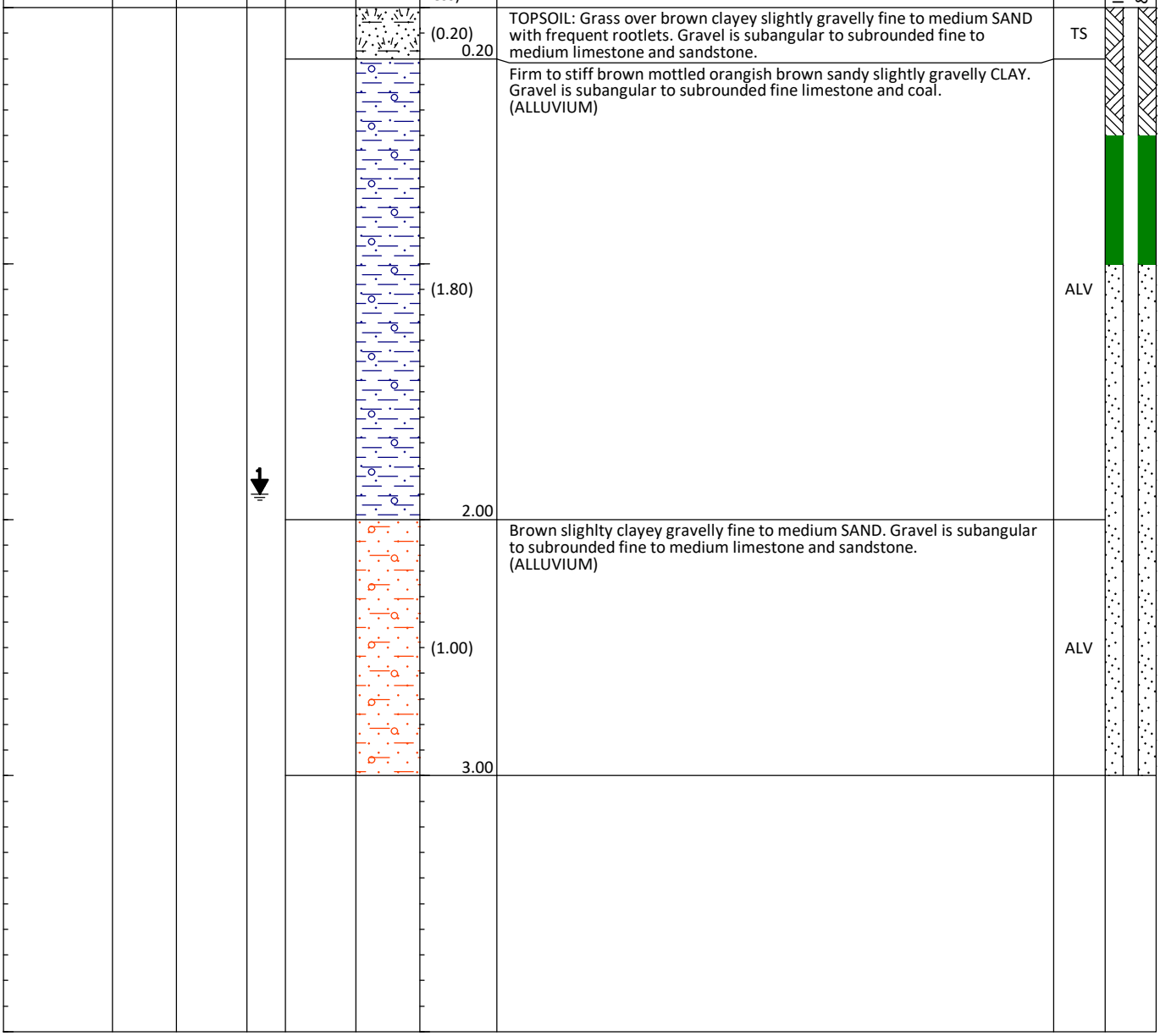
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DYNAMIC SAMPLE BOREHOLE LOG

GEOCON

Project				DYNAMIC SAMPLE BOREHOLE No
Solar Farm, Wrexham				**DS09**
Project ID: GSI 2006	Date: 17-10-25 17-10-25	Ground Level (m):	Co-Ordinates:	
Contractor: N/A				Sheet: 1 of 2

SAMPLES & TESTS			STRATA						
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Geology	Instrument & Backfill
						(0.20) 0.20	TOPSOIL: Grass over brown clayey slightly gravelly fine to medium SAND with frequent rootlets. Gravel is subangular to subrounded fine to medium limestone and sandstone.	TS	
						(1.80) 2.00	Firm to stiff brown mottled orangish brown sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine limestone and coal. (ALLUVIUM)	ALV	
						(1.00) 3.00	Brown slighlty clayey gravelly fine to medium SAND. Gravel is subangular to subrounded fine to medium limestone and sandstone. (ALLUVIUM)	ALV	



Boring Progress and Water Observations					
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Depth

Chiselling			Water Added	
From	To	Hours	From	To

GENERAL REMARKS

Location cleared of buried services using CAT & Genny. Service inspection pit excavated to 1.20mbgl. Groundwater encountered at 3.00mbgl.

All dimensions in metres Scale 1:25	Client: Innova	Method / Plant Used: Competitor Dart	Logged By: AS

APPENDIX C

CHEMICAL LABORATORY TESTING RESULTS

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

INTERIM ANALYTICAL TEST REPORT

Envirolab Job Number: 25/11858
Issue Number: 1 **Date:** 13 November, 2025

Client:
Geocon Site Investigations Ltd
Arden House
Shepley Lane Industrial Estate
Hawk Green, Marple
Stockport
Greater Manchester
UK
SK6 7JW

Project Manager: *Use - Mailing list/*Use - Mailing list 2/*Use - M
Project Name: Wrexham Solar Farm
Project Ref: GSI 2006
Order No: PO 25/0798
Date Samples Received: 17/10/25
Date Instructions Received: 20/10/25
Date Analysis Completed: 31/10/25

Approved by:



Amy Riding
Client Manager

UKAS TESTING
1247

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07	DS08			
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25			
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
pH (w)$_{A}^{\#}$	7.21	7.46	7.57	7.60	7.34	7.59	7.60	pH	0.01	A-T-031w
Hardness Total$_{A}^{\#}$	1831.6	1062.2	835.1	1414.9	1196.4	455.7	1068.9	mg/l Ca CO3	4	A-T-049w
Cyanide (total) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	0.005	A-T-042wTCN
Phenols - Total by HPLC (w)$_{A}$	<0.01	0.02	0.01	0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Arsenic (dissolved)$_{A}^{\#}$	3	6	2	5	6	4	3	µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	0.6	1.1	0.2	0.9	4.0	0.2	0.8	µg/l	0.2	A-T-025w
Copper (dissolved)$_{A}^{\#}$	26	30	13	46	110	13	64	µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	11	7	4	12	18	5	12	µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	28.5	62.5	21.3	67.8	599	16.7	997	µg/l	0.1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	14	21	8	17	51	4	14	µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	2	2	2	3	4	<1	2	µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	34	62	23	70	171	379	54	µg/l	2	A-T-025w
Explosives Suite Waters (Surface and Groundwater)$_{A}^{\#}$	Appended	Appended	Appended	Appended	Appended	Appended	Appended			Subcon BAE

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07	DS08			
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25			
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
PAH 16MS (w)										
Acenaphthene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Anthracene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^{\#}$	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.02	µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^{\#}$	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.02	µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^{\#}$	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.02	µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^{\#}$	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^{\#}$	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.02	µg/l	0.01	A-T-019w
Chrysene (w)$_A^{\#}$	<0.01	0.04	<0.01	0.01	<0.01	<0.01	0.02	µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^{\#}$	<0.01	0.06	<0.01	0.01	<0.01	<0.01	0.03	µg/l	0.01	A-T-019w
Fluorene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^{\#}$	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Naphthalene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Pyrene (w)$_A^{\#}$	<0.01	0.05	<0.01	0.02	<0.01	0.01	0.03	µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^{\#}$	<0.01	0.32	<0.01	0.04	<0.01	0.04	0.16	µg/l	0.01	A-T-019w

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07	DS08			
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25			
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	<5	<5	<5	<5	5	5	<5	µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A^{\#}$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	A-T-055w
Total Aromatics $(w)_A^{\#}$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/8	25/11858/9	25/11858/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS09	SW US	SSW DS							
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25							
Sample Type	WATER - SW	WATER - SW	WATER - SW							
Sample Matrix Code	N/A	N/A	N/A							
pH (w)$_A^\#$	7.17	8.18	8.22					pH	0.01	A-T-031w
Hardness Total$_A^\#$	1999.6	323.1	330.2					mg/l Ca CO3	4	A-T-049w
Cyanide (total) (w)$_A^\#$	<0.005	<0.005	<0.005					mg/l	0.005	A-T-042wTCN
Phenols - Total by HPLC (w)$_A$	<0.01	<0.01	<0.01					mg/l	0.01	A-T-050w
Arsenic (dissolved)$_A^\#$	<5	<1	<1					µg/l	1	A-T-025w
Cadmium (dissolved)$_A^\#$	7.5	0.2	0.2					µg/l	0.2	A-T-025w
Copper (dissolved)$_A^\#$	<20	<4	<4					µg/l	4	A-T-025w
Chromium (dissolved)$_A^\#$	<5	<1	<1					µg/l	1	A-T-025w
Lead (dissolved)$_A^\#$	93.0	3.4	2.8					µg/l	0.1	A-T-025w
Mercury (dissolved)$_A^\#$	<0.5	<0.1	<0.1					µg/l	0.1	A-T-025w
Nickel (dissolved)$_A^\#$	35	<2	<2					µg/l	2	A-T-025w
Selenium (dissolved)$_A^\#$	<5	<1	<1					µg/l	1	A-T-025w
Zinc (dissolved)$_A^\#$	69	51	45					µg/l	2	A-T-025w
Explosives Suite Waters (Surface and Groundwater)$_A^\#$	Appended	Appended	Appended							Subcon BAE

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/8	25/11858/9	25/11858/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS09	SW US	SSW DS							
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25							
Sample Type	WATER - SW	WATER - SW	WATER - SW							
Sample Matrix Code	N/A	N/A	N/A							
PAH 16MS (w)										
Acenaphthene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Acenaphthylene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Anthracene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(a)anthracene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(a)pyrene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(b)fluoranthene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(ghi)perylene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(k)fluoranthene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Chrysene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Fluoranthene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Fluorene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Naphthalene $(w)_A^{\#}$	0.02	<0.01	<0.01					µg/l	0.01	A-T-019w
Phenanthrene $(w)_A^{\#}$	0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Pyrene $(w)_A^{\#}$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Total PAH 16MS $(w)_A^{\#}$	0.03	<0.01	<0.01					µg/l	0.01	A-T-019w

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/8	25/11858/9	25/11858/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS09	SW US	SSW DS							
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25							
Sample Type	WATER - SW	WATER - SW	WATER - SW							
Sample Matrix Code	N/A	N/A	N/A							
TPH CWG (w) with Clean Up										
Ali >C5-C6 (w)$_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
Ali >C6-C8 (w)$_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
Ali >C8-C10 (w)$_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Ali >C10-C12 (w)$_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Ali >C12-C16 (w)$_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Ali >C16-C21 (w)$_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Ali >C21-C35 (w)$_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Total Aliphatics (w)$_A^{\#}$	<5	<5	<5					µg/l	5	Calc-As Recd
Aro >C5-C7 (w)$_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
Aro >C7-C8 (w)$_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
Aro >C8-C10 (w)$_A$	<5	<5	<5					µg/l	5	A-T-055w
Aro >C10-C12 (w)$_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Aro >C12-C16 (w)$_A^{\#}$	5	<5	<5					µg/l	5	A-T-055w
Aro >C16-C21 (w)$_A^{\#}$	27	<5	<5					µg/l	5	A-T-055w
Aro >C21-C35 (w)$_A^{\#}$	<10	<10	<10					µg/l	10	A-T-055w
Total Aromatics (w)$_A^{\#}$	32	<10	<10					µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) (w)$_A$	32	<10	<10					µg/l	10	Calc-As Recd
BTEX - Benzene (w)$_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
BTEX - Toluene (w)$_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
BTEX - Ethyl Benzene (w)$_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
BTEX - m & p Xylene (w)$_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
BTEX - o Xylene (w)$_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
MTBE (w)$_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w

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
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: Geocon Site Investigations Ltd, Arden House, Shepley Lane Industrial Estate , Hawk Green, Marple, Stockport, Greater Manchester, UK, SK6 7JW

Project: Wrexham Solar Farm

Clients Project No: GSI 2006

Project No: 25/11858

Date Received: 20/10/2025 (am)

Cool Box Temperatures (°C): 13.5 - 13.8

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	25/11858/8	25/11858/9	25/11858/10
Client Sample No										
Client Sample ID/Depth	DS01	DS02	DS03	DS04	DS05	DS07	DS08	DS09	SW US	SSW DS
Date Sampled	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25
Deviation Code										
F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	25/11858/8	25/11858/9	25/11858/10
Client Sample No										
Client Sample ID/Depth	DS01	DS02	DS03	DS04	DS05	DS07	DS08	DS09	SW US	SSW DS
Date Sampled	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25
pH (w)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	25/11858/8	25/11858/9	25/11858/10
Client Sample No										
Client Sample ID/Depth	DS01	DS02	DS03	DS04	DS05	DS07	DS08	DS09	SW US	SSW DS
Date Sampled	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25
A-T-019w	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
A-T-022w	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
A-T-025w	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025
A-T-031w	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025
A-T-042wTCN	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
A-T-049w	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025
A-T-050w	28/10/2025	29/10/2025	28/10/2025	28/10/2025	29/10/2025	28/10/2025	28/10/2025	29/10/2025	28/10/2025	28/10/2025
A-T-055w	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
Calc-As Recd	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025

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

BAE Systems
Properties Ltd
10-11 Adlington South
Business Park
Adlington
Lancashire
PR7 4JR, England
Telephone: 03300 488680

TEST CERTIFICATE

Certificate No: BC0114/25

Site : **Envirolab 25/11858** **Ref :** **43X10560**

Client :	Envirolab	**Date Received :**	21/10/2025
Address :	Housesteads off Stockport Road Hattersley	**Date Completed :**	23/10/2025
		Date Of Report :	23/10/2025
	SK14 3QU	**Attention :**	Project Manager

Accreditation Key: **U** = UKAS **M** = UKAS & MCERTS **S** = Subcontracted Tests

Test Methods

Explosives in waters	using method ESAL/QC/4 parts HPLC Waters and HPLC-DAD Waters

Approved :

Mr D.C. Poole
Laboratory manager

Mr P.D. Hart
Senior Analyst

UKAS TESTING
1764

BAE SYSTEMS

TABLE OF RESULTS

Water - Defence (Part 1 of 3)

Lab Code	20251747			20251748			20251749			20251750		
Client Ref A	25/11858/1			25/11858/2			25/11858/3			25/11858/4		
Client Ref B	DS01			DS02			DS03			DS04		
Client Ref C	17/10/25			17/10/25			17/10/25			17/10/25		
Sample Type	Water			Water			Water			Water		
Soil Type	N/A			N/A			N/A			N/A		
HMX	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U
RDX	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U
EGDN	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U
Tetryl	**<2**	**ug/l**	U	**<2**	**ug/l**	U	**<2**	**ug/l**	U	**<2**	**ug/l**	U
NG	**<3**	**ug/l**	U	**<3**	**ug/l**	U	**<3**	**ug/l**	U	**<3**	**ug/l**	U
TNT	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U
2,6-DNT	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U
2,4-DNT	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U
PETN	**<5**	**ug/l**	U	**<5**	**ug/l**	U	**<5**	**ug/l**	U	**<5**	**ug/l**	U
Picrite	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U
Picric Acid	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U

TABLE OF RESULTS

Water - Defence (Part 2 of 3)

Lab Code	20251751			20251752			20251753			20251754		
Client Ref A	25/11858/5			25/11858/6			25/11858/7			25/11858/8		
Client Ref B	DS05			DS07			DS08			DS09		
Client Ref C	17/10/25			17/10/25			17/10/25			17/10/25		
Sample Type	Water			Water			Water			Water		
Soil Type	N/A			N/A			N/A			N/A		
HMX	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U
RDX	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U
EGDN	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U
Tetryl	**<2**	**ug/l**	U	**<2**	**ug/l**	U	**<2**	**ug/l**	U	**<2**	**ug/l**	U
NG	**<3**	**ug/l**	U	**<3**	**ug/l**	U	**<3**	**ug/l**	U	**<3**	**ug/l**	U
TNT	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U
2,6-DNT	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U
2,4-DNT	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U
PETN	**<5**	**ug/l**	U	**<5**	**ug/l**	U	**<5**	**ug/l**	U	**<5**	**ug/l**	U
Picrite	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U
Picric Acid	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U	**<10**	**ug/l**	U

TABLE OF RESULTS

Water - Defence (Part 3 of 3)

Lab Code	20251755			20251756		
Client Ref A	25/11858/9			25/11858/10		
Client Ref B	SW US			SSW DS		
Client Ref C	17/10/25			17/10/25		
Sample Type	Water			Water		
Soil Type	N/A			N/A		
HMX	**<10**	**ug/l**	U	**<10**	**ug/l**	U
RDX	**<10**	**ug/l**	U	**<10**	**ug/l**	U
EGDN	**<10**	**ug/l**	U	**<10**	**ug/l**	U
Tetryl	**<2**	**ug/l**	U	**<2**	**ug/l**	U
NG	**<3**	**ug/l**	U	**<3**	**ug/l**	U
TNT	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U
2,6-DNT	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U
2,4-DNT	**<0.5**	**ug/l**	U	**<0.5**	**ug/l**	U
PETN	**<5**	**ug/l**	U	**<5**	**ug/l**	U
Picrite	**<10**	**ug/l**	U	**<10**	**ug/l**	U
Picric Acid	**<10**	**ug/l**	U	**<10**	**ug/l**	U

COMMENTS AND DEPARTURES FROM STANDARD PROCEDURES

Lab ID	Client Descriptions	Notes

There were no comments or departures from standard procedures

NOTES

1. This test report shall not be reproduced except in full, without written approval of the laboratory.

2. All results for soil samples are reported based on dry weight of soil which has been air-dried in open, shallow trays at temperatures below 30°C and subsequently ground and sieved to pass through a nominal 710µm aperture sieve. Prior to grinding, any material which is retained on a sieve of mesh size 4.5mm is discarded. Analysis is carried out directly on these prepared soils with the exception of petrol range organic compounds (C5-C12). These analyses are carried out on the soil "As Received" and corrected for the dry weight (at 105 °C) prior to reporting.

3. BAE Systems does not correct results for analytical recoveries.

4. All samples were received in good condition unless otherwise stated. Results provided by the Laboratory are based on samples submitted by clients.The Laboratory cannot be held responsible for the storage, condition or preservation of samples prior to arrival.

5. Validation studies indicate that the concentration of nitrocellulose in high organic content soils may be overestimated.

6. Results stated in this test report relate only to the samples tested.

7. Soil descriptions are given in order to provide a log of sample matrices submitted and are not intended as full geological descriptions.

8. The initials or common names used for reporting explosives relate to the following compounds: Nitrocellulose(NC); Cyclotetramethylene Tetranitramine (HMX); Cyclo-1,3,5-Trimethylene-2,4,6-Trinitramine (RDX); Ethylene Glycol Dinitrate (EGDN); 2,4,6-Trinitro-Phenylmethyl Nitramine (Tetryl); Glycerol Trinitrate (NG); 2,4,6-Trinitrotoluene (TNT); Pentaeryhritol Tetranitrate (PETN); Hexanitro-Stilbene (HNS); Nitroguanidine (Picrite); 2,4,6-Trinitro Phenol (Picric Acid); 2,4-Dinitrotoluene (2,4-DNT); 2,6-Dinitrotoluene (2,6-DNT).

9. Some reporting limits may be raised due to poor recovery of internal standard or dilution of highly contaminated samples.

10. In unacidified waters Tetryl and TNT are unstable decaying rapidly over a few days or less depending on the sample matrix. 2,6-DNT and 2,4-DNT are generally more stable depending on the sample matrix, but are likely to show significant loss after three weeks. HMX, RDX, EGDN, PETN, NB, MNT isomers, Picrite and Picric acid are relatively stable after three weeks in unpreserved water samples. These comments are based on laboratory in house trials in surface and ground waters and results from literature searches.

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

End of Report BC0114/25

Certificate of Analysis

Report No.:	**25-09535-1**
Issue No.:	**1**
Date of Issue	**19/11/2025**
Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	Richard Wong
Customer Order No.:	P0758329
Customer Reference:	Not Supplied
Quotation Reference:	Q25-03484 (Issue: 5)
Description:	10 water samples
Date Received:	27/10/2025
Date Started:	28/10/2025
Date Completed:	19/11/2025
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None



Approved By: **David Long, LIMS Manager**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

Testing performed by RPS Environmental Management Limited, a Tetra Tech Company. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
Terms and conditions apply - copy on request

Results Summary

Report No.: 25-09535-1

Customer Reference: Not Supplied

Customer Order No: P0758329

Customer Sample No	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	25/11858/8	25/11858/9	25/11858/10
Customer Sample ID	DS01	DS02	DS03	DS04	DS05	DS07	DS08	DS09	SW US	SSW DS
RPS Sample No	121720	121721	121722	121723	121724	121725	121726	121727	121728	121729
Sample Type	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**
Sample Matrix	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW
Sampling Date	17/10/2025	17/10/2025	17/10/2025	17/10/2025	17/10/2025	17/10/2025	17/10/2025	17/10/2025	17/10/2025	17/10/2025

Determinand	CAS No	Codes	SOP	RL	Units									
1,2-butanediol (1,2-butylene glycol)	584-03-2	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-propanediol (1,2-propylene glycol)	57-55-6	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-butanediol (1,3-butylene glycol)	107-88-0	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-propanediol (1,3-propylene glycol)	504-63-2	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-butanediol (tetramethylene glycol)	110-63-4	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,5-pentanediol (pentamethylene glycol)	111-29-5	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ethanediol (ethylene glycol)	107-21-1	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2'-oxydiethanol (diethylene glycol)	111-46-6	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2'-(ethylenedioxy)diethanol (triethylene glycol)	112-27-6	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-butoxyethanol (butyl glycol)	111-76-2	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
3,3'-oxydipropanol (dipropylene glycol)	25265-71-8	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-isopropoxyethanol (isopropyl glycol)	109-59-1	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-methoxyethyl acetate	110-49-6	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-butoxyethyl acetate	112-07-2	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-(2-butoxyethoxy)ethanol (butyl diglycol, DEGBE)	112-34-5	N	G041	1	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Deviating Samples

Report No.: 25-09535-1

Customer Reference: Not Supplied

Customer Order No: P0758329

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
121720	25/11858/1	DS01	17/10/2025	GCV40 40 mL clear glass vial	No	
121721	25/11858/2	DS02	17/10/2025	GCV40 40 mL clear glass vial	No	
121722	25/11858/3	DS03	17/10/2025	GCV40 40 mL clear glass vial	No	
121723	25/11858/4	DS04	17/10/2025	GCV40 40 mL clear glass vial	No	
121724	25/11858/5	DS05	17/10/2025	GCV40 40 mL clear glass vial	No	
121725	25/11858/6	DS07	17/10/2025	GCV40 40 mL clear glass vial	No	
121726	25/11858/7	DS08	17/10/2025	GCV40 40 mL clear glass vial	No	
121727	25/11858/8	DS09	17/10/2025	GCV40 40 mL clear glass vial	No	
121728	25/11858/9	SW US	17/10/2025	GCV40 40 mL clear glass vial	No	
121729	25/11858/10	SSW DS	17/10/2025	GCV40 40 mL clear glass vial	No	

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FOAM_LIQ	Liquid foam
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	LATEX	Latex/Rubber
Solid	PACKAGING	Packaging material
Solid	PAPER	Paper
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	LIQUOR	Liquor
Water	MINEW	Mine Water
Water	MW	Mineral Water
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Unknown Water

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
*	Modified standard method
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
DW (in units)	Results are expressed on a dry weight basis
L (in results)	Result is outside normal limits

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 week from the issue date of this report
Waters	1 week from the issue date of this report
Other Liquids	1 week from the issue date of this report
Solids / Soils	1 week from the issue date of this report
Sediments	1 week from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/11858
Issue Number: 1 **Date:** 19 November, 2025

Client:
Geocon Site Investigations Ltd
Arden House
Shepley Lane Industrial Estate
Hawk Green, Marple
Stockport
Greater Manchester
UK
SK6 7JW

Project Manager: *Use - Mailing list/*Use - Mailing list 2/*Use - M
Project Name: Wrexham Solar Farm
Project Ref: GSI 2006
Order No: PO 25/0798
Date Samples Received: 17/10/25
Date Instructions Received: 20/10/25
Date Analysis Completed: 19/11/25

Approved by:



Richard Wong
Client Manager

UKAS TESTING
1247

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07	DS08			
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25			
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
pH (w)$_{A}^{\#}$	7.21	7.46	7.57	7.60	7.34	7.59	7.60	pH	0.01	A-T-031w
Hardness Total$_{A}^{\#}$	1831.6	1062.2	835.1	1414.9	1196.4	455.7	1068.9	mg/l Ca CO3	4	A-T-049w
Cyanide (total) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	0.005	A-T-042wTCN
Phenols - Total by HPLC (w)$_{A}$	<0.01	0.02	0.01	0.01	<0.01	<0.01	<0.01	mg/l	0.01	A-T-050w
Arsenic (dissolved)$_{A}^{\#}$	3	6	2	5	6	4	3	µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	0.6	1.1	0.2	0.9	4.0	0.2	0.8	µg/l	0.2	A-T-025w
Copper (dissolved)$_{A}^{\#}$	26	30	13	46	110	13	64	µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	11	7	4	12	18	5	12	µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	28.5	62.5	21.3	67.8	599	16.7	997	µg/l	0.1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	14	21	8	17	51	4	14	µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	2	2	2	3	4	<1	2	µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	34	62	23	70	171	379	54	µg/l	2	A-T-025w
Explosives Suite Waters (Surface and Groundwater)$_{A}^{\#}$	Appended	Appended	Appended	Appended	Appended	Appended	Appended			Subcon BAE

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07	DS08			
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25			
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Glycols (x 15) (w)										
1,2-Butanediol (1,2-Butylene glycol) (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
1,2-Propanediol (1,2-Propylene glycol) (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
1,3-Butanediol (1,3-Butylene glycol) (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
1,3-Propanediol (1,3-Propylene glycol) (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
1,4-Butanediol (1,4-Butylene glycol) (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
1,5-Pentanediol (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
Diethylene glycol (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
Ethylene glycol (Monoethylene glycol) (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
Triethylene glycol (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
2-(2-butoxyethoxy)ethanol(buthyl glycol) (w) A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
2-butoxyethanol (butyl glycol) (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
2-butoxyethyl acetate (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
2-isopropoxyethanol (isopropyl glycol) (w)A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
2-methyloxyethyl acetate (w) A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw
3,3-oxydipropanol (dipropylene glycol) (w) A	Appended	Appended	Appended	Appended	Appended	Appended	Appended	mg/l	1	Subcon RPS MHw

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07	DS08			
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25			
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
PAH 16MS (w)										
Acenaphthene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Anthracene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^\#$	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.02	µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^\#$	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.02	µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^\#$	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.02	µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^\#$	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^\#$	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.02	µg/l	0.01	A-T-019w
Chrysene (w)$_A^\#$	<0.01	0.04	<0.01	0.01	<0.01	<0.01	0.02	µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^\#$	<0.01	0.06	<0.01	0.01	<0.01	<0.01	0.03	µg/l	0.01	A-T-019w
Fluorene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^\#$	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Naphthalene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	µg/l	0.01	A-T-019w
Pyrene (w)$_A^\#$	<0.01	0.05	<0.01	0.02	<0.01	0.01	0.03	µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^\#$	<0.01	0.32	<0.01	0.04	<0.01	0.04	0.16	µg/l	0.01	A-T-019w

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07	DS08			
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25			
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW			
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5	<5	µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	<5	<5	<5	<5	5	5	<5	µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A^{\#}$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	A-T-055w
Total Aromatics $(w)_A^{\#}$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	<10	<10	<10	<10	<10	<10	<10	µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1	<1	µg/l	1	A-T-022w

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/8	25/11858/9	25/11858/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS09	SW US	SSW DS							
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25							
Sample Type	WATER - SW	WATER - SW	WATER - SW							
Sample Matrix Code	N/A	N/A	N/A							
pH (w)$_{A}^{\#}$	7.17	8.18	8.22					pH	0.01	A-T-031w
Hardness Total$_{A}^{\#}$	1999.6	323.1	330.2					mg/l Ca CO3	4	A-T-049w
Cyanide (total) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005					mg/l	0.005	A-T-042wTCN
Phenols - Total by HPLC (w)$_{A}$	<0.01	<0.01	<0.01					mg/l	0.01	A-T-050w
Arsenic (dissolved)$_{A}^{\#}$	<5	<1	<1					µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	7.5	0.2	0.2					µg/l	0.2	A-T-025w
Copper (dissolved)$_{A}^{\#}$	<20	<4	<4					µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	<5	<1	<1					µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	93.0	3.4	2.8					µg/l	0.1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.5	<0.1	<0.1					µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	35	<2	<2					µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<5	<1	<1					µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	69	51	45					µg/l	2	A-T-025w
Explosives Suite Waters (Surface and Groundwater)$_{A}^{\#}$	Appended	Appended	Appended							Subcon BAE

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/8	25/11858/9	25/11858/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS09	SW US	SSW DS							
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25							
Sample Type	WATER - SW	WATER - SW	WATER - SW							
Sample Matrix Code	N/A	N/A	N/A							
Glycols (x 15) (w)										
1,2-Butanediol (1,2-Butylene glycol) (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
1,2-Propanediol (1,2-Propylene glycol) (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
1,3-Butanediol (1,3-Butylene glycol) (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
1,3-Propanediol (1,3-Propylene glycol) (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
1,4-Butanediol (1,4-Butylene glycol) (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
1,5-Pentanediol (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
Diethylene glycol (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
Ethylene glycol (Monoethylene glycol) (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
Triethylene glycol (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
2-(2-butoxyethoxy)ethanol(buthyl glycol) (w) A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
2-butoxyethanol (butyl glycol) (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
2-butoxyethyl acetate (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
2-isopropoxyethanol (isopropyl glycol) (w)A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
2-methyloxyethyl acetate (w) A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw
3,3-oxydipropanol (dipropylene glycol) (w) A	Appended	Appended	Appended					mg/l	1	Subcon RPS MHw

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/8	25/11858/9	25/11858/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS09	SW US	SSW DS							
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25							
Sample Type	WATER - SW	WATER - SW	WATER - SW							
Sample Matrix Code	N/A	N/A	N/A							
PAH 16MS (w)										
Acenaphthene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Anthracene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Chrysene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Fluorene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Naphthalene (w)$_A^\#$	0.02	<0.01	<0.01					µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^\#$	0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Pyrene (w)$_A^\#$	<0.01	<0.01	<0.01					µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^\#$	0.03	<0.01	<0.01					µg/l	0.01	A-T-019w

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/8	25/11858/9	25/11858/10					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS09	SW US	SSW DS							
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25							
Sample Type	WATER - SW	WATER - SW	WATER - SW							
Sample Matrix Code	N/A	N/A	N/A							
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	<5	<5					µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5	<5	<5					µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	<5	<5					µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	5	<5	<5					µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	27	<5	<5					µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A^{\#}$	<10	<10	<10					µg/l	10	A-T-055w
Total Aromatics $(w)_A^{\#}$	32	<10	<10					µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	32	<10	<10					µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	<1	<1					µg/l	1	A-T-022w

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
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: Geocon Site Investigations Ltd, Arden House, Shepley Lane Industrial Estate , Hawk Green, Marple, Stockport, Greater Manchester, UK, SK6 7JW

Project: Wrexham Solar Farm

Clients Project No: GSI 2006

Project No: 25/11858

Date Received: 20/10/2025 (am)

Cool Box Temperatures (°C): 13.5 - 13.8

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	25/11858/8	25/11858/9	25/11858/10
Client Sample No										
Client Sample ID/Depth	DS01	DS02	DS03	DS04	DS05	DS07	DS08	DS09	SW US	SSW DS
Date Sampled	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25
Deviation Code										
F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	25/11858/8	25/11858/9	25/11858/10
Client Sample No										
Client Sample ID/Depth	DS01	DS02	DS03	DS04	DS05	DS07	DS08	DS09	SW US	SSW DS
Date Sampled	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25
pH (w)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	25/11858/8	25/11858/9	25/11858/10
Client Sample No										
Client Sample ID/Depth	DS01	DS02	DS03	DS04	DS05	DS07	DS08	DS09	SW US	SSW DS
Date Sampled	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25
A-T-019w	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
A-T-022w	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
A-T-025w	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025
A-T-031w	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025
A-T-042wTCN	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
A-T-049w	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025
A-T-050w	28/10/2025	29/10/2025	28/10/2025	28/10/2025	29/10/2025	28/10/2025	28/10/2025	29/10/2025	28/10/2025	28/10/2025
A-T-055w	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
Calc-As Recd	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025

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

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/11858
Issue Number: 1 **Date:** 19 November, 2025

Client:
Geocon Site Investigations Ltd
Arden House
Shepley Lane Industrial Estate
Hawk Green, Marple
Stockport
Greater Manchester
UK
SK6 7JW

Project Manager: *Use - Mailing list/*Use - Mailing list 2/*Use - M
Project Name: Wrexham Solar Farm
Project Ref: GSI 2006
Order No: PO 25/0798
Date Samples Received: 17/10/25
Date Instructions Received: 20/10/25
Date Analysis Completed: 19/11/25

Approved by:



Richard Wong
Client Manager

UKAS TESTING
1247

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07				
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
pH (w)$_{A}^{\#}$	7.21	7.46	7.57	7.60	7.34	7.59		pH	0.01	A-T-031w
Hardness Total$_{A}^{\#}$	1831.6	1062.2	835.1	1414.9	1196.4	455.7		mg/l Ca CO3	4	A-T-049w
Cyanide (total) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		mg/l	0.005	A-T-042wTCN
Phenols - Total by HPLC (w)$_{A}$	<0.01	0.02	0.01	0.01	<0.01	<0.01		mg/l	0.01	A-T-050w
Arsenic (dissolved)$_{A}^{\#}$	3	6	2	5	6	4		µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	0.6	1.1	0.2	0.9	4.0	0.2		µg/l	0.2	A-T-025w
Copper (dissolved)$_{A}^{\#}$	26	30	13	46	110	13		µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	11	7	4	12	18	5		µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	28.5	62.5	21.3	67.8	599	16.7		µg/l	0.1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1		µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	14	21	8	17	51	4		µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	2	2	2	3	4	<1		µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	34	62	23	70	171	379		µg/l	2	A-T-025w
Explosives Suite Waters (Surface and Groundwater)$_{A}^{\#}$	Appended	Appended	Appended	Appended	Appended	Appended				Subcon BAE

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07				
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
Glycols (x 15) (w)										
1,2-Butanediol (1,2-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,2-Propanediol (1,2-Propylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,3-Butanediol (1,3-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,3-Propanediol (1,3-Propylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,4-Butanediol (1,4-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,5-Pentanediol (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
Diethylene glycol (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
Ethylene glycol (Monoethylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
Triethylene glycol (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-(2-butoxyethoxy)ethanol(buthyl glycol) (w) $_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-butoxyethanol (butyl glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-butoxyethyl acetate (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-isopropoxyethanol (isopropyl glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-methyloxyethyl acetate (w) $_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
3,3-oxydipropanol (dipropylene glycol) (w) $_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07				
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
PAH 16MS (w)										
Acenaphthene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Anthracene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^\#$	<0.01	0.03	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^\#$	<0.01	0.03	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^\#$	<0.01	0.05	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^\#$	<0.01	0.02	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^\#$	<0.01	0.02	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Chrysene (w)$_A^\#$	<0.01	0.04	<0.01	0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^\#$	<0.01	0.06	<0.01	0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Fluorene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^\#$	<0.01	0.02	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Naphthalene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	0.03		µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Pyrene (w)$_A^\#$	<0.01	0.05	<0.01	0.02	<0.01	0.01		µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^\#$	<0.01	0.32	<0.01	0.04	<0.01	0.04		µg/l	0.01	A-T-019w

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS01	DS02	DS03	DS04	DS05	DS07				
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	<5	<5	<5	<5	5	5		µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A^{\#}$	<10	<10	<10	<10	<10	<10		µg/l	10	A-T-055w
Total Aromatics $(w)_A^{\#}$	<10	<10	<10	<10	<10	<10		µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	<10	<10	<10	<10	<10	<10		µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/7	25/11858/8	25/11858/9	25/11858/10			HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS08	DS09	SW US	SSW DS						
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25						
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
pH (w)$_{A}^{\#}$	7.60	7.17	8.18	8.22				pH	0.01	A-T-031w
Hardness Total$_{A}^{\#}$	1068.9	1999.6	323.1	330.2				mg/l Ca CO3	4	A-T-049w
Cyanide (total) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005	<0.005				mg/l	0.005	A-T-042wTCN
Phenols - Total by HPLC (w)$_{A}$	<0.01	<0.01	<0.01	<0.01				mg/l	0.01	A-T-050w
Arsenic (dissolved)$_{A}^{\#}$	3	<5	<1	<1				µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	0.8	7.5	0.2	0.2				µg/l	0.2	A-T-025w
Copper (dissolved)$_{A}^{\#}$	64	<20	<4	<4				µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	12	<5	<1	<1				µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	997	93.0	3.4	2.8				µg/l	0.1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.5	<0.1	<0.1				µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	14	35	<2	<2				µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	2	<5	<1	<1				µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	54	69	51	45				µg/l	2	A-T-025w
Explosives Suite Waters (Surface and Groundwater)$_{A}^{\#}$	Appended	Appended	Appended	Appended						Subcon BAE

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/7	25/11858/8	25/11858/9	25/11858/10			HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS08	DS09	SW US	SSW DS						
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25						
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
Glycols (x 15) (w)										
1,2-Butanediol (1,2-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
1,2-Propanediol (1,2-Propylene glycol) (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
1,3-Butanediol (1,3-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
1,3-Propanediol (1,3-Propylene glycol) (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
1,4-Butanediol (1,4-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
1,5-Pentanediol (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
Diethylene glycol (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
Ethylene glycol (Monoethylene glycol) (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
Triethylene glycol (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
2-(2-butoxyethoxy)ethanol(buthyl glycol) (w) $_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
2-butoxyethanol (butyl glycol) (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
2-butoxyethyl acetate (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
2-isopropoxyethanol (isopropyl glycol) (w)$_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
2-methyloxyethyl acetate (w) $_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw
3,3-oxydipropanol (dipropylene glycol) (w) $_A$	Appended	Appended	Appended	Appended				mg/l	1	Subcon RPS MHw

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/7	25/11858/8	25/11858/9	25/11858/10			HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS08	DS09	SW US	SSW DS						
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25						
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
PAH 16MS (w)										
Acenaphthene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Anthracene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^\#$	0.02	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^\#$	0.02	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^\#$	0.02	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^\#$	0.02	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Chrysene (w)$_A^\#$	0.02	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^\#$	0.03	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Fluorene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^\#$	<0.01	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Naphthalene (w)$_A^\#$	<0.01	0.02	<0.01	<0.01				µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^\#$	<0.01	0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Pyrene (w)$_A^\#$	0.03	<0.01	<0.01	<0.01				µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^\#$	0.16	0.03	<0.01	<0.01				µg/l	0.01	A-T-019w

Envirolab Job Number: 25/11858

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/11858/7	25/11858/8	25/11858/9	25/11858/10			HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	DS08	DS09	SW US	SSW DS						
Depth to Top										
Depth To Bottom										
Date Sampled	17-Oct-25	17-Oct-25	17-Oct-25	17-Oct-25						
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW						
Sample Matrix Code	N/A	N/A	N/A	N/A						
TPH CWG (w) with Clean Up										
Ali >C5-C6 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Ali >C6-C8 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Ali >C8-C10 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C10-C12 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C12-C16 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C16-C21 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Ali >C21-C35 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Total Aliphatics (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	Calc-As Recd
Aro >C5-C7 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Aro >C7-C8 (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
Aro >C8-C10 (w)$_A$	<5	<5	<5	<5				µg/l	5	A-T-055w
Aro >C10-C12 (w)$_A^{\#}$	<5	<5	<5	<5				µg/l	5	A-T-055w
Aro >C12-C16 (w)$_A^{\#}$	<5	5	<5	<5				µg/l	5	A-T-055w
Aro >C16-C21 (w)$_A^{\#}$	<5	27	<5	<5				µg/l	5	A-T-055w
Aro >C21-C35 (w)$_A^{\#}$	<10	<10	<10	<10				µg/l	10	A-T-055w
Total Aromatics (w)$_A^{\#}$	<10	32	<10	<10				µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) (w)$_A$	<10	32	<10	<10				µg/l	10	Calc-As Recd
BTEX - Benzene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - Toluene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - Ethyl Benzene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - m & p Xylene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
BTEX - o Xylene (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w
MTBE (w)$_A^{\#}$	<1	<1	<1	<1				µg/l	1	A-T-022w

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
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: Geocon Site Investigations Ltd, Arden House, Shepley Lane Industrial Estate , Hawk Green, Marple, Stockport, Greater Manchester, UK, SK6 7JW

Project: Wrexham Solar Farm

Clients Project No: GSI 2006

Project No: 25/11858

Date Received: 20/10/2025 (am)

Cool Box Temperatures (°C): 13.5 - 13.8

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	25/11858/8	25/11858/9	25/11858/10
Client Sample No										
Client Sample ID/Depth	DS01	DS02	DS03	DS04	DS05	DS07	DS08	DS09	SW US	SSW DS
Date Sampled	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25
Deviation Code										
F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	25/11858/8	25/11858/9	25/11858/10
Client Sample No										
Client Sample ID/Depth	DS01	DS02	DS03	DS04	DS05	DS07	DS08	DS09	SW US	SSW DS
Date Sampled	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25
pH (w)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	25/11858/1	25/11858/2	25/11858/3	25/11858/4	25/11858/5	25/11858/6	25/11858/7	25/11858/8	25/11858/9	25/11858/10
Client Sample No										
Client Sample ID/Depth	DS01	DS02	DS03	DS04	DS05	DS07	DS08	DS09	SW US	SSW DS
Date Sampled	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25	17/10/25
A-T-019w	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
A-T-022w	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
A-T-025w	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025	29/10/2025
A-T-031w	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025	27/10/2025
A-T-042wTCN	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
A-T-049w	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025	31/10/2025
A-T-050w	28/10/2025	29/10/2025	28/10/2025	28/10/2025	29/10/2025	28/10/2025	28/10/2025	29/10/2025	28/10/2025	28/10/2025
A-T-055w	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025
Calc-As Recd	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025	28/10/2025

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

A TETRA TECH COMPANY

Certificate of Analysis

Report No.:	**25-06633-1**
Issue No.:	**1**
Date of Issue	**30/07/2025**
Customer Details:	Envirolab Ltd, 7 - 8 Sandpits Business Park, Mottram Road, Hyde, Greater Manchester, SK14 3AR, United Kingdom
Customer Contact:	Maleyka Owen-Agjef
Customer Order No.:	P0757595
Customer Reference:	Not Supplied
Quotation Reference:	Q25-03484 (Issue: 5)
Description:	6 water samples
Date Received:	21/07/2025
Date Started:	29/07/2025
Date Completed:	30/07/2025
Test Methods:	Details available on request (refer to SOP code against relevant result/s)
Notes:	None



Approved By: **Marco Lattughi, Operational Director**

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service.
This certificate shall not be reproduced except in full without the prior written approval of the laboratory.
Observations and interpretations are outside of the scope of UKAS accreditation.
Results reported herein relate only to the items supplied to the laboratory for testing.
Results on an Interim Report are not dry-weight corrected.
Where the laboratory is not responsible for the sampling, results apply to the sample(s) as they were received.
The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

RPS Environmental Management Limited trading as RPS Mountainheath. Registered in England No. 01756175.
13 St Martins Way, Bedford, Bedfordshire, MK42 0LF. T +44 1462 480 400
A member of the RPS Group plc. Terms and conditions apply - copy on request

Results Summary

Report No.: 25-06633-1

Customer Reference: Not Supplied

Customer Order No: P0757595

Customer Sample No	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6
RPS Sample No	107159	107160	107161	107162	107163	107164
Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
Sample Matrix	SW	SW	SW	SW	SW	SW
Sampling Date	22/07/2025	22/07/2025	22/07/2025	22/07/2025	22/07/2025	22/07/2025

Determinand	CAS No	Codes	SOP	RL	Units						
1,2-butanediol (1,2-butylene glycol)	584-03-2	N	G041	1	mg/L	< 1.0	2.7	< 1.0	< 1.0	< 1.0	< 1.0
1,2-propanediol (1,2-propylene glycol)	57-55-6	N	G041	1	mg/L	< 1.0	2.8	< 1.0	< 1.0	< 1.0	< 1.0
1,3-butanediol (1,3-butylene glycol)	107-88-0	N	G041	1	mg/L	< 1.0	2.6	< 1.0	< 1.0	< 1.0	< 1.0
1,3-propanediol (1,3-propylene glycol)	504-63-2	N	G041	1	mg/L	< 1.0	2.7	< 1.0	< 1.0	< 1.0	< 1.0
1,4-butanediol (tetramethylene glycol)	110-63-4	N	G041	1	mg/L	< 1.0	2.7	< 1.0	< 1.0	< 1.0	< 1.0
1,5-pentanediol (pentamethylene glycol)	111-29-5	N	G041	1	mg/L	< 1.0	2.6	< 1.0	< 1.0	< 1.0	< 1.0
ethanediol (ethylene glycol)	107-21-1	N	G041	1	mg/L	< 1.0	3.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2'-oxydiethanol (diethylene glycol)	111-46-6	N	G041	1	mg/L	< 1.0	2.5	< 1.0	< 1.0	< 1.0	< 1.0
2,2'-(ethylenedioxy)diethanol (triethylene glycol)	112-27-6	N	G041	1	mg/L	1.2	2.6	1.0	< 1.0	< 1.0	< 1.0
2-butoxyethanol (butyl glycol)	111-76-2	N	G041	1	mg/L	< 1.0	3.0	< 1.0	< 1.0	< 1.0	< 1.0
3,3'-oxydipropanol (dipropylene glycol)	25265-71-8	N	G041	1	mg/L	< 1.0	2.7	< 1.0	< 1.0	< 1.0	< 1.0
2-isopropoxyethanol (isopropyl glycol)	109-59-1	N	G041	1	mg/L	< 1.0	3.7	< 1.0	< 1.0	< 1.0	< 1.0
2-methoxyethyl acetate	110-49-6	N	G041	1	mg/L	< 1.0	3.8	< 1.0	< 1.0	< 1.0	< 1.0
2-butoxyethyl acetate	112-07-2	N	G041	1	mg/L	< 1.0	3.2	< 1.0	< 1.0	< 1.0	< 1.0
2-(2-butoxyethoxy)ethanol (butyl diglycol, DEGBE)	112-34-5	N	G041	1	mg/L	< 1.0	2.7	< 1.0	< 1.0	< 1.0	< 1.0

Deviating Samples

Report No.: 25-06633-1

Customer Reference: Not Supplied

Customer Order No: P0757595

Our policy on Deviating Samples has been implemented in accordance with UKAS Policy on Deviating Samples (TPS63).
RPS is not responsible for the integrity of samples as received, unless RPS personnel performed the sampling. Samples submitted may be declared to be deviating.
Where applicable the analysis method remains UKAS accredited, however results reported for a deviating sample may be compromised.
Where no sampling date was supplied, samples have been declared to be deviating. If the date can be supplied, results may be reissued if assessed not deviating.
Where the sample container used was unsuitable or broken, the sample is flagged as deviating and re-sampling/re-submisson may be required.

RPS No.	Customer No.	Customer ID	Date Sampled	Containers Received	Deviating	Reason for Deviation
107159	25/08015/1		22/07/2025	GAV40 40 mL amber glass vial	No	
107160	25/08015/2		22/07/2025	GAV40 40 mL amber glass vial	No	
107161	25/08015/3		22/07/2025	GAV40 40 mL amber glass vial	No	
107162	25/08015/4		22/07/2025	GAV40 40 mL amber glass vial	No	
107163	25/08015/5		22/07/2025	GAV40 40 mL amber glass vial	No	
107164	25/08015/6		22/07/2025	GAV40 40 mL amber glass vial	No	

A TETRA TECH COMPANY

Report No.: 25-06633-1

Type	Matrix Code	Description
Food	CEREALPROD	Cereals, grains & products
Food	DRIEDFRUIT	Dried fruits
Food	FRIEDBAKED	Fried or baked food
Food	LEGUME	Legumes
Food	MEAT	Meat
Food	POWDERED	Powdered food
Food	PULSE	Pulses (dried legumes)
Food	VEGETABLES	Vegetables
Gas	TDTUBE	TD Tube
Gas	TENAX	Tenax Tube
Gas	TUBE	Tube
Gas	VAPOUR	Gas
Geological	SED_MAR	Marine Sediment
Geological	SED_RIV	River Sediment
Geological	SLUDG_SOL	Sludge (solid only)
Geological	SOIL	Soil
Liquid	BEVERAGE	Beverage
Liquid	BLOOD	Blood
Liquid	CONDENSATE	Condensate
Liquid	FOAM_LIQ	Liquid foam
Liquid	FORMULATN	Formula
Liquid	LEACHATE	Leachate
Liquid	OIL/GREASE	Oil or grease
Liquid	SLUDG_LIQ	Sludge (liquid only)
Liquid	SOLVENT	Solvent
Liquid	URINE	Urine
Sludge	SLUDG_WHL	Sludge for bulk route
Solid	BADGE	Badge
Solid	BEDDING	Bedding
Solid	BIOTA	Biota (general)
Solid	BIOTA_F	Biota (fish)
Solid	BIOTA_SF	Biota (shellfish)
Solid	CONSTRCTN	Construction materials
Solid	FABRIC	Fabrics & furnishing materials
Solid	FEED	Animal feed
Solid	FERTILISER	Fertiliser
Solid	FILTER	Filter
Solid	FOAM	Solid foam material
Solid	LATEX	Latex/Rubber
Solid	PACKAGING	Packaging material
Solid	PAPER	Paper
Solid	PLANT	Plant (vegetation)
Solid	POWDER	Powder
Solid	SWAB	Swab
Water	BAL	Ballast Water
Water	BIL	Bilge Water
Water	DW	Drinking Water
Water	EFFLUENT	Effluent
Water	GW	Ground Water
Water	INFLUENT	Influent
Water	MINEW	Mine Water
Water	MW	Mineral Water
Water	SALTW	Salt Water
Water	SW	Surface Water
Water	TW	Tap Water
Water	W	Unknown Water

Report No.: 25-06633-1

Key Code	Description
N	Not Accredited Test
U	UKAS Accredited Test - UKAS accreditation is only implied if the report carries the UKAS logo
UF	UKAS Flexible Scope Test
M	MCERTS Accredited Test - MCERTS accreditation is only implied if the report carries the MCERTS logo
O	Marine Management Organisation (MMO) Validated
SN	Subcontracted to approved laboratory not accredited for the test
SU	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
SIN	Subcontracted to internal RPS Group laboratory not accredited for the test
SIU	Subcontracted to internal RPS Group laboratory UKAS Accredited for the test
SIM	Subcontracted to internal RPS Group laboratory MCERTS/UKAS Accredited for the test
*	Modified standard method
I/S (in results)	Insufficient Sample
U/S (in results)	Unsuitable Sample
S/C (in results)	See Comments
ND (in results)	Not Detected
DW (in units)	Results are expressed on a dry weight basis
L (in results)	Result is outside normal limits

Sample Type	Sample Retention and Disposal Period
Foodstuff	1 month (if frozen) from the issue date of this report
Waters	2 weeks from the issue date of this report
Other Liquids	1 month from the issue date of this report
Solids / Soils	1 month from the issue date of this report
Sediments	1 month from the issue date of this report

Note: Sample retention may be subject to agreement with the customer for particular projects

Dev code	Description
D	No sampling date provided.
T	No sampling time provided.
Z	Temperature of samples exceeded in transit/storage.
V	Excessive headspace for volatile determinands.
P	Sample submitted without required preservative(s).
C	Incorrect container.
H	Holding time exceeded (sampling to extraction).
X	Holding time exceeded (sampling to receipt).

Note: Where the following information is included in this certificate, it has usually been supplied by the customer: Customer Sample ID, Sample Location, Sample Depth, Sampling Date and Sampling Time. The laboratory shall not be responsible for any information that is supplied by the customer that may affect the validity of results.

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

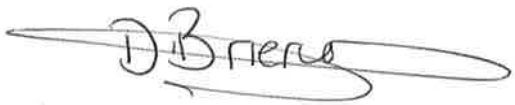
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/08015
Issue Number: 1 **Date:** 04 August, 2025

Client:
Geocon Site Investigations Ltd
Arden House
Shepley Lane Industrial Estate
Hawk Green, Marple
Stockport
Greater Manchester
UK
SK6 7JW

Project Manager: *Use - Mailing list/*Use - Mailing list 2/*Use - M
Project Name: Wrexham Solar Farm
Project Ref: GSI 2006
Order No: PO 25/570
Date Samples Received: 23/07/25
Date Instructions Received: 24/07/25
Date Analysis Completed: 04/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

UKAS TESTING
1247

Envirolab Job Number: 25/08015

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SW US	SW DS	DS03	DS07	DS08	DS05				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
pH (w)$_{A}^{\#}$	7.93	7.86	7.42	9.62	7.45	7.83		pH	0.01	A-T-031w
Hardness Total$_{A}^{\#}$	275.6	267.1	502.7	207.3	532.2	335.9		mg/l Ca CO3	4	A-T-049w
Cyanide (total) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		mg/l	0.005	A-T-042wTCN
Phenols - Total by HPLC (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/l	0.01	A-T-050w
Arsenic (dissolved)$_{A}^{\#}$	<1	<1	<1	<1	1	2		µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	<0.2	<0.2	0.3	<0.2	<0.2	0.3		µg/l	0.2	A-T-025w
Copper (dissolved)$_{A}^{\#}$	<4	<4	5	17	10	16		µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	<1	<1	<1	14	3	3		µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	1	1	8	8	7	73		µg/l	1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	<2	<2	4	5	4	5		µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<1	<1	<1	2	2	<1		µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	29	30	9	12	5	18		µg/l	2	A-T-025w

Envirolab Job Number: 25/08015

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SW US	SW DS	DS03	DS07	DS08	DS05				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
Glycols (x 15) (w)										
1,2-Butanediol (1,2-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,2-Propanediol (1,2-Propylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,3-Butanediol (1,3-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,3-Propanediol (1,3-Propylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,4-Butanediol (1,4-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,5-Pentanediol (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
Diethylene glycol (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
Ethylene glycol (Monoethylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
Triethylene glycol (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-(2-butoxyethoxy)ethanol(buthyl glycol) (w) $_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-butoxyethanol (butyl glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-butoxyethyl acetate (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-isopropoxyethanol (isopropyl glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-methyloxyethyl acetate (w) $_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
3,3-oxydipropanol (dipropylene glycol) (w) $_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw

Envirolab Job Number: 25/08015

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SW US	SW DS	DS03	DS07	DS08	DS05				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
PAH 16MS (w)										
Acenaphthene (w)$_A^{\#}$	<0.01	<0.01	0.08	0.02	<0.01	<0.01		µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Anthracene (w)$_A^{\#}$	<0.01	<0.01	0.07	0.03	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^{\#}$	<0.01	<0.01	0.08	0.11	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^{\#}$	<0.01	<0.01	0.03	0.07	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^{\#}$	<0.01	<0.01	0.04	0.09	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^{\#}$	<0.01	<0.01	<0.01	0.03	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^{\#}$	<0.01	<0.01	0.02	0.04	<0.01	<0.01		µg/l	0.01	A-T-019w
Chrysene (w)$_A^{\#}$	<0.01	<0.01	0.08	0.10	<0.01	<0.01		µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^{\#}$	<0.01	<0.01	0.74	0.47	<0.01	<0.01		µg/l	0.01	A-T-019w
Fluorene (w)$_A^{\#}$	<0.01	<0.01	0.04	0.01	0.01	<0.01		µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^{\#}$	<0.01^U	<0.01^U	<0.01^U	0.03^U	<0.01^U	<0.01^U		µg/l	0.01	A-T-019w
Naphthalene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^{\#}$	0.01	<0.01	0.13	0.06	0.03	<0.01		µg/l	0.01	A-T-019w
Pyrene (w)$_A^{\#}$	<0.01	<0.01	0.44	0.33	<0.01	0.03		µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^{\#}$	0.01	<0.01	1.75	1.39	0.04	0.03		µg/l	0.01	A-T-019w

Envirolab Job Number: 25/08015

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SW US	SW DS	DS03	DS07	DS08	DS05				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	<5	<5	<5	8	<5		µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	<5	<5	<5	8	<5		µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	5	<5		µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	<5	<5	21	10	16	<5		µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A^{\#}$	<10	<10	30	<10	<10	<10		µg/l	10	A-T-055w
Total Aromatics $(w)_A^{\#}$	<10	<10	51	10	21	<10		µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	<10	<10	51	10	29	<10		µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w

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
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: Geocon Site Investigations Ltd, Arden House, Shepley Lane Industrial Estate , Hawk Green, Marple, Stockport, Greater Manchester, UK, SK6 7JW

Project: Wrexham Solar Farm

Clients Project No: GSI 2006

Project No: 25/08015

Date Received: 24/07/2025 (am)

Cool Box Temperatures (°C): 19.7 & 19.9

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	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6
Client Sample No						
Client Sample ID/Depth	SW US	SW DS	DS03	DS07	DS08	DS05
Date Sampled	22/07/25	22/07/25	22/07/25	22/07/25	22/07/25	22/07/25
A-T-019w	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
A-T-022w	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
A-T-025w	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025
A-T-031w	24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
A-T-042wTCN	25/07/2025	25/07/2025	25/07/2025	25/07/2025	25/07/2025	25/07/2025
A-T-049w	04/08/2025	04/08/2025	04/08/2025	04/08/2025	04/08/2025	04/08/2025
A-T-050w	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
A-T-055w	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Calc-As Recd	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025

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

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

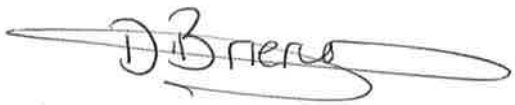
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/08015
Issue Number: 1 **Date:** 04 August, 2025

Client:
Geocon Site Investigations Ltd
Arden House
Shepley Lane Industrial Estate
Hawk Green, Marple
Stockport
Greater Manchester
UK
SK6 7JW

Project Manager: *Use - Mailing list/*Use - Mailing list 2/*Use - M
Project Name: Wrexham Solar Farm
Project Ref: GSI 2006
Order No: PO 25/570
Date Samples Received: 23/07/25
Date Instructions Received: 24/07/25
Date Analysis Completed: 04/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

UKAS TESTING
1247

Envirolab Job Number: 25/08015

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6	HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SW US	SW DS	DS03	DS07	DS08	DS05				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
pH (w)$_{A}^{\#}$	7.93	7.86	7.42	9.62	7.45	7.83		pH	0.01	A-T-031w
Hardness Total$_{A}^{\#}$	275.6	267.1	502.7	207.3	532.2	335.9		mg/l Ca CO3	4	A-T-049w
Cyanide (total) (w)$_{A}^{\#}$	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		mg/l	0.005	A-T-042wTCN
Phenols - Total by HPLC (w)$_{A}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/l	0.01	A-T-050w
Arsenic (dissolved)$_{A}^{\#}$	<1	<1	<1	<1	1	2		µg/l	1	A-T-025w
Cadmium (dissolved)$_{A}^{\#}$	<0.2	<0.2	0.3	<0.2	<0.2	0.3		µg/l	0.2	A-T-025w
Copper (dissolved)$_{A}^{\#}$	<4	<4	5	17	10	16		µg/l	4	A-T-025w
Chromium (dissolved)$_{A}^{\#}$	<1	<1	<1	14	3	3		µg/l	1	A-T-025w
Lead (dissolved)$_{A}^{\#}$	1	1	8	8	7	73		µg/l	1	A-T-025w
Mercury (dissolved)$_{A}^{\#}$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		µg/l	0.1	A-T-025w
Nickel (dissolved)$_{A}^{\#}$	<2	<2	4	5	4	5		µg/l	2	A-T-025w
Selenium (dissolved)$_{A}^{\#}$	<1	<1	<1	2	2	<1		µg/l	1	A-T-025w
Zinc (dissolved)$_{A}^{\#}$	29	30	9	12	5	18		µg/l	2	A-T-025w

Envirolab Job Number: 25/08015

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6	HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SW US	SW DS	DS03	DS07	DS08	DS05				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
Glycols (x 15) (w)										
1,2-Butanediol (1,2-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,2-Propanediol (1,2-Propylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,3-Butanediol (1,3-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,3-Propanediol (1,3-Propylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,4-Butanediol (1,4-Butylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
1,5-Pentanediol (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
Diethylene glycol (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
Ethylene glycol (Monoethylene glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
Triethylene glycol (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-(2-butoxyethoxy)ethanol(buthyl glycol) (w) $_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-butoxyethanol (butyl glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-butoxyethyl acetate (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-isopropoxyethanol (isopropyl glycol) (w)$_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
2-methyloxyethyl acetate (w) $_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw
3,3-oxydipropanol (dipropylene glycol) (w) $_A$	Appended	Appended	Appended	Appended	Appended	Appended		mg/l	1	Subcon RPS MHw

Envirolab Job Number: 25/08015

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6	HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SW US	SW DS	DS03	DS07	DS08	DS05				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
PAH 16MS (w)										
Acenaphthene (w)$_A^{\#}$	<0.01	<0.01	0.08	0.02	<0.01	<0.01		µg/l	0.01	A-T-019w
Acenaphthylene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Anthracene (w)$_A^{\#}$	<0.01	<0.01	0.07	0.03	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(a)anthracene (w)$_A^{\#}$	<0.01	<0.01	0.08	0.11	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(a)pyrene (w)$_A^{\#}$	<0.01	<0.01	0.03	0.07	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(b)fluoranthene (w)$_A^{\#}$	<0.01	<0.01	0.04	0.09	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(ghi)perylene (w)$_A^{\#}$	<0.01	<0.01	<0.01	0.03	<0.01	<0.01		µg/l	0.01	A-T-019w
Benzo(k)fluoranthene (w)$_A^{\#}$	<0.01	<0.01	0.02	0.04	<0.01	<0.01		µg/l	0.01	A-T-019w
Chrysene (w)$_A^{\#}$	<0.01	<0.01	0.08	0.10	<0.01	<0.01		µg/l	0.01	A-T-019w
Dibenzo(ah)anthracene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Fluoranthene (w)$_A^{\#}$	<0.01	<0.01	0.74	0.47	<0.01	<0.01		µg/l	0.01	A-T-019w
Fluorene (w)$_A^{\#}$	<0.01	<0.01	0.04	0.01	0.01	<0.01		µg/l	0.01	A-T-019w
Indeno(123-cd)pyrene (w)$_A^{\#}$	<0.01^U	<0.01^U	<0.01^U	0.03^U	<0.01^U	<0.01^U		µg/l	0.01	A-T-019w
Naphthalene (w)$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		µg/l	0.01	A-T-019w
Phenanthrene (w)$_A^{\#}$	0.01	<0.01	0.13	0.06	0.03	<0.01		µg/l	0.01	A-T-019w
Pyrene (w)$_A^{\#}$	<0.01	<0.01	0.44	0.33	<0.01	0.03		µg/l	0.01	A-T-019w
Total PAH 16MS (w)$_A^{\#}$	0.01	<0.01	1.75	1.39	0.04	0.03		µg/l	0.01	A-T-019w

Envirolab Job Number: 25/08015

Client Project Name: Wrexham Solar Farm

Client Project Ref: GSI 2006

Lab Sample ID	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6	HWOL Report Acronym	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SW US	SW DS	DS03	DS07	DS08	DS05				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25	22-Jul-25				
Sample Type	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW	WATER - SW				
Sample Matrix Code	N/A	N/A	N/A	N/A	N/A	N/A				
TPH CWG (w) with Clean Up										
Ali >C5-C6 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Ali >C6-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Ali >C8-C10 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Ali >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Ali >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Ali >C16-C21 $(w)_A^{\#}$	<5	<5	<5	<5	8	<5		µg/l	5	A-T-055w
Ali >C21-C35 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Total Aliphatics $(w)_A^{\#}$	<5	<5	<5	<5	8	<5		µg/l	5	Calc-As Recd
Aro >C5-C7 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Aro >C7-C8 $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
Aro >C8-C10 $(w)_A$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Aro >C10-C12 $(w)_A^{\#}$	<5	<5	<5	<5	<5	<5		µg/l	5	A-T-055w
Aro >C12-C16 $(w)_A^{\#}$	<5	<5	<5	<5	5	<5		µg/l	5	A-T-055w
Aro >C16-C21 $(w)_A^{\#}$	<5	<5	21	10	16	<5		µg/l	5	A-T-055w
Aro >C21-C35 $(w)_A^{\#}$	<10	<10	30	<10	<10	<10		µg/l	10	A-T-055w
Total Aromatics $(w)_A^{\#}$	<10	<10	51	10	21	<10		µg/l	10	Calc-As Recd
TPH (Ali & Aro >C5-C35) $(w)_A$	<10	<10	51	10	29	<10		µg/l	10	Calc-As Recd
BTEX - Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - Toluene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - Ethyl Benzene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - m & p Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
BTEX - o Xylene $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w
MTBE $(w)_A^{\#}$	<1	<1	<1	<1	<1	<1		µg/l	1	A-T-022w

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
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: Geocon Site Investigations Ltd, Arden House, Shepley Lane Industrial Estate , Hawk Green, Marple, Stockport, Greater Manchester, UK, SK6 7JW

Project: Wrexham Solar Farm

Clients Project No: GSI 2006

Project No: 25/08015

Date Received: 24/07/2025 (am)

Cool Box Temperatures (°C): 19.7 & 19.9

NO DEVIATIONS IDENTIFIED with respect to sampling dates or containers received.

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	25/08015/1	25/08015/2	25/08015/3	25/08015/4	25/08015/5	25/08015/6
Client Sample No						
Client Sample ID/Depth	SW US	SW DS	DS03	DS07	DS08	DS05
Date Sampled	22/07/25	22/07/25	22/07/25	22/07/25	22/07/25	22/07/25
A-T-019w	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
A-T-022w	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
A-T-025w	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025	31/07/2025
A-T-031w	24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025	24/07/2025
A-T-042wTCN	25/07/2025	25/07/2025	25/07/2025	25/07/2025	25/07/2025	25/07/2025
A-T-049w	04/08/2025	04/08/2025	04/08/2025	04/08/2025	04/08/2025	04/08/2025
A-T-050w	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025	28/07/2025
A-T-055w	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025
Calc-As Recd	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025	29/07/2025

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

APPENDIX D

HISTORICAL ROYAL ORDNANCE FACTORY PLAN



Factory buildings associated with explosive manufacturing

Earthwork bund surrounding buildings to the north indicating the location of stored explosive ordnance and materials

The Site

Developed area of site: Source of potential contamination- Railway infrastructure and buildings associated with wider Royal Ordnance Factory. Note the lack of earthwork bunds surrounding buildings in this area when compared to the main area to the north of the river. Therefore, given the absence and close spacing of the buildings, it is unlikely that explosives were stored on site and likely to be related to Locomotor sheds and storage, interconnected by rail and road, connecting the ROF to the main railway further to the south. This is typical of MOD sites during this era.

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PROJECT ID	DRAWING NUMBER	SCALE
GSI 2006 Solar Farm, Wrexham	GSI 2006/03	N.T.S
TITLE	**DATE**	**DRAWN BY**
Historical Photography: ROF Wrexham 1946	December 2023	MP