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WREXHAM AFC KOP DEVELOPMENT
CONTAMINATED LAND INTERPRETATIVE REPORT

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Date	**28 April 2023**
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1. INTRODUCTION

1.1 Brief

1.1.1 Ramboll UK Limited (Ramboll) has been instructed by Wrexham Association Football Club (the 'client') to prepare a Generic Quantitative Risk Assessment (GQRA) for the proposed Wrexham AFC Kop Stand Development.

1.1.2 The site is located within the eastern part of the existing Wrexham Football Club Racecourse Ground football stadium. The site also includes the four floodlight towers situated in each corner of the stadium. The site is located on Mold Road, close to the A483 dual carriageway and immediately to the northwest of the town centre, between the Wrexham General railway station and the university campus. The approximate centre of the site is at National Grid Reference SJ 32885 50952.

1.1.3 This assessment has been undertaken assuming the site will be redeveloped for an end-use comprising a new Kop Stand and new floodlights. A Site Location Plan is provided in Figure 1.

1.1.4 The ground investigation detailed in this report was phased as follows:

- Phase I - Floodlights ground investigation including BH100-BH103 and shallow foundation inspection pits IP100 and IP101;
- Phase II - New Kop Stand ground investigation including boreholes BH104-BH106 and trial pits TP100-TP104 in the footprint of the proposed stand and adjacent public realm area; and
- An additional ground investigation undertaken by P.P. O'Connor Ltd (Demolition Contractor) comprising trial pits into the mound of material that was situated beneath the old Kop stand[1]; and

1.1.5 This GQRA is produced with consideration to Tier 2 of Stage 1 (Risk Assessment) of Land Contamination Risk Management (LCRM) published by the Environment Agency (EA) in 2021 and is applicable to developments in Wales. As such, the brief is to present the GQRA objectives, define the scope of investigation, define suitable generic assessment criteria to which results of investigation can be compared, present investigation findings and assessment of results, and update the preliminary conceptual site model for the site which was produced at the Preliminary Risk Assessment (PRA) stage. The conclusions of the GQRA are used to inform what further action is needed.

1.2 Proposed Development

1.2.1 The Wrexham Gateway Partnership (Established in 2018) comprises of Welsh Government, Wrexham County Borough Council and Wrexham Glyndŵr University. The Wrexham Gateway project will result in the redevelopment of the site around Wrexham General railway station, as well as improvements to WAFC's Racecourse Ground by creating a new stand at the Kop end under planning application ref: P/2022/0725. New floodlights will also be included as part of the Wrexham Gateway project under a separate live planning application (Planning Ref: P/2022 /0548).

1.2.2 The Kop Stand development will include the demolition of the current Kop Stand and construction of a new standing terrace with capacity for up to 5,500 spectators, raising the overall capacity of the stadium to approximately 15,000 for league games. In addition, replacement of the existing floodlights is proposed at four corners of the pitch.

1.2.3 The first floor of the new stand will be fitted out with the club offices and community space. The club store will also move to the ground level concourse. Each of those uses will be relocated from

[1] This additional Investigation was undertaken by P.P. Conner Ltd following demolition of the old Kop stand, following a methodology prepared by Ramboll. The investigation was primarily aimed at informing waste disposal options, but the information is included in this report for completeness.

existing stands providing improved accommodation and facilitating wider improvements at the ground.

1.2.4 The new stand will also provide new hospitality spaces on the upper level with capacity for up to 500 persons on match days and up to 250 persons (banqueting) on non-match days.

1.2.5 From drawings provided to Ramboll (MLD-EX-XX-DR-L-1003 – appended to this report) it is understood the public realm area to the east of the Kop stand will be areas of hard standing with above ground planters and tree pits along the eastern boundary. The current design for the tree pits will require excavations to 950mm below ground level (bgl). Within the public realm area will be CCTV masks with foundation depth of 830mm bgl.

1.2.6 The foundations for the new stand will comprise piles constructed utilising the continuous flight auger (CFA) technique currently planned to be to depths of 20m bgl. The section showing the number of piles is shown in drawing WRX-RAM-04-FN-DR-S-10091 (appended to this report). Currently the depth of the piles for the new floodlights are unknown so therefore assumed to be similar to depths proposed for the CFA piles for the new stand.

1.2.7 The Kop development's plan for managing surface water drainage involves several drainage systems that work in unison, these are.

- A siphonic drainage system that directs water from the Kop roof;
- A network of channel drains collecting water from the external hardstanding;
- A green roof on the adjacent toilet block; and
- Permeable paving with subbase storage / infiltration layer to the front of the stand.

1.2.8 The water is collected from these systems and piped from the impermeable areas to soakaway locations which take advantage of the sites excellent infiltration characteristics. This strategy aligns with the surface water management hierarchy specified in national planning policies, which prioritizes ground infiltration. While the current design includes geocellular soakaways, future adjustments may replace them with permeable build ups and subbase storage/infiltration layers to better suit the site's logistical requirements.

1.2.9 The proposed improvements will enable the Racecourse Ground to be brought up to UEFA Category 4 standards, enabling the stadium to be used for international and Premier League football matches.

1.3 Objectives

1.3.1 The objectives of this report build upon the preliminary risk assessment[2] and consider LCRM; specifically the objectives include:

- Confirm which potential contaminant linkages identified at PRA stage are to be assessed;
- Document how the ground investigation was designed to assess those potential contaminant linkages and any constraints on the ground investigation;
- Document findings of the ground investigation, and interpret the environmental ground conditions encountered during ground investigation;
- Document details of presence of structures and buried services that could influence the conceptual site model, where these have been identified through the investigation;
- Establish appropriate generic assessment criteria and a standard set of generic assumptions to assess the risks;
- Assess the potential for risks to both human health and environmental receptors (including controlled waters) based on the data collected;

[2] Wrexham AFC Kop Redevelopment Ground Investigation Specification Report (1620012485-RAM-XX-XX-RP-CE-00001)

- Carry out a contaminated land risk assessment based on a source-pathway-receptor methodology;
- Present a refined Conceptual Site Model (CSM) based on the findings of the ground investigation;
- Identify potential for changes to ground conditions due to weather conditions and seasonal/climatic patterns and how these changes may affect the CSM;
- Provide a commentary on contaminated land risks;
- Provided further recommendations if required;
- Provide preliminary waste classification using a HazWasteOnline assessment; and
- Support the discharge of planning conditions relevant to contaminated land.

1.4 Planning Conditions

1.4.1 The planning conditions relevant to contaminated land under Planning Ref P/2022/0725 for the new Kop development are shown below for reference. It is intended that this report will support the discharge of Planning Condition No. 6 (II & III). Please refer to section 10.4 for details on discharging planning conditions.

Planning Condition No. 6 (Risk of Contamination)

1.4.2 No development or phase of development, shall commence until the following components of a scheme to deal with the risks associated with contamination at the site, has been submitted to and approved in writing by the Local Planning Authority.

I. A preliminary risk assessment which has identified:

- all previous uses;

- potential contaminants associated with those uses;

- a conceptual model of the site indicating sources, pathways and receptors; and

- potentially unacceptable risks arising from contamination at the site;

II. A site investigation scheme, to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site;

III. The results of the site investigation and the detailed risk assessment referred to in (II) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken; and

IV. A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in (III) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action. The remediation strategy and its relevant components shall be carried out in accordance with the approved details.

Planning Condition No. 7 (Verification Reporting)

1.4.3 Prior to commencement of development a verification report demonstrating completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved in writing by the Local Planning Authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan

to demonstrate that the site remediation criteria have been met. It shall also include a long-term monitoring and maintenance plan for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan. The long-term monitoring and maintenance plan shall be carried out in accordance with the approved details.

Planning Condition No. 8 (Monitoring plan for land contamination)

1.4.4 Prior to the occupation or operation of the development, a long-term monitoring plan for land contamination shall be submitted and approved inwriting by the Local Planning Authority. The long-term monitoring plan should include:

- Details of the methods and triggers for action to be undertaken;
- Timescales for the long-term monitoring and curtailment mechanisms e.g. a scheme of monitoring for 3 years unless the monitoring reports indicate that subsequent monitoring is not required;
- Timescales for submission of monitoring reports to the LPA e.g., annually;
- Details of any necessary contingency and remedial actions and timescales for actions;
- Details confirming that the contingency and remedial actions have been carried out. The monitoring plan shall be carried out in accordance with the approved details, within the agreed timescales.

Planning Condition No. 9 (Contamination remediation strategy)

1.4.5 If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this unsuspected contamination shall be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be carried out as approved.

Planning Condition No. 10 (Details of piling)

1.4.6 No development or phase of development, shall commence until details of piling or any other foundation designs using penetrative methods sufficient to demonstrate that there is no unacceptable risk to groundwater have been submitted to and approved in writing by the Local Planning Authority. The piling/foundation designs shall be implemented in accordance with the approved details.

Planning Condition No. 11 (Infiltration permission)

1.4.7 No infiltration of surface water drainage into the ground at the proposed Wrexham FC Kop stand location is permitted other than with the express written consent of the Local Planning Authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to controlled waters. The development shall be carried out in accordance with the approved details.

1.5 Sustainability

1.5.1 The United Nations (UN) 2030 Agenda for Sustainable Development sets 17 Sustainable Development Goals (SDGs) which are designed to promote the achievement of a better and more sustainable future for all.

1.5.1 Contamination and pollution are recognised by the United Nations as risks to human health and wellbeing as well as sustainability of the places where we live. A target to substantially reduce

those risks is enshrined in the UN Sustainable Development Goal (SDG) No 3: Good Health and Wellbeing, as well as SDG No. 11: Sustainable Cities and Communities, which also emphasises sustainable management of waste. Pollution is likewise recognised as a potential threat to water quality, both for human consumption and for its ability to support water-related ecosystems (UN SDG No. 6: Clean Water and Sanitation).

1.5.2 Contamination and pollution within soils, water and air at the site have been identified through the conceptual site model development process and strategic sampling and analysis. Characterisation and, if recommended as a result of the assessment contained within this report, remediation of contamination at the site thus directly support achievement of UN strategy. Implemented through technically robust investigation and risk assessment this focusses the proposals for remedial works where there is a scientifically justifiable need, thus minimising the carbon footprint of works carried out (supporting SDG No 13: Climate Action) as well as production of waste (SDG No. 11).

1.5.3 In order to recognise where the GQRA works completed are of relevance to the progression of the UN's SDG objectives, reference is made in this report to relevant SDGs.

1.6 Constraints and Limitations

1.6.1 This report has been prepared by Ramboll exclusively for the intended use by the client in accordance with the agreement, defining, among others, the purpose, the scope and the terms and conditions for the services. No other warranty, expressed or implied, is made as to the professional advice included in this report or in respect of any matters outside the agreed scope of the services or the purpose for which the report and the associated agreed scope were intended, or any other services provided by Ramboll.

1.6.2 In preparation of the report and performance of any other services, Ramboll has relied upon publicly available information, information provided by the client and information provided by third parties. Accordingly, the conclusions in this report are valid only to the extent that the information provided to Ramboll was accurate, complete and available to Ramboll within the reporting schedule.

1.6.3 Ramboll's services are not intended as legal advice, nor an exhaustive review of site conditions and/or compliance. This report and accompanying documents are initial and intended solely for the use and benefit of the client for this purpose only and may not be used by or disclosed to, in whole or in part, any other person without the express written consent of Ramboll. Ramboll neither owes nor accepts any duty to any third party, unless formally agreed by Ramboll through that party entering into, at Ramboll's sole discretion, a written reliance agreement.

1.6.4 Unless otherwise stated in this report, the scope of services, assessment and conclusions made assume that the site will continue to be used for its current purpose and end-use without significant changes either on-site or off-site.

1.6.5 The ground investigation works were undertaken during a discrete period of time. The findings and conclusions presented in this report are accordingly factually limited by these circumstances and, unless stated otherwise in the report, are preliminary. The field investigations were restricted to a level of detail necessary to meet the stated objectives of the services. The results of any measurements taken may vary spatially or with time and further confirmatory measurements should be made after any significant period of time has elapsed since the sampling took place. The interpretation of the geological and environmental quality conditions is based on extrapolation from point-source data in a heterogeneous environment. Accordingly, more detailed investigation may be appropriate dependent upon the client objectives.

1.6.6 Overall, Geotechnics Ltd was able to investigate the identified the identified potential contaminant sources and it is considered that the exploratory holes provide an appropriate an appropriate coverage across the accessible areas of the site.

2. SUMMARY OF TIER 1 PRELIMINARY RISK ASSESSMENT

2.1.1 Details of the Preliminary Risk Assessment (PRA) for the site are provided in full in the Kop Development Geotechnical and Contaminated Land Desk Study Report (1620012485-RAM-XX-XX-RP-CE-00001). The section below provides a summary of the key findings and details the relevant potential contaminant linkages (PCLs) which were identified as needing further investigation and quantification. Significant PCLs are those which were assessed in the PRA to be at low-moderate risk or of higher risk.

2.1.2 This section summarises information gathered from the Ramboll Geotechnical and Contaminated Land Desk Study Report, which was produced in general accordance with Tier 1: Preliminary Risk Assessment (PRA) of Stage 1 of LCRM.

2.2 Description of Site and Setting

2.2.1 The site location is at National Grid reference SJ 32885 50952 as shown in Figure 1; it comprises an irregular plot of land of an area of approximately 3.3 hectares (ha).

2.2.2 The site can be defined as the area of land currently occupied by the existing, derelict Kop stand and a parcel of land lying immediately to the east. In addition, an area of land between the site and Crispin Lane is intended to be used as a compound during construction works and part of this area is proposed to be used as access to the new stand.

2.2.3 Currently the ground surface in this area comprises demolition rubble associated with removal of the former buildings which occupied the area.

2.2.4 The following sites have been designated as being environmentally sensitive, and were identified in the PRA as potential receptors of contamination arising at the site and within the surrounding area:

- The nearest statutory designated site is the Gatewen Marsh Site of Special Scientific Interest which is located approximately 715m west of the site;
- A number of ecologically valuable plan species are present to the northern end of the area between the existing stand and Crispin Lane.

2.2.5 A summary of the expected geological conditions at the site is provided in Table 2-1, this information was sourced from the Kop Development Geotechnical and Contaminated Land Desk Study Report (1620012485-RAM-XX-XX-RP-CE-00001).

Table 2-1 Summary of Anticipated Geology and Hydrogeology

Stratum	Estimated Average Thickness (m)	Description	Aquifer Designation
Made Ground	Unknown	Currently unknown but anticipated to contain concrete / brick and by of a reworked nature	N/A
Glaciofluvial Sheet Deposits	Unknown	Sand and Gravel	Secondary A
Etruria Formation	Up to 300m	Mudstone	Secondary A
Carboniferous Lower Pennine Coal Measures Formation	Unknown	Mudstone, siltstone and sandstone	Secondary A

2.2.6 The Coal Authority identified coal working beneath the site at 365 metres below ground level (m bgl) and to the northwest of the site, coal mining took place at depths ranging from 322m bgl and 352m bgl.

2.2.7 The site is located in an area where basic radon protection measures will be required.

2.3 Current and Former Land Uses with Potential for Contamination

2.3.1 No potentially significantly contaminating land uses have been identified within the development site area. However, a large mound is present which supports the existing stand and historical maps from the early 1900s to mid-1900s show this increased in size prior to a stand first being shown in the 1970s.

2.3.2 Land uses identified within the construction compound area includes a former drill shed and a garage which extended further to the south.

2.3.3 A number of potentially contaminating land uses have been identified within the surrounding area (<250m) which include:

- Various railway uses (railway lines, sidings, station, goods shed / depot, oil tanks);
- Various works including a saw mill with timber yard, Cambrian Iron Works / Cambrian Works (engineering), joinery, depot, warehouses;
- Garages and petrol stations; and
- Scrap yard

2.3.4 Made ground associated with the existing football ground stand area was expected to be present.

2.4 Preliminary Conceptual Site Model (CSM)

2.4.1 The main environmental legislation relating to contaminated land in the UK is Part 2A of the Environmental Protection Act 1990 (England and Wales). The philosophy behind Part 2A is the source-pathway-receptor potential contaminant linkage; for land to be contaminated all three aspects of this linkage must be present (i.e. a contaminant must be present and able to move along a pathway and impact a receptor). Further details are provided in Appendix 1.

2.4.2 A preliminary conceptual site model that identifies those potential contaminant linkages forms the output of the PRA and is a simplified representation of the environmental conditions at the site, and in the vicinity of the site, and is used to initially identify potentially sensitive receptors and potential pollutant linkages.

- A key aspect of LCRM is that the GQRA should assess the potential contaminant linkages identified in the preliminary conceptual site model. Those PCLs which were identified in the PRA's CSM are presented below: No significant existing or historical contamination sources identified on-site however Made Ground would be present across the development footprint therefore the potential contamination linkage to future site users and construction workers exists through dermal contact and/or ingestion for any impacted material if present. Risk assessed as low for future site users and moderate for construction workers.

- Potential contamination linkage to future site users and construction workers from gases and vapours from inhalation from potential gas generating material within the Made Ground across the site. Risk assessed as low to moderate to future site users and moderate to construction workers.

- Potential contamination linkage exists for leaching of contaminants from the Made Ground to the underlying Secondary A Aquifers in the Glaciofluvial Sheet Deposits and Etruria Formation. Risk assessed as low to underlying Secondary A Aquifer.

- No surface water courses onsite or close to site therefore potential for impacted runoff to run into nearby drains. Risk assessed as low.

- Potential contamination linkage for contamination within Made Ground to impact onsite buildings. Risk assessed as low.

- A number of potential off site sources (current and historical) have been identified which have the potential to impact underlying groundwater and for gases to migrate onto site. Risk assessed as moderate / low for both risk to groundwater from off-site sources and ground gas migration onto site from off-site sources.

2.4.3 The ground investigation was designed to assess the PCLs above. The following sections describe the ground investigation strategy, the results of laboratory chemical analysis and monitoring and a qualitative source-pathway-receptor risk assessment. A revised conceptual model is then presented.

3. GROUND INVESTIGATION

3.1 Design

3.1.1 The ground investigation was designed to investigate the ground, ground gas and groundwater conditions at the site and to test the preliminary conceptual site model, focussing on the assessment of PCLs identified in Section 2.4. The investigation was undertaken by Geotechnics Ltd on behalf of Ramboll and is split into two phases:

- Pre-demolition investigation for the floodlight foundations.
- Post-demolition investigation to inform construction of the new stand and external works.

3.1.2 The ground investigation was undertaken in order to obtain detailed information on the ground conditions at the site. The exploratory holes locations targeted distinct areas of the proposed development such as locating deeper boreholes to inform the piling requirements for the proposed Kop stand, and targeting potential contamination source areas such as made ground.

3.1.3 An additional six trial pits were excavated into the mound which the old Kop Stand was constructed on by the demolition contractor P.P. O'Conner Ltd for waste classification purposes. A total of 15 samples were taken from the six trial pits. These samples have been included within the assessment but it should be noted this material has since been excavated by P.P. O'Connor Ltd and removed from the site.

3.2 Ground Investigation Activities

3.2.1 Site works for the phased ground investigation were undertaken in two phases from 28 September 2022 to 18 October 2022 and 15 February 2023 to 28 February 2023. The ground investigation was undertaken by Geotechnics Ltd for the ground investigation works.

3.2.2 The ground investigation was undertaken in general accordance with:

i. BS 5930 Code of Practice for Ground Investigation[3]**Error! Bookmark not defined.**; and
ii. BS 10175 Investigation of Potentially Contaminated Sites – Code of Practice[4].

3.2.3 The level of investigation designed for is considered by Ramboll to be 'Detailed' with respect to BS 10175.

3.2.4 A summary of the scope of the investigation undertaken at the site is presented in Table 3-1. Exploratory locations are shown on Figure 2. Borehole logs (including monitoring well details) are provided in Appendix 2.

Table 3-1 Summary of Intrusive Works (Phase I & Phase II investigations)

Item	No.	Comments
Utilities Clearance Survey	Item	Prior to intrusive works a specialist service location contractor, appointed by Geotechnics Ltd was contracted to locate below ground services and mark out drilling locations.
Boreholes	7 No.	Drilling method: Cable Percussion or Rotary open hole (at BH103) *Phase I Floodlights - Pre-demolition Investigation* Three percussion boreholes with (BH100- BH102) to depths between 20.37m to 30.42mgl. One open hole (BH103) to 20.0m bgl *Phase II New Kop Stand - Post-demolition investigation* Three percussion boreholes with rotary follow on (BH104-BH106) to depths between 15.43m to 20m bgl.

[3] BS 5930 Code of practice for ground investigations BS 5930:2015 +A1:2020
[4] BS 10175 Investigation of Potentially Contaminated Sites – Code of Practice BS 10175:2011 + A2:2017

Item	No.	Comments
Trial Pitting	5 No.	Method: Mechanical excavator. Depth range (m): 3 m bgl.
Inspection Pits	2 No.	Method: Hand excavation. Depth Range: 1.35m bgl.
Soil Sampling and Screening	41 No.	During the ground investigation, soil samples were recovered from each exploratory hole location for geotechnical and contamination testing. All environmental samples were subject to screening on-site using a hand-held photo-ionisation detector (PID) for the presence of volatile organic compounds. This was only undertaken during the Phase I Floodlights ground investigation including BH100-BH103. A total of 41 soil samples were scheduled for analysis. Selected soil samples were analysed for a predetermined suite of contaminants (see Section 4.3.5), selected to be reflective of the site's historical and contemporary uses. 35 of the 41 soil samples tested were subjected to leachate testing.
Groundwater Sampling and Monitoring	7 No.	An oil/water interface probe was used to check for free-phase hydrocarbons and resting groundwater levels were monitored. Variable head testing was undertaken in two boreholes at a depth of 3m.
Gas Monitoring	2 No.*	Ground gas monitoring was undertaken using a portable gas analyser
Waste Characterisation for Disposal	Item	All soil and groundwater arisings along with general waste generated during the works were disposed off-site by the ground investigation contractor in accordance with relevant legislation.

*At time of issue two gas monitoring rounds have been completed

3.3 Sampling and Monitoring

3.3.1 Details of the general sampling and monitoring methods utilised during the investigation are provided in within the Geotechnics draft Factual Report in Appendix 2. Project-specific details are summarised below.

3.3.2 Soil samples were recovered at each of the exploratory locations where there were changes in strata or any visual or olfactory evidence of contamination. The spacing was amended to take this into account where applicable or additional samples were recovered. A total of forty one (41) soil samples were scheduled for analysis. Thirty five (35) of these soil samples were also scheduled for leachate preparation and analysis.

3.3.3 It should be noted that barium was only tested for in the Phase I Floodlights ground investigation including BH100-BH103 and shallow foundation inspection pits IP100 and IP101.

3.3.4 Two Waste Acceptance Criteria (WAC) samples were obtained from each borehole and trial pit-one from the made ground and one from the natural soils.

3.3.5 All samples were placed in containers supplied by the laboratory appropriate to the type of analysis being undertaken and stored in cool boxes with ice packs. All samples were dispatched accompanied by chain of custody documentation. All soil samples were labelled with the borehole location, site reference, date and sample depth.

3.3.6 Groundwater samples were recovered from all installing monitoring locations by Geotechnics Ltd.

3.3.7 Monitoring of waters and ground gas was undertaken at selected locations, details of which are summarised in Table 3-2.

Table 3-2 Summary of Monitoring Locations

Monitoring Wells				
Monitoring Position	**Response Zone (mbgl)**	**Response Zone (mAOD)**	**Response Zone Strata**	**Monitoring Purpose**
BH100	23.50 to 25.50	62.88 to 60.88	Glaciofluvial Sheet Deposits	Groundwater
BH101	7.00 to 10.00	81.22 to 78.22	Glaciofluvial Sheet Deposits	Groundwater
BH102	12.90 to 15.90	75.69 to 72.69	Glaciofluvial Sheet Deposits	Groundwater
BH103	13.50 to 15.60	74.44 to 72.34	Glaciofluvial Sheet Deposits	Groundwater
BH104	1.00 to 2.80 12.00 to 15.00	87.54 to 85.74 76.54 to 73.54	Made Ground Glaciofluvial Sheet Deposits	Ground Gas Groundwater
BH105	0.50 to 2.00 12.00 to 15.00	88.04 to 86.54 76.54 to 73.54	Made Ground Glaciofluvial Sheet Deposits	Ground Gas Groundwater
BH106	1.00 to 2.70 15.00 to 18.00	87.58 to 85.88 73.58 to 70.58	Made Ground Glaciofluvial Sheet Deposits	Ground Gas Groundwater

3.3.8 Table 3-3 summarises the analytical schedule for the samples tested together with the rationale for analysis. The laboratory selected to perform the analysis for the phased ground investigation was Derwentside Environmental Testing Services (DETS) in Durham who are a UKAS[5] accredited laboratory.

Table 3-3 Summary of Analytical Strategy

Analytical Suite	**Rationale**	**Number of Samples Tested**		
		Soil	**Leachate**	**Ground water**
Total Petroleum Hydrocarbons Carbon Working Group (TPH CWG)	Typically associated with fuels and oils. May be present in elevated concentrations in historic fill material depending on point of origin.	38	35	7
Metals (including antimony, arsenic, cadmium, chromium, boron, barium, lead, mercury, copper, nickel, zinc, and selenium) *It should be noted that barium was only analysed in the Phase I Floodlights GI.*	Typically associated with brownfield sites	41 *Exception of barium with 21 samples tested.*	35 *Exception of boron with 15 samples tested.*	7

[5] United Kingdom Accreditation Service

Analytical Suite	Rationale	Number of Samples Tested		
		Soil	Leachate	Ground water
Asbestos screen	Commonly associated with Made Ground and locations of historical infilling.	29	N/A	N/A
Polycyclic Aromatic Hydrocarbons (PAH)	Typically associated with fuels and oils.	38	35	7
Volatile Organic Compounds (VOCs)	Typically associated with organic solvents and fuels and oils.	20	-	3
Semi-Volatile Organic Compounds (SVOCs)	Typically associated with organic solvents and fuels and oils	37	-	0
Inorganics- total organic carbon (TOC), sulphate. Ammoniacal nitrogen	Used to characterise the soils and groundwater and derive an assessment criterion for some metals	41	35	7
Water soluble sulphate	Typically associated with Made Ground	41	-	0

3.3.9 The 15 samples of the mound beneath the old Kop Stand taken by P.P O'Conner Limited as part of the additional ground investigation were screened for metals, inorganic, PAHs, TPH, VOC including tentatively identified compounds (TICs) and SVOC including TICs and asbestos screening. No trial pit logs, soil descriptions or photos were provided for the mound material.

3.4 Field Observations

Ground Conditions

3.4.1 An overview of the ground conditions encountered during the phased ground investigation has been provided below. A full lithological description is recorded in the exploratory hole logs which are provided in Appendix 2.

Table 3.4 Summary of Ground Conditions

Stratum	Description	Depth to Base (mbgl)	Approximate Thickness Range (where encountered) (m)
Made Ground	Made ground was present in all exploratory hole locations with the greatest depth observed in BH104. This generally comprised a gravelly very clayey fine to coarse sand with occasional brick fragments.	0.0-2.80	0.1 – 2.80

Stratum	Description	Depth to Base (mbgl)	Approximate Thickness Range (where encountered) (m)
Superficial Deposits	Glaciofluvial sheet deposits were present in all exploratory locations underlaying the Made Ground encountered at depths ranging between 0.10m bgl (TP100) to 2.80m bgl (BH104). The glaciofluvial sheet deposits were unproven in all locations to a maximum depth of 30.42m bgl (BH100). Glaciofluvial sheet deposits consisted of interbedded cohesive and granular material. Granular material generally consisted of either sandy clayey GRAVEL or silty slightly gravelly fine to coarse SAND. Cohesive material generally consisted of slightly gravelly slightly sandy CLAY.	30.42 (unproven)	0.25 - 29.67

3.4.2 Table 3.5 provides information of the exploratory hole locations across the phased ground investigation.

Table 3.5 Summary of Exploratory Hole Locations

Exploratory Location	Depth achieved (m)	Coordinates		Ground Level (mAOD)	Remarks
		Easting (m)	Northing (m)		
BH100	30.42	332776.8	351079.5	86.38	Shallow well install to 25.50m
BH101	20.37	332729.7	350972.2	88.22	Installed to 10m
BH102	30.0	332843.9	350918.6	88.59	Installed to 15.90m
BH103	20.0	332878.6	350989.5	87.94	Installed to 15.60m
BH104	15.45	332874.1	350946.0	88.54	Dual install to 2.80m and 15.0m
BH105	15.43	332880.0	350909.0	88.54	Dual install to 2.0m and 15.0m
BH106	20.0	332914.1	350958.2	88.58	Dual install to 2.70m and 18.0m
IP100	1.35	332782.8	351075.5	86.35	n/a
IP101	1.35	332778.8	351070.5	86.36	n/a
TP100	3.0	332937.0	350962.0	87.42	n/a
TP101	3.0	332925.0	350927.0	87.80	n/a

Exploratory Location	Depth achieved (m)	Coordinates		Ground Level (mAOD)	Remarks
		Easting (m)	Northing (m)		
TP102	3.0	332920.0	350916.0	87.90	n/a
TP103	3.0	332913.0	350904.0	87.85	n/a
TP104	3.0	332890.0	350899.0	87.53	n/a
Note: BH-cable percussion/rotary borehole, TP- trial pit					

3.4.3 Table 3.6 provides information of where notable visually or olfactory impacted soils were recorded, and any associated readings made using a photoionisation detector (PID) to correlate with the location of possible volatile substances. It should be noted that a PID readings were only undertaken for the Phase I Floodlights ground investigation including BH100-BH103.

Table 3.6 Summary of Observations in Soils

Exploratory Location	Observations	PID Reading (parts per million (ppm))
BH100	Presence of coal and brick fragments in the made ground between 0.50m and 0.75mbgl.	<0.1
BH101	Presence of coal and brick fragments in the made ground between 0.30m and 0.70mbgl.	<0.1
BH102	Presence of clinker in the made ground between 0.30m and 0.70mbgl.	<0.1
TP104	Strong hydrocarbon odour between 1.0 to 1.8m bgl	-

Groundwater

3.4.4 The depth to resting groundwater level and details of non-aqueous phase liquid (NAPL) were recorded during the groundwater monitoring rounds (at the time of issuing this report two rounds have been undertaken). A summary of the groundwater levels and evidence for contamination observed throughout the monitoring period is provided in Table 3-7.

Table 3-7 Summary of Groundwater Observations

Monitoring Well	Groundwater Encountered?	NAPL Encountered	Range in Depth to Groundwater (mbgl)	Range in Groundwater Elevation (mAOD)	Inferred Aquifer Containing Groundwater[1]	Evidence for Contamination	Range of PID readings (ppm)	Number of Monitoring Rounds
BH100	Yes	None	5.25 - 5.65	80.73 – 81.13	Glaciofluvial sheet deposits	No	0	6

Monitoring Well	Groundwater Encountered?	NAPL Encountered	Range in Depth to Groundwater (mbgl)	Range in Groundwater Elevation (mAOD)	Inferred Aquifer Containing Groundwater[1]	Evidence for Contamination	Range of PID readings (ppm)	Number of Monitoring Rounds
BH101	Yes	None	8.27 - 8.45	79.77 – 79.95	Glaciofluvial sheet deposits	No	0	6
BH102	Yes	None	9.54 - 9.78	78.81 – 79.05	Glaciofluvial sheet deposits	No	0	6
BH103	Yes	None	8.98 - 11.50	76.44 - 78.96	Glaciofluvial sheet deposits	No	0	6
BH104 (Deep)	Yes	None	9.66 – 9.70	78.88 – 78.84	Glaciofluvial sheet deposits	No	0	2 of 6
BH104 (Shallow)	No	None	N/A	N/A	N/A	N/A	0	2 of 6
BH105 (Deep)	Yes	None	9.75 – 9.87	78.79 – 78.67	Glaciofluvial sheet deposits	No	0	2 of 6
BH105 (Shallow)	No	None	N/A	N/A	N/A	N/A	0	2 of 6
BH106 (Deep)	Yes	None	9.93 – 10.00	78.65 – 78.58	Glaciofluvial sheet deposits	No	0	2 of 6
BH106 (Shallow)	No	None	N/A	N/A	N/A	N/A	0	2 of 6

Notes: [1] The inferred horizon has been identified by comparing the resting groundwater levels against the exploratory hole logs and monitoring well design
LNAPL – Light non-aqueous phase liquid, DNAPL – dense non-aqueous phase liquid

3.4.5 The range in recorded groundwater elevations was 78.85 to 78.88 m AOD; however, groundwater levels fluctuate as a result of changing weather. Based on groundwater level monitoring data, the inferred groundwater flow direction is in an approximate northeast direction.

4. HUMAN HEALTH ASSESSMENT

4.1 Assessment Approach

4.1.1 This assessment has been undertaken in general accordance with the current UK framework and comprises a GQRA as defined in LCRM[6]. Ramboll's assessment methodology is based on the Contaminated Land Exposure Assessment (CLEA) approach, further details of which are presented in Appendix 1.

4.1.2 LCRM requires that the use of GAC is appropriate for a range of management and site-specific technical factors. In choosing the GAC for human health assessment, Ramboll has considered stakeholder requirements, the complexity of the conceptual site model, combined and cumulative factors, potential changes in site circumstances, uncertainties and limitations.

4.1.3 Ramboll has derived GAC for the interpretation of soil and groundwater chemical analyses. The GAC are threshold-based screening criteria below which a significant risk is not considered to be present. Contaminants at concentrations above the GAC do not infer an unacceptable risk; rather that further assessment is required to more fully understand potential contamination risks (as discussed below).

4.1.4 GAC have been adopted for commercial/industrial end land use. This is based upon the proposed end use of the site as a football stadium, however this is considered conservative as commercial/industrial end use is based on workers within or on the new stand. However, workers within the stadium and users of the stadium are likely to be present for a limited time, therefore reducing exposure time to potential pathways and sources of contamination. A conservative soil organic matter (SOM) of 1% has been adopted for the assessment.

4.1.5 Chemical analyses are discussed below and are provided in full in Appendix 3. Laboratory certificates are provided in Appendix 4.

4.2 Analytical Results - Soils

4.2.1 A review of the soil testing obtained during the phased ground investigation are detailed in Table 4.1. Contaminations that were below the method detection limit are excluded from the table. The tests results from the P.P. O'Conner Ltd testing of the mound beneath the old Kop Stand are included within the screening of analytical results.

4.2.2 The following determinands were not detected above the laboratory method report limits and therefore not included in Table 4.1:

- Total Petroleum Hydrocarbons (TPH) fraction: aromatic C5-C7
- Semi-volatile organic compounds with the exception of 4-nitrophenol, dibenzofuran, di-n-butylphthalate, butylbenzylphthalate, bis(2-ethylhexyl)phthalate and carbazole
- Volatile organic compounds

[6] Land contamination risk management (LCRM) - GOV.UK (www.gov.uk)

Table 4-1 Summary of Chemical Test Results on Soil Samples collected from the Site

Contaminant	Total No. of Samples	GAC (mg/kg)	No. of Exceedances of GAC	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg), location and depth (m bgl)
Metals					
Antimony	41	7,400	0	<MRL	6.1 (TP100 at 0.05m)
Arsenic	41	640	0	2.6	21 (IP101 at 1.0m)
Barium	21	22,000	0	24	320 (IP100 at 0.80m)
Boron (water soluble)	41	240,000	0	<MRL	1.9 (TP02 at 0.70m)
Cadmium	41	410	0	<MRL	5.6 (TP02 at 0.50m)
Chromium III	41	8,600	0	<MRL	440 (TP100 at 0.05m)
Chromium VI	41	49	0	<MRL	1.2 (IP101 at 0.20m)
Copper	41	68,000	0	9.8	93 (BH104 at 0.20m)
Lead	41	2,300	0	<MRL	1,300 (BH104 at 0.20m)
Mercury	41	1,100	0	<MRL	1.1 (BH104 at 0.20m)
Nickel	41	980	0	<MRL	40 (IP100 at 0.80m)
Selenium	41	12,000	0	<MRL	1.4 (BH101 at 1.00m)
Zinc	41	730,000	0	16	1,500 (TP103 at 0.40m)
Vanadium	21	9,000	0	5	64 (IP101 at 0.20m)

Contaminant	Total No. of Samples	GAC (mg/kg)	No. of Exceedances of GAC	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg), location and depth (m bgl)
Total Petroleum Hydrocarbons (TPH)					
Aliphatic C5-C6	41	2,400	0	<MRL	0.14 (BH101 at 6.0m)
Aliphatic C6-C8	41	5,300	0	<MRL	0.02 (TP104 at 1.50m)
Aliphatic C8-C10	41	1,300	0	<MRL	0.05 (TP104 at 1.50m)
Aliphatic C10-C12	41	6,100	0	<MRL	6.1 (TP104 at 1.50m)
Aliphatic C12-C16	41	43,000	0	<MRL	8.6 (TP104 at 1.50m)
Aliphatic C16-C21	41	1,000,000	0	<MRL	22 (TP104 at 1.50m)
Aliphatic C21-C35	41	1,000,000	0	<MRL	1,300 (TP104 at 1.50m)
Aromatic C7-C8	41	NC	N/A	<MRL	0.02 (TP104 at 1.50m)
Aromatic C8-C10	41	2,200	0	<MRL	0.16 (TP104 at 1.50m)
Aromatic C10-C12	41	11,000	0	<MRL	2.3 (IP101 at 0.20m)
Aromatic C12-C16	41	35,000	0	<MRL	10 (TP104 at 1.50m)
Aromatic C16-C21	41	29,000	0	<MRL	50 (TP104 at 1.50m)
Aromatic C21-C35	41	29,000	0	<MRL	820 (TP104 at 1.50m)
Polyaromatic Hydrocarbons (PAHs)					
Naphthalene	38	110	0	<MRL	0.5 (TP104, 1.50m)

Contaminant	**Total No. of Samples**	**GAC (mg/kg)**	**No. of Exceedances of GAC**	**Minimum Concentration (mg/kg)**	**Maximum Concentration (mg/kg), location and depth (m bgl)**
Acenaphthylene	38	76,000	0	<MRL	0.7 (TP104, 1.50m)
Acenaphthene	38	75,000	0	<MRL	0.2 (BH105, 0.20m)
Fluorene	38	60,000	0	<MRL	1.0 (TP104, 1.50m)
Phenanthrene	38	22,000	0	<MRL	2.5 (BH105, 0.20m)
Anthracene	38	520,000	0	<MRL	1.8 (TP104, 1.50m)
Fluoranthene	38	23,000	0	<MRL	4.5 (BH105, 0.20m)
Pyrene	38	54,000	0	<MRL	4.3 (BH105, 0.20m)
Benzo(a)pyrene	38	76	0	<MRL	2.8 (BH105, 0.20m)
Semi-Volatile Organic Compounds (SVOCs)					
4-Nitrophenol	38	3,800	0	<MRL	0.8 (BH102, 0.10m)
Dibenzofuran	38	6,700	0	<MRL	0.4 (BH102, 0.20m)
Di-n-butylphthalate	38	15,000	0	<MRL	0.1 (TP104, 0.25m)
Butylbenzylphthalate	38	940,000	0	<MRL	0.4 (TP104, 0.25m)
Bis(2-ethylhexyl)phthalate)	38	85,000	0	<MRL	5.2 (TP104, 1.50m)
Carbazole	38	900	0	<MRL	0.4 (BH106, 0.20m)

Contaminant	Total No. of Samples	GAC (mg/kg)	No. of Exceedances of GAC	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg), location and depth (m bgl)
Additional Inorganics					
Total cyanide	41	49	0	<MRL	11 (BH104, 2.0m)
Water Soluble Sulphate as SO_4 16hr extraction(2:1), as mg/l	41	NC	N/A	11	1500 (TP101, 0.25m)
pH	41	NC	N/A	6.7 (TP02, 0.70m)	10.9 (TP103, 0.20m)
Total Organic Carbon	41	NC	N/A	<MRL	12 (BH102, 0.50m)
Asbestos Screen	29	NC	N/A	NAD	<0.001% chrysotile fibre bundles at IP101, 0.20m
Notes: MRL- Method Reporting Limit NC- No Criteria N/A- Not Applicable					

4.3 Hydrocarbon Theoretical Saturation Assessment

4.3.1 A number of soil test results recorded concentrations of petroleum hydrocarbons in excess of theoretical saturation limits which are indicative of the potential presence of free phase hydrocarbons. The locations concerned comprise:

- Aromatic fractions C21-C35 exceeded the saturation limit of 4.8mg/kg at 12 sample locations (TP100 0.05m, TP101 at 0.25m, TP102 at 0.50m, 0.70m, TP103 at 0.20m, TP104 at 0.25m and 1.50m, BH104 at 0.20m, IP100 at 0.30m and 0.80m and IP101 at 0.20m and 1.0m); and
- Aromatic fractions C35-C44 exceeded the saturation limit of 4.8mg/kg at 13 sample locations detailed above with the addition of BH104 at 2.0m.

4.3.2 These theoretical exceedances were not supported by visual / olfactory observations in the field and it is considered unlikely that the theoretical exceedance represents a potential for free phase product to be present.

4.4 Analytical Results

Asbestos

4.4.1 Asbestos was detected in 1 of 29 samples screened by the laboratory from the phased ground investigation. Quantification analysis recorded the asbestos content of the sample to be <0.001% by weight, which is below the hazardous threshold of 0.1% (by weight). The chrysotile fibre bundles were identified within the Made Ground in IP101 at 0.20m bgl which is located to the north-west corner of the site. If Made Ground were to be removed from the site during the proposed development, further assessment with regard to asbestos concentrations may be necessary.

Soil

4.4.2 Elevated levels of barium (IP100 at 0.80m bgl, 320 mg/kg), chromium (TP100 at 0.05m bgl, 440 mg/kg), copper (BH102 at 0.10mbgl at 110mg/kg and 0.50m bgl, 190mg/kg and IP101 at 0.20m bgl, 130 mg/kg) and lead (BH104 at 0.20m bgl, 1300 mg/kg) were identified. However, the concentrations of all metals tested within the New Kop Stand and Flood lights ground investigation were below their respective GAC for commercial/industrial land use.

4.4.3 Results for PAHs (as a sum of 16 compounds) were identified above the method detection limit in 18 samples with the maximum concentration of 29mg/kg at BH105, 5.0m bgl however none of these exceeded the Ramboll human health screening criteria for commercial end use.

4.4.4 Elevated concentrations of total petroleum hydrocarbons (TPH) were identified within the sandy gravel at TP104 at 1.50m bgl at the following concentrations: aliphatic C21-C35 at 1,300mg/kg, aliphatic C10-C44 at 1,400 mg/kg, aromatic C21-C35 at 820 mg/kg and aromatic C10-C44 at 1,000 mg/kg. Elevated TPH fractions were not identified in any other locations with none of the concentrations found to exceed the Ramboll commercial/industrial GAC.

4.4.5 The 15 samples taken from the mound to characterise the material for off-site disposal by P.P. O'Connor were screened against human health criteria with only one exceedance recorded of lead within TP3 at 0.5m bgl (5,967mg/kg) exceeding the screening criteria of 2,300 mg/kg. It should be noted this material has been removed from site.

4.5 Analytical Results - Groundwater (Human Health)

4.5.1 The groundwater analytical results obtained during this investigation have been screened against the GAC for commercial / industrial end use. The exceedances recorded as part of the screening are summarised in Table 4-2.

4.5.2 The determinands which were not detected above laboratory reporting limits include:

- Aliphatic petroleum hydrocarbons fractions C5-C6, C6-C8, C8-C10, C10-12, C12- C16, C21-C35 and C35-C44.
- Aromatic petroleum hydrocarbon (all fractions)
- Benzene, Toluene, Ethylbenzene, p & m-xylene, o-xylene (BTEX)
- Nine PAHs (acenaphthylene, anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, indeno[1,2,3-cd]pyrene, Dibenz(a,h)anthracene, Benzo(a)anthracene and benzo[g,h,i]perylene)
- Phenols
- Methyl Tertiary Butyl Ether (MTBE)
- Volatile Organic Compounds not mentioned in Table 4.2
- Semi-volatile Organic Compounds.

4.5.3 With the exception of mercury, there is no volatilisation pathway for inorganic including metals determinands, and therefore is discounted from the assessment in Table 4.2.

4.6 Human Health Discussion

4.6.1 The existing site and proposed Kop stand development is considered to be a low sensitivity land use in terms of risk to site users. Asbestos was detected in one of the 29 samples screened by the laboratory from the phased ground investigation at the site. Chrysotile fibre bundles (<0.001%) were identified in the made ground in IP101 which is located to the north-west corner of the site associated with the Phase I floodlights ground investigation. No visual evidence of asbestos containing materials were observed and no asbestos was recorded in the remaining samples.

Groundwater (Human Health)

4.6.2 No groundwater concentrations were detected exceeding the human health pathway for groundwater volatilisation for a residential and commercial end use.

Construction Workers

4.6.3 This report and the GAC consider long term and chronic risk to humans based on defined exposure scenarios set out in the CLEA model and in CAR-SOIL for asbestos impacts. In some cases, contaminants may also pose acute hazards to workers at a site, or a worker's exposure scenario may differ from the scenarios considered when deriving the GAC.

4.6.4 As exposure times for construction workers are generally short term, risks from site contamination are generally addressed through the use of appropriate working procedures and the use of personal protective equipment (PPE) in line with the Management of Health and Safety at Work Regulations[7], Construction (Design and Management) Regulations[8] (for some sites) and the Control of Substances Hazardous to Health Regulations[9].

[7] UK Statutory Instruments (1999) The Management of Health and Safety at Work Regulation No. 3242
[8] UK Statutory Instruments (2015) Construction (Design and Management) Regulations No. 51
[9] UK Statutory Instruments (2002) Control of Substances Hazardous to Health Regulations No. 2677

Table 4-2 Summary of Groundwater Analytical Results (Human Health)

Contaminant	No. of Samples	Conc. Range (µg/l)	Location of Max. (µg/l)	Ramboll Water GAC for Human Health (Commercial) (µg/l)	No of Exceedances	Location of Exceedances
Metals						
Mercury	7	<MRL – 0.03	BH101	95	0	N/A
Polycyclic Aromatic Hydrocarbons						
Naphthalene	7	<MRL – 0.11	BH100	23,000	0	N/A
Acenaphthene	7	<MRL – 0.01	BH100, BH104, BH106	15,000,000	0	N/A
Fluorene	7	<MRL – 0.01	BH106	18,000,000	0	N/A
Phenanthrene	7	<MRL – 0.02	BH104	NC	0	N/A
Fluoranthene	7	<MRL – 0.03	BH106	NC	0	N/A
Pyrene	7	<MRL – 0.04	BH106	NC	0	N/A
Benzo(a)anthracene	7	<MRL – 0.01	BH106	NC	0	N/A
Total Petroleum Hydrocarbons						
Aliphatic C10 - C44	7	<MRL – 16	BH100	NC	0	N/A
Aliphatic C16 - C21	7	<MRL – 15	BH100	NC	0	N/A
Volatile Organic Compounds						
Chloroform	3	3 – 9	BH106	85,000	0	N/A
Bromodichloromethane	3	<MRL – 5	BH106	1,600	0	N/A
Dibromochloromethane	3	<MRL - 2	BH106	NC	0	N/A

Notes:
MRL- Method Reporting Limit
NC- No Criteria
N/A- Not Applicable

5. WATER ENVIRONMENT ASSESSMENT

5.1 Assessment Approach

5.1.1 LCRM requires that the use of GAC is appropriate for a range of management and site-specific technical factors. In defining GAC for the water environment, Ramboll has considered stakeholder requirements, the complexity of the conceptual site model, combined and cumulative factors, potential changes in site circumstances, uncertainties and limitations.

5.1.2 The potential risk to the aquatic environment from entry of pollutants (either directly or via a groundwater pathway) has been assessed using commonly accepted UK guidelines including country specific water regulations and the Environmental Quality Standards (EQS) defined in European legislation such as the Water Framework Directive (WFD) (2000/60/EC).

5.1.3 The potential receptors in the water environment which have been identified comprise:

- Groundwater in the underlying Secondary A Aquifers in the Superficial and Bedrock Aquifers; and
- Surface water runoff into adjacent drainage network.

5.1.4 Assessment of the risk to these receptors is required using the appropriate GAC which are protective of that specific receptor. The GAC selected to assess the above receptors are detailed below in Table 5-1 and Table 5-2.

5.1.5 For those determinands included in the analytical suite which do not have corresponding European screening criteria derived from the above sources, UK-specific GAC are utilised. Where these are not available reference is made to other international guidance.

5.1.6 Leachate testing is undertaken on soil samples in the laboratory by vigorous mixing of soil and water to ascertain the degree to which contaminants in soil may leach into the dissolved phase. The process represents a 'worst case' scenario as the vigorous laboratory process would not be expected to be replicated on site either during construction or operation. As such, the leachate testing results generally provide an over estimation of the true leachability of contaminants from soils. The exception is for volatile organic compounds (VOCs), which may volatilise and be lost during the leachate preparation process, as such leachate results for VOCs should be treated with caution.

5.2 Analytical Results

5.2.1 The results of the screening against relevant GACs are summarised in Table 5-1 and Table 5-2. Results are provided in full in Appendix 4.

5.2.2 For leachate analysis the following determinands were not detected above laboratory reporting limits include:

- Aliphatic petroleum hydrocarbons fractions - C6-C8, C8-C10, C10-12 and C12- C16; and
- Aromatic petroleum hydrocarbon fractions – C5-C7, C7-C8, C8-C10 and C10-C12.

5.2.3 For groundwater the following determinands were not detected above laboratory reporting limits include:

- Aliphatic petroleum hydrocarbons fractions - C5-C6, C6-C8, C8-C10, C10-12, C12- C16, C21-C35 and C35-C44;
- Aromatic petroleum hydrocarbon (all fractions);
- Benzene, Toluene, Ethylbenzene, p & m-xylene, o-xylene (BTEX);

- Nine PAHs (acenaphthylene, anthracene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[a]pyrene, indeno[1,2,3-cd]pyrene, Dibenzo(a,h)anthracene, Benzo(a)anthracene and benzo[g,h,i]perylene);
- Phenols;
- Methyl Tertiary Butyl Ether (MTBE);
- Volatile Organic Compounds not mentioned in Table 5.2; and
- Semi-volatile Organic Compounds.

Table 5-1 Summary of Chemical Test Results on Soil Leachate Samples

Contaminant	No. of Samples	Environmental Quality Standards (µg/l)	Drinking Water Standards (µg/l)	Number of Exceedances of GAC	Minimum Concentration (µg/l)	Maximum Concentration (µg/l), location and depth (m)
Metals						
Antimony	35	NC	5	0	<MRL	4.9 (BH104 at 0.20m)
Arsenic	35	50	10	0	0.18	4.6 (BH101 at 0.20m)
Barium	15	NC	1,300	0	3.1	22 (IP100 at 1.20m and IP101 at 0.20m)
Boron (water soluble)	35	2,000	1,000	0	<MRL	49 (TP102, 0.70m)
Cadmium	35	NC	5	0	<MRL	0.17 (TP102 at 0.50m)
Chromium III	35	4.7	50	**7 (EQS)**	<MRL	**6.4 (TP101 at 0.25m)**
Chromium VI	35	3.4	NC	**2 (EQS)**	<MRL	**27 (BH104 at 0.20m)**
Copper	35	1	2,000	**30 (EQS)**	<MRL	**8.1 (BH104 at 0.20m)**
Lead	35	1.2	10	**2 (DWS) 23(EQS)**	<MRL	**30 (BH104 at 0.20m)**
Mercury	35	0.07	1	**2 (EQS)**	<MRL	**0.15 (BH104 at 0.15m)**
Nickel	35	4	20	0	<MRL	2.6 (TP100 at 1.20m)
Selenium	35	NC	10	0	<MRL	1.5 (BH101 at 6.00m)
Zinc	35	10.9	5,000	**3 (EQS)**	<MRL	**32 (TP102 at 0.50m)**
Vanadium	21	20 (0-200mg/l CaCO3)	NC	0	<MRL	14 (BH101 at 0.20m)
Total Petroleum Hydrocarbons (TPH)						
Aliphatic C5-C6	35	NC	15,000	0	<MRL	35 (BH104 at 0.20m)
Aliphatic C21-C35	35	NC	NC	N/A	<MRL	300 (TP104 at 1.50m)
Aliphatic C35-C44	35	NC	NC	0	<MRL	2.4 (TP104 at 1.50m)

Contaminant	**No. of Samples**	**Environmental Quality Standards (µg/l)**	**Drinking Water Standards (µg/l)**	**Number of Exceedances of GAC**	**Minimum Concentration (µg/l)**	**Maximum Concentration (µg/l), location and depth (m)**
Aliphatic C10-C44	35	NC	300	0	<MRL	270 (TP104 at 1.50m)
Aromatic C12-C16	35	NC	90	0	<MRL	3.3 (TP04 at 1.50m)
Aromatic C16-C21	35	NC	90	0	<MRL	19 (TP04 at 1.50m)
Aromatic C21-C35	35	NC	90	**1 (DWS)**	<MRL	**190 (TP04 at 1.50m)**
Aromatic C35-C44	35	NC	NC	0	<MRL	28 (TP104 at 1.50m)
Polyaromatic Hydrocarbons (PAH)						
Naphthalene	35	2	NC	0	<MRL	0.17 (BH101 at 0.50m)
Acenaphthylene	35	NC	NC	0	<MRL	0.07 (TP102 at 0.50m)
Acenaphthene	35	NC	NC	0	<MRL	0.04 (TP100 at 1.20m)
Fluorene	35	NC	NC	0	<MRL	0.03 (TP100 at 1.20m)
Phenanthrene	35	NC	NC	0	<MRL	0.16 (TP102 at 0.50m)
Anthracene	35	NC	NC	0	<MRL	0.06 (TP102 at 0.50m)
Fluoranthene	35	0.12*	NC	**4 (EQS)**	<MRL	**0.47 (TP102 at 0.50m)**
Pyrene	35	NC	NC	0	<MRL	0.42 (TP102 at 0.50m)
Benzo(a)pyrene	35	0.27*	0.01	**13 (DWS)** **1 (EQS)**	<MRL	**0.34 (TP102 at 0.50m)**
Notes: MRL- Method Reporting Limit NC- No Criteria N/A- Not Applicable						

Table 5-2 Summary of Groundwater Chemical Test Results

Contaminant	No. of Samples	Environmental Quality Standards (EQS)(µg/l)	Drinking Water Standards (DWS)(µg/l)	Number of Exceedances of GAC	Minimum Concentration (µg/l)	Maximum Concentration (µg/l) and location
Metals						
Antimony	7	NC	5	0	0.27	1.6 (BH103)
Arsenic	7	50	10	0	0.3	0.84 (BH103)
Barium	7	NC	1,300	0	16	86 (BH101)
Boron (water soluble)	7	2,000	1,000	0	<MRL	54 (BH100)
Cadmium	7	NC	5	0	<MRL	0.12 (BH101)
Chromium III	7	4.7	50	0	<MRL	6.1 (BH103)
Chromium VI	7	3.4	NC	0	<MRL	<MRL
Copper	7	1	2,000	**1 (EQS)**	1.2 (Bioavailable concentration – 0.09)	**6.3 (Bioavailable concentration – 1.22) (BH102 and BH103 – maximum bioavailable concentration)**
Lead	7	1.2	10	0	<MRL(Bioavailable concentration – <MRL)	1.2 (Bioavailable concentration – 0.60) (BH101)
Mercury	7	0.07	1	0	<MRL	0.03 (BH101)
Nickel	7	4	20	0	<MRL (Bioavailable concentration 0.04)	4.1 (Bioavailable concentration – 0.31) (BH101)
Selenium	7	NC	10	0	0.28	3 (BH105)
Vanadium	7	20 (0-200mg/l CaCO3)	NC	0	<MRL	8.3 (BH103)
Zinc	7	10.9	5,000	**3 (EQS)**	1.3 (Bioavailable concentration – 0.95)	**65 (Bioavailable concentration – 35.41)(BH106)**

Contaminant	No. of Samples	Environmental Quality Standards (EQS)(µg/l)	Drinking Water Standards (DWS)(µg/l)	Number of Exceedances of GAC	Minimum Concentration (µg/l)	Maximum Concentration (µg/l) and location
Polyaromatic Hydrocarbons (PAH)						
Naphthalene	7	2	NC	0	<MRL	0.11 (BH100)
Acenaphthene	7	NC	NC	0	<MRL	0.01 ((BH100, BH104 and BH106)
Fluorene	7	NC	NC	0	<MRL	0.01 (BH106)
Phenanthrene	7	NC	NC	0	<MRL	0.02 (BH104)
Fluoranthene	7	0.12*	NC	0	<MRL	0.03 (BH106)
Pyrene	7	NC	NC	0	<MRL	0.04 (BH106)
Benzo(a)anthracene	7	NC	NC	0	<MRL	0.01 (BH106)
Total Petroleum Hydrocarbons						
Aliphatic C10 - C44	7	NC	NC	0	<MRL	16 (BH100)
Aliphatic C16 - C21	7	NC	NC	0	<MRL	15 (BH100)
Volatile Organic Compounds (VOC)						
Chloroform	3	2.5	300	**3 (EQS)**	3	**9 (BH106)**
Bromodichloromethane	3	NC	NC	0	<MRL	5 (BH106)
Dibromochloromethane	3	NC	NC	0	<MRL	2 (BH106)

Notes:

The following criteria have been used to select GAC:

G1 – Hazardous substances in groundwater for waterbodies at 'High' WFD status: UKTAG Technical Report on Groundwater Hazardous Substances Sept 2016 plus accompanying Confirmed Hazardous Substances List (January 2018)

G2 – Non-hazardous substances in groundwater and waterbodies not at 'High' WFD status: WFD Threshold Values (TVs) for 'Good' Status. The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015

S1 – Priority substances in surface water and selected (other determinands to which this policy relates): 2013/39/EU: Priority Substances in the Field of Water Policy Directive and 2008/105/EC: Environmental Quality Standards in the Field of Water Policy Directive

S2 – Specific and other pollutants in surface water: The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015 or where not available EA EQSs to be utilised in surface water risk assessments as part of environmental permit applications and WFD assessments of works in coastal and transitional waters in England.

* -For Fluoranthene and PAHs, the biota EQS refers to crustaceans and molluscs. For the purpose of assessing chemical status, monitoring of Fluoranthene and PAHs in fish is not appropriate. An alternative biota taxon, or another matrix, may be monitored instead, as long as the EQS applied provides an equivalent level of protection. The nearest receiving water to site is unlikely to be utilised for crustacean and molluscs production for human consumption.

Bioavailable concentrations of copper, lead, nickel, and zinc have been calculated using the Water Framework Directive mBAT tool.

NC – No criteria available

N/A – Not applicable

MRL – Method reporting limit

5.3 Controlled Waters Summary

Leachate

5.3.1 Exceedances of screening criteria do not infer that an unacceptable risk is present; the outcome of the screening is assessed further in the context of a qualitative source-pathway-receptor risk assessment. Contaminant concentrations in soil leachate completed on 35 samples have been compared to the Drinking Water Standards (DWS) and to the Environmental Quality Standards (EQS).

5.3.2 One exceedance of the DWS for aromatic C21-C35 (90 µg/l) was identified within leachate obtained from a sample of made ground at TP104 at 1.50m bgl (190 µg/l). The concentrations for total petroleum hydrocarbons in other samples did not exceed the corresponding EQS or DWS. A strong hydrocarbon odour was noted during the ground investigation at TP104 at 1.50m bgl.

5.3.3 The following metals were recorded in leachate samples exceeding the EQS or DWS, associated with the made ground:

- Lead (10 µg/l) exceeded the DWS in two samples at BH104 at 0.2m bgl (30 µg/l) and at 2m bgl (12 µg/l) and exceeded the EQS in a total of 23 samples from the Made Ground with the exception of BH102 at 1.00m bgl.;
- Chromium III (4.7 µg/l) exceeded the EQS in seven samples in the trial pits at TP100 at 1.20m (6.3 µg/), TP101 at 0.25m (6.3 µg/l), TP101 at 0.90m (5.5 µg/l), TP102 at 0.50m (5.4 µg/l), TP102 at 0.70m (5.7 µg/l)), TP103 at 0.40m (5.0 µg/l) and IP100 at 1.20m (4.8 µg/l);
- Chromium VI (3.4 µg/l) exceeded the EQS in two samples at TP100 at 0.05m (15 µg/l) and BH104 at 0.20m (27 µg/l);
- Copper (1 µg/l) exceeded the EQS in a total of 30 samples from the Made Ground with the exception of BH104 at 5.00m bgl and BH106 at 5.00m bgl;
- Mercury (0.07 µg/l) exceeded the EQS from one sample at BH104 at 0.2m bgl (0.15 µg/l);
- Zinc (10.9 µg/l) exceeded the EQS in three samples at TP102 at 0.50m (32 µg/l), TP102 at 0.70m (17 µg/l) and 0.20m (13 µg/l);
- Fluoranthene (0.12 µg/l) exceeded the EQS in a total of 4 samples with the maximum recorded in TP102 at 0.50m bgl (0.47 µg/l); And
- Benzo(a)pyrene (0.27 µg/l – EQS and 0.01 – DWS) exceeded the EQS in one sample and DWS in a total of 13 samples with the maximum recorded in TP102 at 0.50m bgl (0.34 µg/l).

5.3.4 EQS exceedances for lead, copper and zinc are based on conservative values assuming 100% of the recorded concentrations are bioavailable if leached into the nearest surface water. As no surface water features have been identified in the vicinity of the site these exceedances are therefore not thought to represent an unacceptable risk.

Groundwater

5.3.5 No exceedances were recorded for the DWS of any contaminant for the seven obtained groundwater samples.

5.3.6 Exceedances of the EQS screening criteria for metals were as follows;

- Copper of 1 µg/l in one location (BH103 – 1.22 µg/l Bioavailable cooper); and
- Zinc of 10.9 µg/l in three locations (BH102 – 11.34 µg/l, BH104 – 16.24 µg/l and BH106 35.42 µg/l).
- Chloroform exceeded the EQS of 2.5 µg/l in three locations (BH104 - 3 µg/l, BH105 - 7 µg/l and BH106 - 9 µg/l).

5.3.7 Exceedances of copper, zinc, fluoranthene and chloroform within the groundwater do not present an unacceptable risk to the nearest surface water feature due to the distance to the nearest surface water feature to site; a pond 230m south east and then the River Gwenfro located 328m southwest.

5.3.8 As above the EQS for fluoranthene is a conservative assessment and a screening value of 0.12 µg/l is sufficient therefore there are no exceedances within the groundwater samples.

Discussion

5.3.9 No exceedances of DWS were recorded within any groundwater samples across the site therefore the underlying groundwater does not represent an unacceptable risk to current or future human consumption.

5.3.10 Within the leachate analysis one exceedance was recorded exceeding the DWS in TP104 at 1.50mbgl from Made Ground for aromatic C21-C35 however no aromatic C21-C35 was detected within the groundwater samples therefore this contaminant does not appear to have impacted groundwater, potentially due to of the presence of an aquiclude forming a barrier between the impacted material within the Made Ground and the underlying groundwater within the Glaciofluvial Sheet Deposits. TPH was recorded below the MRL in all the groundwater samples with the exception of BH100 in the far north west of the site which recorded a concentration of 15 µg/l Aliphatic C16-C21.

5.3.11 A total of 13 exceedances of the EQS and DWS were recorded of benzo(a)pyrene within the leachate sampling however benzo(a)pyrene was below the level of detect within all groundwater samples.

6. GROUND GAS ASSESSMENT

6.1 Assessment Approach

6.1.1 Ground gases can be produced as a result of the decomposition of organic materials and may also originate from natural sources, such as coal seams and organic-rich soils. The principal components of ground gas are methane and carbon dioxide, although other gases may be present in trace concentrations. Ground gases can present a hazard to site occupants and property as result of flammable / explosive hazards, physiological effects, odour and effects on vegetation.

6.1.2 The ground gas assessment included in this report is provided for indicative purposes only and is not intended for use as a detailed ground gas risk assessment.

6.1.3 Ramboll has applied a semi-quantitative method in line with current good practice guidance on risk assessment to assess ground gas risks. Full details of Ramboll's assessment methodology are presented in Appendix 1.

6.1.4 At the time of writing only two rounds of ground gas monitoring have been completed for the new Kop Stand therefore this assessment is indicative only and will be updated on completion of the ground gas monitoring works.

6.2 Ground Gas Monitoring Results

6.2.1 Potential ground gas sources at or in the vicinity of the site, and subject to assessment comprise:

- Potential Source 1: Made Ground

6.2.2 Coal seams are noted to be present underlying the site however at the shallowest depth of 322m bgl these would not represent a source of potential ground gas.

6.2.3 Six rounds on the Floodlight Ground Investigation (BH100, BH101, BH102, and BH103) on the 11 November, 16 November, 24 November, 30 November, 07 December and 12 December 2022. Six ground gas monitoring rounds have been undertaken on wells BH104, BH105, and BH106, installed during this investigation) on the 14 March and 20 March, 29 March, 04 April, 11 April, and the 18 April 2023. A summary of the results is provided in Table 6-1. The ground gas monitoring results are provided in full in the draft Geotechnics Factual Report Appendix 2.

Table 6-1 Summary of Ground Gas Monitoring Results

Monitoring Well	No. of Monitoring Rounds	Response Zone Strata	Response Zone (mbgl)	Evidence of Contamination	Water Level Range (mbgl)	Atmospheric Pressure during Monitoring (mb)	Steady State Methane Range (% v/v)	Steady State Carbon Dioxide Range (% v/v)	Oxygen (% v/v)	Flow (l/hr)	Range of Volatile Organic Compounds (ppm)
BH100*	6	Glaciofluvial sheet deposits	23.50 to 25.50	None	5.25 – 5.65	978 – 1013	0.0	0.6 - 0.9	16.0 – 20.0	0	0
BH101	6	Glaciofluvial sheet deposits	7.00 to 10.00	None	8.27 - 8.45	978 – 1013	0.0	0.5 - 0.6	19.1 – 19.9	0	0
BH102*	6	Glaciofluvial sheet deposits	12.90 to 15.90	None	9.54- 9.78	978 – 1013	0.0	0.5 - 0.8	19.5 – 20.3	0	0
BH103*	6	Glaciofluvial sheet deposits	13.50 to 15.60	None	8.91 – 11.50	978 - 1013	0.0	0.2 - 0.4	20.1 – 21.1	0	0
BH104 *Shallow*	6	Made Ground	1.00 – 2.80	None	Dry	994 – 1019	0.0 – 0.2	0.1 – 2.0	18.1 - 22.3	0 – 0.1	0
BH105 *Shallow*	6	Made Ground	0.50 – 2.00	Ash within Made Ground	Dry	994 – 1019	0.0 – 0.3	0.4 – 1.3	19.0 - 22.2	0 – 0.4	0
BH106 *Shallow*	6	Made Ground	1.00 – 2.70	None	Dry	994 – 1019	0.0 – 0.2	1.8 – 4.8	15.1 -19.1	0 – 0.4	0

Monitoring Well	No. of Monitoring Rounds	Response Zone Strata	Response Zone (mbgl)	Evidence of Contamination	Water Level Range (mbgl)	Atmospheric Pressure during Monitoring (mb)	Steady State Methane Range (% v/v)	Steady State Carbon Dioxide Range (% v/v)	Oxygen (% v/v)	Flow (l/hr)	Range of Volatile Organic Compounds (ppm)
BH104 *Deep**	6	Glaciofluvial sheet deposits	12.00 -15.00	None	9.66 – 9.70	994 – 1019	0.0 – 0.3	0.2 - 0.6	19.6 - 21.4	0 – 0.2	0
BH105 *Deep**	6	Glaciofluvial sheet deposits	12.00 – 15.00	None	9.75 – 9.87	994 – 1019	0.0 – 0.2	0.2 - 0.7	19.6 - 21.3	0 – 0.1	0
BH106 *Deep**	6	Glaciofluvial sheet deposits	15.00 -18.00	None	9.93 – 10.00	994 – 1019	0.0 – 0.1	1.1 – 2.0	19.0 - 19.9	0 – 0.1	0

Gas concentrations and flow rates provided as steady state.

** Groundwater table above top of well screen.*

Monitoring wells shown in bold font are situated beneath the proposed building footprint.

6.3 Results and Discussion

6.3.1 All deep installs (BH100, BH102 – BH106) had water levels that were above the top of the well screens during both monitoring rounds, and have therefore been discounted from this assessment. This was not the case for the shallow monitoring wells installed at BH104 to BH106 beneath the footprint of the proposed Kop Stand development and so can be used in the assessment.

Atmospheric Pressure

6.3.2 For the Kop Stand investigation the six monitoring rounds were undertaken during a range of atmospheric pressures (994 mb to 1019 mb). Three rounds were undertaken during periods of relatively low atmospheric pressure (994 to 1001 mb) and three rounds were undertaken during periods of higher atmospheric pressures (1013 to 1019 mb).

Flow Rates

6.3.3 A very slight steady flow rate of 0.1 l/hr was detected in BH104, and a slight steady flow rate (<0.1 – 0.4 l/hr) was detected in the shallow monitoring wells BH105 and BH106.

6.3.4 The low flow rates recorded over both monitoring rounds for the shallow monitoring wells installed in the footprint of the proposed new Kop Stand indicate that the gas generating potential in shallow soils is low.

Methane and Carbon Dioxide

6.3.5 The maximum steady methane recorded was 0.3% by volume (v/v) (BH104 to BH106 – shallow wells) in the area of the proposed new Kop Stand.

6.3.6 For the shallow monitoring wells installed in the area of the proposed new Kop Stand steady cardon dioxide concentrations ranged from 0.1% to 4.8 v/v. The maximum steady state carbon dioxide recorded was 4.8% v/v in BH106 towards the northeast of the site. These elevated concentrations of carbon dioxide are potentially associated with the underlying Made Ground.

Oxygen

6.3.7 Oxygen concentrations varied from 15.0% v/v and 22.3% v/v in the shallow monitoring wells BH104, BH105 and BH106.

6.3.8 In all rounds only two incidences of reduced oxygen levels were recorded below 18 % v/v. This was a recording of 15.1% (20 March) and 16% (11 April) in the shallow monitoring well BH106 in the footprint of the proposed Kop Stand. In both cases the reduced oxygen concentrations coincided with the maximum recorded steady carbon dioxide concentrations of 4.8%.

Carbon Monoxide

6.3.9 A maximum carbon monoxide concentration of 1ppm was recorded in the shallow monitoring wells installed at BH104 and BH106 for the Kop Stand investigation which is not considered a significant concentration.

Hydrogen Sulphide

6.3.10 Hydrogen sulphide was not detected at concentrations above the lower instrument detection limit (<1 ppm) at all locations.

Volatile Organic Compounds (VOCs)

6.3.11 During the ground gas monitoring a photo-ionisation detector (PID) was used to screen for the potential presence of VOCs within the monitoring wells. PID readings were recorded below the instrument detection limit in all monitoring results.

Monitoring Frequency

6.3.12 For the Kop Stand investigation six planned monitoring rounds have been completed for the site. Six monitoring rounds have been completed for the monitoring wells installed as part of the floodlights ground investigation. The total number and frequency of monitoring rounds was assessed with reference to guidance provided within BS58576.

6.4 Outcome of Ground Gas Assessment

6.4.1 Details of Ramboll's assessment methodology is presented in Appendix 1 and a discussion of the results is provided below. The risk posed by ground gases has been assessed by calculating a Gas Screening Value (GSV). The worst case GSV has been calculated based on the worst-case scenario, i.e. maximum ground gas concentrations and maximum flow rates applied as relevant to each of the potential sources; as summarised in Table 6-2. The GSV is used to identify the relevant characteristic situation (CS).

Table 6-2 Ground Gas Assessment Based on Worst Case Scenario

Worst Case	Flow Rate (l/hr)	CO_2		CH_4		Characteristic Situation
		Maximum Steady State Gas Concentration	GSV (l/hr)	Maximum Steady State Gas Concentration (% v/v)	GSV (l/hr)	
Potential Source 1	0.4	4.8	0.0192	0.3	0.0012	CS1

Based on BS8485[10]

6.4.2 The GSV for cardon dioxide is taken on a worst-case scenario across the site and was calculated as 0.0192 l/hr which corresponds to 'Characteristic Situation 1' (CS1, very low hazard) in BS8485 which is applicable for industrial/commercial and high-rise residential development.

6.4.3 The GSV for methane is taken on a worst-case scenario across the site and was calculated as 0.0012l/hr which corresponds to 'Characteristic Situation 1' (CS1, very low hazard) in BS8485 which is applicable for industrial/commercial and high-rise residential development.

6.4.4 In summary, in the initial assessment the site is considered to be CS1 (very low hazard) due to low steady flow rates and no significant concentrations of gas.

6.4.5 The design of the proposed new Kop Stand and any other new buildings on site will need to take into account the findings of this ground gas risk assessment and will not need to consider the incorporation of ground gas protection measures for the proposed use of the site. The requirement (or otherwise) and design of gas protection measures will need to be agreed in consultation with the building control authority prior to construction and implemented in line with guidance provided in BS8485 which includes consideration for the building's construction and use.

6.5 Radon Assessment

6.5.1 No monitoring of radon has been undertaken as part of the ground investigations at the site. However, it should be noted that the site is located within an area where 3-5% of dwellings exceed the radon action level and therefore basic radon protection measures will be required, in

[10] British Standard Institute (2015) Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Building 8485:2015+A1:2019

accordance with BR 211 for new buildings[11] and GG 75 for new large buildings. As a minimum this should incorporate the installation of a damp proof membrane to the floor slab, tied into the damp proof course in the walls. Joints in the membrane and any service penetrations through the membrane will need to be sealed.

[11] BRE, 2015. BR 211: Radon. Guidance on protective measures for new buildings. By Chris Scivyer.

7. FOUNDATION RISK ASSESSMENT

7.1 Introduction

7.1.1 A Foundation Risk Assessment is required in accordance with Environment Agency requirements (see Section 7.4) to establish whether the use of deep foundations for the new Kop Stand and for the floodlights could introduce any potential risks to controlled waters and human health.

7.2 Description of Structure

Kop Stand

7.2.1 The general structure of the Kop Stand will consist of numerous piles across the footprint supporting beams and ground bearing slab. These piles will need to support the stand which will include facilities and a canopy. The depth of the piles is anticipated to be 20.0m bgl with 1.0m deep pile caps.

Floodlights

7.2.2 Currently it is anticipated the floodlights will be installed on concrete slabs supported on piles to an unknown depth but for this assessment assumed to be 20m bgl with pile caps to 2.0m bgl.

7.2.3 Full foundation details will be delivered by the piling contractor this report will need updating if the final foundation design differs significantly from these assumptions.

7.3 Foundation Type

7.3.1 It is understood the Kop Stand will be founded on piled foundations connected by concrete pile caps to 1.0m bgl. There will be more than 50 No.450mm diameter Continuous Flight Auger (CFA) piles across the footprint of the new stand to a depth of 20m bgl.

7.3.2 It is assumed the floodlights will also be supported by Continuous Flight Auger (CFA) piles but situated upon 2.0m bgl pile caps, however these design has not been confirmed at this stage.

7.3.3 Table 7.1 provides a more detailed explanation of the piling methods being employed at the site.

Table 7-1 Description of Piling Techniques

Piling Technique	Description	Potential Hazards
CFA -Piles	This non-displacement piling method involves the drilling of an auger with a hollow stem (temporarily plugged) into the ground. Once the design depth is reached, concrete is pumped through the hollow stem of the auger while the auger is extracted at a controlled rate, keeping the end of the auger embedded into the concrete, maintaining a positive pressure throughout the process. Once the full length of the pile is concreted a reinforcement steel cage is pushed into the fluid concrete to provide additional strength.	The use of non-displacement piles has the potential to bring contaminated soil arisings to the surface. Soil arisings will require management and either disposal off-site or re-use on-site as set out in the earthworks specification and / or the Materials Management Plan (MMP) if in place. Segregation of this material from the vicinity of each pile location during piling will minimise the potential for cross contamination of arisings and the creation of additional waste that will need controlled disposal. The progression of CFA piles relies on the retention of soil on the augur flights to support the surrounding soil and prevent collapse or migration outwards of soil. The potential for creation of a temporary pathway for groundwater flow around the auger is limited with this method, and should one occur, it

Piling Technique	Description	Potential Hazards
		would likely be short lived (in the region of minutes) and subsequent concreting of the pile and close up of soil due to soil stresses would close the pathway.

7.4 Risk Assessment

7.4.1 The assessment of piling risks has been carried out with due regard to the following Environment Agency documents:

- Piling into Contaminated Sites[12];
- Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention NC/99/73[13]; and
- Piling in Layered Ground: Risks to Groundwater and Archaeology[14].

7.4.2 In particular this risk assessment makes reference to a number of generic pollution scenarios detailed within NC/99/73 which are summarised in Table 7.2.

Table 7-2 Summary of generic pollution scenarios detailed with NC/99/73

Scenario	Detail
1	Creation of preferential pathways through a low permeability layer (an aquitard) to allow potential contamination of an aquifer and/or surface water feature
2	Creation of preferential pathways, through a low permeability surface layer, to allow migration of landfill gas, soil gas or vapours to surface
3	Direct contact of site workers and others with contaminated soil arisings that have been brought to the surface
4	Direct contact of the piles or engineered structures with contaminated soil or leachate causing degradation of pile materials
5	The driving of solid contaminants down into an aquifer during pile driving
6	Contamination of groundwater, and subsequently, surface waters by wet concrete, cement paste or grout
+	Any other relevant pollution scenarios

7.4.3 Consideration is given to whether each scenario is significant in the context of the proposed piling method at the site. Each of the risks for the site-specific piling methods are then assessed in terms of the likelihood and the severity of the consequence using the following criteria in Table 7.3 & Table 7.4.

Table 7-3 Definition of severity

Severity	Criteria
High	Significant pollutant linkage which would cause deterioration of water quality or significant risks to human health in the long term.
Medium	Pollutant linkage which could result in deterioration of water quality or risks to human health in the long term or cause a short-term pollutant linkage restricted to the duration of piling.
Low	Any pollutant linkage caused would not significantly affect water quality or risks to health.

[12] Environment Agency (2002) Piling into Contaminated Sites.
[13] Environment Agency (2001) Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination Guidance on Pollution Prevention NC/99/73.
[14] Environment Agency (2014) Piling in Layered Ground: Risks to Groundwater and Archaeology SC020074.

Table 7-4 Definition of likelihood

Likelihood	Criteria
High	Would cause a pathway to be created.
Medium	May cause a pathway to be created, but if it was realised, would not be likely to represent a significant risk.
Low	Would be unlikely to cause a pollutant linkage, but if it was realised, would not be likely to represent a significant risk.

7.4.4 The severity and likelihood classifications are then used to provide an overall risk, as detailed below in Table 7.5.

Table 7-5 Risk Matrix

		Severity		
		High	**Medium**	**Low**
Likelihood	**High**	Very High	High	Medium
	Medium	High	Medium	Low
	Low	Medium	Low	Very Low

7.4.5 An assessment of the risks associated with the proposed piling works is provided in Table 7.6. The assessment is based on site-specific conditions and known levels of contamination plus potential for encountering unexpected contamination.

Table 7-6 Foundation Risk Assessment for CFA Piling

Site-Specific Pollution Scenario	Activity	Source (S) Pathway (P) Receptor (R)		Severity	Likelihood	Risk Assessment	Comments/Mitigation Measures
1: Creation of preferential pathways through an aquitard to allow potential contamination of an aquifer.	CFA piles	**S**	Potential contaminated soils / perched groundwater	Medium	Low	Low	The use of CFA piles minimises the risk of vertical pathway creation and is a method generally accepted by the Environment Agency for contaminated sites where important aquifers lie beneath. Visual or olfactory evidence of contamination was only noted at one location TP104 1.0m to 1.80m bgl during the ground investigation but no piling is planned for this area. However leachable concentrations of metals and PAHs were identified above the DWS and EQS assessment criteria within the Made Ground. Groundwater in the Glaciofluvial Sheet Deposits identified marginal exceedances of EQS for metals, PAHs and chloroform. Ground conditions identified granular layers within Glaciofluvial Sheet Deposits that could potentially be water bearing strata. However, these are laterally discontinuous, confined between cohesive layers and unlikely to migrate vertically to the groundwater.
		P	Vertical pathway created by CFA piles				
		R	Secondary A Aquifer (Glaciofluvial Sheet Deposits)				
2: Creation of preferential pathways through a low permeability surface layer, allowing migration of landfill gas, soil gas or contaminant vapours to the surface.	CFA piles	**S**	Underlying geology	Medium	Negligible	N/A	No landfills or organic rich soils were identified during the ground investigation in the areas of piling. No significant ground gas concentrations recorded during ground gas monitoring therefore, the likelihood of this pathway is negligible and therefore not considered a risk. The enabling works contractor and any subcontractors are required to have appropriate safe working practices and health and safety measures in place during works e.g. personal protective equipment (PPE), (respiratory protective equipment) RPE and confined spaces entry systems etc.
		P	Pathway created by CFA piles				
		R	Human health and buildings				
3: Direct contact of site workers and others with contaminated soil arisings that have been brought to the surface.	CFA piles	**S**	Potential contaminated soils / perched groundwater	Low	Low	Very Low	There were no exceedances of the assessment criteria for a commercial land use. Site workers will require appropriate PPE; this will reduce the risk to negligible. Site activities are to be managed and controlled. The Land Quality Method Statement (LQMS -which details procedures for managing contaminated soils, materials and unexpected contamination) will be adhered throughout the project.
		P	Soils brought to the surface				

Site-Specific Pollution Scenario	Activity	Source (S) Pathway (P) Receptor (R)		Severity	Likelihood	Risk Assessment	Comments/Mitigation Measures
		R	Site workers				
4: Direct contact of the piles or engineered structures with contaminated soil or leachate causing degradation of materials.	CFA piles	**S**	Natural soil conditions such as elevated sulphates	Low	Low	Very Low	All samples except one (TP101 at 0.25m bgl – 1,500mg/l) had water Soluble Sulphate concentrations below the 500mg/l threshold for DS1 concrete classification set out in the BRE SD1 Part1 3rd Edition. However the location of TP101 is located outside of the building footprint. An assessment of the ground and groundwater aggressivity will be confirmed by the Piling Contractor. This will inform the appropriate concrete design class/ specification required for the site and will mitigate risk to the built environment.
		P	Contact				
		R	Construction Materials				
5: The driving of solid contaminants down into an aquifer during pile driving	CFA piles	**S**	Potential contaminated soils / perched groundwater	Low	Low	Very Low	The severity is low due to the limited contamination identified in the area of the proposed foundations. The anticipated volume of material dragged down is expected to be minimal owing to the nature of the method used.
		P	Pathway created by piles				
		R	Glaciofluvial Sheet Deposits Secondary A Aquifer				
6: Contamination of groundwater and, subsequently, surface waters by wet concrete, cement paste, grout or polymer	CFA piles	**S**	Construction Materials	Medium	Low	Low	Concrete deliveries and the wash out of concrete mixers will be managed at the site in accordance with a Construction stage Environmental Management Plan which will ensure that wash out water containing cement / concrete is not discharged to ground or allowed to flow into surface water features though unlikely due to the distance of such features from site. Concrete used in the construction of the piles will need to be of the right consistency to (i.e. of sufficient strength) to hold the bore open so is unlikely to be overly wet, however, the release of concrete in groundwater cannot be ruled out. Groundwater beneath the site will be limited to laterally discontinuous layers of granular glacial deposits at depths of ~10m bgl within the Glaciofluvial Sheet Deposits (Secondary A aquifer). On this basis the overall risk is considered to be low.
		P	Pathway created by piles				
		R	Glaciofluvial Sheet Deposits Secondary A Aquifer				

8. SOURCE-PATHWAY-RECEPTOR RISK ASSESSMENT

8.1 Proposed Development Considerations

8.1.1 It is understood there will be two stages of development:

- Construction of new flood lighting which is understood will involve concrete pads on piles installed using the continuous flight auger method; and
- Construction of a new Kop Stand which will encompass the majority of the site to the east. It is understood the stand will utilise continuous flight auger piles to a depth of 20m bgl. There will be a public realm area to the east of the Kop Stand which will include an area of public open space covered by hardstanding with raised planters and sunken tree pits. Currently facilities planned for within the Kop Stand excluding standing for spectators will include club offices, community and hospitality spaces (including banqueting) and a club shop. The drainage strategy for the Kop development is to be infiltration based.

8.2 Updated Conceptual Site Model

8.2.1 The information presented in the previous sections of this report has been collated and evaluated to refine the preliminary conceptual site model for the site.

8.3 Qualitative Risk Assessment

The potential contamination linkages which were identified at within the conceptual site model in the PRA stage as posing a potentially risk are considered further by reassessment based on the ground investigation findings.

8.3.1 Table 8.1 forms a qualitative risk assessment.

8.3.2 Potential pollutant linkages are identified using the source-pathway-receptor framework detailed in Appendix 1. An assessment of the potential of each linkage is then made by consideration of the likely magnitude and mobility of the source, the sensitivity of the receptor and nature of the migration/exposure pathways between them.

8.3.3 This qualitative risk assessment has been undertaken by definition of risk categories in accordance with NHBC and EA guidance, further details of which are provided in Appendix 1.

8.3.4 Table 8-1 summarises the updated assessment of PCLs and risk categories associated with the proposed development as assessed following interpretation of the results of the ground investigation.

Table 8-1 Ground Contamination Risk Assessment – Updated Conceptual Site Model (CSM)

Potential Contaminants	Potential Pathways	Potential Receptors	Risk of Pollutant Linkage	Overall Risk Rating
Onsite				
Potential for made ground and localised spills (oils / fuels) from vehicles. No significant contamination sources identified from current or historical site uses.	Dermal contact / ingestion	Future users	No exceedances of human health screening criteria for commercial end use. Additionally, the site including the areas for the floodlights will mainly comprise hardstanding, limiting any potential pathways.	Very Low
	Dermal contact / ingestion	Construction and future maintenance workers	No exceedances of human health screening criteria for commercial end use however construction workers should use appropriate safe working practices and health and safety measures during works (e.g. personal protective equipment (PPE) and respiratory protective equipment (RPE)). Asbestos was encountered in one location <0.001% however due to the nature of asbestos it is possible to exist in discrete pockets construction workers should be made aware of the potential risk.	Very Low
	Inhalation of gas / vapours	Future users	No significant concentrations of ground gas encountered within shallow soils and low flow rates recorded, therefore no gas protection measures would be required. It should be noted this is based on two rounds of ground gas monitoring for the Kop ground investigation and six rounds for the floodlights ground investigation. The site is located within an area where 3-5% of dwellings exceed the radon action level and radon protection measures may be required. This will be determined by the local authority.	Low
	Inhalation of gas / vapours	Construction and future maintenance workers	No significant concentrations of ground gas encountered and low flow rates recorded, however	Low

			construction workers should use appropriate safe working practices and health and safety measures during works (e.g. personal protective equipment (PPE) and respiratory protective equipment (RPE)).	
	Leaching to groundwater & groundwater flow	Groundwater within the Secondary A aquifer in the superficial Glaciofluvial Sheet Deposits and Sandstone bedrock.	Leachable concentrations exceeding the DWS for aromatic hydrocarbons (C21-C35) identified in TP104 at 1.50m bgl. However, no exceedances have been observed within the groundwater, suggesting no pathway to groundwater. Piling activities are unlikely to create a pathway for contaminant migration to groundwater. The proposed design will be covered in hardstanding reducing the infiltration of rainwater and subsequent leaching of contaminants.	Very Low
	Surface water runoff	Surface water as controlled water.	Low mobility of contaminants identified, no perched groundwater observed and the nearest surface water feature is located at distance from the site.	Very Low
	Direct contact	Buildings and services	No significant contamination identified at the site therefore risk to future buildings is considered to be low. Water solubale sulphate recorded at the site is low except at TP101 at 0.25m bgl within the Made Ground where 1,500 mg/l was observed. However this location is outside of the building footprint so is unlikely to be an issue.	Low
Off site				
Potential current and historical off-site contamination sources in the vicinity of the site including:	Groundwater flow	Underlying the groundwater within Glacial Till deposits.	Exceedances of chloroform within groundwater above the EQS however no on-site sources have been identified. Therefore it is assumed to be from an offsite source. Due to the underlying clay acting as an aquiclude metals within groundwater are also likely to	Low

• Various railway features including tracks, sidings, goods shed / depot. • Scrapyard • Various works, depots, warehouses • Garages and petrol stations			be from an offsite source or represent existing background levels of naturally occurring contaminants.	
	Inhalation of gas / vapours	Future site users	No significant ground gas or flow identified during the ground gas monitoring therefore no impact is expected from any potential sources from nearby sites.	Very low

8.4 Climate Change Considerations

The UK Government and devolved administrations have produced climate change adaptation programmes, including plans for both mitigating and adapting to climate change. SDGs support the development of Sustainable Cities and Communities (SDG No. 11), Clean Water and Sanitation (SDG No.6), sustainable ecosystems (SDG No.14. Life below Water and SDC No. 15 Life on Land). It is therefore important to recognise how changes in weather/season/climate could affect the ground conditions that were encountered during the investigation.

Climate change projections[15] demonstrate that in the UK the following conditions are expected to result from future climate change: drier and hotter summers, wetter and milder winters, a higher frequency of intense rainfall periods and sea level rise. The following are considered relevant to the assessment:

- Drier, hotter weather – would lower the water table nut contaminants could come more concentrated however unlikely to affect the site as contaminants in groundwater not a problem.
- Wetter weather – could increase groundwater table and therefore dilute contaminants however may cause increased leaching. However unlikely to affect the site as will be covered in hard standing.
- Higher water table – mobilisation of contaminants which are currently within the unsaturated zone, mobilisation through pathways such as service/drainage routes that previously were above the water table, new groundwater-surface water interaction, introduction of new GWDTEs
- Greater fluctuation of water table – increased NAPL smear zones, changes to groundwater discharge locations and flow directions

Based on the above considerations, the effects of climate change are not likely to alter the findings of the risk assessment.

[15] Meteorological Office UK (2018). UKCP18 Land Projections: Science Report. Updated March 2019.

9. PRELIMINARY WASTE ASSESSMENT

9.1 Methodology

9.1.1 The assessment has been undertaken using available soil chemical data and HazWasteOnline, an internet based tool for classifying waste. The software utilises EA guidance and European regulations to classify samples in line with current requirements. Further details of the waste classification methodology are provided in Appendix 1. The HazWasteOnline output sheets are provided in Appendix 5.

9.2 Soils Assessment

9.2.1 Samples collected during the ground investigations were combined and entered into the HazWasteOnline assessment tool.

9.2.2 These comprised samples of:

- Thirteen samples from the Glaciofluvial Sheet Deposits
- Twenty-eight samples from the. Made Ground

9.2.3 The results including the 24 Waste Acceptance Criteria (WAC) results undertaken are shown in Table 9-1.

9.2.4 The Hazardous Waste (England and Wales) Regulations[16] requires that any waste having an asbestos content greater than 0.1 % w/w be classified as Hazardous Waste. Any waste with a total asbestos content of less than 0.1 % w/w can be classified as non-hazardous waste, unless there are other contaminants present which would make the waste hazardous. Details of asbestos testing are provided in Table 9-1.

9.2.5 Asbestos was only recorded in one location at IP101 at 0.2m bgl however was below the <0.001% and therefore classified as non-hazardous.

Table 9-1 Summary Preliminary Waste Classification Assessment

ID	Depth (mbgl)	Waste Classification (European Waste Management Regulations)	Hazardous Properties	Asbestos (x/✓)	Landfill Type Based on WAC Results	Waste Assessment Outcome
Made Ground						
BH100	0.15	Not hazardous	N/A	x	Inert	Inert
BH100	0.40	Not hazardous	N/A	x	Inert	Inert
BH101	0.20	Not hazardous	N/A	x	N/A	Non-hazardous
BH101	0.50	Not hazardous	N/A	x	Inert	Inert
BH102	0.10	Not hazardous	N/A	x	N/A	Non-hazardous
BH102	0.50	Not hazardous	N/A	x	N/A	Non-hazardous
IP100	0.30	Not hazardous	N/A	x	N/A	Non-hazardous
IP100	0.80	Not hazardous	N/A	x	Non-hazardous	Non-hazardous
IP100	1.20	Not hazardous	N/A	x	N/A	Non-hazardous

[16] UK Statutory Instruments (2005) Hazardous Waste (England and Wales) Regulations. No. 894

ID	Depth (mbgl)	Waste Classification (European Waste Management Regulations)	Hazardous Properties	Asbestos (x/✓)	Landfill Type Based on WAC Results	Waste Assessment Outcome
IP101	0.20	Not hazardous	N/A	✓ <0.001%	N/A	Non-hazardous
IP101	1.00	Not hazardous	N/A	**x**	Inert	Inert
IP101	1.20	Not hazardous	N/A	**x**	N/A	Non-hazardous
TP100	0.05	Not hazardous	N/A	**x**	Inert	Inert
TP100	1.20	Not hazardous	N/A	**x**	Inert	Inert
TP101	0.25	Not hazardous	N/A	**x**	Non-hazardous	Non-hazardous
TP101	0.90	Not hazardous	N/A	**x**	Inert	Inert
TP102	0.50	Not hazardous	N/A	**x**	Non-hazardous	Non-hazardous
TP102	0.70	Not hazardous	N/A	**x**	Non-hazardous	Non-hazardous
TP103	0.20	Not hazardous	N/A	**x**	Inert	Inert
TP103	0.40	Hazardous	Zinc	**x**	Stable non-reactive hazardous	Stable non-reactive hazardous
TP104	0.25	Not hazardous	N/A	**x**	Non-hazardous	Non-hazardous
TP104	1.50	Hazardous	TPH	**x**	Stable non-reactive hazardous	Stable non-reactive hazardous
BH106	0.20	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH106	2.00	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH105	0.20	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH105	1.00	Not hazardous	N/A	**x**	Inert	Inert
BH104	0.20	Not hazardous	N/A	**x**	N/A	Non-hazardous
Natural Strata – Glaciofluvial Sheet Deposits						
BH100	1.00	Not hazardous	N/A	**x**	Inert	Inert
BH100	3.00	Non-hazardous	N/A	**x**	N/A	Non-hazardous
BH101	1.00	Not hazardous	N/A	**x**	Inert	Inert
BH101	2.00	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH101	4.00	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH101	6.00	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH102	1.00	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH012	3.00	Not hazardous	N/A	**x**	N/A	Non-hazardous

ID	Depth (mbgl)	Waste Classification (European Waste Management Regulations)	Hazardous Properties	Asbestos (x/✓)	Landfill Type Based on WAC Results	Waste Assessment Outcome
BH102	5.00	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH104	2.00	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH014	5.00	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH106	3.00	Not hazardous	N/A	**x**	Inert	Inert
BH106	5.00	Not hazardous	N/A	**x**	N/A	Non-hazardous
BH106	16.00	Not hazardous	N/A	**x**	N/A	Non-hazardous

9.2.6 Based on the HazWasteOnline Assessment the majority of the waste is classified as non-hazardous with the exception of TP103 at 0.40m bgl for zinc and TP104 at 1.50m bgl for TPH. Generally, as the zinc exceedance is an outlier it is recommended the majority of the site is classified as non-hazardous. Due to olfactory evidence of contamination in TP104 this material will be classified as hazardous if requiring removal from site. A watching brief should be in place if this material is to be excavated to ensure it has been removed entirely.

9.3 Discussion / Summary

9.3.1 Based upon the information available, the overall waste classification of the soils underlying the site is **non-hazardous.**

9.3.2 Of the 23 WAC testing results 11 were classified as either hazardous or stable non-reactive non-hazardous due to total organic carbon content. The remaining samples are classified as inert.

9.3.3 Note that the indicative waste classifications provided as a part of this assessment should be confirmed by any receiving facility prior to disposal, under Duty of Care, following discussions with the producer of the waste. Additional chemical testing and / or WAC analysis may be required prior to disposal.

9.3.4 Should the reuse of site won materials be considered suitable, consideration should be given to the risk to human health and the environment that any such material may pose as part of its new use. This could be under (for example) the provisions of the CL:AIRE Definition of Waste: Development Industry Code of Practice[17].

[17] CL:AIRE (2011) The Definition of Waste: Development Industry Code of Practice Version 2. ISBN 978-1-905046-23-2

10. CONCLUSIONS AND RECOMMENDATIONS

10.1 Conclusions

10.1.1 The GQRA is based on a site investigation strategy prepared by Ramboll. The strategy did not identify any point sources of contamination but provided sufficient coverage across the site to assess any potential risks. The strategy considered potential contaminant migration pathways and likely environmental receptors, which informed the design of the investigation.

10.1.2 The site investigation was designed by Ramboll and completed by Geotechnics Ltd. The site investigation comprised seven boreholes (6 cable percussion and one open hole), five trial pits and two inspection pits. A total of 41 soil samples were taken during the investigation. Six rounds of ground gas and water monitoring were completed for the monitoring wells installed at the location of the floodlights, whereas two rounds of ground gas and groundwater monitoring have been completed for the monitoring wells installed for the new Kop Stand. A further four rounds of ground gas monitoring are yet to be completed on the New Kop Stand monitoring wells.

10.1.3 Made ground was identified at all locations across the site to a maximum depth of 2.80 m bgl generally consisting of gravelly very clayey sand with occasional brick fragments. Underlying the Made Ground was Glaciofluvial sheet deposits with distinct granular and cohesive layers generally consisting of either sandy clayey gravel, slightly gravelly sand or slightly gravelly slightly sandy clay unproven to a maximum depth of 30.42m bgl. Within one location (TP104 from 1.0m bgl) evidence of contamination was observed as a strong hydrocarbon odour.

10.1.4 A total of 41 soil samples were taken across the site, analysis results did not record any contaminant concentrations in excess of commercial GAC (which are used as a first screen to determine whether a contaminant is potentially a risk to human health receptors). Asbestos fibres were recorded at one location (IP100 at 0.20m bgl) though when quantified recorded <0.001%.

10.1.5 A total of 35 soil samples from across the site were subjected to leachate preparation and testing. Exceedances of EQS screening criteria for metals and PAHs were recorded across the site and majority from within the Made Ground. Due to the distances to the nearest surface water features and the conservative nature of the screening criteria the leachate exceedances are not thought to represent unacceptable risk. Leachate exceedances of DWS were recorded for benzo(a)pyrene in 13 locations and aromatic (C21-C35) at TP104 at 1.50m bgl. However, these exceedances do not represent a risk as (with the exception of BH100 located in the far north-west) no concentrations of TPH or benzo(a)pyrene were detected within groundwater samples.

10.1.6 Within the groundwater samples no exceedances were recorded of DWS. Marginal exceedances were recorded of the EQS for metals, PAHs and chloroform. The exceedances of metals and PAHs are marginal (in the same order of magnitude) and not widespread and thought to present naturally occurring conditions. Chloroform was detected exceeding the EQS screening criteria within BH104, BH105 and BH106, however as there is no identified source on-site this is assumed to be from an off-site source, potentially the former garage to the south of the site.

10.1.7 The results of the ground gas assessment show that the site should be classified as 'CS1' (very low hazard) in accordance with BS8485. The results are consistent with the ground conditions encountered, which did not encounter a significant source of elevated ground gases.

10.1.8 The site is located within an area where 3-5% of dwellings exceed the radon action level.

10.1.9 In conclusion, significant or widespread ground contamination was not found by the GQRA. Some leachable contaminants in exceedance of the relevant GAC typical of urban contaminants were found in the made ground such as metals and polycyclic aromatic hydrocarbons. However, the concentrations detected were relatively modest and common to many brownfield site redevelopments (noting that none were detected above commercial GACs).

10.1.10 Development works (the new Kop Stand and four floodlights) will need to consider, for example, risks to construction workers and managing contaminated soils. The contaminants detected are well

known and standard health and safety precautions, management plans and waste classification will be required.

10.1.11 Based on Ramboll's initial assessment, ground gas protection is not likely to be required in new buildings.

10.1.12 Further assessment or remediation of groundwater is not considered necessary as a significant risk of pollution was not identified.

10.2 Sustainability

10.2.1 The findings discussed within this report support sustainable development of the site; through strategic sampling and analysis of various environmental media including soil and groundwater, combined with technically robust investigation and risk assessment processes. This facilitates proportionate and scientifically justifiable recommendations to reduce risks to humans and ecosystems alike. It allows for development of sustainable remedial measures and management of soils.

10.3 Recommendations

10.3.1 The assessments undertaken herein have resulted in the identification of a number of plausible pollutant linkages that will require limited mitigation measures to be implemented in order to deliver a site that is suitable for use for the proposed development.

10.3.2 The material in the vicinity of TP104 is suitable to remain in-situ however care should be taken not to bring the material to the surface. If excavated and not reused elsewhere at the site (under an MMP, exemption from the Environmental Permitting Regulations or similar) the material would need to be disposed off-site as hazardous waste, although other options could comprise recycling the material at another site (with due regard to the Environmental Permitting Regulations).

10.3.3 In accordance with good practice in developing brownfield land, it is recommended that a Land Quality Method Statement (or LQMS) is prepared to fulfil the requirement of a remediation strategy, to set out a watching brief to be implemented by the construction contractor during earthworks at the site to identify any unforeseen ground conditions or localised contamination hotspots (e.g. concentrated pockets of ash, asbestos or hydrocarbons), especially for any earthworks in the vicinity of TP104. If previously unforeseen contamination is identified, the LQMS will set out steps to be followed by the construction contractor to manage any risks. This will include consultation with suitably qualified and experienced contaminated land professionals as well as the Local Authority and Natural Resources Wales.

10.3.4 It is also recommended that the LQMS sets out a verification plan for the earthworks, to evidence the earthworks undertaken and record any unexpected contamination that is encountered, including any mitigation or remediation measures that are implemented to manage contamination.

10.3.5 Due to elevated concentrations of carbon dioxide within the shallow monitoring wells installed within the Made Ground the contractor should ensure the gas is monitored and have appropriate health and safety measures are implemented when undertaking any work in confined spaces within the ground (i.e. during excavations).

10.3.6 Due to the site being located within an area where 3-5% of dwellings exceed the radon action level, the proposed development will require the installation of basic radon protection measures, in accordance with BR 211 for new buildings and GG 75 for new large buildings. As a minimum this will require the incorporation of a damp proof membrane in the floor, linked to a damp-proof course within the walls of the building. Joints in the membrane and any service penetrations through the membrane will need to be properly sealed.

10.4 Discharge of Planning Conditions

10.4.1 It is recommended that this report is submitted alongside the Geotechnical and Contaminated Land Desk Study Report to the Local Planning Authority and its consultees to support the discharge of Planning Condition No. 6 (Risk of contamination), specifically sections I, II & III, prior to commencement of construction works at the site. The LQMS referenced above will also support the

discharge of Planning Condition No. 6 section IV by fulfilling the requirement of a remediation strategy and a verification plan. It will also set out the framework under which planning condition No. 9 (Contamination remediation strategy) would be discharged in the event that unexpected contamination is encountered. A remediation options appraisal is not considered to be necessary given the low level of risk that has been identified at the site.

10.4.2 The verification report required by planning condition No. 7 (Verification report) will need to be prepared in due course on completion of the earthworks for the project, but due to the nature of the report, this cannot be prepared prior to commencement.

10.4.3 It is considered that a long term monitoring plan for land contamination (as described under planning condition No. 8) will not be required for the proposed development. This is on the basis that limited contamination has been identified at the site and the risks to human health and controlled waters is considered to be low. No remediation works are deemed necessary, therefore the need for longer term monitoring is not warranted.

10.4.4 The Foundation Risk Assessment included in Section 8 of this report is considered to be sufficient to discharge the requirements under planning condition No. 10 (Details of piling). It is acknowledged that the pile design for the floodlights has not been confirmed at this stage, but should the final pile design differ significantly from the assumptions made in this report the Foundation Risk Assessment will be updated and resubmitted to the LPA for approval.

10.4.5 It is recommended that planning condition No. 11 (Infiltration permission) is discharged on the basis that the contaminated land qualitative risk assessment has concluded that the risk to controlled waters (groundwater in the underlying Secondary A aquifer in the Glaciofluvial Sheet Deposits and Sandstone bedrock) is very low, due to the limited contamination present within made ground and the limited evidence of any existing contamination impact in groundwater beneath the site. As such, an infiltration led drainage strategy is proposed and the design is being progressed on that basis.

FIGURES

FIGURE 1 Site Location

FIGURE 2 Site Investigation Locations

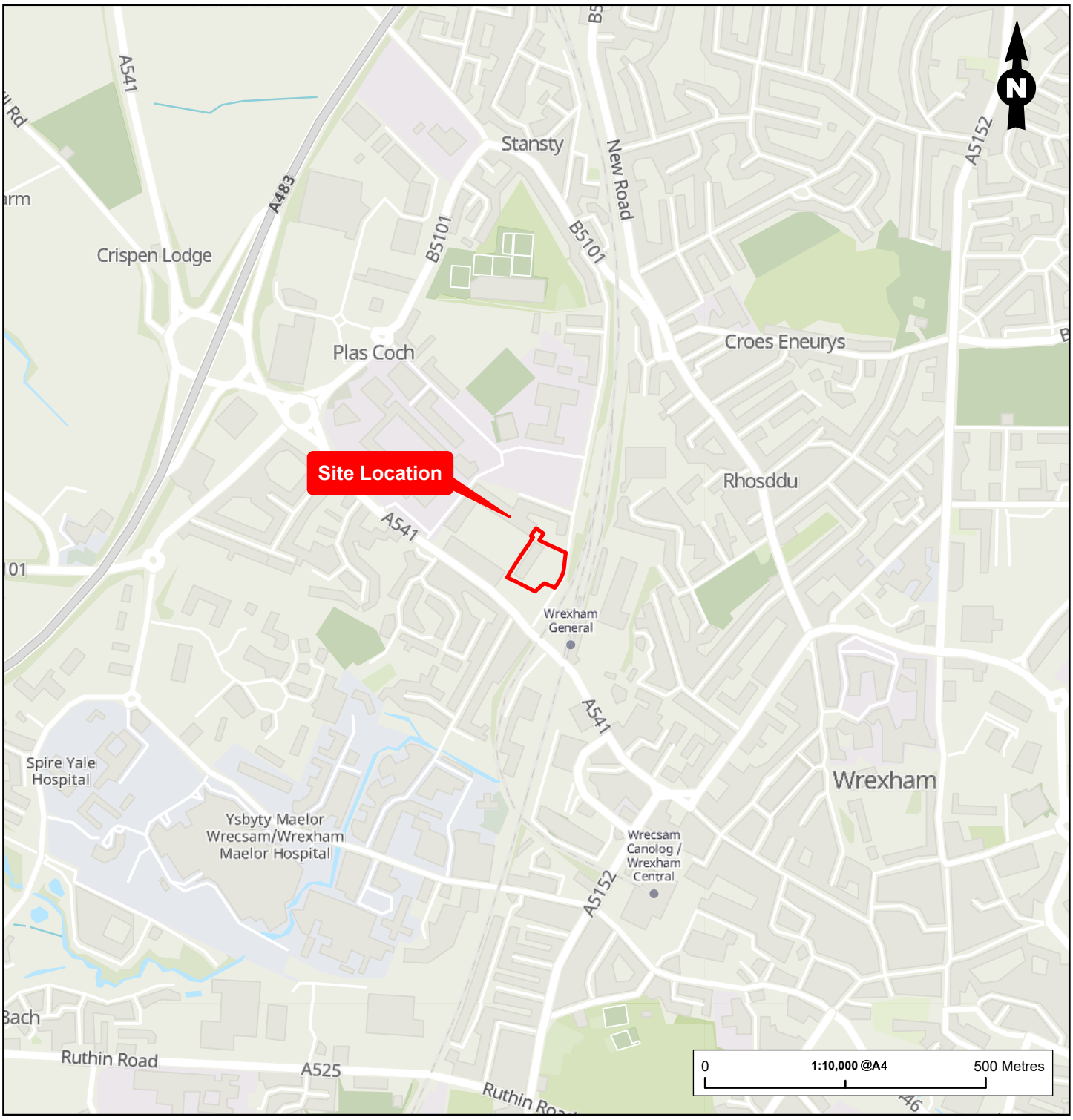




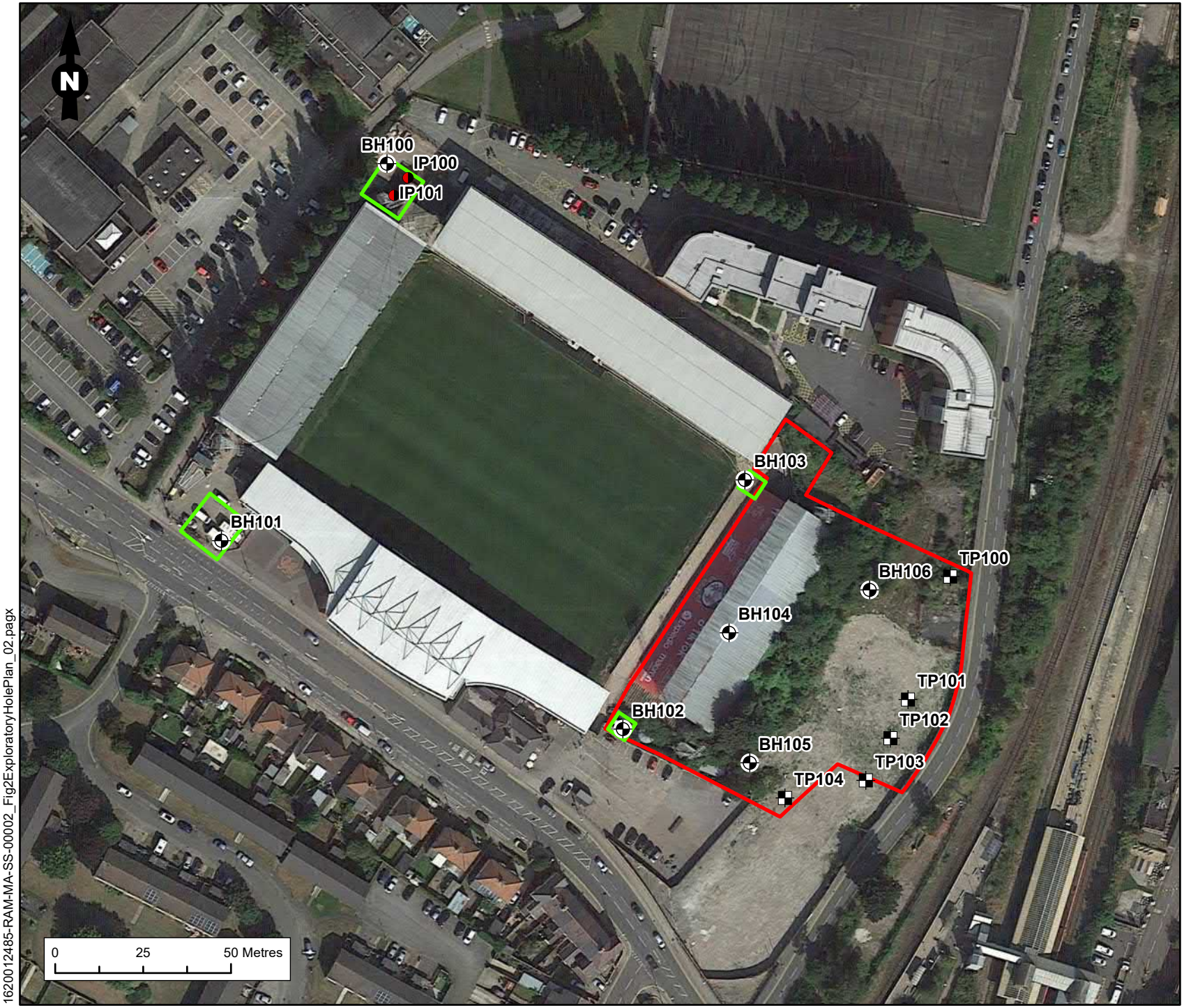


Figure Title: Figure 1: Site Location	Project Name: New Kop Stand and Floodlights	Date: April 2023	
		Scale: As shown	
Project Number: 1620012485	Client: Wrexham Association Football Club	Issue: 1	Prepared By: CT

1620012485-RAM-MA-SS-00001_FigISiteLoc_01.pagx

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Coordinate System: British National Grid. Projection: Transverse Mercator. Datum: OSGB 1936.



Legend

- Borehole
- Inspection Pit
- Trail Pit
- New Kop Stand Boundary
- New Floodlights

Figure Title
Exploratory Hole Plan

Project Name
New Kop Stand and Floodlights

Project Number	Figure No.
1620012485	2
Date	**Prepared By**
April 2023	CT
Scale	**Issue**
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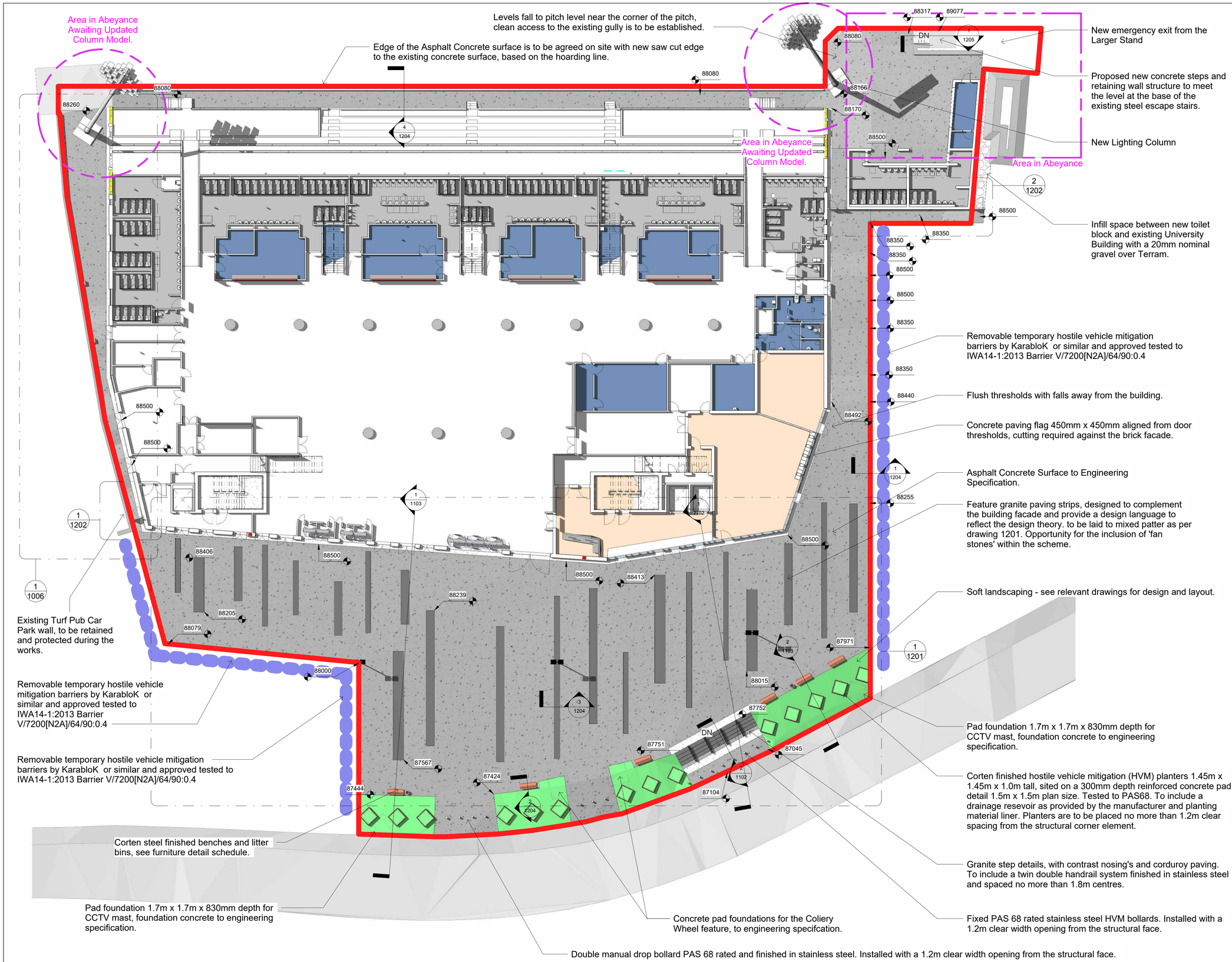
Client
Wrexham Association Football Club

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Coordinate System: British National Grid. Projection: Transverse Mercator. Datum: OSGB 1936.



1 Landscape Plan
1 : 200

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Rev	Description	Date
P02	Issued For MS Costing	03/03/23
P01	Issued For Coordination	24/02/23

PURPOSE OF ISSUE

PROJECT
Wrexham Kop Stand Development

TITLE
Site Plan - Option 3

CLIENT
Wrexham AFC

DRAWN BY	CHECKED BY	DATE
Author	Checker	10/11/22

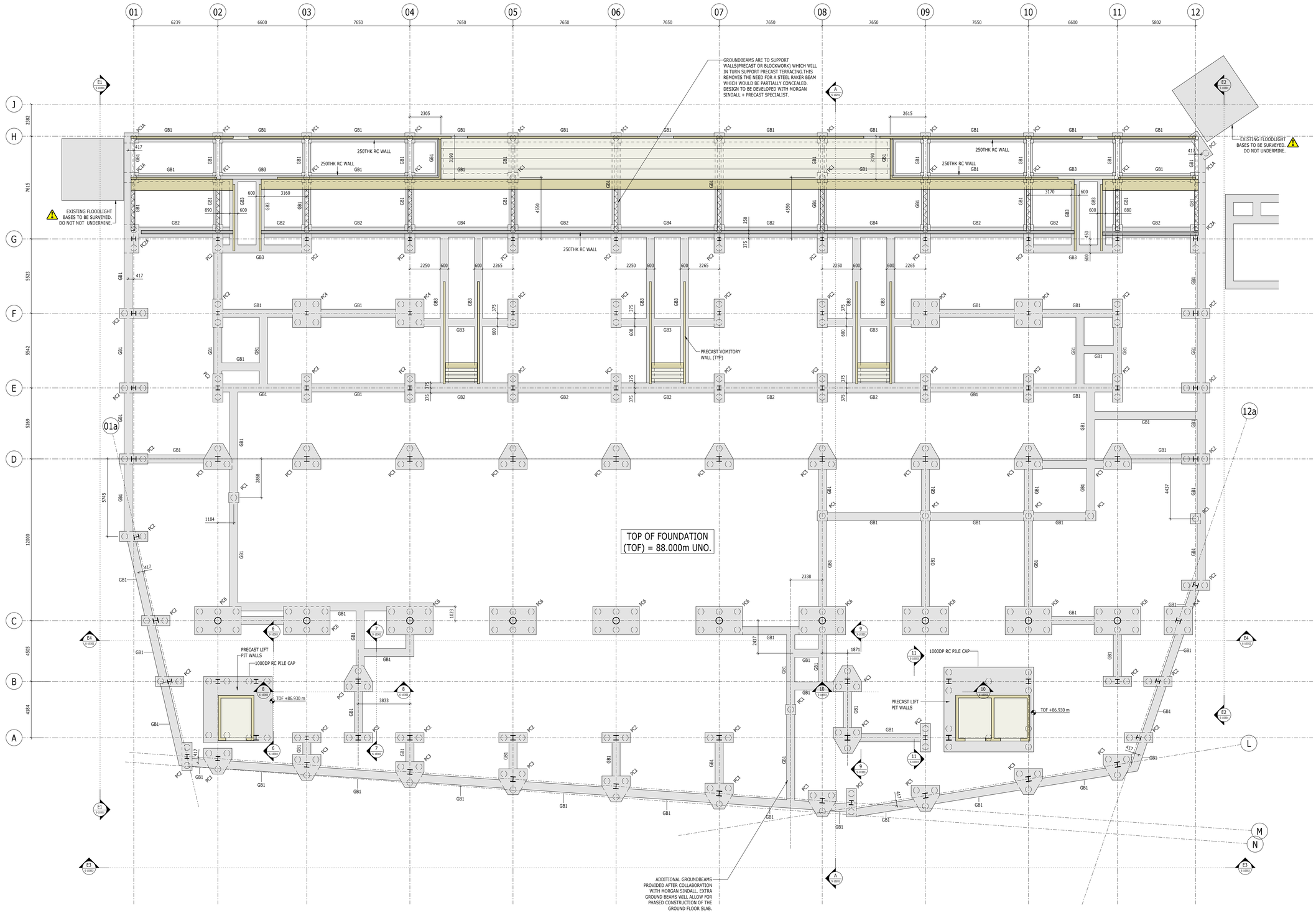
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1 : 200	22202

DRAWING NUMBER
MLD-EX-XX-DR-L-1003 P02

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ALL PILE CAPS TO BE 1000mm DEEP UNO

LEGEND (GROUND BEAMS):

GB1: 600WD x 600DP RC
GB2: 750WD x 600DP RC
GB3: 600WD x 750DP RC
GB4: 750WD x 750DP RC

Rev	Description	Date	Drn	App
P03	WIP UPDATE	10/02 2023	DM AP	MW
P02	ISSUED FOR STAGE 3	28/10 2022	CW MW	MW
P01	ISSUED FOR REVIEW	22/10 2021	CW MW	MW

PRELIMINARY

KOP DEVELOPMENT
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LEVEL FN
FOUNDATION PLAN
GENERAL ARRANGEMENT
SHEET 1

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1620012485	1 : 100	OCT'21	CW

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WRX-RAM-04-FN-DR-S-10091	P03

APPENDIX 1
LEGISLATIVE CONTEXT AND METHODOLOGY

LEGISLATIVE CONTEXT

The regime for contaminated land was set out in Part 2A (ss.78A-78YC) of the Environmental Protection Act 1990 (EPA), 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 revoked with the provision of The Contaminated Land (England) Regulations 2006 (SI 2006/1380) (as amended), which came into force in August 2006, and consolidated the previous regulations and amendments. Revised statutory guidance ("the Guidance") for local authorities on how to implement the regime, including the decision-making process on whether land is contaminated land in the legal sense, has been published by Defra and entered into force in April 2012.

Under Part 2A of the EPA Section 78A(2), "contaminated land" is defined as "land which appears… to be in such a condition, by reason of substances in, on or under the land, that:

a) significant harm is being caused or there is a significant possibility of such harm being caused[1]; or
b) significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused".

"Significant harm" is defined in the Guidance on risk-based criteria and must be the result of one or more relevant 'contaminant linkages' relating to the land. The presence of a contaminant linkage relies on the Source-Pathway-Receptor concept, where all three factors must be present and potentially or actually linked for a potential risk to exist. Under the Guidance, a 'significant contaminant linkage' is one which gives rise to a level of risk sufficient to justify a piece of land being determined as contaminated land. Should the authority consider that there is an unacceptably high probability, supported by robust science-based evidence that significant harm would occur if no action is taken to stop it, the land should be deemed a Category 1: Human Health. Land should be placed into Category 2 if the authority concludes, on the basis that there is a strong case for considering that the risks from the land are of sufficient concern, that the land poses a significant possibility of significant harm. Both Category 1 and Category 2 cases would be capable of being determined as contaminated land under Part 2A on the grounds of significant possibility of significant harm to human health. If the legal test for significant possibility of significant harm is not met, the authority should place the land into Category 3. If the local authority considers that there is no risk or that the level of risk posed is low, the land should be placed into Category 4.

The pollution of controlled waters is defined in Section 78A(9) of the Act as "the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter". The new Guidance stresses that the Part 2A regime is designed to identify and deal with 'significant pollution' and not lesser levels of pollution. As with human health risk, Categories 1 and 2 comprise land where the local authority considers that a significant possibility of significant pollution of controlled waters exists and Categories 3 and 4 comprises cases where the authority considers that a significant possibility of such pollution does not exist. The local authority should be satisfied that a substance is continuing to enter controlled waters or is likely to enter controlled waters.

Risk Assessment Framework

"Significant harm" or "significant pollution of controlled waters" is defined in the Guidance on risk-based criteria and must be the result of one or more relevant 'contaminant linkages' relating to the land.

The presence of a contaminant linkage relies on the Source-Pathway-Receptor concept, where all three factors must be present and potentially or actually linked for a potential risk to exist. For a risk

[1] Water Act 2003 (Commencement No. 11) Order 2012

of pollution or environmental harm to occur as a result of ground contamination, all of the following elements must be present:

- A source - a substance that is capable of causing pollution or harm;
- A receptor - something which could be adversely affected by the contaminant; and
- A pathway - a route by which the contaminant can reach the receptor.

If one of these elements is absent there can be no significant risk. If all are present then the magnitude of the risk is a function of the magnitude and mobility of the source, the sensitivity of the receptor and the nature of the migration pathway.

The Land Contamination: Risk Management[2] (LCRM) provides the technical framework for structured decision making about land contamination. LCRM advocates a phased approach, commencing with Stage 1 Risk Assessment comprising:

- Preliminary Risk Assessment (PRA) – desk study and qualitative assessment to develop of an outline Conceptual Site Model (CSM);
- Generic Quantitative Risk Assessment (GQRA) – an estimation of risk through assessment of contaminant concentrations against generic assessment criteria; and
- Detailed Quantitative Risk Assessment (DQRA) – an estimation of risk through detailed site-specific risk assessment and development of site-specific assessment criteria (SSAC) and site-specific risk assessment.

Each stage of assessment is focussed upon the development and refinement of a conceptual site model, which identifies Source-Pathway-Receptor linkages. The conceptual site model has been developed with consideration to guidance including BS EN ISO 21365:2020 Soil quality – Conceptual site models for potentially contaminated sites.

RISK ESTIMATION

An assessment of environmental risks is made for each potential pollutant linkage identified.

Risk estimation has been completed in accordance with the guidance provided in:

- NHBC and Environment Agency 2008. Guidance for the Safe Development of Housing on Land Affected by Contamination. R&D Publication 66: 2008.

The following is taken directly from NHBC/EA 2008. The key to the classification is that the designation of risk is based upon the consideration of both:

- the magnitude of the potential consequence (i.e. severity) [takes into account both the potential severity of the hazard and the sensitivity of the receptor]; and
- the magnitude of probability (i.e. likelihood) [takes into account both the presence of the hazard and receptor and the integrity of the pathway].

Table 1: Classification of Consequence (after NHBC/EA 2008)

Category	Definition
Severe	Highly elevated concentrations **likely** to result in "significant harm" to human health as defined by the EPA 1990, Part 2A, if exposure occurs.

[2] Land Contamination: Risk Management (LCRM), published by the Environment Agency on 8 October 2020

Category	Definition
	Equivalent to **EA Category 1** pollution incident including persistent and/or extensive effects on water quality; leading to closure of a potable abstraction point; major impact on amenity value or major damage to agriculture or commerce. Major damage to aquatic or other ecosystems, which is likely to result in a substantial adverse change in its functioning or harm to a species of special interest that endangers the long-term maintenance of the population. Catastrophic damage to crops, buildings or property.
Medium	Elevated concentrations which could result in "significant harm" to human health as defined by the EPA 1990, Part 2A if exposure occurs. Equivalent to **EA Category 2** pollution incident including significant effect on water quality; notification required to abstractors; reduction in amenity value or significant damage to agriculture or commerce. Significant damage to aquatic or other ecosystems, which may result in a substantial adverse change in its functioning or harm to a species of special interest that may endanger the long-term maintenance of the population. Significant damage to crops, buildings or property.
Mild	Exposure to human health **unlikely** to lead to "significant harm". Equivalent to **EA Category 3** pollution incident including minimal or short-lived effect on water quality; marginal effect on amenity value, agriculture or commerce. Minor or short lived damage to aquatic or other ecosystems, which is unlikely to result in a substantial adverse change in its functioning or harm to a species of special interest that would endanger the long-term maintenance of the population. Minor damage to crops, buildings or property.
Minor	No measurable effect on humans. Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems. Repairable effects of damage to buildings, structures and services.

* For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or extensive skin ailments. Mental dysfunction is included only insofar as it is attributable to the effects of a pollutant on the body of the person concerned.

The likelihood of an event (probability) takes into account both the presence of the hazard and target and the integrity of the pathway and has been assessed based on the categories given below.

Table 2: Classification of Probability (after NHBC/EA 2008)

Category	Definition
High Likelihood	There is pollutant linkage and an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution.
Likely	There is pollutant linkage and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.
Low Likelihood	There is pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place and is less likely in the shorter term.
Unlikely	There is pollutant linkage, but circumstances are such that it is improbable that an event would occur even in the very long-term.

The potential severity of the risk and the probability of the risk occurring have been combined in accordance with the following matrix in order to give a level of risk for each potential hazard.

Table 3: The Classification of Risk (after NHBC/EA 2008)

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	**Very high**	High	Moderate	Low
	Likely	High	Moderate	Moderate/Low	Low
	Low Likelihood	Moderate	Moderate/ Low	Low	Very low
	Unlikely	Moderate/ Low	Low	Very low	Very low

Very high risk
There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without remediation action OR there is evidence that severe harm to a designated receptor is already occurring. Realisation of that risk is likely to present a substantial liability to be site owner/or occupier. Investigation is required as a matter of urgency and remediation works likely to follow in the short-term.

High risk
Harm is likely to arise to a designated receptor from an identified hazard at the site without remediation action. Realisation of the risk is likely to present a substantial liability to the site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. Remediation works may be necessary in the short-term and are likely over the longer term.

Moderate risk
It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely, that the harm would be relatively mild. Further investigative work is normally required to clarify the risk and to determine the potential liability to site owner/occupier. Some remediation works may be required in the longer term.

Low risk
It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild. It is unlikely that the site owner/or occupier would face substantial liabilities from such a risk. Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remediation works are likely to be relatively limited.

Very low risk
It is a low possibility that harm could arise to a designated receptor, but it is likely at worst, that this harm if realised would normally be mild or minor.

No potential risk
There is no potential risk if no pollution linkage has been established.

GQRA METHODOLOGIES

In order to assess the significance of contaminant concentrations, Ramboll has derived Generic Assessment Criteria (GAC) for screening purposes. GAC are derived for each critical receptor identified. Receptors are considered in relation to:

- Human health receptors (e.g. site users); and
- The water environment (e.g. groundwater and surface water).

Potential risks to human health are considered primarily using measured concentrations of contaminants in soil. Potential risks to the water environment are considered primarily using groundwater and soil leachate (most commonly in the absence of groundwater) concentrations as indicative of the potentially mobile fraction of any soil impact.

Additional receptors may be relevant, dependent on the site e.g. flora/fauna, agricultural use, water supply pipes, buried concrete etc. These are considered separately on a site specific basis if relevant.

Soil Human Health Risk Assessment

The Ramboll GAC for human health risk assessment of soils are based on the generic scenarios outlined in the Defra[3] SP1010 guidance, Contaminated Land Exposure Assessment (CLEA) methodology and associated guidance documents. The Ramboll GAC have been calculated by use of two proprietary risk assessment models (CLEA Version 1.071 and the ASTM RBCA[4] Tool Kit Version 2.6 for Chemical Releases) which have been altered, where necessary, to reflect the current UK approach to human health risk assessment as set out in LCRM, DEFRA SP1010 guidance, and the CLEA guidance documents (incorporating Science Reports SC050021/SR2 (January 2009), SR3 (January 2009), SR4 (September 2009) and the SGV reports (2009)). The Ramboll GAC include the conservative assumptions of a sandy soil type and 1% soil organic matter.

A methodology for derivation of screening values, the Category 4 Screening Levels, or C4SLs, has been developed and endorsed for use by Defra that describe a low level of risk just below the Category 3/4 boundary set in the Statutory Guidance, i.e. where concentrations are below the C4SL, there is no risk or the level of risk is acceptably low. Initially, C4SLs were developed for six common contaminants (benzo(a)pyrene, cadmium, arsenic, benzene, hexavalent chromium and lead). The Environment Agency states under their LCRM approach that they expect C4SL values to be used in risk assessments for land contamination. C4SLs for additional compounds are being developed by Contaminated Land: Applications in Real Environments (CL:AIRE) and are published on their website when approved for publication[5]. Currently additional C4SLs have been published for vinyl chloride, trichloroethene, tetrachloroethene and 1,2-dichloroethane.

Defra's SP1010 Policy Companion document states that it is anticipated that risk assessors will use the C4SL values, where derived, in line with Part 2A Statutory Guidance. In the absence of a suitable C4SL, risk assessors should identify and select appropriate generic assessment criteria in accordance with established good practice. On this basis, Ramboll has adopted the use of C4SLs where available, however minimal risk (instead of the 'low' level of risk) toxicological assumptions have been applied for in-house Ramboll GAC for other contaminants of concern within our screening assessments.

For contaminants which do not have published C4SLs, the physiochemical and toxicological data has been taken from or derived using the methodology detailed in SR7 (November 2008) and SGV reports (2009), where feasible. Ramboll also attended the Land Quality Management and Chartered Institute of Environmental Health workshop for the collaborative development of 'Suitable 4 Use Levels' (S4ULs) and reference has been made to their publication 'The LQM/CIEH S4ULs for Human Health Risk Assessment, 2015'. Review of additional UK organisation guidance including CL:AIRE and partners GAC, including addendums up until 10 April 2012 has also been made. Finally, where necessary, other published sources of (non-UK) information, such as the RBCA V2.6 database have also been reviewed.

[3] SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document, Defra, revised December 2014.

[4] American Society for Testing Materials – Risk Based Corrective Action Model, Version 2.6

[5] C4SL (claire.co.uk)

Assessment of Impact to Waters

Assessment of risks to water resources (referred to as "controlled waters" in England & Wales) is completed in general accordance with guidance provided in the Environment Agency's Approach to groundwater protection (2018[6]).

Generic assessment criteria for waters have been selected by Ramboll to assess potential risks to the identified environmental receptors. A hierarchical approach has been taken to the use of assessment criteria based on adoption of published water quality standards at European level and UK specific standards, with those standards being chosen based on the conceptual site model and identified critical receptors. For those determinants included in the analytical suite which do not have a corresponding UK drinking water or environmental screening criteria, reference is made to international guidance in accordance with Environment Agency recommendations.

Where such standards are unavailable, standards taken from other organisations, for example the World Health Organisation or OSPAR, have been used.

The list of critical legislation used in this approach is described below.

European Assessment Criteria:

- 2000/60/EC: Water Framework Directive;
- 2006/118/EC: On the Protection of Groundwater Against Pollution and Deterioration; and
- 2013/39/EU: Priority Substances in the Field of Water Policy Directive.

UK Assessment Criteria:

- UKTAG Groundwater Hazardous Substances Standards 2016, annex 2018.

English and Welsh Criteria:

- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017;
- The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015;
- The Groundwater (Water Framework Directive) (England) Direction 2016; and
- The Water Supply (Miscellaneous Amendments) Regulations (England and Wales) 2010.

Other Criteria:

- World Health Organisation (WHO) Drinking Water Regulations 4th edition 2011;
- World Health Organisation (WHO): Petroleum Products in Drinking-water. Background document for development of WHO Guidelines for Drinking-water Quality 2008;
- USEPA National Primary Drinking Water Regulations; and
- OSPAR: Establishment of a List of Predicted No Effect Concentrations (PNECs) for Naturally Occurring Substances in Produced Water. OSPAR Agreement 2014-2015.

Minimum reporting values are also considered for hazardous substances for assessment of risks to groundwater resources in order to comply with the requirements of the guidance to 'prevent' input of hazardous substances to groundwater.

Assessment of Water Impact to Human Health

A methodology for the generation of the GAC for groundwater vapours (GACgwvap) was published by the Society of Brownfield Risk Assessment (SoBRA) in February 2017[7], which is based on the CLEA model. Ramboll has adopted SoBRA's approach and modified the model input parameters to reflect site conditions and generate site SSAC for groundwater contaminant sources designed to be protective of site users for a residential and/or commercial/industrial scenario as appropriate.

[6] The Environment Agency's approach to groundwater protection; February 2018; Version 1.2.

[7] SoBRA (2017) Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater. Version 1.0

The SoBRA (GACgwvap) methodology uses the Environment Agency's CLEA software model. The CLEA software was originally provided for deriving assessment criteria for soils, not groundwater; however, groundwater assessment criteria can be extracted from the calculations within CLEA. CLEA assumes a steady state equilibrium between the sorbed, water and vapour phase concentrations in soil. Consequently, as part of the process of calculating soil phase concentrations, the software also calculates the vapour phase concentration and the pore water dissolved concentration (soil solution concentration) at the soil GAC. Therefore, for given soil assessment criteria derived to be protective of health, a soil solution concentration is also available within the CLEA calculations which would give rise to this vapour concentration at the tolerable risk level. This soil solution concentration is used as an inferred groundwater SSAC.

The proprietary risk assessment model, the ASTM RBCA[8] Tool Kit Version 2.6 for Chemical Releases, has been used for compounds which could not be run in CLEA. The RBCA model has been altered where necessary to reflect the current UK approach to human health risk assessment, as appropriate.

Contaminant Distribution Assessment

Concentrations above the GAC are considered further in relation to vertical and lateral distribution across the site. Where relevant, statistical analysis has been used with consideration to guidance provided in CL:AIRE statistical assessment guidance[9].

GROUND GAS RISK ASSESSMENT

The assessment of risks from ground gas is based on current best practice guidance provided in the following documents:

- BS8485:2015+A1:2019. Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings; and
- NHBC, 2007. Guidance on Evaluation of Development Proposals on Sites where Methane and Carbon Dioxide are Present (applicable for low rise residential housing with beam and block flooring and a clear ventilated void).

Derivation of Characteristic Situation

The risk posed by ground gases using the approaches outlined in the documents above are assessed by calculating a Gas Screening Value (GSV). Derivation of the GSV is calculated by multiplying the steady state borehole flow rate (l/hr) with the peak carbon dioxide and methane concentrations for each well. Where required, a 'worst case' condition is also calculated by multiplying the maximum recorded steady state borehole flow rate with the peak carbon dioxide and methane concentrations for different strata across the entire site or zone (as applicable).

The calculated GSV is used to derive a 'Characteristic Situation' which ranges between CS1 (very low hazard potential) to CS6 (very high hazard potential) as defined within BS8485; or to categorise the site as Red / Amber / Green (referred to as traffic lights) as defined within the NHBC guidance for low rise residential buildings.

Requirement for Gas Protection Measures

Depending on the type of proposed development, the British Standards Characteristic Situation or NHBC traffic light system is used to determine the gas protection measures needed for a building.

[8] American Society for Testing Materials – Risk Based Corrective Action Model, Version 2.6

[9] CL:AiRE (2020) Professional Guidance: Comparing Soil Contamination Data with a Critical Concentration

Gas protection measures are generally not required for CS1 or NHBC Green sites unless the Conceptual Site Model indicates a need for further consideration. Although BS8485 and NHBC guidance relates to assessment for new buildings the same assessment methodology can be applied for appraisal of existing site buildings.

BS8485 requires a gas protection score to be identified for a proposed development. This is categorised based on the 'building type' from Type A to D, based on factors including construction and use of the building, together with the control of future structural changes to the building and its maintenance, since potential risks posed by ground gases are strongly influenced by these factors. Gas protection measures are selected to meet the required gas protection score in BS8485, although for some developments in higher Characteristic Situations the gas hazard is considered too high to use the method outlined in BS8485 to define the gas protection measures and further detailed quantitative gas risk assessment is required.

For low rise residential developments, the NHBC traffic light system also uses the GSV to derive the minimum level of protection required and expectations for verification for sites classified as either Amber 1 or Amber 2. NHBC considers that standard residential housing sites with a Red classification would not normally be acceptable without a detailed gas assessment and /or possible remediation to reduce or remove the ground gas source.

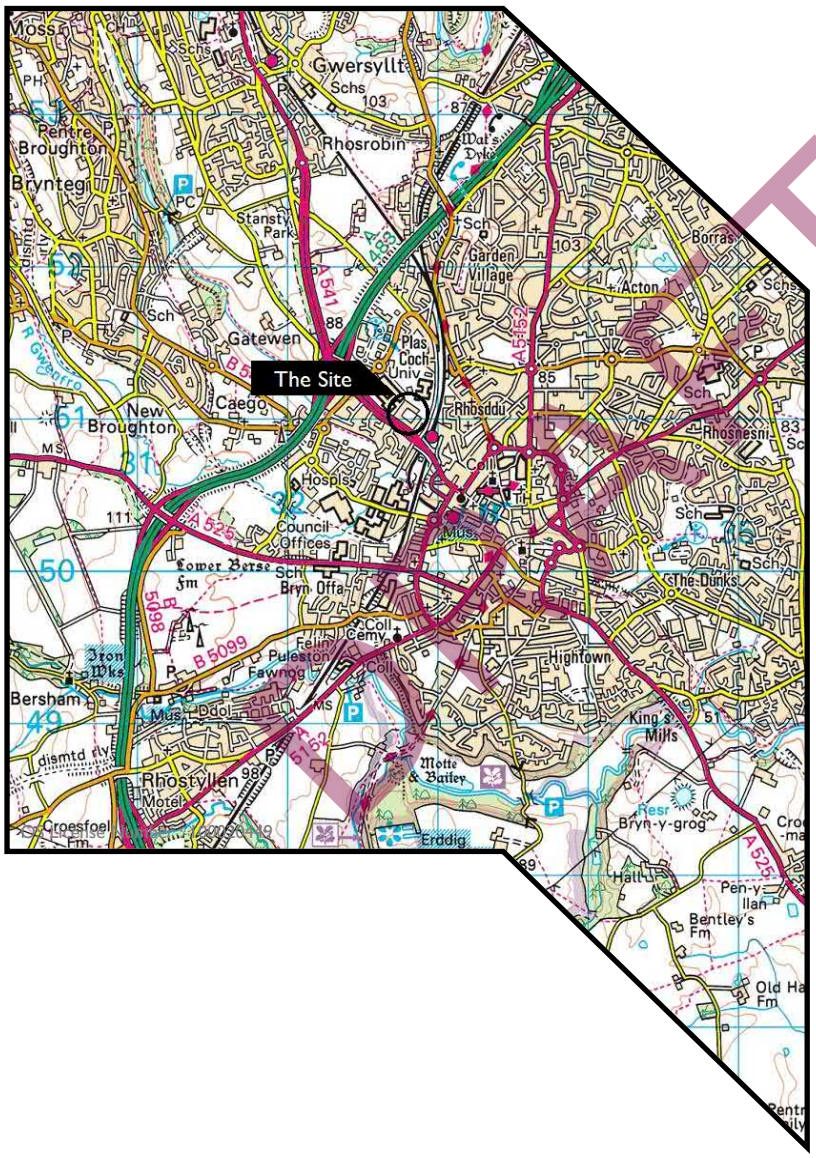
APPENDIX 2
FACTUAL SITE INVESTIGATION INFORMATION

GEOTECHNICS

geotechnical and geoenvironmental specialists

Ground Investigation

www.geotechnics.co.uk



WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION

Factual Report

for

Wrexham A.F.C.

Engineer : Ramboll UK Limited

Project Number PN224453

April 2023

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Factual Report

WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION

for
Wrexham A.F.C.

DRAFT

Engineer :
Ramboll UK Limited

Project No:
PN224453
April 2023

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WREXHAM F.C. : NEW KOP STAND GROUND INVESTIGATION

Project No : PN224453
April 2023

1.0 INTRODUCTION

A geotechnical and geo-environmental investigation was undertaken by Geotechnics Limited at the site of the proposed construction of a new south-east stand for the Wrexham F.C. ground, including an entrance concourse, terraced seating, offices and hospitality suites. In addition, the replacement of the existing floodlights is proposed.

The investigation was carried out to the instructions of [the Engineer, Ramboll UK Limited on behalf of the Client, Wrexham A.F.C. This report describes the work undertaken and presents the data obtained.

2.0 OBJECT AND SCOPE OF THE INVESTIGATION

The object of the investigation was to obtain information on the ground and groundwater conditions relating to the design of the proposed works within the limitations posed by trial hole numbers, locations, depths, methods adopted and the scope of approved in situ and laboratory testing. The investigation comprised two (2 No.) inspection pits, five (5 No.) machine-dug trial pits, six (6 No.) cable percussion boreholes and a single (1 No.) rotary open-hole borehole, in situ and laboratory testing and reporting.

The fieldwork was undertaken in two phases, the first between 28th September and 19th October 2022, and the second, between 15th and 28th February 2023.

A Factual Report was also commissioned.

3.0 PRESENTATION

A description of the site and a summary of the procedures followed during the investigation process are presented in Sections 4 to 6. The factual data so obtained are presented in Appendices 2. To 11 of this report. Attention is drawn to the General Notes and Investigation Procedures presented in Appendix 12 to aid an understanding of the procedures followed and the context in which the report should be read.

In addition, data in electronic format in accordance with "The Electronic Transfer of Geotechnical Data from Ground Investigations" published by the AGS (the AGS Format) are presented together with a copy of the report in electronic PDF format.

4.0 THE SITE

A Geotechnical and Contaminated Land Desk Study Report "*Wrexham AFC – KOP Standard Development*" was issued by Ramboll Limited under their Project Number: 1620012485, in June 2022. This desk top report provides more detailed information on the site history, site geology, hydrogeology, etc.

4.1 Location

The site is located within the corners of the existing Racecourse Ground football stadium, off the north side of the A541 Mold Road in Wrexham. The stadium is located approximately 180m northwest of Wrexham Railway Station. The site is centred at National Grid Reference SJ 328 510 and an extract from the relevant 1:50,000 Scale O.S. Map (Sheet No. 117) is included as Appendix 1.

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4.2 Description

The site is currently occupied by the existing Racecourse Ground (comprising hardstanding and concrete associated with the development) and part of the land immediately east which consists of a grassed mound. The site is roughly rectangular in shape covers a square area of approximately 14,000m^2 and is bounded to the north by Wrexham Student Village, to the east by Crispin Lane, to the south by Mold Road and to the west by Wrexham Education Facility.

Access is via the main gates to the science park off Pool Lane.

4.3 Site Geology

The 1:50,000 scale map published by the British Geological Survey, Sheet 121 (Wrexham) dated 1993 and the British Geological Survey online GeoIndex Viewer https://mapapps2.bgs.ac.uk/geoindex/home.html accessed on 14th November 2022 shows the site to be underlain by:

Made Ground is not shown to be present on published geological mapping, however, given the site's setting, a thickness of Made Ground would be anticipated associated with the construction of the stadium and surrounding pavements.

Superficial deposits of Glaciofluvial Sheet Deposits *(formally named Glacial Sand and Gravel)* and is described as: "*Sand and gravel, locally with lenses of silt, clay or organic material.*"

Bedrock of Etruria Formation *(formally named Ruabon Marl Formation)* which is Carboniferous in age and can be described as: "*Red, purple, brown, ochreous, green, grey and commonly mottled mudstone, with lenticular sandstones and conglomerates referred to as 'espleys'. Common pedogenic horizons, but coal seams are rare.*"

An unnamed east-west trending fault is shown to traverse the site. The downthrow of the fault is not shown on geological mapping however based on the surrounding geological succession it is evident that the strata to the north have been downthrown relative to those on the south side of the fault.

4.4 Hydrogeology

The Government's DEFRA Magic Map website, https://magic.defra.gov.uk/MagicMap.aspx accessed on 14th November 2022, shows that the superficial (Glaciofluvial Sheet Deposits) and bedrock geology (Etruria Formation) are both classified as Secondary A Aquifers. A Secondary A Aquifer is defined as an aquifer that comprise permeable layers that can support local water supplies, and may form an important source of base flow to rivers.

5.0 PROCEDURE

5.1 Commissioning

The work was awarded following submission of a tender for work designed by the Engineer for ground investigation of the site in accordance with the Client's requirements.

5.2 General

The procedures followed in this site investigation are based on *BS 5930: 2015+A1:2020 – Code of Practice for Site Investigations* and *BS 10175:2011+A2:2017 - Investigation of Potentially Contaminated Sites*. The soils and rocks encountered have been described in accordance with BS5930:2015+A1:2020 and BS EN ISO 14688-1:2018 and BS EN ISO 14689:2018.

The Exploratory Hole locations were specified by Ramboll and their positions are shown on the Exploratory Hole Location Plan in Appendix 11. The co-ordinates and levels shown on the Exploratory Hole Records were measured using a Leica GPS survey device. The depths quoted on the exploratory hole records are in metres below ground

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level.

Prior to the investigation, available records and plans were consulted to check for the presence of buried services at the proposed exploratory hole locations. At each exploratory hole location, with the exception of the trial pits, an inspection pit was excavated using hand tools to a depth of 1.20m below ground level to further check for the presence of underground services. Prior to and on completion of the excavation, the location was scanned using a cable avoidance tool (CAT).

At those locations where concrete was present at ground level, 350mm diameter coring was used to advance the exploratory hole through the concrete and facilitate the excavation of the inspection pit. Details of the concrete coring is included on the appropriate exploratory hole records.

5.3 Hand-Dug Inspection Pits

Two (2 No.) Inspection Pits (numbered IP100 and IP101) were excavated to a depth of 1.35m below ground level using a hand tools on 19th October 2022 during the first phase of the ground investigation.

These inspection pits were excavated to investigate the existing floodlight bases. This work was supervised on site by a geotechnical / geo-environmental engineer.

The profiles of strata or other features were recorded as excavation proceeded and measurements taken from ground level. Representative samples were taken, where appropriate, for laboratory examination and analysis and in addition, Environmental soil samples (ES) were recovered at the depths indicated on the Inspection Pit Records, presented in Appendix 2. Samples were taken directly from excavated materials deposited at the surface. Groundwater observations and trench stability notes are included on the Inspection Pit Records.

5.4 Machine-Dug Trial Pits

Five (5 No.) Trial Pits (numbered TP100 to TP104) were excavated to a depth of 3.00m below ground level using a 12 Tonne tracked excavator on 15th and 16th February 2023 during the second phase of the ground investigation. This work was supervised on site by a geotechnical / geo-environmental engineer.

The profiles of strata or other features were recorded as excavation proceeded and measurements taken from ground level. Representative samples were taken, where appropriate, for laboratory examination and analysis and in addition, Environmental soil samples (ES) were recovered at the depths indicated on the Trial Pit Records, presented in Appendix 3. Samples were taken directly from excavated materials deposited at the surface. Groundwater observations and trench stability notes are included on the Trial Pit Records.

Photographs of the machine-dug trial pits excavated during the investigation are presented in Appendix 4.

5.5 Cable Percussion Boreholes

Three (3 No.), Cable Percussive Boreholes were sunk using a combination of 200mm and 150mm diameter casings and tools to depths of 30.42m (BH100), 20.37m (BH101) and 30.00m (BH102) below ground level. This boring work was carried out between 28th September and 18th October 2022 during the first phase of the ground investigation.

A further three (3 No.), Cable Percussive Boreholes were sunk using a combination of 200mm and 150mm diameter casings and tools to depths of 15.45m (BH104), 15.43m (BH105) and 20.44m (BH106) below ground level. This boring work was carried out between 20th and 28th February 2023 during the second phase of the ground investigation.

Samples were taken from the service inspection pit, where appropriate, for laboratory examination and analysis. Representative disturbed (D and B) samples and driven open-tube thin-walled (UT) samples of the soils encountered were obtained at regular intervals. In addition, Environmental Soil samples (ES) were recovered at the depths indicated on the Cable Percussive Borehole Records, presented in Appendix 5. Soil samples taken specifically for

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chemical analyses were contained within appropriate receptacles and stored alongside ice packs in a cool box to preclude any sample deterioration prior to delivery to the testing laboratory.

Standard Penetration Tests (SPTs) were undertaken at the depths indicated on the Cable Percussive Borehole Records in accordance with BS EN ISO 22476-3:2005+A1:2011 to obtain a measure of the engineering properties of the proved strata. The full details of the SPT results are presented on the SPT Results Summary Sheets, included in Appendix 5, along with a copy of the relevant SPT Hammer Energy Test Report.

On encountering groundwater, boring operations were suspended for 20 minutes in order to record any rise in water level. Full details of groundwater observations during site work are included on the Borehole Records. Where water was added it has been noted on the Borehole Records.

Aquifer protection measures were employed when drilling the boreholes in order to preclude the creation of a pathway for contamination to migrate down towards the underlying aquifer. These protection measures comprised using 200mm diameter casing and tools to drill to the base of the Made Ground, then by installing a 1m thick bentonite plug, prior to reducing to 150mm diameter casing and tools and re-commencing drilling.

On completion, standpipes were installed in all of the cable percussive boreholes (See Section 5.8).

5.6 Rotary Open-hole Borehole

A single (1 No.) 150mm diameter boreholes (numbered BH103) was sunk utilising open-hole, drilling techniques to a depth of 20.43m below ground level. This borehole was drilled using rotary open-hole draining methods rather than cable percussive techniques due to restricted access at the borehole location.

This rotary open-hole drilling work was carried out between 10th and 13th October 2022 during the first phase of the ground investigation.

Symmetrix
The open-hole drilling was carried out utilising a Symmetrix casing advancement system. The Symmetrix system involves a concentric method of drilling through overburden with casing. The three main components of the system are:

- a pilot bit, which drills the centre part of the hole and guides the drill string.
- a casing shoe welded to the casing leading length, which is pulled down by the impact of the hammer and pilot bit.
- a symmetrical ring bit.

The Symmetrix system is an open-hole drilling technique that generally precludes the taking of samples. However, it does facilitate the installation of casing to bedrock. Standard Penetration Tests can be taken during a pause in the drilling following withdrawal of the drill rods.

The drilling equipment on this particular contract utilised water as the flushing medium. The strata descriptions are the Drilling Foreman's estimate based on sediment and chipping returns in the flushing medium. The rate of penetration is also used as an indicator of the type of material being drilled, particularly where there is loss of flush returns. Definitive classification in terms of geology or degree of disturbance is not usually possible from these sources.

Standard Penetration Tests (SPTs) were undertaken at the depths indicated on the Cable Percussive Borehole Records in accordance with BS EN ISO 22476-3:2005+A1:2011 to obtain a measure of the engineering properties of the proved strata. The full details of the SPT results are presented on the SPT Results Summary Sheets, included in Appendix 6, along with the Rotary Open-hole Borehole Record and a copy of the relevant SPT Hammer Energy Test Report.

Groundwater observations are included on the Borehole Records where appropriate. It should be noted that the addition of water to the borehole as part of the drilling process may have masked the presence of groundwater in

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the borehole. Where water was added it has been noted on the Borehole Records.
On completion, a standpipes was installed in Boreholes BH103 (see Section 5.7).

5.7 Photo-ionisation Detector (PID) Tests

Photo-ionisation detection (PID) tests were undertaken during the drilling of the boreholes and the excavation of the trial pits by testing the headspace of the Environmental Soil samples taken. The tests were carried out using a suitably calibrated MiniRAE 2000 PID Meter fitted with a 10.6eV UV lamp. The results of the PID tests are presented on the Trial Pit Records and the Cable Percussive Borehole Records with the readings reported as Volatile Organic Compounds (VOCs) recorded in parts per million.

5.8 Installations and Monitoring

Long-term monitoring of the gas and groundwater levels was made possible by the installation of standpipes as follows:

Exploratory Hole	Diameter (mm)	Standpipe Slotted Pipe (m)	Standpipe Filter Zone (m)
BH100	50	23.40 to 25.20	23.40 to 25.20
BH101	50	7.00 to 10.00	7.00 to 10.00
BH102	50	12.90 to 15.90	12.90 to 15.90
BH103	50	13.50 to 15.60	13.50 to 15.60
BH104	50	1.00 to 2.80	1.00 to 2.80
	50	12.00 to 15.00	12.00 to 15.00
BH105	50	1.00 to 2.70	1.00 to 2.70
	50	15.00 to 18.00	15.00 to 18.00
BH106	50	0.50 to 2.00	0.50 to 2.00
	50	12.00 to 15.00	12.00 to 15.00

Monitoring of the gas and groundwater levels in Boreholes BH100 to BH103 site commenced on 10th November 2022 with further visits on 16th, 24th and 30th November 2022 and also on 7th and 12th December 2022.

Monitoring of the gas and groundwater levels in Boreholes BH104 to BH106 commenced on 14th March 2023 with further visits on 20th and 29th March 2023 and also on 4th, 11th and 18th April 2023.

On each of the monitoring visits a record of the groundwater level in the standpipes was obtained.

In addition to the groundwater levels, the following parameters were measured and recorded in each standpipe using a Geotech GFM346 Gas Analyser:-

- Concentrations (% Vol) of CH_4, O_2, CO_2, along with (% LEL) CH_4 and (ppm) H_2S, CO
- Flow Rate
- Barometric Pressure
- Air Temperature

The results of the monitoring are presented in Appendix 7.

5.9 Purging and Groundwater Sampling

On 16th November and 7th December 2023, where water was recorded in Boreholes BH100 to BH103, samples were obtained (where possible) following purging of water in the standpipes.

On 14th March 2023, where water was recorded in Boreholes BH104 to BH106, samples were obtained (where possible) following purging of water in the standpipes.

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In order to obtain representative groundwater samples, where groundwater was present within the standpipes, purging was carried out by the removal of three times the volume of groundwater (where possible) within each installation. Once the standpipes had been successfully purged, a groundwater sample was taken (where possible) to enable subsequent chemical analyses to be carried out.

Groundwater samples taken specifically for chemical analyses were contained within appropriate receptacles and stored alongside ice packs in a cool box to preclude any sample deterioration prior to immediate delivery to the testing laboratory.

This work was carried on 16th November and 7th December 2022.

6.0 LABORATORY TESTING

6.1 Geotechnical

The laboratory testing schedule was specified by the Engineer. Unless otherwise stated, the tests were carried out in Geotechnics Limited's UKAS accredited Laboratory (Testing No. 1365) and were undertaken in accordance with the appropriate Standards as indicated below and on the Laboratory Test Certificate in Appendix 8. Any descriptions, opinions and interpretations are outside the scope of UKAS accreditation.

The geotechnical testing has been undertaken by Geotechnics Laboratory in Coventry. The tests undertaken can be summarised as follows:-

Standard	Test Description	Quantity
BS EN ISO 17892-1:2014	Water Content Determination	13
BS EN ISO 17892-4:2016	Particle Size Distribution Determination – Sieving Method	44
	Particle Size Distribution Determination – Pipette Method	8
BS EN ISO 17892-8:2018	Unconsolidated Undrained Triaxial Test – Single Stage	2
BS EN ISO 17892-12:2018	Determination of Liquid and Plastic Limits	13

An undisturbed driven open-tube thin-walled (UT) sample taken from Borehole BH102 between 12.50m and 12.95m below ground level was also scheduled for both an unconsolidated undrained triaxial test and an incremental loading oedometer test. It was not possible to undertake these tests due to the short sample length and the gravelly nature of the soil recovered.

The following testing was carried out at the laboratories of Derwentside Environmental Testing Services Limited (UKAS Accredited Laboratory, Number 2139):

Standard	Test Description	Quantity
BRE Special Digest 1 Suite A	Suites comprising:- Soluble Sulphate pH	9

The results of these geotechnical soil tests are presented in Appendix 8.

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6.2 Contamination

Selected samples of soil and groundwater were tested at the laboratories of Derwentside Environmental Testing Services Limited (UKAS Accredited Laboratory, Number 2139) for a number of determinands in order to check on potential site contamination. The determinands were specified by the Engineer and are detailed on the results sheets in Appendix 9 (Soils) and Appendix 10 (Groundwater) together with the test result as well as the test method, accreditation and detection limit.

Signed for and on behalf of Geotechnics Limited.

Prepared by:

Josh Noble
BSc (Hons), FGS
Engineer

Reviewed by:

John Knowles,
BSc (Hons), PGCE, MSc, C.Geol, FGS
UK Registered Ground Engineering Adviser (RoGEP)
Principal Engineer

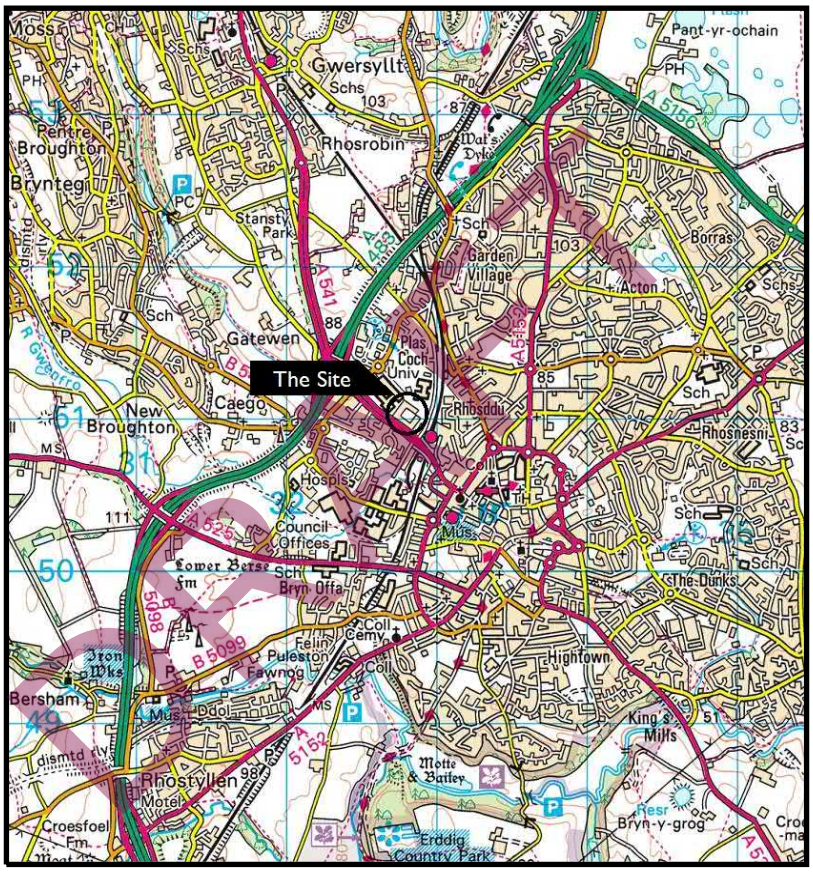
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APPENDIX I

Site Location Plan

SITE LOCATION PLAN



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WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION
for
Wrexham A.F.C.

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APPENDIX 2

Inspection Pit Records

DATA SHEET - Symbols and Abbreviations used on Records

Sample Types

B	Bulk disturbed sample
BLK	Block sample
C	Core sample
D	Small disturbed sample (tub/jar)
E	Environmental test sample
ES	Environmental soil sample
EW	Environmental water sample
G	Gas sample
L	Liner sample
LB	Large bulk disturbed sample
P	Piston sample (PF - failed P sample)
TW	Thin walled push in sample
U	Open Tube - 102mm diameter with blows to take sample. (UF - failed U sample)
UT	Thin wall open drive tube sampler - 102mm diameter with blows to take sample. (UTF - failed UT sample)
V	Vial sample
W	Water sample
#	Sample Not Recovered

Insitu Testing / Properties

CBRP	CBR using TRL probe
CHP	Constant Head Permeability Test
COND	Electrical conductivity
TC	Thermal Conductivity
TR	Thermal Resistivity
HV	Strength from Hand Vane
ICBR	CBR Test
IDEN	Density Test
IRES	Resistivity Test
MEX	CBR using Mexecone Probe Test
PKR	Packer Permeability Test
PLT	Plate Load Test
PP	Strength from Pocket Penetrometer
Temp	Temperature
VHP	Variable Head Permeability Test
VN	Strength from Insitu Vane
w%	Water content

(All other strengths from undrained triaxial testing)

S	Standard Penetration Test (SPT)
C	SPT with cone
N	SPT Result
-/-	Blows/penetration (mm) after seating drive
-*/- (mm)	Total blows/penetration
( )	Extrapolated value

Groundwater

Water Strike

Depth Water Rose To

Instrumentation



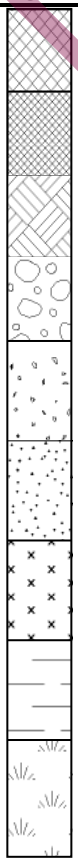
Seal

Filter

Seal

Strata

Legend



Made Ground Granular

Made Ground Cohesive

Topsoil

Cobbles and Boulders

Gravel

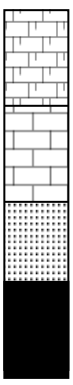
Sand

Silt

Clay

Peat

Note: Composite soil types shown by combined symbols



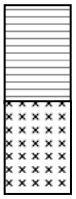
Chalk

Limestone

Sandstone

Coal

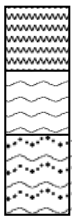
Strata, Continued



Mudstone

Siltstone

Metamorphic Rock

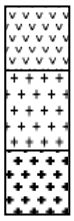


Fine Grained

Medium Grained

Coarse Grained

Igneous Rock



Fine Grained

Medium Grained

Coarse Grained

Backfill Materials



Arisings

Bentonite

Concrete

Sand

Grout

Gravel

Asphalt/Tarmacadam

Rotary Core

RQD	Rock Quality Designation (% of intact core >100mm)
FRACTURE INDEX	Fractures/metre
NI	Non-intact core
NR	No core recovery
AZCL	Assumed zone of core loss

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TRIAL PIT RECORD - *Inspection pit*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Location ID	IP100
Client	Wrexham AFC	**National Grid Coordinates**	332782.8 E 351075.5 N	**Ground Level**	86.35 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.10 - 0.50	B			MADE GROUND: Strong grey concrete.	0.10		86.25
0.30	D			MADE GROUND: Brown mottled red and black sandy clayey angular to subrounded fine to coarse gravel of siltstone, sandstone, tarmacadam and brick fragments. Sand is of ash.	0.50		85.85
0.30	ES						
0.50 - 1.10	B			MADE GROUND: Dark greyish brown sandy clayey angular to subrounded fine to coarse gravel of silstone, sandstone and tarmacadam. Rare fragments of glass. Traces of slag. At 0.55m, 0.80m wide concrete footing, extending to 1.10m depth.	1.10		85.25
0.80	D						
0.80	ES						
1.10 - 1.35	B			Firm orangish brown sandy CLAY.	1.35		85.00
1.20	D			End of Excavation			
1.20	ES						

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Excavation

Plant	Hand Tools.	**Width (B)**	0.45
Date	19/10/2022	**Length (C)**	1.45
Shoring	None.	**Date Backfilled**	19/10/2022
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks Inspection pit hand excavated to 1.20m depth and no services were found. ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial.

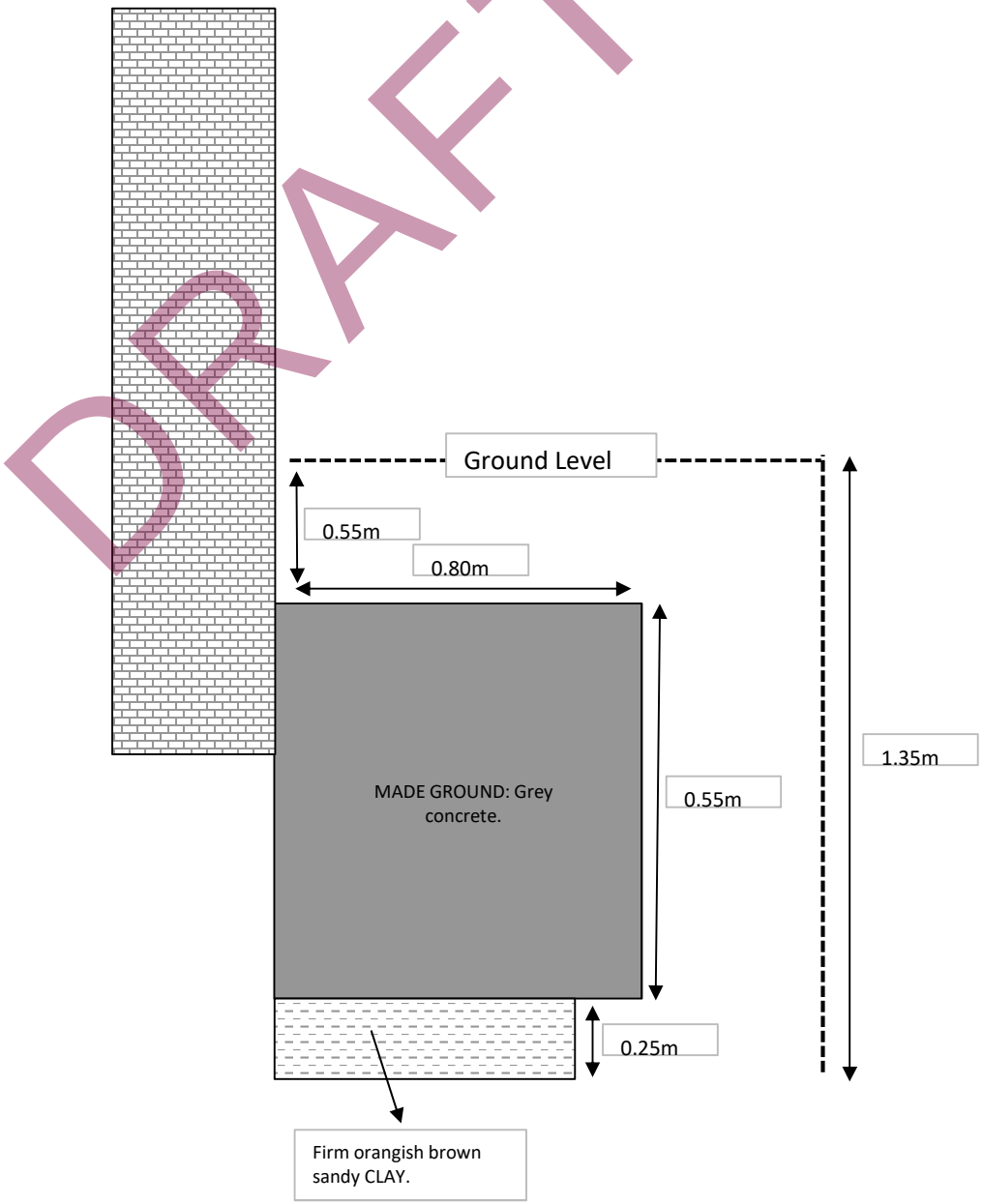
Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by PC
Checked by JN
Figure Sheet 1 of 1
07/03/2023

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NOT TO SCALE

All Measurements in Metres

All references to the origin and/or ownership of existing underground plant/services are based on the correlation of service drawings provided by the Client and visual inspection of underground plant/services during excavation. Actual origin and/or ownership remains unconfirmed.

Client:

Wrexham AFC

Project:

Wrexham AFC: New Kop Stand - Ground Investigation

Project No:	PN224453
Title:	IP100
View:	Section View
Excavated:	19 October 2022
Drawn by:	Joshua Noble
Date:	24 October 2022
Contact:	jnoble@geotechnics.co.uk

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TRIAL PIT RECORD - *Inspection pit*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Location ID	IP101
Client	Wrexham AFC	**National Grid Coordinates**	332778.8 E 351070.5 N	**Ground Level**	86.36 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.10	B			MADE GROUND: Black tarmacadam.	0.10		86.26
0.10 - 0.50	B			MADE GROUND: Black mottled borwn sandy angular to subangular fine to coarse gravel of siltstone, sandstone, limestone and brick fragments. Traces of slag. Sand is of ash.	0.50		85.86
0.20	D			MADE GROUND: Strong grey concrete.			
0.20	ES			At 0.55m, 0.95m wide concrete footing, extending to 1.10m depth.	0.80		85.56
0.40	D			MADE GROUND: Dark grey mottled brown sandy slightly clayey angular to subangular fine to coarse gravel of mudstone, slate and brick fragments.	1.10		85.26
0.40	ES			Firm orangish brown sandy CLAY.	1.35		85.01
0.80 - 1.10	B			End of Excavation			
1.00	D						
1.00	ES						
1.10 - 1.30	B						
1.20	D						
1.20	ES						

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Excavation

Plant	Hand Tools.	**Width (B)**	0.40
Date	19/10/2022	**Length (C)**	1.45
Shoring	None.	**Date Backfilled**	19/10/2022
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks Inspection pit hand excavated to 1.20m depth and no services were found. ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1L plastic tub.

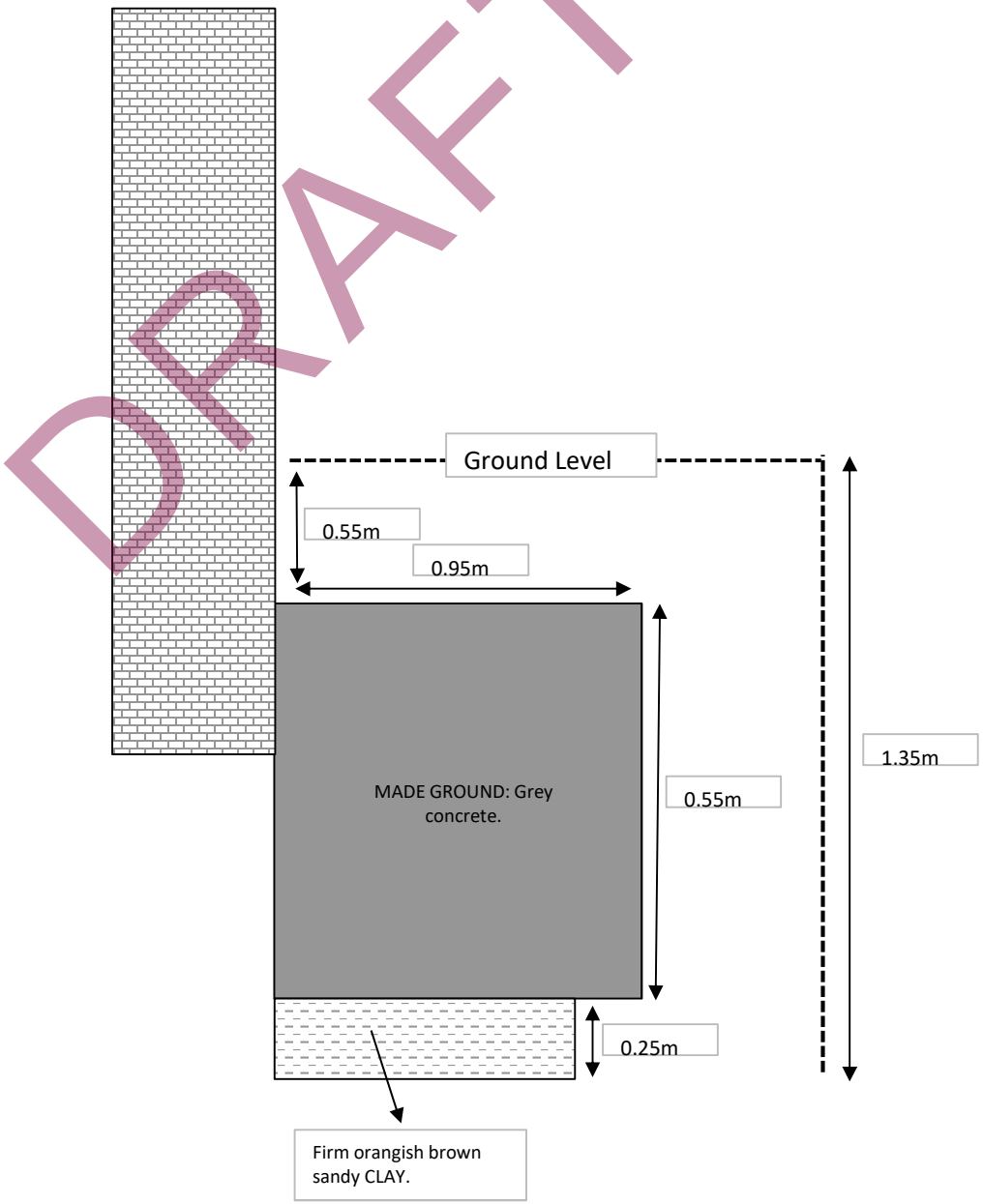
Logged by PC
Checked by JN
Figure Sheet 1 of 1
07/03/2023

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

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NOT TO SCALE

All Measurements in Metres

All references to the origin and/or ownership of existing underground plant/services are based on the correlation of service drawings provided by the Client and visual inspection of underground plant/services during excavation. Actual origin and/or ownership remains unconfirmed.

Client:

Wrexham AFC

Project:

Wrexham AFC: New Kop Stand - Ground Investigation

Project No:	PN224453
Title:	IP101
View:	Section View
Excavated:	19 October 2022
Drawn by:	Joshua Noble
Date:	24 October 2022
Contact:	jnoble@geotechnics.co.uk

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APPENDIX 3

Machine-Dug Trial Pit Records

DATA SHEET - Symbols and Abbreviations used on Records

Sample Types

B	Bulk disturbed sample
BLK	Block sample
C	Core sample
D	Small disturbed sample (tub/jar)
E	Environmental test sample
ES	Environmental soil sample
EW	Environmental water sample
G	Gas sample
L	Liner sample
LB	Large bulk disturbed sample
P	Piston sample (PF - failed P sample)
TW	Thin walled push in sample
U	Open Tube - 102mm diameter with blows to take sample. (UF - failed U sample)
UT	Thin wall open drive tube sampler - 102mm diameter with blows to take sample. (UTF - failed UT sample)
V	Vial sample
W	Water sample
#	Sample Not Recovered

Insitu Testing / Properties

CBRP	CBR using TRL probe
CHP	Constant Head Permeability Test
COND	Electrical conductivity
TC	Thermal Conductivity
TR	Thermal Resistivity
HV	Strength from Hand Vane
ICBR	CBR Test
IDEN	Density Test
IRES	Resistivity Test
MEX	CBR using Mexecone Probe Test
PKR	Packer Permeability Test
PLT	Plate Load Test
PP	Strength from Pocket Penetrometer
Temp	Temperature
VHP	Variable Head Permeability Test
VN	Strength from Insitu Vane
w%	Water content

(All other strengths from undrained triaxial testing)

S	Standard Penetration Test (SPT)
C	SPT with cone
N	SPT Result
-/-	Blows/penetration (mm) after seating drive
-*/- (mm)	Total blows/penetration
( )	Extrapolated value

Groundwater

Water Strike

Depth Water Rose To

Instrumentation



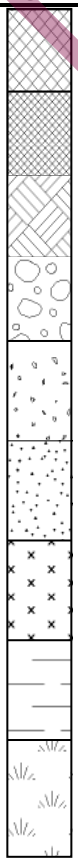
Seal

Filter

Seal

Strata

Legend



Made Ground Granular

Made Ground Cohesive

Topsoil

Cobbles and Boulders

Gravel

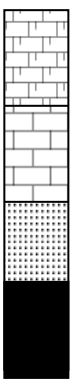
Sand

Silt

Clay

Peat

Note: Composite soil types shown by combined symbols



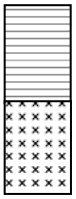
Chalk

Limestone

Sandstone

Coal

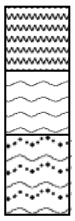
Strata, Continued



Mudstone

Siltstone

Metamorphic Rock

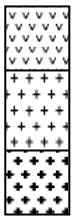


Fine Grained

Medium Grained

Coarse Grained

Igneous Rock



Fine Grained

Medium Grained

Coarse Grained

Backfill Materials



Arisings

Bentonite

Concrete

Sand

Grout

Gravel

Asphalt/Tarmacadam

Rotary Core

RQD	Rock Quality Designation (% of intact core >100mm)
FRACTURE INDEX	Fractures/metre
NI	Non-intact core
NR	No core recovery
AZCL	Assumed zone of core loss

DRAFT

TRIAL PIT RECORD - Trial Pit

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Location ID	TP100
Client	Wrexham AFC	**National Grid Coordinates**	332937.0 E 350962.0 N	**Ground Level**	87.42 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.05	B			Tree stumps and weeds over MADE GROUND: Dark brown gravelly slightly clayey fine to coarse sand with many roots and rootlets. Occasional tree roots (up to 20mm diameter). Between 0.00-0.10m in South side only, MADE GROUND: Grey concrete slabs.	0.10		87.32
0.05	ES						
0.15	B						
0.15	ES						
0.50	B			Orangish brown sandy clayey subangular to subrounded fine to coarse GRAVEL of sandstone. Medium subangular to subrounded cobble content of sandstone. Between 0.15-0.25m in South side only, MADE GROUND: Red sandy angular fine to coarse gravel of burnt shale. Occasional disposable plastic cup.	0.90		86.52
0.50	ES						
1.20	B			Greyish brown clayey medium to coarse SAND and angular to subrounded fine, medium and occasionally coarse GRAVEL of sandstone. Below 1.30m, occasional pockets and lenses of angular coarse gravel of black coal and thinly laminated mudstone. Occasional roots.			
1.20	ES						
2.00	B				2.10		85.32
2.50	B			Orangish brown sandy clayey subangular to subrounded fine to coarse GRAVEL of mudstone, sandstone and occasional coal. Medium to high subangular to subrounded cobble content of sandstone. Low angular to subrounded boulder content of sandstone. Occasional pockets of soft to firm reddish brown slightly sandy gravelly clay. Cobbles generally iron-stained and splitting along bedding.			
				End of Excavation	3.00		84.42

DRAFT

Excavation

Plant	13 Tonne Tracked Excavator	**Width (B)**	1.50
Date	15/02/2023	**Length (C)**	2.60
Shoring	None.	**Orientation (degrees)**	274
		Date Backfilled	15/02/2023
Stability	Sides Spalling below 2.10m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks

ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial.
Any clay encountered was too friable and gravelly to undertake hand shear vane tests.

Logged by JA
Checked by JK
Figure Sheet 1 of 1
10/03/2023

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS
geotechnical and geoenvironmental specialists

TRIAL PIT RECORD - Trial Pit

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Location ID	TP101
Client	Wrexham AFC	**National Grid Coordinates**	332925.0 E 350927.0 N	**Ground Level**	87.80 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
				MADE GROUND: Light grey/white sandy angular fine to coarse gravel of limestone.	0.10		87.70
0.25	B			MADE GROUND: Light greyish brown very sandy angular fine to coarse gravel of concrete, glass, slate, metal, plastic, pottery, wire and brick fragments. Medium to high angular cobble content of concrete and occasional bricks. Occasional pockets of black ash. Occasional rootlets. Occasional pieces of polythene damp-proof membrane. Occasional door handle.	0.45		87.35
0.25	ES						
0.50	B						
0.50	ES						
0.90	B			Very stiff black occasionally dark orange slightly gravelly to gravelly sandy CLAY. Gravel is subangular to subrounded fine to coarse of sandstone. Grading to clay-bound gravel in places.	0.60		87.20
0.90	ES						
1.90	B			Orangish brown sandy clayey subangular to subrounded fine to coarse GRAVEL of sandstone. Medium to high subangular to subrounded cobble content of sandstone. Low boulder content of sandstone in places. Cobbles generally iron-stained and splitting along bedding. Between 1.10-1.20m in Southeast side only: lens of black coaly gravel.			
2.50	B						
				End of Excavation	3.00		84.80

DRAFT

Excavation

Plant	13 Tonne Tracked Excavator	**Width (B)**	1.50
Date	15/02/2023	**Length (C)**	2.60
Shoring	None.	**Orientation (degrees)**	205
		Date Backfilled	15/02/2023
Stability	Sides spalling below 1.20m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks

ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial.
Any clay encountered was too friable and gravelly to undertake hand shear vane tests.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by JA
Checked by JK
Figure Sheet 1 of 1
10/03/2023

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geotechnical and geoenvironmental specialists

TRIAL PIT RECORD - Trial Pit

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Location ID	TP102
Client	Wrexham AFC	**National Grid Coordinates**	332920.0 E 350916.0 N	**Ground Level**	87.90 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
				MADE GROUND: Light grey/white sandy angular fine to coarse gravel of limestone.	0.05		87.85
0.20	B			MADE GROUND: Light greyish brown very sandy angular fine to coarse gravel of concrete, glass, slate, metal, plastic, pottery, wire and brick fragments. Medium to high angular cobble content of concrete and occasional bricks. Occasional rootlets. Occasional pieces of polythene damp-proof membrane. Occasional green plastic bottle and bullet cartridge.	0.40		87.50
0.20	ES				0.60		87.30
0.50	B				0.80		87.10
0.50	ES						
0.70	B						
0.70	D			MADE GROUND: Black occasionally red very sandy angular fine, medium occasionally coarse gravel of ash, mudstone and burnt shale. Extends to 1.20m depth in Southwest end only where it becomes red.			
0.70	ES						
1.40	B			MADE GROUND: Stiff to very stiff friable dark brown slightly gravelly sandy slightly organic clay. Gravel is angular to subangular fine to coarse of coal, black shale, sandstone and brick fragments. Fragment of old smoker's pipe. Traces of rootlets (Possible relict topsoil).			
				Orangish brown sandy clayey subangular to subrounded fine to coarse GRAVEL of sandstone. Medium subangular to subrounded cobble content of sandstone. Low boulder content of sandstone in places. Cobbles generally iron-stained and splitting along bedding. Between 1.20-1.40m in Southwest end only: MADE GROUND: Grey concrete slab with aggregate of buff sandstone and red brick fragments.			
2.80	B						
				End of Excavation	3.00		84.90

DRAFT

Excavation

Plant	13 Tonne Tracked Excavator.	**Width (B)**	1.50
Date	15/02/2023	**Length (C)**	2.60
Shoring	None.	**Orientation (degrees)**	228
		Date Backfilled	15/02/2023
Stability	Sides spalling below 0.80m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks

ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial.
Any clay encountered was too friable and gravelly to undertake hand shear vane tests.

Logged by JA
Checked by JK
Figure Sheet 1 of 1
10/03/2023

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

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TRIAL PIT RECORD - Trial Pit

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Location ID	TP103
Client	Wrexham AFC	**National Grid Coordinates**	332913.0 E 350904.0 N	**Ground Level**	87.85 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.20	B			MADE GROUND: Light grey sandy angular fine to medium predominantly coarse gravel of limestone.	0.10		87.75
0.20	ES			MADE GROUND: Light greyish brown very sandy angular fine to coarse gravel of concrete, glass, slate, metal, plastic, pottery, wire and brick fragments. Medium to high angular cobble content of concrete and occasional bricks. Occasional rootlets. Occasional pieces of polythene bags. Some wood fragments. Occasional pieces of grey plastic ducting.	0.30		87.55
0.40	B			MADE GROUND: Very stiff dark grey/black slightly garvelly to gravelly sandy clay. Gravel is angular fine to coarse of mudstone, sandstone and burnt shale.	0.60		87.25
0.40	ES			Orangish brown sandy clayey subangular to subrounded fine to coarse GRAVEL of sandstone. Medium subangular to subrounded cobble content of sandstone. Low boulder content of sandstone in places.			
0.90	B			Cobbles generally iron-stained and splitting along bedding.			
2.00	B			Between 0.50-2.40m in North corner: Red brick structure with occasional slate course (Possible sewer manhole) - with wall trending 074° to 254°.			
				Structure 0.70m wide infilled with black ash including pottery saucer to 0.90m depth and brown clayey gravel with clayware pipe fragments below.			
				Wall of structure located at 332912.4mE, 350906.7mN, 87.44m OD.			
3.00	B			End of Excavation	3.00		84.85

DRAFT

Excavation

Plant	13 Tonne Tracked Excavator.	**Width (B)**	1.50
Date	15/02/2023	**Length (C)**	3.10
Shoring	None.	**Orientation (degrees)**	320
		Date Backfilled	15/02/2023
Stability	Sides spalling below 0.60m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks

ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial.
Any clay encountered was too friable and gravelly to undertake hand shear vane tests.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by JA
Checked by JK
Figure Sheet 1 of 1
10/03/2023

GEOTECHNICS
geotechnical and geoenvironmental specialists

TRIAL PIT RECORD - Trial Pit

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Location ID	TP104
Client	Wrexham AFC	**National Grid Coordinates**	332890.0 E 350899.0 N	**Ground Level**	87.53 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
				MADE GROUND: Light grey/white sandy angular fine to coarse gravel of limestone.	0.10		87.43
0.25	B			MADE GROUND: Light greyish brown very sandy angular fine to coarse gravel of concrete, glass, slate, metal, plastic, and pottery. Medium to high angular cobble content of concrete. Clayey in places. Occasional rootlets. Occassional tree roots.	0.40		87.13
0.25	ES						
0.50	ES				0.60		86.93
0.70	B			MADE GROUND: Stiff to very stiff friable dark brown slightly gravelly sandy clay. Gravel is angular to subangular fine to coarse of sandstone. At 0.55m 50mm grey ducting (Possible redundant BT service) trending North East to South West.			
1.20	B			Orangish brown sandy clayey subangular to subrounded fine to coarse GRAVEL of sandstone. Medium subangular to subrounded cobble content of sandstone. Clayey in places. Low boulder content of sandstone in places. Occasional rootlets. Between 0.90-1.30m, grading to orangish brown clayey medium to coarse sand and subangular to subrounded fine to coarse gravel of sandstone. Between 1.00-1.80m in Southeast corner only: grey concrete slab with plastic sheeting. Strong hydrocarbon odour.			
1.50	ES						
2.50	B						
				End of Excavation	3.00		84.53

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Excavation

Plant	13 Tonne Tracked Excavator.	**Width (B)**	1.50
Date	16/02/2023	**Length (C)**	2.60
Shoring	None.	**Orientation (degrees)**	45
		Date Backfilled	16/02/2023
Stability	Sides spalling below 0.60m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks

ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial.
Any clay encountered was too friable and gravelly to undertake hand shear vane tests.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by JA
Checked by JK
Figure Sheet 1 of 1
10/03/2023

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APPENDIX 4

Machine-Dug Trial Pit Photographs

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP100 (1) - Looking West

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP100 (2) - Looking West

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP100 (3) - Looking East

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP100 (4) Arisings

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP101 (1) - Looking Southwest

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP101 (2) - Looking Northeast

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP101 (3) Arisings

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP102 (1) - Looking Southwest

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP102 (2) - Looking Northeast

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP102 (3) Arisings

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP103 (1) - Close-up of brick wall

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP103 (2) - Looking Northwest

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP103 (3)

Project Number : PN224453

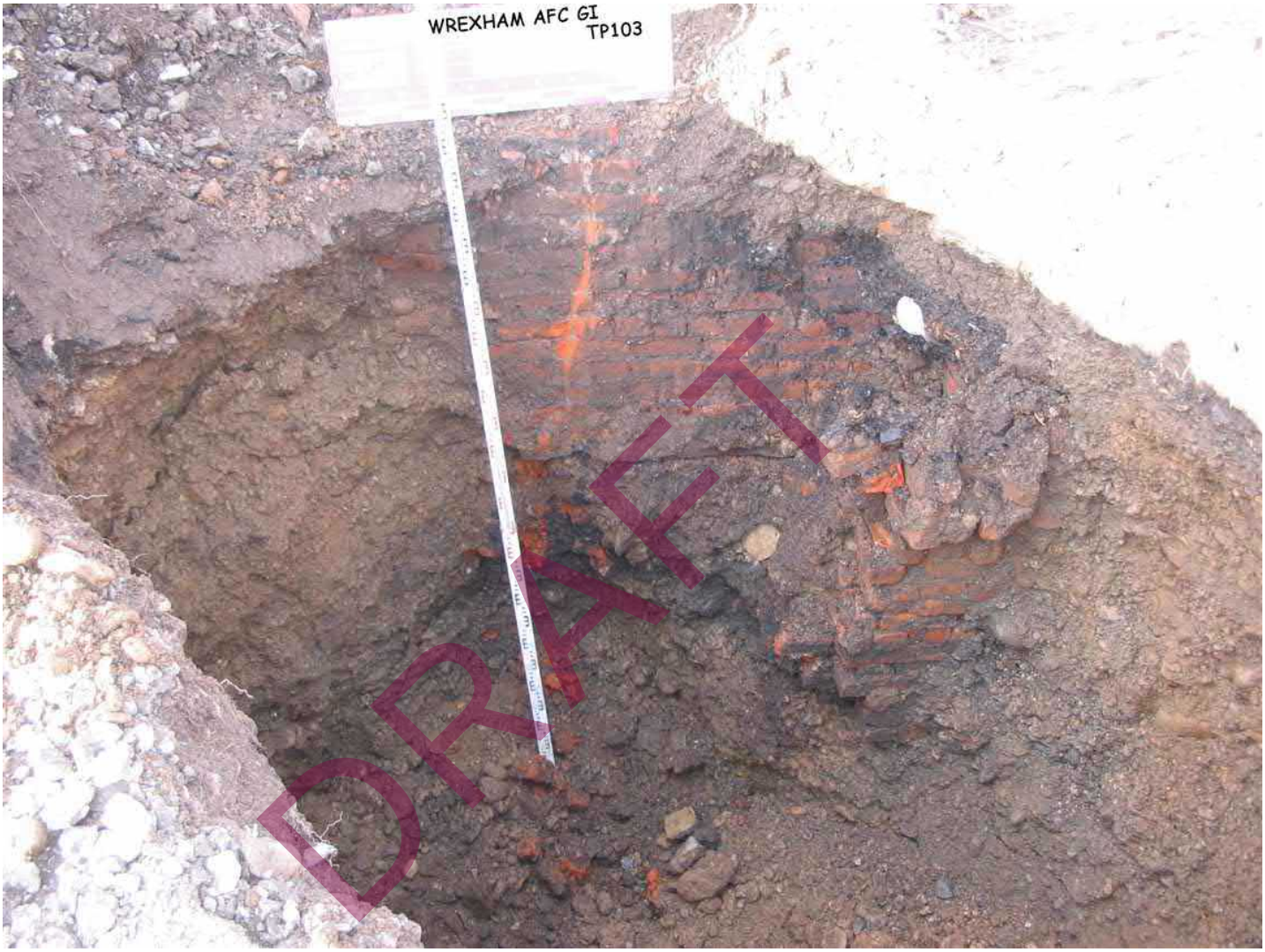
Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



Trial Pit TP103 (4)

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP103 (5) - Looking Northwest

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP103 (6)

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP103 (7)

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



Trial Pit TP103 (8)

Project Number : PN224453

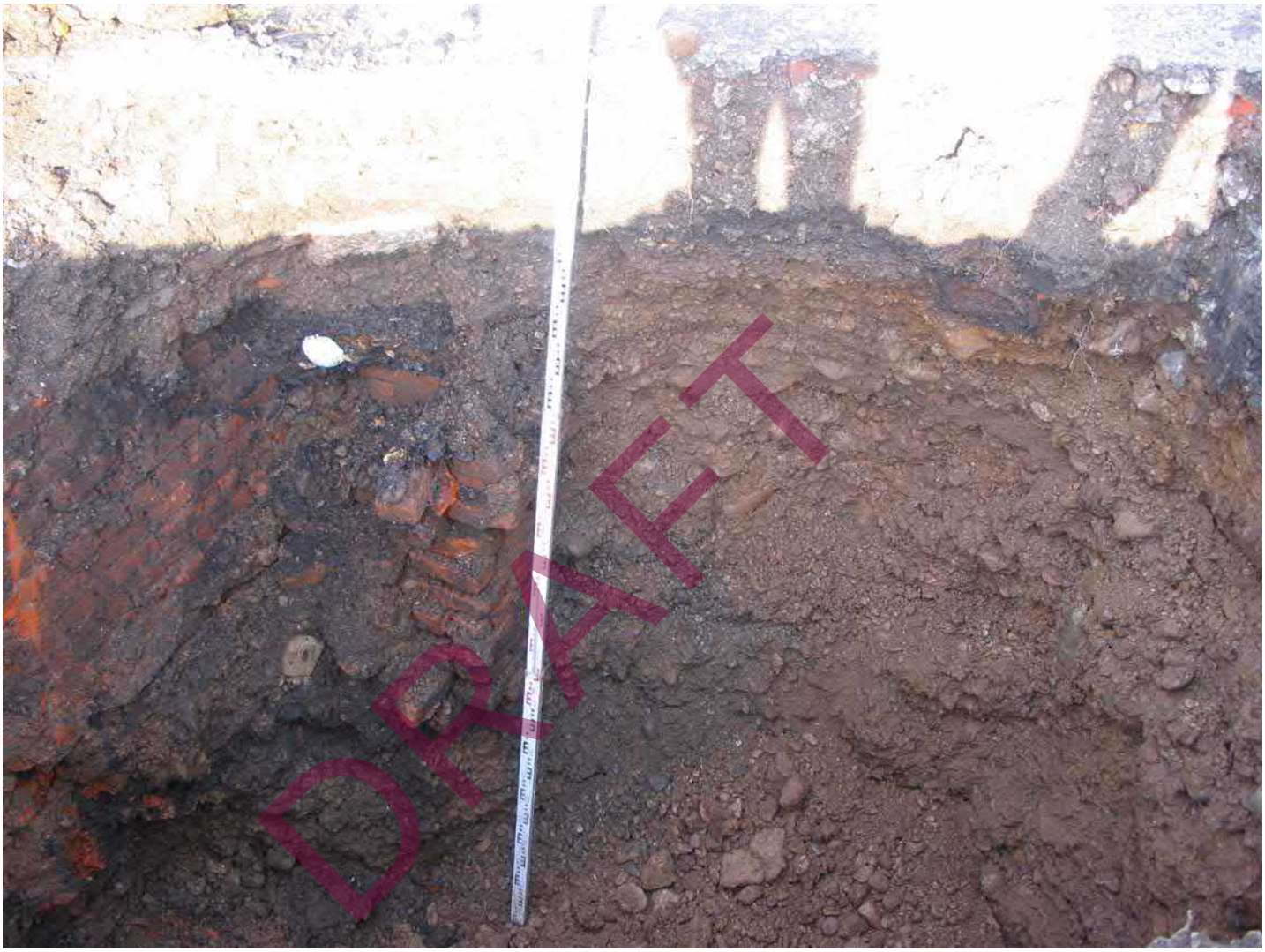
Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



Trial Pit TP103 (9)

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



Trial Pit TP103 (10)

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



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Trial Pit TP103 (11) - Looking Southeast

geotechnics

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP103 (12) Arisings

geotechnics

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



Trial Pit TP104 (1) - Looking Southwest

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



Trial Pit TP104 (2) - Looking Southwest

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



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Trial Pit TP104 (3) - Looking Northeast

geotechnics

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP104 (4) - Looking Southeast

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



Trial Pit TP104 (5) - Looking Southeast

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



Trial Pit TP104 (6) - Looking Southeast

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



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Trial Pit TP104 (7) - Looking Northwest

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



DRAFT

Trial Pit TP104 (8) - Looking Northwest

Project Number : PN224453

Project : WREXHAM F.C. NEW KOP STAND GROUND INVESTIGATION



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Trial Pit TP104 (9) Arisings

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APPENDIX 5

Cable Percussive Borehole Records, SPT Results Summary Sheets and SPT Hammer Energy Test Report

DATA SHEET - Symbols and Abbreviations used on Records

Sample Types

B	Bulk disturbed sample
BLK	Block sample
C	Core sample
D	Small disturbed sample (tub/jar)
E	Environmental test sample
ES	Environmental soil sample
EW	Environmental water sample
G	Gas sample
L	Liner sample
LB	Large bulk disturbed sample
P	Piston sample (PF - failed P sample)
TW	Thin walled push in sample
U	Open Tube - 102mm diameter with blows to take sample. (UF - failed U sample)
UT	Thin wall open drive tube sampler - 102mm diameter with blows to take sample. (UTF - failed UT sample)
V	Vial sample
W	Water sample
#	Sample Not Recovered

Insitu Testing / Properties

CBRP	CBR using TRL probe
CHP	Constant Head Permeability Test
COND	Electrical conductivity
TC	Thermal Conductivity
TR	Thermal Resistivity
HV	Strength from Hand Vane
ICBR	CBR Test
IDEN	Density Test
IRES	Resistivity Test
MEX	CBR using Mexecone Probe Test
PKR	Packer Permeability Test
PLT	Plate Load Test
PP	Strength from Pocket Penetrometer
Temp	Temperature
VHP	Variable Head Permeability Test
VN	Strength from Insitu Vane
w%	Water content

(All other strengths from undrained triaxial testing)

S	Standard Penetration Test (SPT)
C	SPT with cone
N	SPT Result
-/-	Blows/penetration (mm) after seating drive
-*/- (mm)	Total blows/penetration
( )	Extrapolated value

Groundwater

Water Strike

Depth Water Rose To

Instrumentation



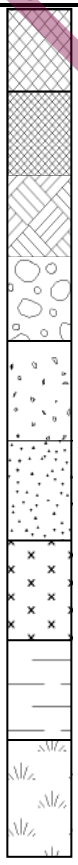
Seal

Filter

Seal

Strata

Legend



Made Ground Granular

Made Ground Cohesive

Topsoil

Cobbles and Boulders

Gravel

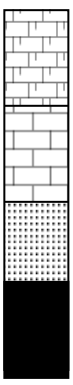
Sand

Silt

Clay

Peat

Note: Composite soil types shown by combined symbols



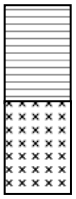
Chalk

Limestone

Sandstone

Coal

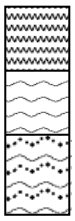
Strata, Continued



Mudstone

Siltstone

Metamorphic Rock

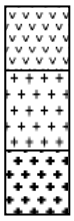


Fine Grained

Medium Grained

Coarse Grained

Igneous Rock



Fine Grained

Medium Grained

Coarse Grained

Backfill Materials



Arisings

Bentonite

Concrete

Sand

Grout

Gravel

Asphalt/Tarmacadam

Rotary Core

RQD	Rock Quality Designation (% of intact core >100mm)
FRACTURE INDEX	Fractures/metre
NI	Non-intact core
NR	No core recovery
AZCL	Assumed zone of core loss

DRAFT

BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
Client	Wrexham AFC	**National Grid Coordinates**	332776.8 E 351079.5 N	**Borehole**	BH100
				Ground Level	86.38 m OD

Sampling			Properties			Strata			Scale 1:50
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.05 - 0.20	B					MADE GROUND: Black tarmacadam.	0.05		86.33
0.15	ES					MADE GROUND: Grey slightly sandy angular to subangular fine to coarse gravel of limestone (Sub base).	0.20		86.18
0.15	ES								
0.15			PID=<0.1			MADE GROUND: Brown mottled red very sandy slightly clayey angular to subangular fine to coarse gravel of sandstone, coal and brick fragments. Sand is of ash.	0.50		85.88
0.20 - 0.50	B						0.75		85.63
0.40	ES								
0.40	ES					MADE GROUND: Soft to firm brown mottled grey and red slightly sandy gravelly clay. Gravel is angular to subangular fine to coarse of siltstone, sandstone and brick fragments.			
0.40			PID=<0.1				1.20		85.18
0.50 - 0.75	B								
0.60	ES					Brown slightly clayey fine to coarse SAND and subangular to rounded fine to coarse GRAVEL of siltstone, sandstone and limestone. Low to medium subrounded cobble content of limestone and sandstone (Possible Made Ground).			
0.60			PID=<0.1						
0.75 - 1.20	B								
1.00	ES								
1.00	ES					Medium dense brown very sandy clayey subangular to subrounded fine to coarse GRAVEL of siltstone, sandstone and coal. Occasional pockets of firm gravelly clay (Possible Made Ground).	2.00		84.38
1.00			PID=<0.1						
1.20 - 1.65		(DRY)			S17				
1.20 - 1.65	B					Medium dense brown very sandy clayey subrounded to rounded fine to coarse GRAVEL of siltstone, sandstone and slate. Medium subangular to subrounded cobble content of sandstone.			
1.20 - 1.65	D								
1.20 - 1.65	ES								
1.80	D								
2.00 - 2.45		1.70 (DRY)			S25				
2.00	ES								
2.00 - 2.45	B								
2.00 - 2.45	D								
2.00			PID=<0.1						
2.80	D								
3.00 - 3.45		3.00 (DRY)			S25	Below 4.00m, dense, very clayey.			
3.00	ES								
3.00 - 3.45	B								
3.00 - 3.45	D								
3.00 - 3.45	ES								
3.00			PID=<0.1						
3.80	D								
4.00 - 4.45		4.00 (DRY)			S34		5.40		80.98
4.00	ES					Dense brown gravelly slightly silty fine to medium SAND. Gravel is subangular to rounded fine to coarse of siltstone and sandstone.			
4.00 - 4.45	B								
4.00 - 4.45	D								
4.00			PID=<0.1				6.00		80.38
4.80	D					Brown mottled grey sandy angular to subrounded fine to coarse GRAVEL of siltstone and sandstone.			
5.00 - 5.45		4.70 (DRY)			S41				
5.00	ES					Below 6.50m, medium dense.			
5.00 - 5.45	B								
5.00 - 5.45	D								
5.00			PID=<0.1				7.10		79.28
6.00	D					Firm to stiff yellowish brown slightly sandy slightly gravelly CLAY. Gravel is subangular fine of sandstone.			
6.00	ES								
6.00			PID=<0.1						
6.50 - 6.95		6.30 (3.30)			S21				
6.50 - 6.95	B						7.90		78.48
6.50 - 6.95	D					Dense brown very sandy clayey angular to subrounded fine to coarse GRAVEL of siltstone and sandstone. Many bands of stiff slightly sandy slightly gravelly clay.			
7.00	ES								
7.00			PID=<0.1						
7.30	ES								
7.30			PID=<0.1				8.80		77.58
7.50	D			25		Very stiff brown slightly gravelly sandy CLAY. Gravel is subangular to subrounded fine to coarse of siltstone and sandstone.			
8.00 - 8.45		7.70 (7.80)			S31		9.10		77.28
8.00	ES					Dense to very dense brown mottled yellow fine to coarse SAND and angular to subrounded fine to coarse GRAVEL of siltstone and sandstone. Medium subangular cobble content of sandstone. Many bands of very stiff slightly sandy slightly gravelly clay.			
8.00 - 8.45	B								
8.00 - 8.45	D								
8.00			PID=<0.1			Very stiff brown slightly gravelly sandy CLAY. Gravel is subangular fine to coarse of siltstone and sandstone.	9.80		76.58
8.90	ES								
8.90			PID=<0.1						

DRAFT

Boring

Depth	Hole Dia.	Technique	Crew
0.05	0.35	Concrete Core	CDS
1.20	0.35	Inspection Pit	SL/JL
14.60	0.20	Cable Percussion	SL/JL
30.42	0.15	Cable Percussion	SL/JL

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			28/09/22	08:00
5.50	5.50	DRY	28/09/22	17:00
5.50	5.50	DRY	29/09/22	08:00
12.50	12.50	9.80	29/09/22	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
23.50	23.50				Seepage. No rise.

Remarks

Symbols and abbreviations are explained on the accompanying key sheets.
All dimensions are in metres.

Tarmacadam surfacing cored using 350mm diameter concrete corer. Inspection pit hand excavated to 1.20m depth and no services were found. ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial. PID = Photo-ionisation detector reading measuring total Volatile Organic Compounds (VOC's) in ppm. Chiseling from 2.60m- 2.80m for 35 minutes, 2.60m- 2.80m for 35 minutes, 2.60m- 2.80m for 35 minutes, 4.40m- 4.50m for 30 minutes, 5.40m- 5.50m for 50 minutes, 7.10m-7.60m for 80 minutes, 8.80m-9.00m for 40 minutes, 9.90m-10.30m for 60 minutes, 12.90m -13.10m for 30 minutes, 13.50m-14.00m for 275 minutes, 23.10m-23.50m for 85 minutes, 24.50m-25.20m for 170 minutes, 25.20m-25.50m for 105 minutes, 26.30m-26.60m for 115 minutes, 28.80,-30.00m for 190 minutes. Water was added to assist boring between 5.50m and 15.00m. Aquifer protection undertaken by
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Logged by PC
Checked by JN
Figure

06/04/2023

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
Client	Wrexham AFC	**National Grid Coordinates**	332776.8 E 351079.5 N	**Borehole**	BH100
				Ground Level	86.38 m OD

Scale 1:50

Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
9.00	D								
9.30	ES								
9.50 - 9.95		9.30 (7.10)			S50				
						Brown very silty fine to coarse SAND with occasional bands of clay and gravel.	10.50		75.88
9.50 - 9.95	B								
9.50 - 9.95	D								
10.00	ES								
10.00			PID=<0.1			Below 11.00m, dense to very dense. Sand is fine to medium.			
10.50	D								
11.00 - 11.45		10.70 (9.80)			S50				
11.00	ES								
11.00 - 11.45	B								
11.00			PID=<0.1						
12.00	D								
12.00	ES								
12.00			PID=<0.1						
12.50 - 12.95		12.20 (8.50)			S35				
						Very stiff brown slightly sandy slightly gravelly CLAY with a low subrounded cobble content of siltstone and sandstone. Gravel is angular to subrounded fine to coarse of siltstone and sandstone.	12.90		73.48
12.50 - 12.95	B								
12.50 - 12.95	D								
13.00	ES								
13.00			PID=<0.1						
13.50	D			9					
13.50	ES								
14.00 - 14.28		13.70 (12.10)			S50/ 127mm				
14.00	ES								
14.00 - 14.45	B								
14.00 - 14.45	D								
14.00			PID=<0.1						
15.00	D								
15.00	ES								
15.00			PID=<0.1						
						Dense brown slightly gravelly silty fine to medium SAND. Gravel is angular to subangular fine to coarse of siltstone and sandstone.	15.30		71.08
15.50 - 15.95		15.00 (10.30)			S39				
15.50 - 15.95	B								
15.50 - 15.95	D								
16.00	D								
16.00			PID=<0.1						
16.50	D					Below 16.50m, mottled black.			
17.00 - 17.43		16.60 (10.80)			S50/ 276mm	Below 17.00m, very dense, very silty. Gravel absent.			
17.00	ES								
17.00 - 17.45	B								
17.00 - 17.45	D								
17.00			PID=<0.1						
18.00	D								
18.00			PID=<0.1						
18.50 - 18.87		18.40 (11.00)			S50/ 220mm				
18.50 - 18.95	B								
19.00	ES								
19.00			PID=<0.1						
19.50	D								
20.00 - 20.29		19.80 (12.20)			S50/ 138mm				

Boring

Depth	Hole Dia.	Technique	Crew

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
12.50	12.50	8.00	30/09/22	08:00
15.00	15.00	13.10	30/09/22	17:00
15.00	15.00	9.70	03/10/22	08:00
23.50	23.50	14.30	03/10/22	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

installing a 1m thick bentonite seal at 14.60m depth and reducing casing diameter to 150mm. A 50mm standpipe was installed to 25.50m with a geowrapped slotted section from 23.50m to 25.50m with a flush cover installed. Backfill details from base of hole: bentonite seal up to 25.50m, gravel filter up to 23.50m, bentonite seal up to 0.20m, concrete up to ground level.

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Checked by JN
Figure Sheet 2 of 4
06/04/2023

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
Client	Wrexham AFC	**National Grid Coordinates**	332776.8 E 351079.5 N	**Borehole**	BH100
				Ground Level	86.38 m OD

Scale 1:50

Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
20.00	ES					Between 20.00-21.00m, many bands of clay (up to 50mm thick).			
20.00 - 20.45	B								
20.00 - 20.45	D								
20.00			PID=<0.1						
21.00	D								
21.00	ES								
21.00			PID=<0.1						
21.50 - 21.94		21.30 (13.10)			S50/ 292mm				
21.50 - 21.95	B								
22.00	ES								
22.00			PID=<0.1						
22.50	D								
23.00 - 23.27		22.80 (13.90)			S50/ 123mm				
23.00	ES					Very stiff brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of siltstone and sandstone.	23.10		63.28
23.00 - 23.45	B					Brown mottled yellow and grey very sandy silty angular to subangular fine to coarse GRAVEL of siltstone and sandstone.	23.40		62.98
23.00 - 23.45	D								
23.00			PID=<0.1						
24.00	D								
24.00	ES								
24.00			PID=<0.1						
24.50 - 24.95		24.20 (6.60)			S50	Below 24.50m, dense to very dense, slightly silty.			
24.50 - 24.95	B								
25.00	ES								
25.00			PID=<0.1						
25.50	D					Very stiff brown slightly sandy slightly gravelly CLAY with a medium subangular to subrounded cobble content of siltstone and sandstone. Gravel is angular to subrounded fine to coarse of siltstone and sandstone.	25.20		61.18
25.50	ES								
25.50			PID=<0.1						
26.00 - 26.32		25.40 (6.80)			S50/ 169mm				
26.00 - 26.45	B								
26.00 - 26.45	D			12					
26.00 - 26.45	ES								
26.00			PID=<0.1						
27.00	D								
27.00	ES								
27.00			PID=<0.1						
27.50 - 27.85		25.40 (7.30)			S50/ 198mm				
27.50 - 27.95	B								
27.50 - 27.95	D								
28.00	ES								
28.00			PID=<0.1						
28.50	D								
29.00 - 29.39		25.40 (8.80)			S50/ 238mm				
29.00	ES								
29.00 - 29.45	B								
29.00 - 29.45	D								
29.00			PID=<0.1						
30.00 - 30.27		25.40 (10.90)			S50/ 118mm				

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Boring

Depth	Hole Dia.	Technique	Crew

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
23.50	23.50	6.20	04/10/22	08:00
25.40	25.40	7.70	04/10/22	17:00
25.40	25.40	5.80	05/10/22	08:00
30.42	25.40	10.90	05/10/22	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

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Checked by JN
Figure Sheet 3 of 4
06/04/2023

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH100
Client	Wrexham AFC	**National Grid Coordinates**	332776.8 E 351079.5 N	**Ground Level**	86.38 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
30.00	D								
30.00	ES								
30.00			PID=<0.1						
						End of Borehole	30.42		55.96

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Boring				Progress					Groundwater					
Depth	Hole Dia.	Technique	Crew	Depth of Hole	Depth Cased	Depth to Water	Date	Time	Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

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Logged by PC
Checked by JN
Figure Sheet 4 of 4
06/04/2023

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH101
Client	Wrexham AFC	**National Grid Coordinates**	332729.7 E 350972.2 N	**Ground Level**	88.22 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.10 - 0.30	B					MADE GROUND: Grey stone setts.	0.10		88.12
0.20	ES					MADE GROUND: Reddish brown very sandy slightly clayey angular to subangular fine to coarse gravel of sandstone and brick fragments. Some cinder and ceramic fragments.	0.30		87.92
0.20			PID=<0.1						
0.30 - 0.70	B								
0.50	ES					MADE GROUND: Brown gravelly very clayey fine to medium sand. Gravel is angular to subrounded fine to coarse of siltstone, sandstone, coal and brick fragments.	0.70		87.52
0.50			PID=<0.1						
0.70 - 1.20	B								
1.00	ES					Brown very sandy clayey subangular to rounded fine to coarse GRAVEL of siltstone, sandstone and limestone. Medium to high subangular to rounded cobble content of sandstone and limestone (Possible Made Ground). Below 1.20m, medium dense.			
1.00			PID=<0.1						
1.20 - 1.65		(DRY)			S16				
1.20 - 1.65	B								
1.20 - 1.65	D								
1.80	D								
2.00 - 2.45		1.70 (DRY)			S17				
2.00 - 2.45	B								
2.00 - 2.45	D								
2.00 - 2.45	ES								
2.00			PID=<0.1						
2.80	D								
3.00 - 3.45		3.00 (DRY)			S18				
3.00	ES								
3.00 - 3.45	B								
3.00 - 3.45	D								
3.00			PID=<0.1						
3.80	D								
4.00 - 4.45		4.00 (DRY)			S14				
4.00	ES								
4.00 - 4.45	B								
4.00 - 4.45	D								
4.00			PID=<0.1						
4.80	D					Below 5.00m, very dense.			
5.00 - 5.38		4.70 (DRY)			S50/ 225mm				
5.00	ES								
5.00 - 5.45	B								
5.00 - 5.45	D								
5.00			PID=<0.1						
6.00	D								
6.00	ES					Firm brown slightly gravelly sandy CLAY. Gravel is angular to subrounded fine to coarse of siltstone and sandstone.	6.20		82.02
6.00			PID=<0.1						
6.30	ES								
6.50 - 6.95		6.20 (DRY)			S10				
6.50 - 6.95	B					Brown mottled yellow and white sandy angular to subrounded fine to coarse GRAVEL of siltstone and sandstone. Low to medium subangular to subounded cobble content of sandstone.	6.90		81.32
6.50 - 6.95	D								
7.00	ES								
7.00			PID=<0.1						
7.50	D								
8.00 - 8.45		7.70 (6.90)			S35	Below 8.00m, dense, very sandy.			
8.00	ES								
8.00 - 8.45	B								
8.00 - 8.45	D								
8.00			PID=<0.1						
9.00	D					Brown mottled yellow fine to coarse SAND and angular to subrounded fine to coarse GRAVEL of siltstone and sandstone.	8.80		79.42
9.00	ES								
9.00			PID=<0.1						
9.50 - 9.95		9.20 (7.80)			S28	Below 9.50m, medium dense.			
9.50 - 9.95	B								
9.50 - 9.95	D								
10.00	ES								

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Boring

Depth	Hole Dia.	Technique	Crew
0.10	0.35	Concrete Core	KS
1.20	0.35	Inspection Pit	SL/JL
14.00	0.20	Cable Percussion	SL/JL
20.37	0.15	Cable Percussion	SL/JL

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			06/10/22	08:00
5.50	5.50	DRY	06/10/22	17:00
5.50	5.50	DRY	07/10/22	08:00
14.00	13.50	11.90	07/10/22	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
					No strikes noted. Possibly masked by water added.

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Stone setts cored using 350mm diameter concrete corer. Inspection pit hand excavated to 1.20m depth and no services were found. ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial. PID = Photo-ionisation detector reading measuring total Volatile Organic Compounds (VOC's) in ppm. Chiselling from 2.50m- 2.70m for 35 minutes, 5.20m- 5.50m for 55 minutes, 10.10-10.30m for 25 minutes, 12.40-12.60m for 30 minutes, 13.10-13.50m for 95 minutes., 14.70-14.80m for 50 minutes, 15.80-16.20m for 95 minutes, 19.60-19.80m for 45 minutes. Water was added to assist boring between 7.00m and 20.00m. Aquifer protection undertaken by installing a 1m thick bentonite seal at 14.00m depth and reducing casing diameter to 150mm. A 50mm standpipe was installed to 10.00m with a geowrapped slotted section from 7.00m to 10.00m with a flush cover installed. Backfill details from base of hole:
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Logged by PC
Checked by JN
Figure
Sheet 1 of 3
06/04/2023

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
Client	Wrexham AFC	**National Grid Coordinates**	332729.7 E 350972.2 N	**Borehole**	BH101
				Ground Level	88.22 m OD

Scale 1:50

Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
10.00			PID=<0.1			Stiff brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of siltstone and sandstone.	10.10		78.12
10.50	D			21		At 10.50m, grading to slightly sandy slightly gravelly silt.			
10.50	ES								
11.00 - 11.45		10.70 (9.80)			S36	Below 11.00m, very stiff.			
11.00 - 11.45	B					Brown slightly clayey fine to medium SAND with some bands of angular to subangular fine to coarse gravel.	11.30		76.92
12.00	D					Very stiff brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of siltstone, sandstone and coal. Some bands of gravel to 17.10m depth.	12.10		76.12
12.50 - 12.95		12.00 (10.70)			S50				
12.50 - 12.95	B								
12.50 - 12.95	D								
13.50	D			15		At 13.50m, grading to slightly sandy slightly gravelly silt.			
13.50	ES								
14.00 - 14.34		14.00 (9.30)			S50/ 189mm				
14.00 - 14.45	B								
14.00 - 14.45	D								
15.00 - 15.40		15.20 (10.20)			S50/ 252mm				
15.00	D								
15.50 - 15.95	B								
15.50 - 15.95	D								
16.50	D								
17.00 - 17.42		16.70 (11.70)			S50/ 269mm	Below 17.10m, coal fragments absent.			
17.00 - 17.45	B								
18.00	D			20		At 18.00m, grading to slightly sandy slightly gravelly silt.			
18.50 - 18.88		18.20 (11.00)			S50/ 225mm				
18.50 - 18.95	B								
19.50	D					Brown silty fine to medium SAND.	19.60		68.62
19.80	D								
20.00 - 20.37		20.00 (10.70)			S50/ 217mm				

DRAFT

Boring

Depth	Hole Dia.	Technique	Crew

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
14.00	13.50	8.90	08/10/22	08:00
20.37	20.00	10.70	08/10/22	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks bentonite seal up to 12.50m, gravel filter up to 7.00m, bentonite seal up to 0.20m, concrete up to ground level.

Logged by PC
Checked by JN
Figure
Sheet 2 of 3
06/04/2023

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH101
Client	Wrexham AFC	**National Grid Coordinates**	332729.7 E 350972.2 N	**Ground Level**	88.22 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
20.00 - 20.45	B					Below 20.00m, very dense, very silty.			
						End of Borehole	20.37		67.85

DRAFT

Boring				Progress					Groundwater					
Depth	Hole Dia.	Technique	Crew	Depth of Hole	Depth Cased	Depth to Water	Date	Time	Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

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Logged by PC
Checked by JN
Figure Sheet 3 of 3
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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH102
Client	Wrexham AFC	**National Grid Coordinates**	332843.9 E 350918.6 N	**Ground Level**	88.59 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.00 - 0.15	B					MADE GROUND: Brown gravelly clayey fine to coarse sand. Gravel is angular to rounded fine to coarse of siltstone, sandstone, limestone and brick fragments. Traces of slag.	0.30		88.29
0.10	ES								
0.10			PID=<0.1						
0.15 - 0.55	B					MADE GROUND: Dark brown sandy angular to subangular fine to coarse gravel of clinker, siltstone, sandstone, and traces of ceramic fragments. Sand is of ash. At 0.55m, 100mm diameter plastic ducting exposed in inspection pit.	0.70		87.89
0.50	ES								
0.50			PID=<0.1						
0.55 - 1.20	B					Brown sandy to very sandy clayey subangular to rounded fine to coarse GRAVEL of siltstone and sandstone. Low to medium subangular to subrounded cobble content of siltstone and sandstone.			
1.00	ES								
1.00			PID=<0.1						
1.20 - 1.65		(DRY)			S7				
1.20 - 1.65	B					Below 1.20m, loose.			
1.20 - 1.65	D								
1.80	D								
2.00 - 2.45		1.70 (DRY)			S6				
2.00 - 2.45	B								
2.00 - 2.45	D								
2.00 - 2.45	ES								
2.00			PID=<0.1						
2.80	D								
3.00 - 3.45		3.00 (DRY)			S25	Below 3.00m, medium dense.			
3.00	ES								
3.00 - 3.45	#								
3.00 - 3.45	B								
3.00			PID=<0.1						
3.80	D								
4.00 - 4.45		4.00 (DRY)			S41	Below 4.00m, dense.			
4.00	ES								
4.00 - 4.45	B					Between 4.50-6.50m, slightly clayey.			
4.00 - 4.45	D								
4.00			PID=<0.1						
4.80	D					Below 5.00m, very dense.			
5.00 - 5.37		4.80 (DRY)			S50/ 217mm				
5.00	ES								
5.00 - 5.45	B								
5.00 - 5.45	D								
5.00			PID=<0.1						
6.00	D								
6.00	ES								
6.00			PID=<0.1						
6.50 - 6.95		6.20 (DRY)			S20	Below 6.50m, medium dense, grey and brown.			
6.50 - 6.95	B								
6.50 - 6.95	D								
7.00	ES								
7.00			PID=<0.1						
7.50	D								
8.00 - 8.45		7.70 (DRY)			S25				
8.00	ES								
8.00 - 8.45	B								
8.00 - 8.45	D								
8.00			PID=<0.1						
9.00	D								
9.00	ES								
9.00			PID=<0.1						
9.50 - 9.95		9.20 (DRY)			S31	Below 9.50m, dense.			
9.50 - 9.95	B								
9.50 - 9.95	D								
10.00	ES								

DRAFT

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.50	Inspection Pit	SL/JL
13.50	0.20	Cable Percussion	SL/JL
30.00	0.15	Cable Percussion	SL/JL

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			12/10/22	08:00
9.50	9.20	DRY	12/10/22	17:00
9.50	9.20	DRY	13/10/22	08:00
18.00	18.00	11.00	13/10/22	18:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
12.90	12.20	11.80	20		Fast inflow.

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Inspection pit hand excavated to 1.20m depth and no services were found. ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial. PID = Photo-ionisation detector reading measuring total Volatile Organic Compounds (VOC's) in ppm. Chiselling from 4.40m- 4.60m for 55 minutes, 5.40m- 6.00m for 75 minutes, 9.60-9.70m for 35 minutes, 11.40-11.70m for 75 minutes, 11.90-12.10m for 50 minutes, 19.90-20.00m for 35 minutes, 20.40-21.00m for 100 minutes, 22.90-23.30m for 65 minutes, 25.40-25.70m for 95 minutes, 26.00-26.40m for 70 minutes, 26.70-27.00m, for 140 minutes. Slow progress from 21.00-21.50m for 70 minutes, 22.00-22.90m for 130 minutes, 23.80-24.50m for 105 minutes, 27.20-27.80m for 140 minutes, 29.00-29.90m for 135 minutes. Water was added to assist boring between 11.00-11.90m,13.50-23.50m and 27.70-30.00m. Aquifer protection undertaken by installing a 1m thick bentonite seal at

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Figure

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
Client	Wrexham AFC	**National Grid Coordinates**	332843.9 E 350918.6 N	**Borehole**	BH102
				Ground Level	88.59 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
10.00			PID=<0.1						
10.50	D								
11.00 - 11.40		10.70 (DRY)			S50/ 246mm	Below 11.00m, very dense.			
11.00 - 11.45	#								
11.00 - 11.45	B								
12.00	D			16		Stiff brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of siltstone and sandstone.	11.90		76.69
12.50 - 12.95	UT100	12.20 (12.20)							
13.00	D					Brown mottled black silty fine to coarse SAND.	12.90		75.69
13.50	D								
14.00 - 14.44		13.80 (12.10)			S50/ 288mm	Below 14.00m, very dense.			
14.00 - 14.45	B								
14.00 - 14.45	D								
15.00	D								
15.50 - 15.95		15.50 (10.30)			S24	Below 15.50m, medium dense. Sand is fine to medium.			
15.50 - 15.95	B								
15.50 - 15.95	D								
15.50 - 15.95	ES								
16.50	D								
17.00 - 17.45	#								
17.00 - 17.45	B								
18.00 - 18.45		16.90 (11.00)			S28				
18.00	D								
18.50 - 18.95		18.20 (12.20)			S36	Below 18.50m, dense. Occasional bands of firm to stiff clay.			
18.50	B								
18.50 - 18.95	D								
19.50	D								
20.00 - 20.34		19.90 (16.00)			S50/ 195mm	Stiff brown slightly gravelly sandy CLAY with occasional bands of sand. Gravel is angular to subrounded fine to coarse of siltstone and sandstone. Thinly laminated in places.	19.90		68.69

DRAFT

Boring

Depth	Hole Dia.	Technique	Crew

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
18.00	18.00	11.80	14/10/22	08:00
23.50	23.50	13.80	14/10/22	17:00
23.50	23.50	10.60	17/10/22	08:00
27.20	26.00	17.90	17/10/22	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

13.50m depth and reducing casing diameter to 150mm. A 50mm standpipe was installed to 15.90m with a geowrapped slotted section from 12.90m to 15.90m with a flush cover installed. Backfill details from base of hole: bentonite seal up to 15.90m, gravel filter up to 12.90m, bentonite seal up to 0.20m, concrete up to ground level.

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Figure
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Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
Client	Wrexham AFC	**National Grid Coordinates**	332843.9 E 350918.6 N	**Borehole**	BH102
				Ground Level	88.59 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
20.00 - 20.45	B					Below 20.00m, very stiff.			
20.00 - 20.45	D								
21.00	D			26					
21.50 - 21.95	UT100	20.80				Between 21.50-21.95m, UUT, cu = 251kPa.			
21.50 - 21.95		(17.20)	251						
22.00	D								
22.50	D								
23.00 - 23.43		22.50 (13.80)			S50/ 277mm				
23.00 - 23.45	B					Brown silty fine to coarse SAND.	23.30		65.29
23.00 - 23.45	D								
24.00	D					Brown silty fine to coarse SAND and angular to subrounded fine to coarse GRAVEL of siltstone and sandstone. Low to medium subangular to rounded cobble content of sandstone.	23.80		64.79
24.50 - 24.93		24.20 (11.10)			S50/ 282mm	Below 24.50m, very dense.			
24.50 - 24.95	B					Very dense brown slightly gravelly very silty fine to coarse SAND. Grading to slightly gravelly sandy silt.	24.70		63.89
25.50	D					Very stiff brown slightly sandy slightly gravelly CLAY with a low subrounded cobble content of siltstone and sandstone. Gravel is subangular to subrounded fine to coarse of siltstone and sandstone. Occasional bands of sand.	25.40		63.19
26.00 - 26.29		24.20 (11.10)			S50/ 138mm	Below 26.00m, many bands of brown fine to coarse sand.			
26.00 - 26.45	B								
27.00	D			11					
27.50 - 27.83		27.20 (9.10)			S50/ 178mm				
27.50 - 27.95	B								
28.50	D								
29.00 - 29.45	B								
29.00 - 29.45	UT100	28.00 (12.80)							
29.50 - 29.95	B								
29.50 - 29.95	UT100	28.00 (14.70)							
30.00	D			14		End of Borehole	30.00		58.59

DRAFT

Boring

Depth	Hole Dia.	Technique	Crew

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
27.20	26.00	9.10	18/10/22	08:00
30.00	28.00	14.70	18/10/22	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

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Figure Sheet 3 of 3
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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
Client	Wrexham AFC	**National Grid Coordinates**	332874.1 E 350946.0 N	**Borehole**	BH104
				Ground Level	88.54 m OD

Sampling			Properties			Strata			Scale 1:50
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.00 - 0.50	B					MADE GROUND: Dark greyish brown very sandy clayey angular to subrounded fine to coarse gravel of sandstone, concrete, clinker and brick fragments. Medium cobble content. Sand is of ash.			
0.20	ES								
0.50	ES								
0.50 - 1.20	B								
1.00	ES						1.00		87.54
1.20 - 1.65		(DRY)			S7	MADE GROUND: Loose to medium dense yellowish grey and yellowish brown sandy clayey subangular to subrounded fine to coarse gravel of sandstone and occasional brick fragments. Medium cobble content.			
1.20 - 1.65	B								
1.20 - 1.65	D								
1.80	D								
2.00 - 2.45		1.80 (DRY)			S11				
2.00	ES								
2.00 - 2.45	B								
2.00 - 2.45	D								
2.80	D						2.80		85.74
3.00 - 3.45		3.00 (DRY)			S17	Medium dense becoming loose greyish brown very sandy clayey subangular to subrounded fine to coarse GRAVEL of sandstone. Medium cobble content.			
3.00	ES								
3.00 - 3.45	B								
3.00 - 3.45	D								
3.80	D								
4.00 - 4.45		4.00 (DRY)			S9				
4.00	ES						4.30		84.24
4.00 - 4.45	B					Loose greyish brown slightly silty gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of sandstone and traces of coal.			
4.00 - 4.45	D								
4.80	D								
5.00 - 5.45		4.80 (DRY)			S6				
5.00	ES						5.20		83.34
5.00 - 5.45	B					Loose yellowish brown fine to coarse SAND and subangular to subrounded fine to coarse GRAVEL of sandstone.	5.40		83.14
5.00 - 5.45	D					Firm thinly laminated brown mottled reddish brown slightly sandy CLAY.			
5.80	D								
6.00	ES								
6.00 - 6.45	UT89	6.00 (DRY)				Brown sandy slightly clayey subangular to subrounded fine to coarse GRAVEL of various lithologies. High cobble content of sandstone.	6.10		82.44
6.50	D								
7.00	D								
7.00	ES					Between 7.00-8.00m, cobble/boulder.			
7.50 - 7.62		7.50 (6.10)			S50/ 57mm				
7.50 - 7.95	B								
8.00	ES								
8.50	D								
9.00 - 9.45		9.00 (6.90)			C23	Below 9.00m, medium dense.	9.20		79.34
9.00	ES					Firm to stiff reddish brown slightly sandy gravelly CLAY with a low cobble content. Gravel is subangular to subrounded fine to coarse of various lithologies.			
9.00 - 9.45	B								
10.00	D					Brown very clayey fine to medium SAND. with traces of fine gravel.	9.90		78.64
10.00	ES								

DRAFT

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	SL/JL
5.80	0.20	Cable Percussion	SL/JL
15.45	0.15	Cable Percussion	SL/JL

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			20/02/23	08:00
9.50	9.50	7.50	20/02/23	17:00
9.50	9.50	8.30	21/02/23	08:00
15.45	15.00	11.60	21/02/23	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
					None encountered.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found. ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial. Installed a 1m thick bentonite seal at 5.80m depth and reduced casing diameter to 150mm. Chiselling: 7.00-8.00m for 130 minutes. Water was added to assist boring between 6.50m and 15.00m.
A 50mm standpipe was installed to 2.80m with a geowrapped slotted section from 1.00m to 2.80m with an up-standing cover installed.
A 50mm standpipe was installed to 15.00m with a geowrapped slotted section from 12.00m to 15.00m with an up-standing cover installed.
Backfill details from base of hole: gravel filter up to 12.00m, bentonite seal up to 2.80m, gravel filter up to 1.00m, bentonite seal up to

Logged in accordance with BS5930:2015 + A1:2020

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged by JG
Checked by JN
Figure

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH104
Client	Wrexham AFC	**National Grid Coordinates**	332874.1 E 350946.0 N	**Ground Level**	88.54 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
10.50 - 10.95		10.50 (10.30)			S43				
						Dense orangish brown very sandy SILT.	10.60		77.94
10.50 - 10.95	B					Grading to stiff brown sandy clay.	10.80		77.74
10.50 - 10.95	D					Dense orangish brown slightly silty fine to medium SAND.			
11.00	ES								
11.50	D					Medium dense orangish brown clayey fine to medium SAND with traces of fine gravel of coal.	11.50		77.04
12.00 - 12.45		12.00 (10.50)			S28				
12.00	ES								
12.00 - 12.45	B								
12.00 - 12.45	D								
13.00	D								
13.00	ES								
13.50 - 13.95		13.50 (10.70)			S20				
13.50 - 13.95	B								
13.50 - 13.95	D								
14.00	ES								
14.50	D								
15.00 - 15.45		15.00 (11.60)			S29				
15.00	ES								
15.00 - 15.45	D					End of Borehole	15.45		73.09

DRAFT

Boring				Progress					Groundwater					
Depth	Hole Dia.	Technique	Crew	Depth of Hole	Depth Cased	Depth to Water	Date	Time	Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks 0.30m, concrete up to ground level.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

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Checked by JN
Figure Sheet 2 of 2
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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH105
Client	Wrexham AFC	**National Grid Coordinates**	332880.0 E 350909.0 N	**Ground Level**	88.54 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.00 - 0.50	B					MADE GROUND: Dark brown very sandy clayey angular to subrounded fine to coarse gravel of various lithologies and brick fragments. High cobble content Sand is of ash.			
0.20	ES								
0.50	ES						0.50		88.04
0.50 - 1.20	B					MADE GROUND: Loose dark greyish brown very sandy clayey angular to subrounded fine to coarse garvel of various lithologies and brick fragments. Medium cobble content. Sand is of ash.			
1.00	ES								
1.20 - 1.65		(DRY)			S7				
1.20 - 1.65	B								
1.20 - 1.65	D								
1.80	D								
2.00 - 2.45		1.70 (DRY)			S17		2.00		86.54
2.00	ES					Medium dense to very dense greyish brown very sandy clayey angular to subrounded fine to coarse of GRAVEL various lithologies. Medium cobble content.			
2.00 - 2.45	B								
2.80	D								
3.00 - 3.17		3.00 (DRY)			S50/ 51mm	Between 3.00-3.30m, cobble/boulder.			
3.00	ES								
3.00 - 3.45	B								
3.80	D								
4.00 - 4.45		4.00 (DRY)			S25	Medium dense brownish grey very sandy clayey angular to subrounded fine to coarse GRAVEL of various lithologies. Low cobble content.	4.00		84.54
4.00	ES								
4.00 - 4.45	B								
4.80	D								
5.00 - 5.45		4.70 (DRY)			C26				
5.00	ES								
5.00 - 5.45	B								
						Between 5.80-6.50m, cobble/boulder.			
6.00	D								
6.00	ES								
6.50 - 6.95		6.20 (DRY)			C25				
6.50 - 6.95	B								
7.00	ES								
7.50	D					Firm to stiff greyish brown slightly sandy CLAY.	7.50		81.04
						Medium dense greyish brown very sandy clayey angular to subrounded fine to coarse GRAVEL of various lithologies. Low cobble content.	7.60		80.94
8.00 - 8.45		7.70 (DRY)			C26				
8.00	ES								
8.00 - 8.45	B								
9.00	D					Between 9.00-9.50m, cobble/boulder.			
9.00	ES								
9.50 - 9.95		9.20 (DRY)			C21				
9.50 - 9.95	B					Firm to stiff reddish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium of various lithologies.	9.70		78.83
10.00	ES								

DRAFT

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	SL/JL
7.00	0.20	Cable Percussion	SL/JL
15.43	0.15	Cable Percussion	SL/JL

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			23/02/23	08:00
4.00	4.00	DRY	23/02/23	17:00
4.00	4.00	DRY	24/02/23	08:00
12.00	12.00	11.6	24/02/23	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
					None encountered.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found. ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial. Chiselling: 3.00-3.30m for 40 minutes, 5.80-6.50m for 155 minutes, 9.00-9.50m for 80 minutes. Installed a 1m thick bentonite seal at 7.00m depth and reduced casing diameter to 150mm. Water was added to assist boring between 11.00m and 15.00m. A 50mm standpipe was installed to 2.00m with a geowrapped slotted section from 0.50m to 2.00m with an up-standing cover installed. A 50mm standpipe was installed to 15.00m with a geowrapped slotted section from 12.00m to 15.00m with an up-standing cover installed.

Backfill details from base of hole: gravel filter up to 12.00m, bentonite seal up to 2.00m, gravel filter up to 0.50m, bentonite seal up to

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Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

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Figure
Sheet 1 of 2
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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH105
Client	Wrexham AFC	**National Grid Coordinates**	332880.0 E 350909.0 N	**Ground Level**	88.54 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
10.50	D								
11.00	ES								
11.00 - 11.45	UT67	10.50 (DRY)				Greyish brown fine to medium SAND.	11.00		77.54
11.50	D					Brown clayey fine to medium SAND.	11.30		77.24
12.00	D								
12.00	ES								
12.50 - 12.95		12.00 (6.20)			S34	Below 12.50m, dense.			
12.50 - 12.95	B								
12.50 - 12.95	D								
13.00	ES								
13.50	D								
14.00 - 14.43		13.70 (7.80)			S60/ 276mm	Below 14.00m, very dense.			
14.00	ES								
14.00 - 14.45	B								
14.00 - 14.45	D								
15.00 - 15.43		15.00 (8.30)			S50/ 282mm				
15.00	D								
15.00	ES					End of Borehole	15.43		73.10
15.01 - 15.43	D								

DRAFT

Boring				Progress					Groundwater					
Depth	Hole Dia.	Technique	Crew	Depth of Hole	Depth Cased	Depth to Water	Date	Time	Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
				12.00	12.00	10.00	28/02/23	08:00						
				15.43	15.00	8.30	28/02/23	17:00						

Remarks 0.30m, concrete up to ground level.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by JG
Checked by JN
Figure Sheet 2 of 2
06/04/2023

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH106
Client	Wrexham AFC	**National Grid Coordinates**	332914.1 E 350958.2 N	**Ground Level**	88.58 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.00 - 0.50	B					MADE GROUND: Black to dark greyish brown very sandy clayey angular to subrounded fine to coarse gravel of various lithologies and brick fragments. Low cobble content. Sand is of ash.			
0.20	ES								
0.50	ES								
0.50 - 1.20	B								
1.00	ES						1.00		87.58
1.20 - 1.65		(DRY)			S16	MADE GROUND: Medium dense yellowish brown very sandy clayey angular to subrounded fine to coarse gravel of various lithologies and brick fragments.			
1.20 - 1.65	B								
1.20 - 1.65	D								
1.80	D								
2.00 - 2.45		1.80 (DRY)			S39	Below 2.00m, dense.			
2.00	ES								
2.00 - 2.45	B								
2.00 - 2.45	D								
2.80	D						2.70		85.88
3.00 - 3.45		3.00 (DRY)			S8	Loose greyish brown very sandy clayey angular to subrounded fine to coarse GRAVEL of various lithologies including traces of coal.			
3.00	ES								
3.00 - 3.45	B								
3.00 - 3.45	D								
3.80	D								
4.00 - 4.45		4.00 (DRY)			S28	Medium dense greyish brown very sandy clayey angular to subrounded fine to coarse GRAVEL of various lithologies. Low cobble content.	4.00		84.58
4.00	ES								
4.00 - 4.45	B								
4.00 - 4.45	D								
4.80	D								
5.00 - 5.45		4.70 (DRY)			S18				
5.00	ES								
5.00 - 5.45	B								
5.00 - 5.45	D								
						Firm greyish brown slightly sandy CLAY.	5.80		82.78
6.00	D					Medium dense dark greyish brown very sandy clayey angular to subrounded fine to coarse GRAVEL of various lithologies. Low cobble content.	5.90		82.68
6.00	ES								
6.50 - 6.95		6.20 (DRY)			S14				
6.50 - 6.95	B								
6.50 - 6.95	D								
7.00	ES								
7.50	D								
8.00 - 8.45		7.70 (DRY)			S31	Below 8.00m, dense, medium cobble content.			
8.00	ES								
8.00 - 8.45	B								
8.00 - 8.45	D								
9.00	D								
9.00	ES								
9.50 - 9.95		9.20 (DRY)			S44				
9.50 - 9.95	B					Dense greyish brown sandy slightly clayey angular to subrounded fine to coarse GRAVEL of various lithologies. Low to medium cobble content	9.80		78.78
9.50 - 9.95	D								
10.00	ES								

DRAFT

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	SL/JL
10.00	0.20	Cable Percussion	SL/JL
20.44	0.15	Cable Percussion	SL/JL

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			21/02/23	08:00
4.00	4.00	DRY	21/02/23	17:00
4.00	4.00	DRY	22/02/23	08:00
16.50	16.50	11.90	22/02/23	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
15.20	14.50	11.20	20		Fast inflow.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found. ES sample = 1 litre plastic tub, 2 x 258ml amber glass jars and 1 x 60ml VOC vial. Installed a 1m thick bentonite seal at 10.00m depth and reduced casing diameter to 150mm. Chiselling: 12.80-14.00m for 140 minutes. Water was added to assist boring between 9.90m and 20.00m.

A 50mm standpipe was installed to 2.70m with a geowrapped slotted section from 1.00m to 2.70m with an up-standing cover installed. A 50mm standpipe was installed to 18.00m with a geowrapped slotted section from 15.00m to 18.00m with an up-standing cover installed.

Backfill details from base of hole: gravel filter up to 15.00m, bentonite seal up to 2.70m, gravel filter up to 1.00m, bentonite seal up to

Logged in accordance with BS5930:2015 + A1:2020

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged by JG
Checked by JN
Figure
Sheet 1 of 3
06/04/2023

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
Client	Wrexham AFC	**National Grid Coordinates**	332914.1 E 350958.2 N	**Borehole**	BH106
				Ground Level	88.58 m OD

Scale 1:50

Sampling			Properties			Strata		
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Level (m OD)
10.50	D							
11.00 - 11.45		10.70 (10.60)			C35			
11.00	ES							
11.00 - 11.45	B							
12.00	D							
12.00	ES							
12.50 - 12.95		12.30 (12.10)			S39			
12.50 - 12.95	B							
13.00	ES					Very stiff occasionally thinly laminated reddish brown slightly sandy slightly gravelly CLAY. Gravel is subangular fine to coarse of various lithologies.	12.80	75.78
13.50	D							
14.00	ES							
14.00 - 14.45	UT100	13.50 (13.30)				Between 14.00-14.45m, UUT, cu = 353kPa, extremely high strength.		
14.50	D							
15.00	D							
15.00	ES							
						Brown silty fine to coarse SAND.	15.20	73.38
15.50 - 15.95		15.20 (11.60)			S21	Medium dense to dense brown clayey fine to medium SAND with traces of angular fine gravel of coal.	15.50	73.08
15.50 - 15.95	B							
15.50 - 15.95	D							
16.00	ES							
16.50	D							
17.00 - 17.45		16.70 (10.70)			S39			
17.00	ES							
17.00 - 17.45	B							
17.00 - 17.45	D							
18.00	D							
18.00	ES							
18.50 - 18.95		18.20 (10.90)			S29			
18.50 - 18.95	B							
19.00	ES							
19.50	D							
20.00 - 20.44		19.70 (11.70)			S50/ 288mm			

DRAFT

Boring

Depth	Hole Dia.	Technique	Crew

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
16.50	16.50	10.20	23/02/23	08:00
20.44	19.70	11.70	23/02/23	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

0.30m, concrete up to ground level.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by JG
Checked by JN
Figure Sheet 2 of 3
06/04/2023

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BOREHOLE RECORD - *Cable Percussion*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH106
Client	Wrexham AFC	**National Grid Coordinates**	332914.1 E 350958.2 N	**Ground Level**	88.58 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
20.00 20.00 - 20.44	ES D					Below 20.00m, very dense. End of Borehole	20.44		68.14

DRAFT

Boring				Progress					Groundwater					
Depth	Hole Dia.	Technique	Crew	Depth of Hole	Depth Cased	Depth to Water	Date	Time	Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by JG
Checked by JN
Figure Sheet 3 of 3
06/04/2023

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FIELDWORK RESULTS - *SPT Results Summary*

Project Wrexham FC : New Kop Stand - Ground Investigation

Engineer Ramboll UK Limited

Project No. PN224453

Client Wrexham AFC

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH100	1.20	85.18	S		3	4	4	4	4	5	17	
BH100	2.00	84.38	S		3	4	5	5	6	9	25	
BH100	3.00	83.38	S		5	7	8	5	5	7	25	
BH100	4.00	82.38	S		5	6	7	5	10	12	34	
BH100	5.00	81.38	S		3	3	5	7	9	20	41	
BH100	6.50	79.88	S		6	10	6	5	6	4	21	
BH100	8.00	78.38	S		4	6	7	7	7	10	31	
BH100	9.50	76.88	S		6	7	6	10	13	21	50	
BH100	11.00	75.38	S		6	7	10	14	15	11	50	
BH100	12.50	73.88	S		4	6	6	8	8	13	35	
BH100	14.00	72.38	S		8	17	27	23			50/127	
BH100	15.50	70.88	S		3	5	7	9	10	13	39	
BH100	17.00	69.38	S		3	7	9	13	16	12	50/276	
BH100	18.50	67.88	S		5	10	14	15	21		50/220	
BH100	20.00	66.38	S		10	13	26	24			50/138	
BH100	21.50	64.88	S		5	8	10	13	14	13	50/292	
BH100	23.00	63.38	S		12	13	27	23			50/123	
BH100	24.50	61.88	S		3	7	10	14	17	9	50	
BH100	26.00	60.38	S		6	10	13	27	10		50/169	
BH100	27.50	58.88	S		9	11	14	20	16		50/198	
BH100	29.00	57.38	S		6	10	14	27	9		50/238	
BH100	30.00	56.38	S		9	13	29	21			50/118	

DRAFT

Hammer No.:	AR2636
Energy Ratio, Er (%):	70

Remarks

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

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FIELDWORK RESULTS - *SPT Results Summary*

Project Wrexham FC : New Kop Stand - Ground Investigation

Engineer Ramboll UK Limited

Project No. PN224453

Client Wrexham AFC

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH101	1.20	87.02	S		5	5	6	5	2	3	16	
BH101	2.00	86.22	S		2	3	4	3	3	7	17	
BH101	3.00	85.22	S		3	4	4	5	4	5	18	
BH101	4.00	84.22	S		2	3	4	3	3	4	14	
BH101	5.00	83.22	S		5	9	20	8	22		50/225	
BH101	6.50	81.72	S		1	1	1	1	2	6	10	
BH101	8.00	80.22	S		2	6	7	9	9	10	35	
BH101	9.50	78.72	S		2	3	5	7	7	9	28	
BH101	11.00	77.22	S		5	7	8	8	9	11	36	
BH101	12.50	75.72	S		5	7	10	13	16	11	50	
BH101	14.00	74.22	S		9	15	15	21	14		50/189	
BH101	15.00	73.22	S		5	8	13	13	16	8	50/252	
BH101	17.00	71.22	S		4	8	10	15	16	9	50/269	
BH101	18.50	69.72	S		6	10	14	15	21		50/225	
BH101	20.00	68.22	S		5	10	14	17	19		50/217	

DRAFT

Hammer No.:	AR2636
Energy Ratio, Er (%):	70

Remarks

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

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FIELDWORK RESULTS - *SPT Results Summary*

Project Wrexham FC : New Kop Stand - Ground Investigation

Engineer Ramboll UK Limited

Project No. PN224453

Client Wrexham AFC

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH102	1.20	87.39	S		1	2	2	1	2	2	7	
BH102	2.00	86.59	S		1	2	2	1	2	1	6	
BH102	3.00	85.59	S		1	3	9	4	5	7	25	
BH102	4.00	84.59	S		5	7	6	7	8	20	41	
BH102	5.00	83.59	S		6	9	11	20	19		50/217	
BH102	6.50	82.09	S		3	4	3	5	7	5	20	
BH102	8.00	80.59	S		2	3	3	5	7	10	25	
BH102	9.50	79.09	S		5	17	7	7	8	9	31	
BH102	11.00	77.59	S		3	7	11	14	18	7	50/246	
BH102	14.00	74.59	S		4	7	10	11	14	15	50/288	
BH102	15.50	73.09	S		1	1	3	5	7	9	24	
BH102	18.00	70.59	S		2	3	4	7	8	9	28	
BH102	18.50	70.09	S		2	4	5	9	10	12	36	
BH102	20.00	68.59	S		6	10	15	18	17		50/195	
BH102	23.00	65.59	S		5	7	10	14	16	10	50/277	
BH102	24.50	64.09	S		6	9	11	13	15	11	50/282	
BH102	26.00	62.59	S		11	14	22	28			50/138	
BH102	27.50	61.09	S		7	14	17	22	11		50/178	

DRAFT

Hammer No.:	AR2636
Energy Ratio, Er (%):	70

Remarks

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

Printed: 09/03/2023

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FIELDWORK RESULTS - *SPT Results Summary*

Project Wrexham FC : New Kop Stand - Ground Investigation

Engineer Ramboll UK Limited

Project No. PN224453

Client Wrexham AFC

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH104	1.20	87.34	S		2	1	2	2	1	2	7	
BH104	2.00	86.54	S		2	2	2	3	3	3	11	
BH104	3.00	85.54	S		2	3	4	4	4	5	17	
BH104	4.00	84.54	S		2	2	3	2	2	2	9	
BH104	5.00	83.54	S		2	2	2	1	1	2	6	
BH104	7.50	81.04	S		25		50				50/57	
BH104	9.00	79.54	C		3	4	5	5	6	7	23	
BH104	10.50	78.04	S		6	8	9	9	11	14	43	
BH104	12.00	76.54	S		1	2	3	6	8	11	28	
BH104	13.50	75.04	S		1	2	3	5	5	7	20	
BH104	15.00	73.54	S		1	3	5	6	8	10	29	

DRAFT

Hammer No.:	AR2636
Energy Ratio, Er (%):	62

Remarks

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

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FIELDWORK RESULTS - *SPT Results Summary*

Project Wrexham FC : New Kop Stand - Ground Investigation

Engineer Ramboll UK Limited

Project No. PN224453

Client Wrexham AFC

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH105	1.20	87.34	S		1	1	2	2	1	2	7	
BH105	2.00	86.54	S		3	5	7	4	3	3	17	
BH105	3.00	85.54	S		9	16	50				50/51	
BH105	4.00	84.54	S		3	4	5	5	7	8	25	
BH105	5.00	83.54	C		2	3	4	7	7	8	26	
BH105	6.50	82.04	C		2	2	4	6	7	8	25	
BH105	8.00	80.54	C		9	9	7	8	5	6	26	
BH105	9.50	79.04	C		4	3	4	5	6	6	21	
BH105	12.50	76.04	S		3	3	5	7	7	15	34	
BH105	14.00	74.54	S		4	7	11	13	17	19	60/276	
BH105	15.00	73.54	S		5	7	9	11	14	16	50/282	

DRAFT

Hammer No.:	AR2636	**Remarks**
Energy Ratio, Er (%):	62	

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

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FIELDWORK RESULTS - *SPT Results Summary*

Project Wrexham FC : New Kop Stand - Ground Investigation

Engineer Ramboll UK Limited

Project No. PN224453

Client Wrexham AFC

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH106	1.20	87.38	S		2	2	3	4	4	5	16	
BH106	2.00	86.58	S		3	8	7	9	11	12	39	
BH106	3.00	85.58	S		1	2	2	2	2	2	8	
BH106	4.00	84.58	S		3	4	5	7	7	9	28	
BH106	5.00	83.58	S		3	4	4	5	4	5	18	
BH106	6.50	82.08	S		1	3	4	4	3	3	14	
BH106	8.00	80.58	S		5	9	11	7	6	7	31	
BH106	9.50	79.08	S		6	7	7	8	14	15	44	
BH106	11.00	77.58	C		5	7	7	8	9	11	35	
BH106	12.50	76.08	S		4	6	9	9	11	10	39	
BH106	15.50	73.08	S		2	3	4	4	6	7	21	
BH106	17.00	71.58	S		5	6	8	8	11	12	39	
BH106	18.50	70.08	S		2	3	5	7	8	9	29	
BH106	20.00	68.58	S		6	8	9	12	14	15	50/288	

DRAFT

Hammer No.:	AR2636	**Remarks**
Energy Ratio, Er (%):	62	

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

GEOTECHNICS geotechnical and geoenvironmental specialists

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Printed: 09/03/2023

SPT Hammer Energy Test Report

In accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING (UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	AR2636
Test Date:	07/01/2022
Report Date:	07/01/2022
File Name:	AR2636.spt
Test Operator:	JL

Instrumented Rod Data

Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	200
Accelerometer No.1:	7080
Accelerometer No.2:	11609

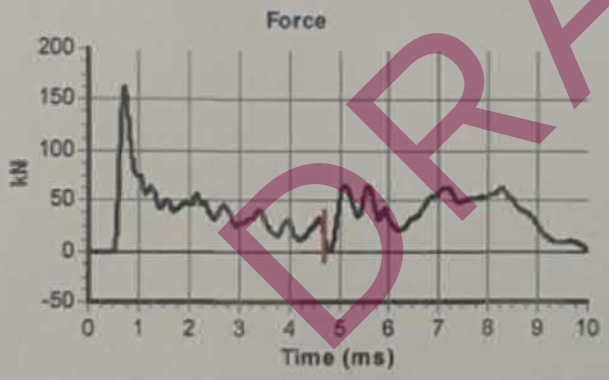
SPT Hammer Information

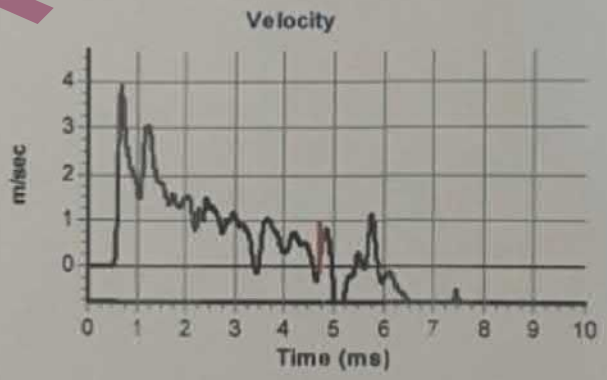
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

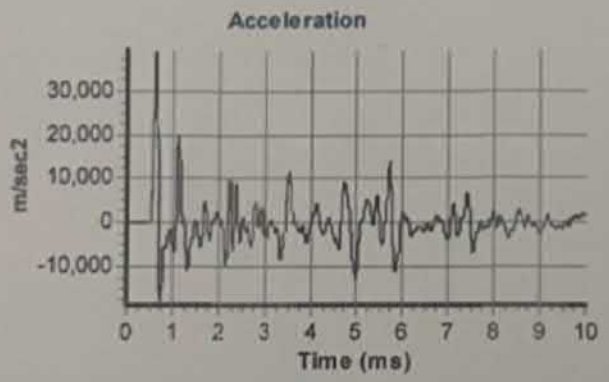
Comments / Location

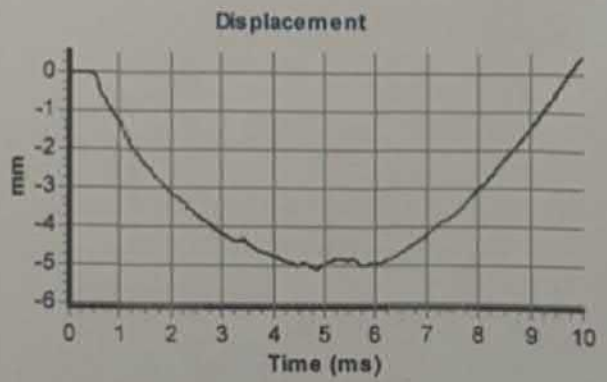
STEVE LOWRY DRILLING LTD - 78630

DRAFT









Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	329

Energy Ratio E_r (%): **70**

Signed: J.LOCK

Title: FITTER

The recommended calibration interval is 12 months

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING UK LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	AR2636
Test Date:	06/01/2023
Report Date:	06/01/2023
File Name:	AR2636.spt
Test Operator:	JL

Instrumented Rod Data

Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.5
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	72572
Accelerometer No.2:	72757

SPT Hammer Information

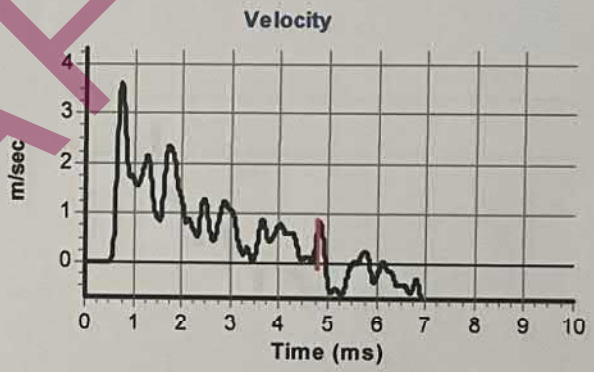
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

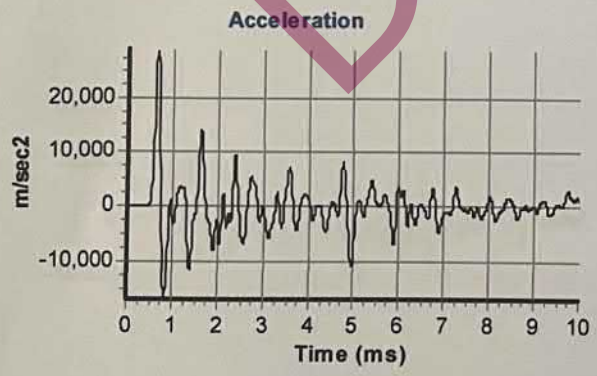
Comments / Location

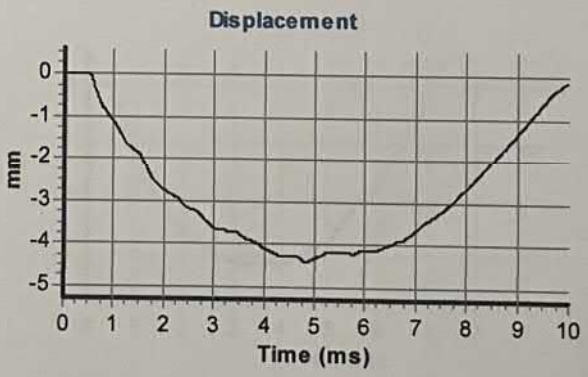
STEVE LOWERY DRILLING - 83222

DRAFT









Calculations

Area of Rod A (mm2):	970
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	291

Energy Ratio E_r (%): **62**

Signed: J.LOCK
Title: FITTER

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APPENDIX 6

Rotary Open-hole Borehole Record, SPT Results Summary Sheet and SPT Hammer Energy Test Report

DATA SHEET - Symbols and Abbreviations used on Records

Sample Types

B	Bulk disturbed sample
BLK	Block sample
C	Core sample
D	Small disturbed sample (tub/jar)
E	Environmental test sample
ES	Environmental soil sample
EW	Environmental water sample
G	Gas sample
L	Liner sample
LB	Large bulk disturbed sample
P	Piston sample (PF - failed P sample)
TW	Thin walled push in sample
U	Open Tube - 102mm diameter with blows to take sample. (UF - failed U sample)
UT	Thin wall open drive tube sampler - 102mm diameter with blows to take sample. (UTF - failed UT sample)
V	Vial sample
W	Water sample
#	Sample Not Recovered

Insitu Testing / Properties

CBRP	CBR using TRL probe
CHP	Constant Head Permeability Test
COND	Electrical conductivity
TC	Thermal Conductivity
TR	Thermal Resistivity
HV	Strength from Hand Vane
ICBR	CBR Test
IDEN	Density Test
IRES	Resistivity Test
MEX	CBR using Mexecone Probe Test
PKR	Packer Permeability Test
PLT	Plate Load Test
PP	Strength from Pocket Penetrometer
Temp	Temperature
VHP	Variable Head Permeability Test
VN	Strength from Insitu Vane
w%	Water content

(All other strengths from undrained triaxial testing)

S	Standard Penetration Test (SPT)
C	SPT with cone
N	SPT Result
-/-	Blows/penetration (mm) after seating drive
-*/- (mm)	Total blows/penetration
( )	Extrapolated value

Groundwater

Water Strike

Depth Water Rose To

Instrumentation



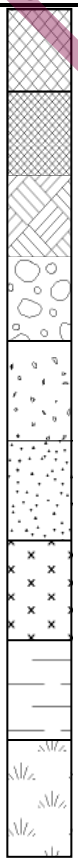
Seal

Filter

Seal

Strata

Legend



Made Ground Granular

Made Ground Cohesive

Topsoil

Cobbles and Boulders

Gravel

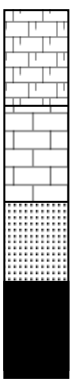
Sand

Silt

Clay

Peat

Note: Composite soil types shown by combined symbols



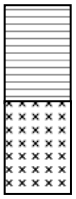
Chalk

Limestone

Sandstone

Coal

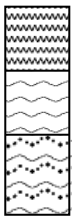
Strata, Continued



Mudstone

Siltstone

Metamorphic Rock

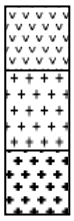


Fine Grained

Medium Grained

Coarse Grained

Igneous Rock



Fine Grained

Medium Grained

Coarse Grained

Backfill Materials



Arisings

Bentonite

Concrete

Sand

Grout

Gravel

Asphalt/Tarmacadam

Rotary Core

RQD	Rock Quality Designation (% of intact core >100mm)
FRACTURE INDEX	Fractures/metre
NI	Non-intact core
NR	No core recovery
AZCL	Assumed zone of core loss

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BOREHOLE RECORD - *Rotary open hole*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH103
Client	Wrexham AFC	**National Grid Coordinates**	332878.6 E 350989.5 N	**Ground Level**	87.94 m OD

Scale 1:50

Sampling/Testing		Drilling					Strata				
Sample / SPT Depth	SPT N / Type	Core Run/Depth (Core Dia/Time)	Depth Cased & (to Water)	TCR/ SCR (%)	RQD (%)	FI	General	Detail	Depth	Legend	Level (m OD)
							**MADE GROUND: Strong grey concrete with 5mm steel reinforcing bar.		0.15		87.79
							**MADE GROUND: Reddish brown sandy clayey gravel of sandstone and brick fragments.		0.70		87.24
							**MADE GROUND: Strong grey concrete with 5mm steel reinforcing bar.		0.90		87.04
1.20 - 1.65	C13						**Brown sandy clayey GRAVEL of siltstone and sandstone.	Below 1.20m, medium dense.			
3.00 - 3.45	C23										
4.50 - 4.95	C25										
6.00 - 6.45	C41							Below 6.00m, dense.			
7.50 - 7.95	C47										
9.00 - 9.45	C36										

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Boring				Progress					Groundwater					
Depth	Hole Dia.	Technique	Crew	Depth of Hole	Depth Cased	Depth to Water	Date	Time	Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
0.15	0.30	Concrete Core	CDS	0.00			10/10/22	08:00						No strikes noted. May have been masked by water added.
0.70	0.30	Inspection Pit	PB/KS	0.70		DRY	10/10/22	17:00						
0.90	0.30	Concrete Core	CDS	0.70		DRY	11/10/22	08:00						
1.20	0.30	Inspection Pit	PB/KS	7.50	7.50	DRY	11/10/22	17:00						

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Concrete slabs cored using 300mm diameter concrete corer. Inspection pit hand excavated to 1.20m depth and no services were found. No geotechnical /environmental samples were taken on the instruction of the Engineer. Borehole advanced using Rotary Symmetrix Drilling. A 50mm standpipe was installed to 15.60 with a geowrapped slotted section from 13.50m to 15.60m with a flush cover installed. Backfill details from base of hole: bentonite seal up to 15.60m, gravel filter up to 13.50m, bentonite seal up to 0.20m, concrete up to ground level.

Logged in accordance with BS5930:2015 + A1:2020

Logged by PC
Checked by JN
Figure
Sheet 1 of 3
07/03/2023

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BOREHOLE RECORD - *Rotary open hole*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
Client	Wrexham AFC	**National Grid Coordinates**	332878.6 E 350989.5 N	**Borehole**	BH103
				Ground Level	87.94 m OD

Sampling/Testing | Drilling | Strata | Scale 1:50

Sample / SPT Depth	SPT N / Type	Core Run/Depth (Core Dia/Time)	Depth Cased & (to Water)	TCR/ SCR (%)	RQD (%)	FI	General	Detail	Depth	Legend	Level (m OD)
10.50 - 10.93	C50/ 280mm							Below 10.50m, very dense.			
12.00 - 12.45	C38							Below 12.00m, dense.			
							**Very stiff brown sandy gravelly CLAY.		12.30		75.64
							**Light brown fine to coarse SAND.		13.30		74.64
13.50 - 13.95	C42										
							**Brown fine to coarse SAND and GRAVEL of siltstone and sandstone.		14.20		73.74
15.00 - 15.45	C46							Below 15.00m, dense.			
16.50 - 16.89	C50/ 235mm							Below 16.50m, very dense.			
18.00 - 18.43	C50/ 280mm										
							**Very stiff brown slightly clayey GRAVEL with some bands of fine to coarse sand.		18.20		69.74
20.00 - 20.43	C51/ 285mm								20.00		67.94

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Boring

Depth	Hole Dia.	Technique	Crew
20.00	0.15	Rotary Open Hole	PB/KS

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
7.50	7.50	DRY	12/10/22	08:00
16.50	16.50	12.50	12/10/22	17:00
16.50	16.50	9.40	13/10/22	08:00
20.00	20.00	12.50	13/10/22	17:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by PC
Checked by JN
Figure Sheet 2 of 3
07/03/2023

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BOREHOLE RECORD - *Rotary open hole*

Project	Wrexham FC : New Kop Stand - Ground Investigation	**Engineer**	Ramboll UK Limited	**Project No.**	PN224453
				Borehole	BH103
Client	Wrexham AFC	**National Grid Coordinates**	332878.6 E 350989.5 N	**Ground Level**	87.94 m OD

Sampling/Testing		Drilling					Strata				Scale 1:50
Sample / SPT Depth	SPT N / Type	Core Run/Depth (Core Dia/Time)	Depth Cased & (to Water)	TCR/ SCR (%)	RQD (%)	FI	General	Detail	Depth	Legend	Level (m OD)
								End of Borehole			

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Boring				Progress					Groundwater					
Depth	Hole Dia.	Technique	Crew	Depth of Hole	Depth Cased	Depth to Water	Date	Time	Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by PC
Checked by JN
Figure Sheet 3 of 3
07/03/2023

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FIELDWORK RESULTS - *SPT Results Summary*

Project Wrexham FC : New Kop Stand - Ground Investigation

Engineer Ramboll UK Limited

Project No. PN224453

Client Wrexham AFC

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH103	1.20	86.74	C		2	2	2	3	4	4	13	
BH103	3.00	84.94	C		3	4	5	5	6	7	23	
BH103	4.50	83.44	C		2	5	5	6	7	7	25	
BH103	6.00	81.94	C		4	6	8	10	11	12	41	
BH103	7.50	80.44	C		5	6	10	12	13	12	47	
BH103	9.00	78.94	C		4	6	8	9	9	10	36	
BH103	10.50	77.44	C		6	8	10	12	14	14	50/280	
BH103	12.00	75.94	C		5	7	9	11	10	8	38	
BH103	13.50	74.44	C		4	6	9	10	11	12	42	
BH103	15.00	72.94	C		3	8	10	12	11	13	46	
BH103	16.50	71.44	C		5	9	11	15	17	7	50/235	
BH103	18.00	69.94	C		7	8	10	13	15	12	50/280	
BH103	20.00	67.94	C		6	7	11	12	14	14	51/285	

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Hammer No.:	AR522
Energy Ratio, Er (%):	67

Remarks

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

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Printed: 11/11/2022

AGS

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING UK LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref:	AR522
Test Date:	08/09/2022
Report Date:	08/09/2022
File Name:	AR522.spt
Test Operator:	JL

Instrumented Rod Data

Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.5
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	72572
Accelerometer No.2:	72757

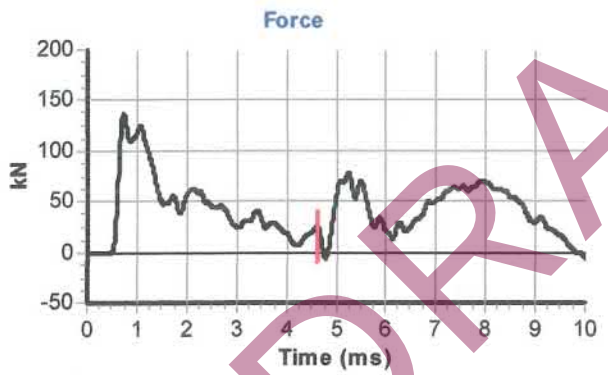
SPT Hammer Information

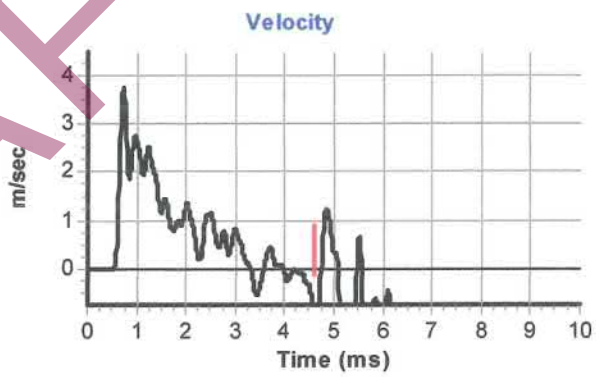
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

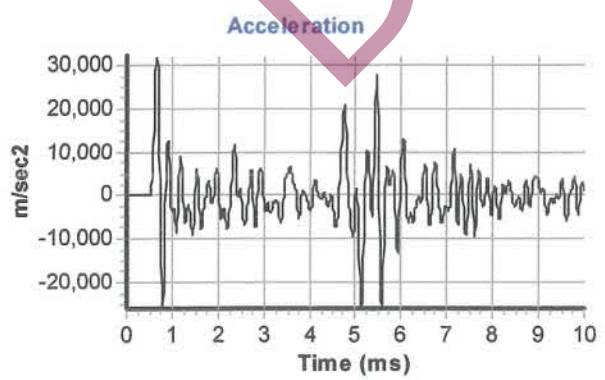
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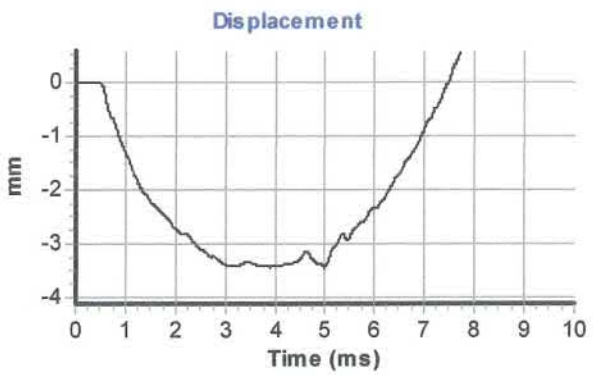
MACKLIN GEOTECH - 81825

DRAFT









Calculations

Area of Rod A (mm2):	970
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	319

Energy Ratio E_r (%): **67**

Signed: J.LOCK

Title: FITTER

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APPENDIX 7

Monitoring Results

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:** 10/11/2022	**Operative:** BT	**Visit No: 1**
Gas Analyser:	Gas Data GFM436	**PID Meter:**	RAE Systems MiniRAE			**Sheet** 1 **of** 1

Meteorological Conditions: **Wind:** Still **Cloud Cover:** Cloudy **Precipitation:** None **Ground Condition:** Dry **Atmospheric Pressure Trend:**

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH100	25.50	10/11/2022 00:00	0.0	0.0	0.0	0.0	0.9	0.9	16.1	16.0	6.0	0.0	0.0	13.0	1001.0		5.37	25.20	
BH101	10.00	10/11/2022 00:00	0.0	0.0	0.0	0.0	0.5	0.5	19.8	19.8	0.0	0.0	0.0	13.0	1001.0		8.45	10.00	
BH102	15.90	10/11/2022 00:00	0.0	0.0	0.0	0.0	0.6	0.6	19.5	19.5	1.0	0.0	0.0	13.0	1001.0		9.78	15.82	
BH103	15.60	10/11/2022 00:00	0.0	0.0	0.0	0.0	0.3	0.3	20.1	20.1	0.0	0.0	0.0	13.0	1001.0		9.12	15.60	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:** 16/11/2022	**Operative:** BT	**Visit No: 2**
Gas Analyser:	Gas Data GFM436	**PID Meter:**	RAE Systems MiniRAE			**Sheet** 1 **of** 1

Meteorological Conditions: **Wind:** Still **Cloud Cover:** Cloudy **Precipitation:** None **Ground Condition:** Dry **Atmospheric Pressure Trend:**

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH100	25.50	16/11/2022 00:00	0.0	0.0	0.0	0.0	0.9	0.9	16.6	16.6	0.0	0.0	0.0	6.0	978.0		5.65	25.03	
BH101	10.00	16/11/2022 00:00	0.0	0.0	0.0	0.0	0.6	0.6	19.1	19.1	0.0	0.0	0.0	6.0	978.0		8.44	10.00	
BH102	15.90	16/11/2022 00:00	0.0	0.0	0.0	0.0	0.6	0.6	20.2	20.2	0.0	0.0	0.0	6.0	978.0		9.77	15.87	
BH103	15.60	16/11/2022 00:00	0.0	0.0	0.0	0.0	0.4	0.3	20.7	20.7	1.0	0.0	0.0	6.0	978.0		11.10	15.60	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:** 24/11/2022	**Operative:** BT	**Visit No: 2**
Gas Analyser:	Gas Data GFM436	**PID Meter:**	RAE Systems MiniRAE			**Sheet** 1 **of** 1

Meteorological Conditions: **Wind:** Still **Cloud Cover:** Cloudy **Precipitation:** None **Ground Condition:** Dry **Atmospheric Pressure Trend:**

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH100	25.50	24/11/2022 00:00	1.7	1.7	0.0	0.0	0.6	0.6	18.4	18.4	0.0	0.0		8.0	982.0		5.25	25.03	
BH101	10.00	24/11/2022 00:00	0.0	0.0	0.0	0.0	0.5	0.5	19.7	19.7	0.0	0.0		8.0	982.0		8.35	10.00	
BH102	15.90	24/11/2022 00:00	0.0	0.0	0.0	0.0	0.6	0.6	20.1	20.1	0.0	0.0		8.0	982.0		9.63	15.87	
BH103	15.60	24/11/2022 00:00	0.0	0.0	0.0	0.0	0.2	0.2	21.0	21.0	0.0	0.0		8.0	982.0		8.98	15.60	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:** 30/11/2022	**Operative:** BT	**Visit No: 4**
Gas Analyser:	Gas Data GFM436	**PID Meter:**	RAE Systems MiniRAE			**Sheet** 1 **of** 1

Meteorological Conditions: **Wind:** Still **Cloud Cover:** Cloudy **Precipitation:** None **Ground Condition:** Dry **Atmospheric Pressure Trend:**

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH100	25.50	30/11/2022 00:00	0.0	0.0	0.0	0.0	0.8	0.8	18.4	18.4	0.0	0.0		4.0	1013.0		5.56	25.03	
BH101	10.00	30/11/2022 00:00	0.0	0.0	0.0	0.0	0.5	0.5	19.9	19.9	0.0	0.0		4.0	1013.0		8.27	10.00	
BH102	15.90	30/11/2022 00:00	0.0	0.0	0.0	0.0	0.5	0.5	20.3	20.3	0.0	0.0		4.0	1013.0		9.54	15.87	
BH103	15.60	30/11/2022 00:00	0.0	0.0	0.0	0.0	0.3	0.3	21.1	21.1	0.0	0.0		4.0	1013.0		11.50	15.60	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:**	07/12/2022	**Operative:**	BT	**Visit No:**	5
Gas Analyser:	Gas Data GFM436	**PID Meter:**	RAE Systems MiniRAE					**Sheet**	1 of 1

Meteorological Conditions: **Wind:** Still **Cloud Cover:** Cloudy **Precipitation:** None **Ground Condition:** Dry **Atmospheric Pressure Trend:**

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH100	25.50	07/12/2022 00:00	0.0	0.0	0.0	0.0	0.7	0.7	18.7	18.7	0.0	0.0		2.0	1011.0		5.63	24.96	
BH101	10.00	07/12/2022 00:00	0.0	0.0	0.0	0.0	0.6	0.6	19.5	19.5	0.0	0.0		2.0	1012.0		8.29	10.10	
BH102	15.90	07/12/2022 00:00	0.0	0.0	0.0	0.0	0.8	0.8	19.5	19.5	0.0	0.0		2.0	1012.0		9.57	15.80	
BH103	15.60	07/12/2022 00:00	0.0	0.0	0.0	0.0	0.3	0.3	20.9	20.9	0.0	0.0		2.0	1012.0		9.90	15.75	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:** 12/12/2022	**Operative:** BT	**Visit No:** 6
Gas Analyser:	Gas Data GFM436	**PID Meter:**	RAE Systems MiniRAE			**Sheet** 1 **of** 1

Meteorological Conditions: **Wind:** Light **Cloud Cover:** Overcast **Precipitation:** None **Ground Condition:** Frozen **Atmospheric Pressure Trend:**

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH100	25.50	12/12/2022 00:00	0.0	0.0	0.0	0.0	0.6	0.6	20.0	20.0	0.0	0.0		-3.0	996.0		5.65	24.93	
BH101	10.00	12/12/2022 00:00	0.0	0.0	0.0	0.0	0.6	0.6	19.4	19.4	0.0	0.0		-3.0	997.0		8.33	10.09	
BH102	15.90	12/12/2022 00:00	0.0	0.0	0.0	0.0	0.8	0.8	19.7	19.7	0.0	0.0		-3.0	997.0		9.61	15.81	
BH103	15.60	12/12/2022 00:00	0.0	0.0	0.0	0.0	0.4	0.4	20.8	20.8	0.0	0.0		-3.0	997.0		8.91	15.70	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:** 14/03/2023	**Operative:** PC	**Visit No: 1**
Gas Analyser:	Geotech GA5000	**PID Meter:**	ION Science Tiger			**Sheet 1 of 1**

Meteorological Conditions: **Wind:** Light **Cloud Cover:** Cloudy **Precipitation:** None **Ground Condition:** Moist **Atmospheric Pressure Trend:**

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH104	2.80	14/03/2023 00:00	0.0	0.0	0.0	0.0	0.1	0.1	22.3	22.3	1.0	0.0	0.0	5.0	1013.0		DRY	2.70	
BH104	15.00	14/03/2023 00:00	0.0	0.0	0.0	0.0	0.5	0.5	21.4	21.4	1.0	0.0	0.0	5.0	1013.0		9.70	15.00	
BH105	15.00	14/03/2023 00:00	0.0	0.0	0.0	0.0	0.2	0.2	21.3	21.3	60.0	0.0	0.0	5.0	1013.0		9.87	14.72	
BH105	2.00	14/03/2023 00:00	-0.1	0.0	0.0	0.0	0.4	0.4	22.2	22.2	0.0	0.0	0.0	5.0	1013.0		DRY	1.96	
BH106	18.00	14/03/2023 00:00	0.0	0.0	0.0	0.0	2.0	2.0	19.2	19.2	2.0	0.0	0.0	5.0	1013.0		10.00	18.00	
BH106	2.70	14/03/2023 00:00	0.0	0.0	0.0	0.0	3.6	3.6	18.4	18.4	1.0	0.0	0.0	5.0	1013.0		DRY	2.70	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:** 20/03/2023	**Operative:** MM	**Visit No: 2**
Gas Analyser:	Geotech GA5000	**PID Meter:**	ION Science Tiger			**Sheet 1 of 1**

Meteorological Conditions: **Wind:** Light **Cloud Cover:** Cloudy **Precipitation:** Slight **Ground Condition:** Wet **Atmospheric Pressure Trend:** Rising

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH104	2.80	20/03/2023 00:00	0.0	0.0	0.2	0.1	1.5	1.4	18.1	18.1	0.0	0.0	0.0	12.0	1001.0		DRY	2.80	
BH104	15.00	20/03/2023 00:00	0.1	0.1	0.2	0.2	0.6	0.6	19.8	19.6	1.0	0.0	0.0	12.0	1001.0		9.66	15.00	
BH105	15.00	20/03/2023 00:00	0.1	0.1	0.2	0.1	0.3	0.3	19.6	19.6	15.0	0.0	0.0	12.0	1001.0		9.75	14.87	
BH105	2.00	20/03/2023 00:00	0.1	0.1	0.3	0.1	1.3	1.3	19.0	19.0	0.0	0.0	0.0	12.0	1001.0		DRY	2.00	
BH106	18.00	20/03/2023 00:00	0.0	0.0	0.1	0.1	1.2	1.1	19.4	19.1	2.0	0.0	0.0	12.0	1001.0		9.93	18.00	
BH106	2.70	20/03/2023 00:00	0.1	0.1	0.1	0.1	5.1	4.8	15.1	15.1	0.0	0.0	0.0	12.0	1001.0		DRY	2.35	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:**	29/03/2023	**Operative:**	MM	**Visit No: 3**
Gas Analyser:	Geotech GA5000	**PID Meter:**	ION Science Tiger					**Sheet 1 of 1**

Meteorological Conditions: **Wind:** Light **Cloud Cover:** Cloudy **Precipitation:** Slight **Ground Condition:** Wet **Atmospheric Pressure Trend:** Rising

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH104	2.80	29/03/2023 00:00	-0.1	-0.1	0.1	0.1	1.8	1.8	19.5	19.5	0.0	0.0	0.0	12.0	994.0		2.77	2.80	
BH104	15.00	29/03/2023 00:00	0.1	0.1	0.1	0.1	0.6	0.6	20.2	20.2	1.0	0.0	0.0	12.0	994.0		9.63	15.00	
BH105	15.00	29/03/2023 00:00	0.1	0.1	0.1	0.1	0.4	0.4	20.0	20.0	2.0	0.0	0.0	12.0	994.0		9.70	14.95	
BH105	2.00	29/03/2023 00:00	0.4	0.4	0.1	0.1	1.9	1.9	18.6	18.3	0.0	0.0	0.0	12.0	994.0		DRY	2.05	
BH106	18.00	29/03/2023 00:00	0.0	0.0	0.1	0.1	1.2	1.1	19.7	19.7	1.0	0.0	0.0	12.0	994.0		9.92	18.00	
BH106	2.70	29/03/2023 00:00	0.4	0.4	0.1	0.1	2.4	2.4	18.5	18.5	0.0	0.0	0.0	12.0	994.0		DRY	2.55	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:**	04/04/2023	**Operative:**	MM	**Visit No: 4**
Gas Analyser:	Geotech GA5000	**PID Meter:**	ION Science Tiger					**Sheet 1 of 1**

Meteorological Conditions: **Wind:** Light **Cloud Cover:** Cloudy **Precipitation:** Slight **Ground Condition:** Wet **Atmospheric Pressure Trend:** Rising

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH104	2.80	04/04/2023 00:00	0.0	0.0	0.2	0.2	1.8	1.8	19.4	19.4	0.0	0.0	0.0	10.0	1016.0			2.80	
BH104	15.00	04/04/2023 00:00	0.2	0.2	0.1	0.1	0.2	0.2	20.5	20.4	1.0	0.0	0.0	10.0	1016.0			15.00	
BH105	15.00	04/04/2023 00:00	0.1	0.1	0.2	0.2	0.5	0.5	20.1	20.1	2.0	0.0	0.0	10.0	1016.0			14.95	
BH105	2.00	04/04/2023 00:00	0.1	0.1	0.2	0.1	1.5	1.5	19.1	19.1	0.0	0.0	0.0	10.0	1016.0			2.00	
BH106	18.00	04/04/2023 00:00	0.0	0.0	0.2	0.1	1.2	1.1	19.9	19.9	1.0	0.0	0.0	10.0	1016.0			18.00	
BH106	2.70	04/04/2023 00:00	0.2	0.2	0.2	0.1	2.7	2.7	18.4	18.4	0.0	0.0	0.0	10.0	1016.0			2.55	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:** 11/04/2023	**Operative:** MM	**Visit No: 5**
Gas Analyser:	Geotech GA5000	**PID Meter:**	ION Science Tiger			**Sheet 1 of 1**

Meteorological Conditions: **Wind:** Light **Cloud Cover:** Cloudy **Precipitation:** Slight **Ground Condition:** Wet **Atmospheric Pressure Trend:** Rising

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH104	2.80	11/04/2023 00:00	0.1	0.1	0.3	0.2	1.9	1.9	19.7	19.7	1.0	0.0	0.0	12.0	999.0		DRY	2.80	
BH104	15.00	11/04/2023 00:00	0.2	0.2	0.3	0.3	0.5	0.5	20.7	20.7	0.0	0.0	0.0	12.0	999.0		9.65	15.00	
BH105	15.00	11/04/2023 00:00	0.1	0.1	0.2	0.2	0.6	0.5	20.1	20.1	1.0	0.0	0.0	12.0	999.0		9.72	14.85	
BH105	2.00	11/04/2023 00:00	0.3	0.3	0.3	0.3	1.3	1.3	19.0	19.0	0.0	0.0	0.0	12.0	999.0		DRY	2.00	
BH106	18.00	11/04/2023 00:00	0.3	0.3	0.3	0.2	1.5	1.2	19.0	19.0	2.0	0.0	0.0	12.0	999.0		9.96	18.00	
BH106	2.70	11/04/2023 00:00	0.0	0.0	0.3	0.1	4.9	4.8	16.0	16.0	0.0	0.0	0.0	12.0	999.0		DRY	2.75	

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GROUND GAS & GROUNDWATER MONITORING RECORD SHEET

Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	**Project No:**	PN224453	**Date:**	18/04/2023	**Operative:**	MM	**Visit No:** 6
Gas Analyser:	Geotech GA5000	**PID Meter:**	ION Science Tiger					**Sheet** 1 **of** 1

Meteorological Conditions: **Wind:** Still **Cloud Cover:** None **Precipitation:** None **Ground Condition:** Dry **Atmospheric Pressure Trend:** Rising

Location ID	Standpipe Depth (m bgl)	Reading Date / Time (dd/mm/yyyy hh:mm)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m)	Remarks
BH104	2.80	18/04/2023 00:00	-0.1	-0.1	0.2	0.1	2.0	2.0	19.2	19.2	0.0	0.0	0.0	10.0	1019.0		DRY	2.80	
BH104	15.00	18/04/2023 00:00	0.3	0.3	0.2	0.2	0.5	0.5	20.7	20.7	1.0	0.0	0.0	10.0	1019.0		9.67	15.00	
BH105	15.00	18/04/2023 00:00	0.3	0.3	0.2	0.2	0.7	0.7	19.6	19.6	1.0	0.0	0.0	10.0	1019.0		9.73	14.85	
BH105	2.00	18/04/2023 00:00	0.0	0.0	0.2	0.1	0.4	0.4	20.6	20.6	0.0	0.0	0.0	10.0	1019.0		DRY	2.00	
BH106	18.00	18/04/2023 00:00	0.0	0.0	0.2	0.1	1.1	1.0	19.6	19.5	1.0	0.0	0.0	10.0	1019.0		9.94	18.00	
BH106	2.70	18/04/2023 00:00	0.1	0.1	0.2	0.1	1.8	1.8	19.0	19.0	0.0	0.0	0.0	10.0	1019.0		DRY	2.70	

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APPENDIX 8

Laboratory Test Results - Geotechnical

DATA SHEET - Laboratory Test Symbols

Classification and Strength

Symbol	**C - Clay**	**M - Silt**
	(0 - containing organic matter)	
	Plasticity	L - Low
		I - Intermediate
		H - High
		V - Very High
		E - Extremely High

Ip	Plasticity Index
%	% retained on 425 µm sieve, shown under Ip value
w_L	Liquid Limit
w_P	Plastic Limit
NP	Non-Plastic
NAT	Sample tested in natural state
w	Water Content
P_d	Particle Density
Test	**Quick undrained triaxial tests**
	SS Single stage - 102mm diameter.
	S3 Single stage - set of 3 38mm diameter.
	MS Multistage - 102mm diameter.
	D Drained Test
	HV Hand Vane
	PP Pocket Penetrometer (kg/cm²)
	NST Not suitable for test
γ_b	Bulk Density
σ_3	Triaxial Cell Pressure
$\sigma_1 - \sigma_3$	Deviator Stress
##	Excessive Strain
c_u	Undrained Cohesion
c	Cohesion Intercept
ϕ	Angle of Shearing Resistance
Linear Shrink	Linear Shrinkage
Stab add-	Stabiliser which is added

Consolidation

m_v	Coefficient of Volume Compressibility
c_{v50}	Coefficient of Consolidation - Log t
c_{v90}	Coefficient of Consolidation - $\sqrt{t}$

Rock

UF	Unacceptable Failure

Chemical Analysis

Acid Soluble	Total sulphate in specimen, expressed as SO_3 %, value in brackets expressed as SO_4 %
Water Soluble	Soluble sulphate in 2:1 water : soil extract, expressed as SO_3 g/l, value in brackets expressed as SO_4 g/l
In Water	Sulphate content of groundwater, expressed as SO_3 g/l, value in brackets expressed as SO_4 g/l
pH	pH value
Organic content	Organic content expressed as a percentage of dry weight
Chloride	Chloride Ion content expressed as a percentage of dry weight

MCV, Compaction, CBR

MCV	Moisture Condition Value at natural water content
MCC	Moisture Condition Calibration
CCV	Chalk Crushing Value

Compaction

Type	2.5	=	2.5 kg Rammer
	4.5	=	4.5 kg Rammer
	V	=	Vibrating Hammer

γ_b	Bulk Density
γ_d	Dry Density

CBR California Bearing Ratio

Type	2.5	=	Test on Specimen Recompacted using 2.5 kg Rammer
	4.5	=	As above but using 4.5 kg Rammer
	V	=	As above but using Vibrating Hammer
	M	=	Test on open drive mould specimen cut in field
	S	=	Soaked Specimen

Top	CBR at top of mould
Bottom	CBR at bottom of mould
ND	None Detected
*	In the Sample Description denotes a laboratory only description

DRAFT

Laboratory Test Certificate

Geotechnics Ltd The Geotechnical Centre 203 Torrington Avenue Tile Hill Coventry, CV4 9AP		**Date of issue**	30.11.22
		Issue No.	1
		Client Ref. No.	N/A
		Samples / Material Source	
		Samples Recv'd	02.11.22
Testing Start Date	08.11.22	Sample State	As received
Testing Complete	29.11.22	Sampled by	Geotechnics Limited
Comments			
Project No	PN224453		
Project Name	Wrexham FC : New Kop Stand - Ground Investigation.		

Summary of Tests

Standard	Test Description	Test Quantity	UKAS
BS EN ISO 17892-1:2014	Water Content	10	Yes
BS EN ISO 17892-12:2018 Cl. 5.3 & 5.5	Liquid Limit and Plastic Limit (4 Points Method)	10	Yes
BS EN ISO 17892-4:2016 Cl. 5.2	Particle Size Distribution by Sieving Method	14	Yes
BS EN ISO 17892-4:2016 Cl. 5.4	Particle Size Distribution by Pipette Method	8	Yes
BS EN ISO 17892-8:2018	Shear Strength by Unconsolidated Undrained Triaxial Test - Single Stage	1	Yes

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Note: Any descriptions, opinions or interpretations are outside the scope of UKAS accreditation.
The results within this report relate only to the samples tested and received from the client.

UKAS TESTING 1365

Test Results checked and approved for issue.
Signed for and on behalf of Geotechnics Limited

Paul Smart (Laboratory Testing Manager)

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geotechnical and geoenvironmental specialists
203 Torrington Avenue, Tile Hill,
Coventry, CV4 9UT

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Summary of Classification Test Results

Project Number: PN224453

Project Name: Wrexham FC : New Kop Stand - Ground Investigation

Hole Number	Sample				Specimen Description	*w*	Passing 425µm	LL (Factor)	PL	PI	Particle Density	Remarks
	Sample ID	Top (m)	Base (m)	Type		%	%	%	%	%	Mg/m³	
BH100		7.50		D	Brown slightly gravelly CLAY	25.0	92	38-4pt	19	19		
BH100		13.50		D	Brown slightly sandy slightly gravelly CLAY	8.8	90	24-4pt	12	12		
BH100		26.00	26.45	D	Brown slightly sandy slightly gravelly CLAY	12.3	76	24-4pt	11	13		
BH101		10.50		D	Brown slightly sandy clayey SILT.	20.5	84	19-4pt	NP			
BH101		13.50		D	Brown slightly sandy slightly gravelly clayey SILT.	14.6	79	18-4pt	NP			
BH101		18.00		D	Brown sandy clayey SILT.	19.7	98	22-4pt	NP			
BH102		12.00		D	Brown slightly sandy slightly gravelly CLAY	16.1	75	28-4pt	13	15		
BH102		21.00		D	Brown slightly sandy CLAY	26.2	99	28-4pt	17	11		
BH102		27.00		D	Brown slightly sandy CLAY	11.4	77	26-4pt	12	14		
BH102		30.00		D	Brown slightly sandy CLAY	14.1	78	23-4pt	13	10		

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All tests performed in accordance with BS EN ISO 17892 unless specified otherwise on the Test Certificate.

Key

Density test
Linear measurement unless
wd - water displacement
wi - immersion in water
wi - immersion in water

Liquid Limit
4pt 80g/30deg fall cone with increasing water content unless specified otherwise
Sample washed through 0.425mm sieve unless specified otherwise
1pt - single point test
* - BS1377 method

Particle density
sp - small pykno
gj - gas jar (BS1377)

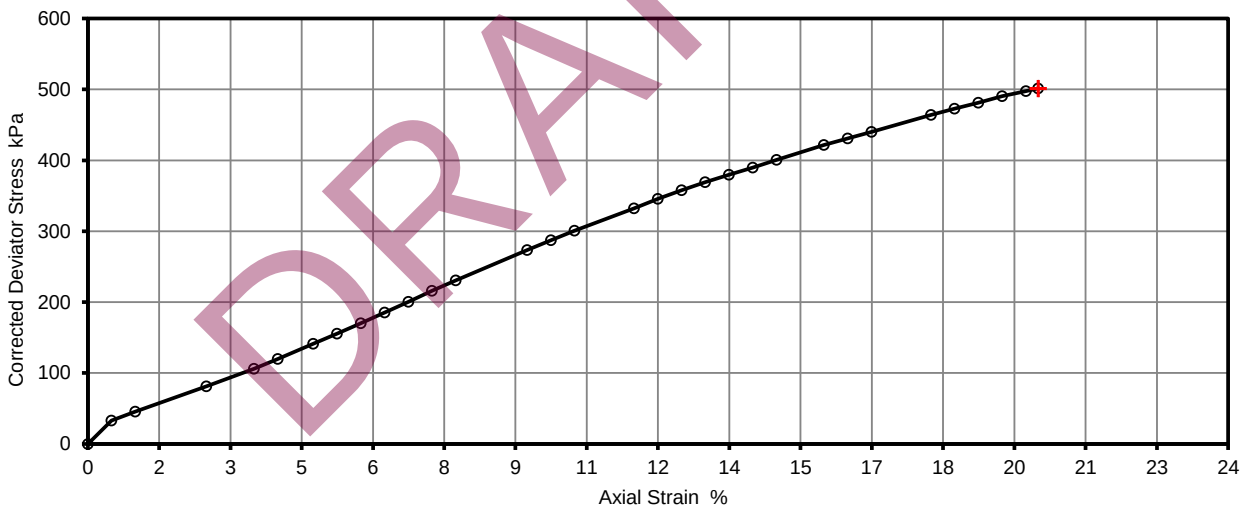
Date Printed: 09/12/2022

Sheet: 1

GEOTECHNICS geotechnical and geoenvironmental specialists	Unconsolidated Undrained Triaxial Compression Test - single specimen			Project No.	PN224453
				Hole No.	BH102
Project Name	Wrexham FC : New Kop Stand - Ground Investigation			Sample ID.	
Specimen Reference	2	Specimen Depth	m	Depth	21.50 - 21.95 m
Specimen Description	Very high strength brown slightly sandy silty CLAY.			Sample Type	UT
Test Method	BS EN ISO 17892-8			Date of Test	17.11.22

Test Number		1	
Length		191.8	mm
Diameter		102.3	mm
Bulk Density		2.15	Mg/m3
Water Content		16.9	%
Dry Density		1.84	Mg/m3
Rate of Strain		1.3	%/min
Cell Pressure		400	kPa
At failure	Axial Strain	20.0	%
	Deviator Stress, (σ1 - σ3)f	501	kPa
	Undrained Shear Strength, cu	251	kPa ½(σ1 - σ3)f
	Mode of Failure	Plastic	

Deviator Stress v Axial Strain



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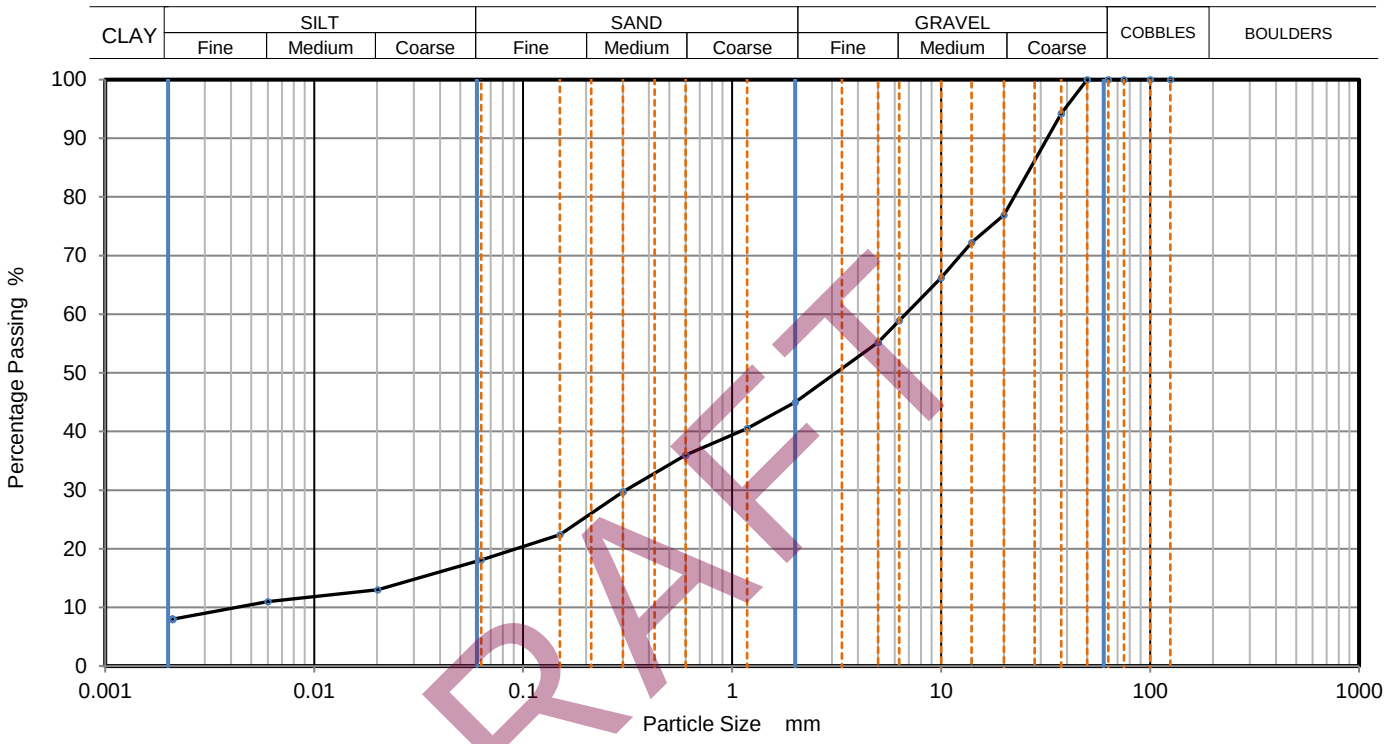


Remarks	Printed
WC at failure Zone = 18.9%	12/04/2023

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	BH100
		Sample No.	
Project Number:	PN224453	Depth	1.20 - 1.65 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	13
100	100	0.006	11
75	100	0.002	8
63	100		
50	100		
37.5	94		
20	77		
14	72		
10	66		
6.3	59		
5	55		
2	45		
1.18	41		
0.6	36		
0.3	30		
0.15	22	Particle density (assumed)	
0.063	18	2.65	Mg/m3

Sample Proportions	% dry mass
Cobbles	0
Gravel	55
Sand	27
Silt	10
Clay	8

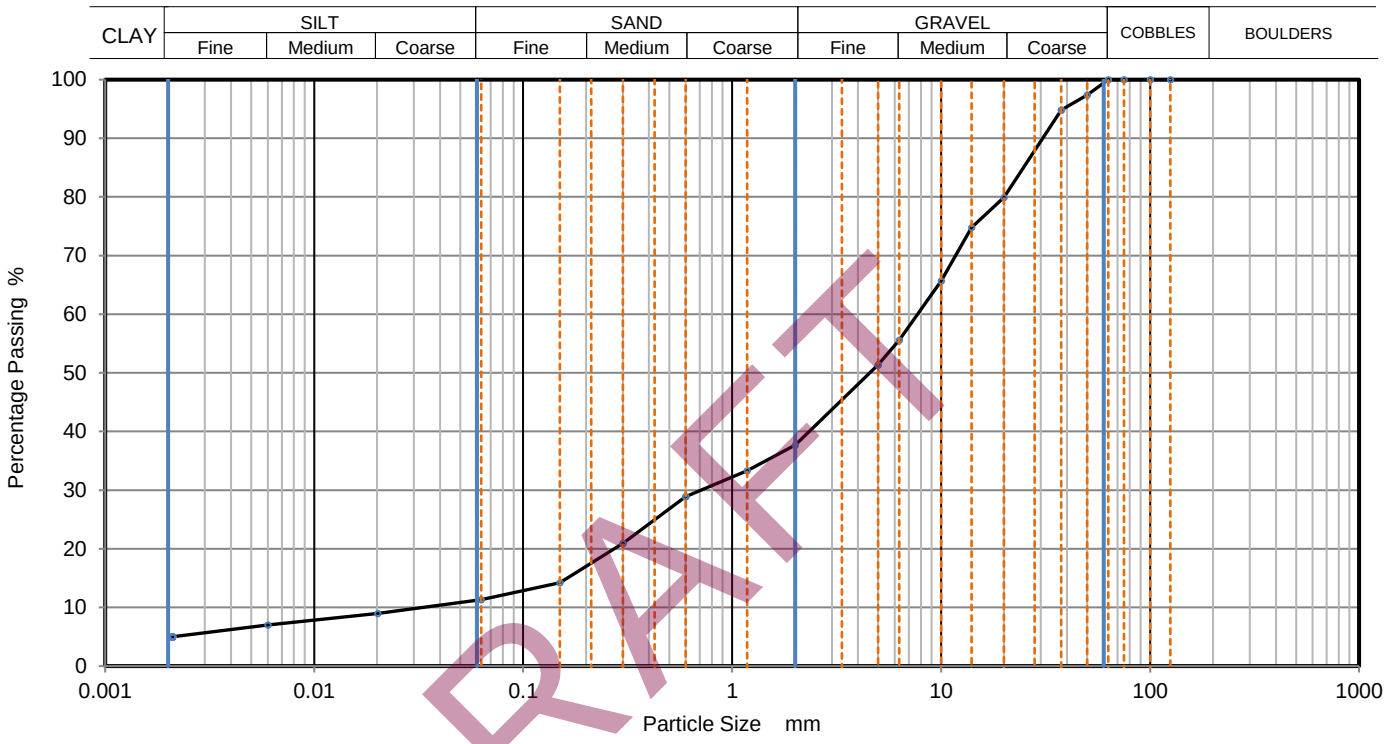
Grading Analysis		
D100	mm	50
D60	mm	6.75
D30	mm	0.309
D10	mm	0.00462
Uniformity Coefficient		1500

Remarks	Sheet printed	Sheet
	05/12/2022	1

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	BH100
		Sample No.	
Project Number:	PN224453	Depth	3.00 - 3.45 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



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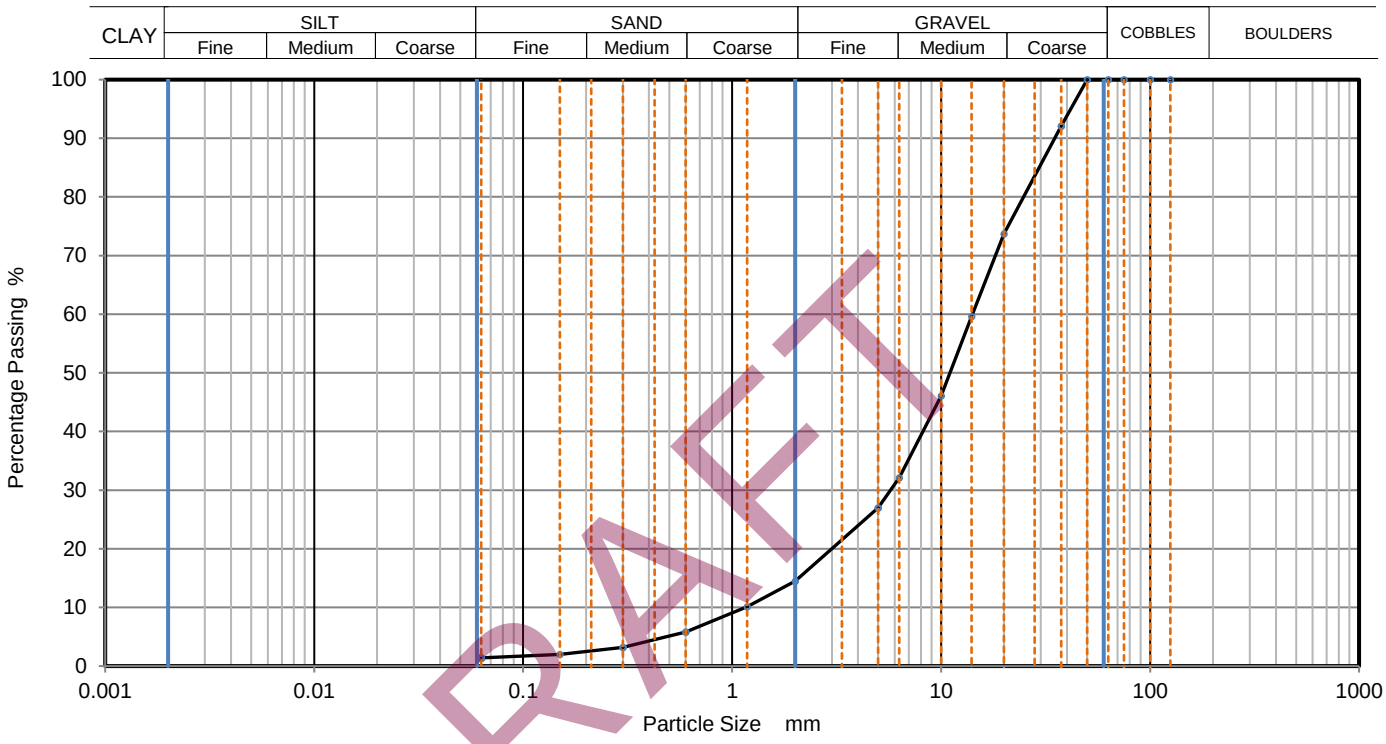
Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	9
100	100	0.006	7
75	100	0.002	5
63	100		
50	97		
37.5	95		
20	80		
14	75		
10	66		
6.3	56		
5	51		
2	38		
1.18	33		
0.6	29		
0.3	21		
0.15	14	Particle density	(assumed)
0.063	11	2.65	Mg/m3

Sample Proportions	% dry mass
Cobbles	0
Gravel	62
Sand	26
Silt	7
Clay	5

Grading Analysis		
D100	mm	63
D60	mm	7.7
D30	mm	0.71
D10	mm	0.0323
Uniformity Coefficient		240

Remarks	Sheet printed	Sheet
	05/12/2022	2

GEOTECHNICS geotechnical and geoenvironmental specialists	**PARTICLE SIZE DISTRIBUTION**	Exploratory Hole No.	BH100
		Sample No.	
Project Number:	PN224453	Depth	6.50 - 6.95 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown sandy GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	92		
20	74		
14	60		
10	46		
6.3	32		
5	27		
2	15		
1.18	10		
0.6	6		
0.3	3		
0.15	2		
0.063	1		

Sample Proportions	% dry mass
Cobbles	0
Gravel	86
Sand	13
Fines <0.063mm	1

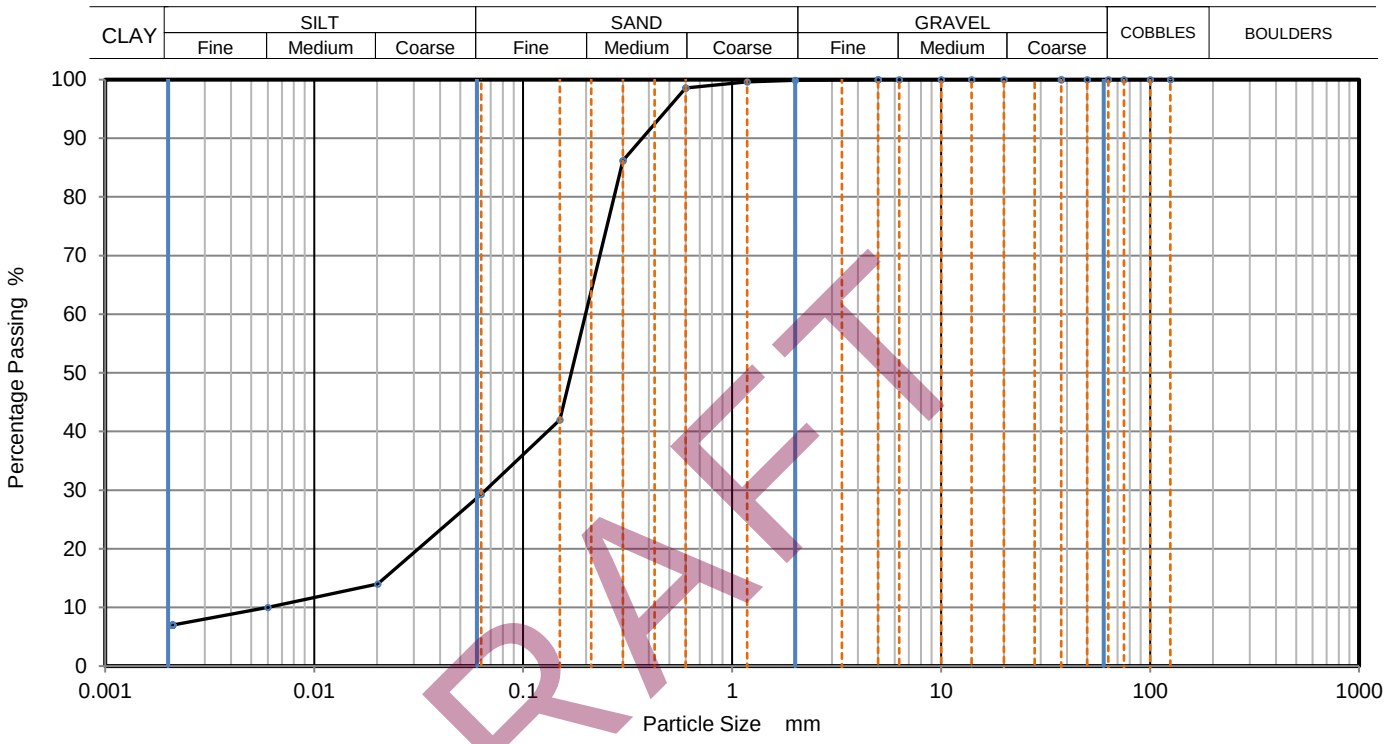
Grading Analysis		
D100	mm	50
D60	mm	14.1
D30	mm	5.73
D10	mm	1.16
Uniformity Coefficient		12

Remarks	Sheet printed	Sheet
	05/12/2022	3

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	BH100
		Sample No.	
Project Number:	PN224453	Depth	11.00 - 11.45 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very silty SAND.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



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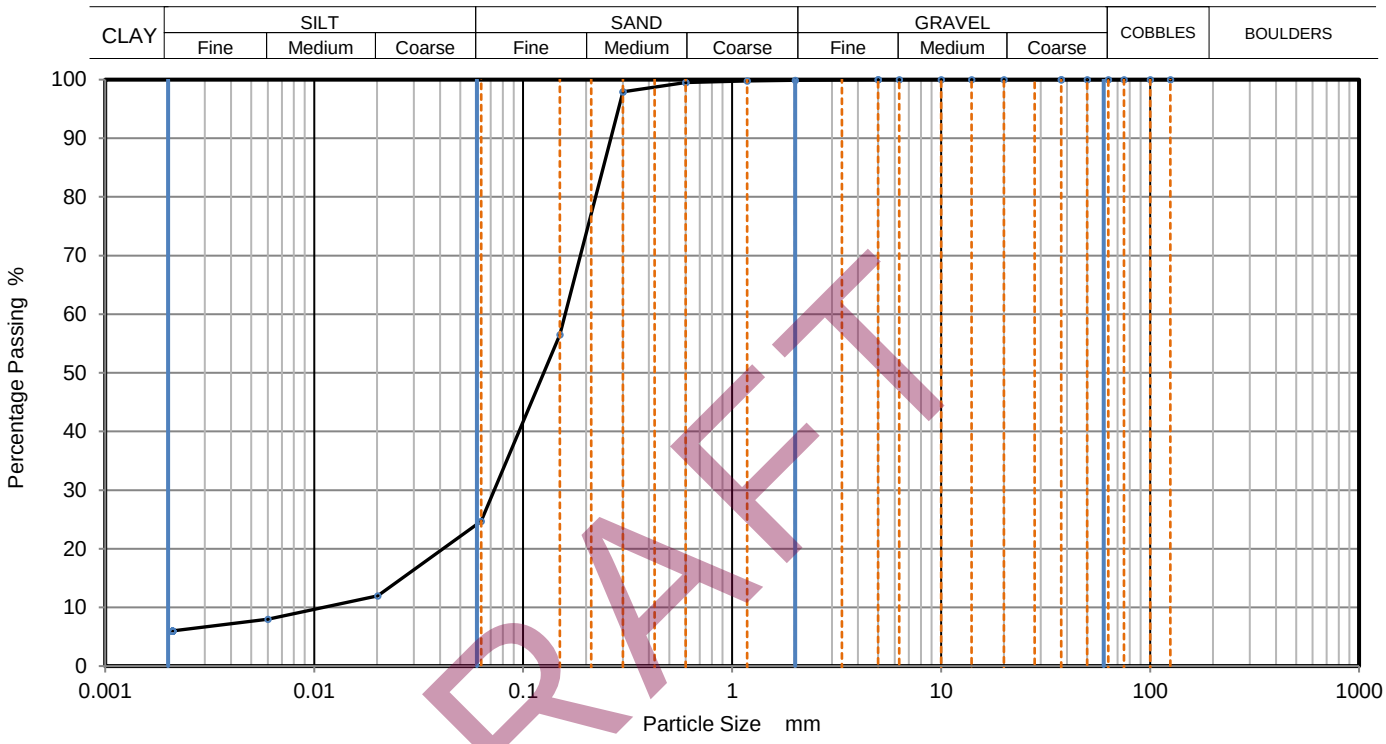
Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	14
100	100	0.006	10
75	100	0.002	7
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
2	100		
1.18	100		
0.6	99		
0.3	86		
0.15	42	Particle density (assumed)	
0.063	29	2.65	Mg/m3

Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	70
Silt	23
Clay	7

Grading Analysis		
D100	mm	5
D60	mm	0.199
D30	mm	0.066
D10	mm	0.00628
Uniformity Coefficient		32

Remarks	Sheet printed	Sheet
	05/12/2022	4

GEOTECHNICS geotechnical and geoenvironmental specialists	**PARTICLE SIZE DISTRIBUTION**	Exploratory Hole No.	BH100
		Sample No.	
Project Number:	PN224453	Depth	17.00 - 17.45 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very silty SAND.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



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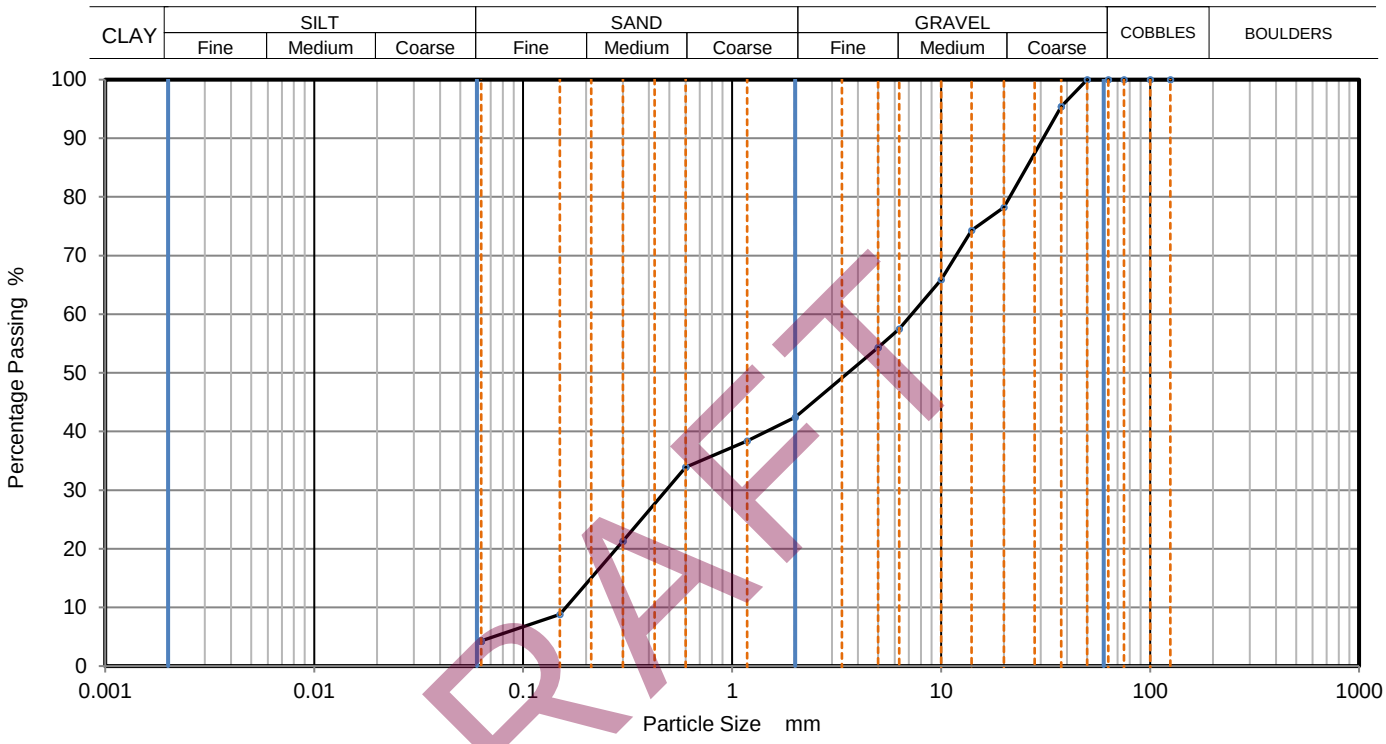
Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	12
100	100	0.006	8
75	100	0.002	6
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
2	100		
1.18	100		
0.6	100		
0.3	98		
0.15	57	Particle density (assumed)	
0.063	25	2.65	Mg/m3

Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	75
Silt	19
Clay	6

Grading Analysis		
D100	mm	5
D60	mm	0.159
D30	mm	0.0728
D10	mm	0.0107
Uniformity Coefficient		15

Remarks	Sheet printed	Sheet
	05/12/2022	5

GEOTECHNICS geotechnical and geoenvironmental specialists	**PARTICLE SIZE DISTRIBUTION**	Exploratory Hole No.	BH100
		Sample No.	
Project Number:	PN224453	Depth	24.50 - 24.95 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy slightly silty GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	95		
20	78		
14	74		
10	66		
6.3	58		
5	54		
2	42		
1.18	38		
0.6	34		
0.3	21		
0.15	9		
0.063	4		

Sample Proportions	% dry mass
Cobbles	0
Gravel	58
Sand	38
Fines <0.063mm	4

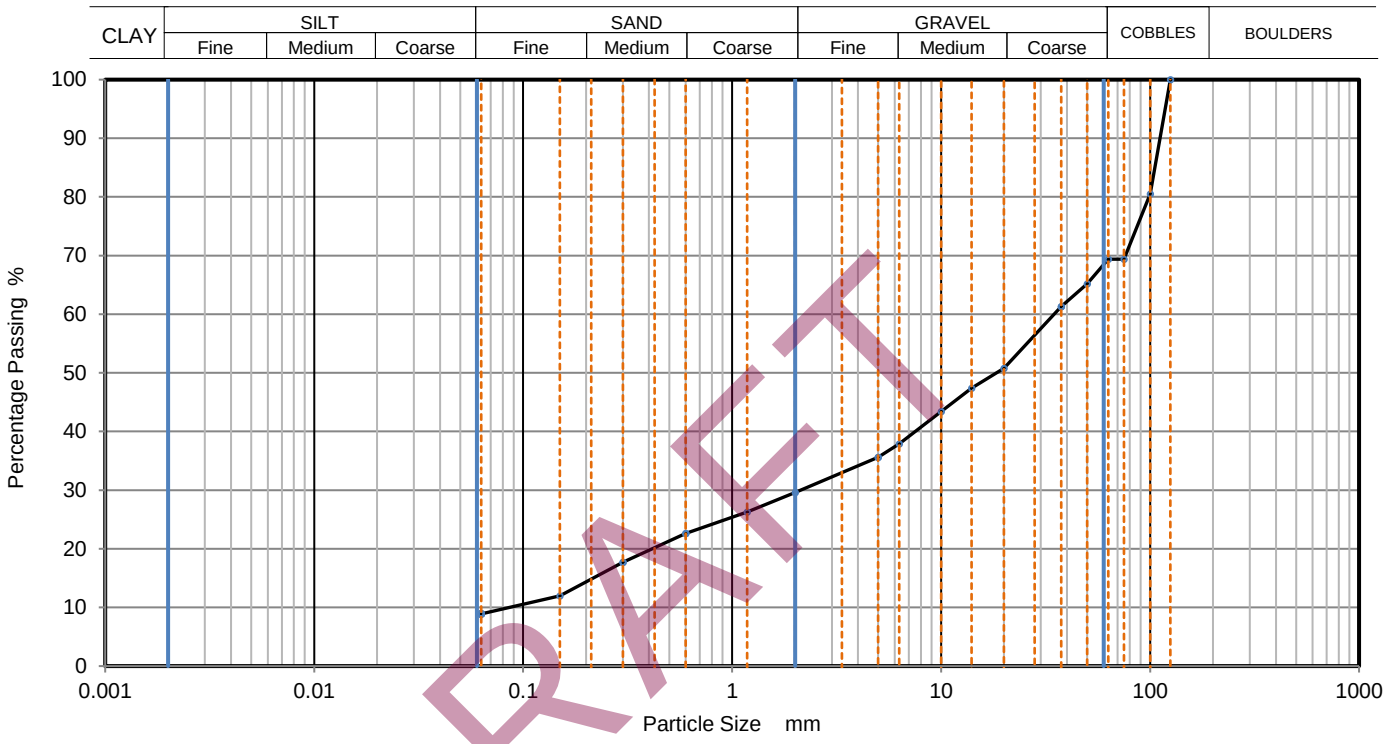
Grading Analysis		
D100	mm	50
D60	mm	7.23
D30	mm	0.485
D10	mm	0.16
Uniformity Coefficient		45

Remarks	Sheet printed	Sheet
	05/12/2022	6

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	BH101
		Sample No.	
Project Number:	PN224453	Depth	2.00 - 2.45 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy clayey GRAVEL with a high cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	81		
75	69		
63	69		
50	65		
37.5	61		
20	51		
14	47		
10	43		
6.3	38		
5	36		
2	30		
1.18	26		
0.6	23		
0.3	18		
0.15	12		
0.063	9		

Sample Proportions	% dry mass
Cobbles	31
Gravel	39
Sand	21
Fines <0.063mm	9

Grading Analysis		
D100	mm	125
D60	mm	34.6
D30	mm	2.13
D10	mm	0.0861
Uniformity Coefficient		400

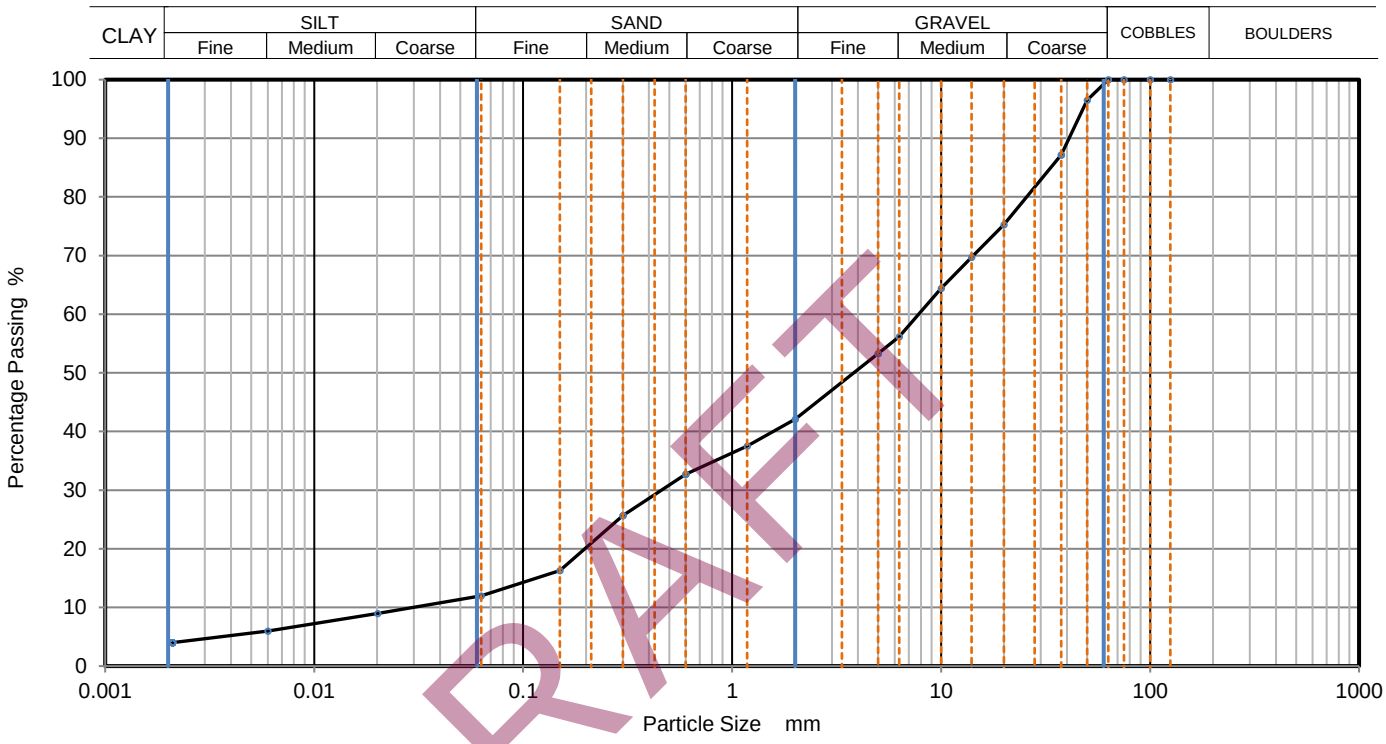
Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Sheet printed	Sheet
	05/12/2022	7

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	BH101
		Sample No.	
Project Number:	PN224453	Depth	5.00 - 5.45 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	9
100	100	0.006	6
75	100	0.002	4
63	100		
50	97		
37.5	87		
20	75		
14	70		
10	64		
6.3	56		
5	53		
2	42		
1.18	38		
0.6	33		
0.3	26		
0.15	16	Particle density	(assumed)
0.063	12	2.65	Mg/m3

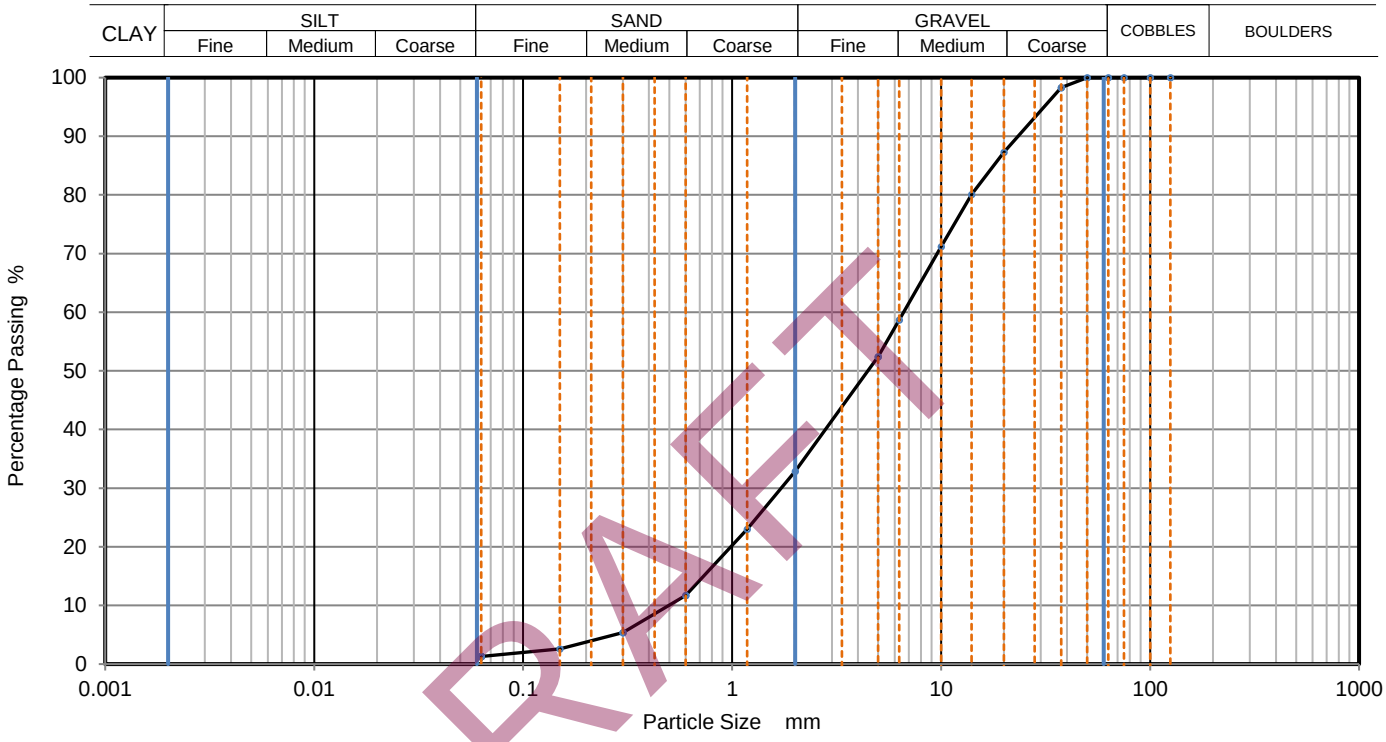
Sample Proportions	% dry mass
Cobbles	0
Gravel	58
Sand	30
Silt	8
Clay	4

Grading Analysis		
D100	mm	63
D60	mm	7.8
D30	mm	0.458
D10	mm	0.0292
Uniformity Coefficient		270

Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Sheet printed	Sheet
	05/12/2022	8

GEOTECHNICS geotechnical and geoenvironmental specialists	**PARTICLE SIZE DISTRIBUTION**	Exploratory Hole No.	BH101
		Sample No.	
Project Number:	PN224453	Depth	8.00 - 8.45 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	98		
20	87		
14	80		
10	71		
6.3	59		
5	52		
2	33		
1.18	23		
0.6	12		
0.3	5		
0.15	3		
0.063	1		

Sample Proportions	% dry mass
Cobbles	0
Gravel	67
Sand	32
Fines <0.063mm	1

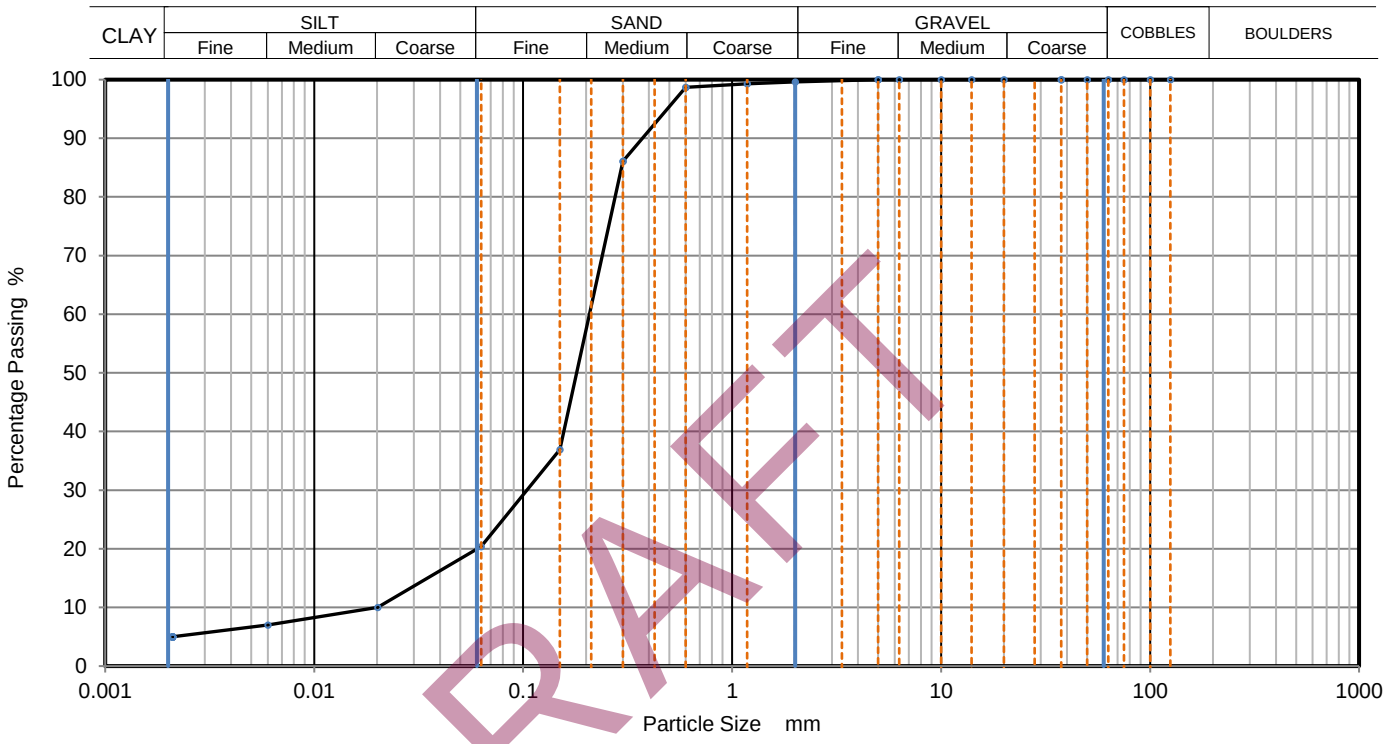
Grading Analysis		
D100	mm	50
D60	mm	6.61
D30	mm	1.71
D10	mm	0.496
Uniformity Coefficient		13

Remarks	Sheet printed	Sheet
	05/12/2022	9

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	BH101
		Sample No.	
Project Number:	PN224453	Depth	20.00 - 20.45 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very silty SAND.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	10
100	100	0.006	7
75	100	0.002	5
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
2	100		
1.18	99		
0.6	99		
0.3	86		
0.15	37	Particle density (assumed)	
0.063	20	2.65	Mg/m3

Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	79
Silt	16
Clay	5

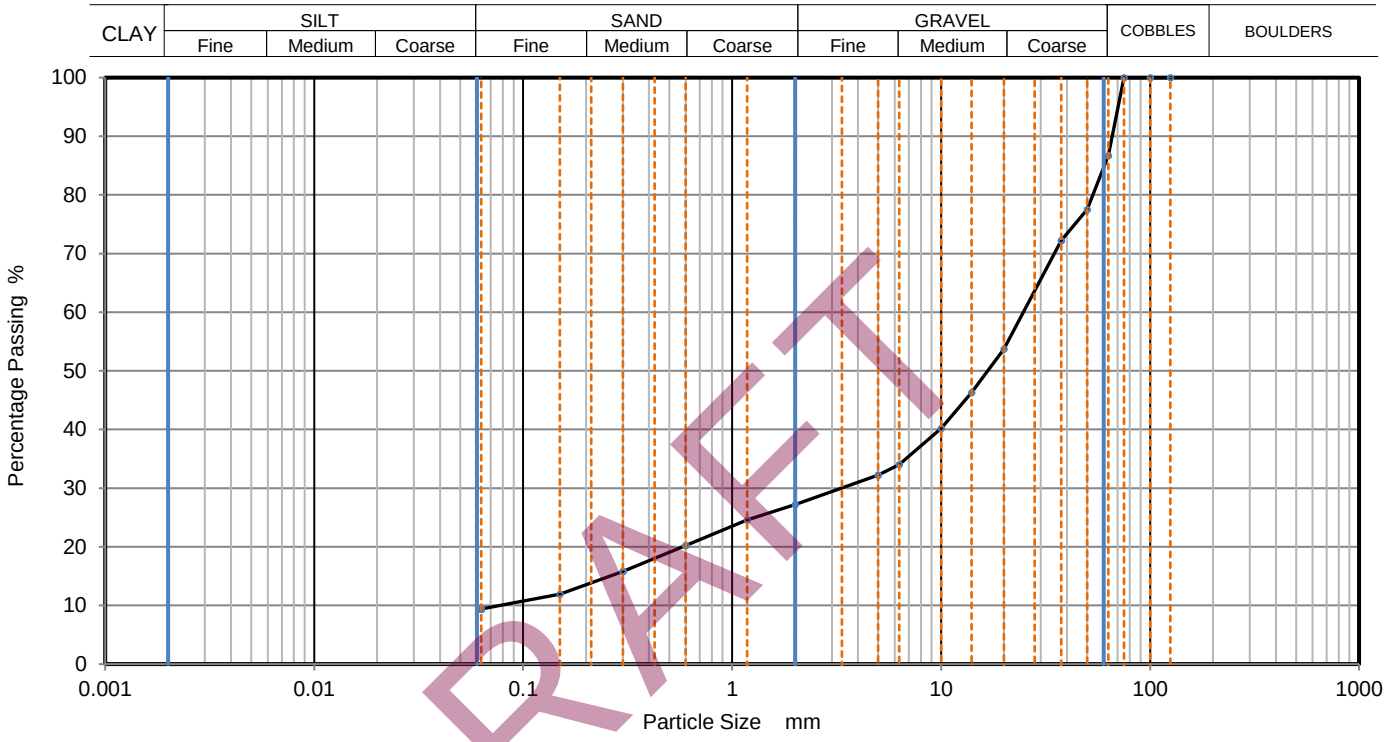
Grading Analysis		
D100	mm	5
D60	mm	0.208
D30	mm	0.104
D10	mm	0.0207
Uniformity Coefficient		10

Remarks	Sheet printed	Sheet
	05/12/2022	10

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	BH102
		Sample No.	
Project Number:	PN224453	Depth	2.00 - 2.45 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy clayey GRAVEL with a medium cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	87		
50	78		
37.5	72		
20	54		
14	46		
10	40		
6.3	34		
5	32		
2	27		
1.18	25		
0.6	20		
0.3	16		
0.15	12		
0.063	9		

Sample Proportions	% dry mass
Cobbles	13
Gravel	60
Sand	18
Fines <0.063mm	9

Grading Analysis		
D100	mm	75
D60	mm	24.8
D30	mm	3.34
D10	mm	0.0779
Uniformity Coefficient		320

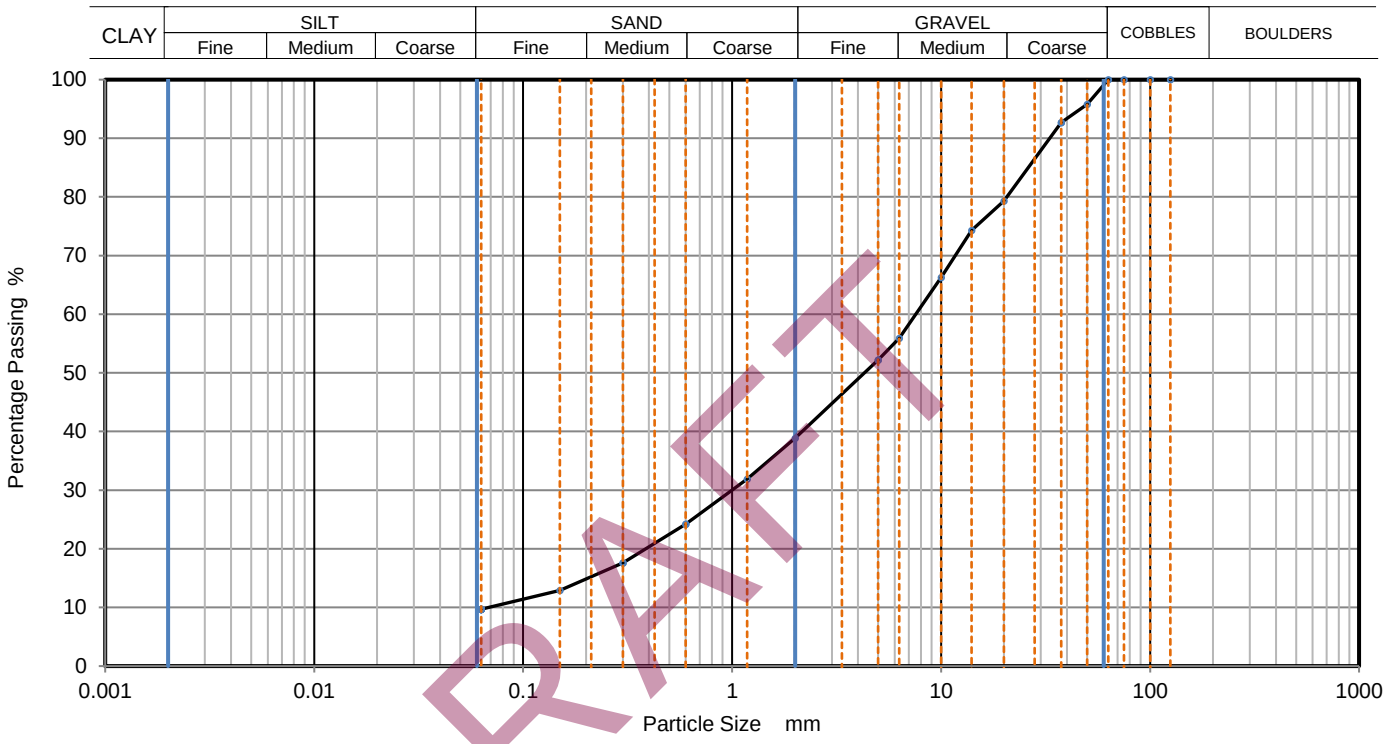
Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Sheet printed	Sheet
	05/12/2022	11

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	BH102
		Sample No.	
Project Number:	PN224453	Depth	6.50 - 6.95 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Grey very sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	96		
37.5	93		
20	79		
14	74		
10	66		
6.3	56		
5	52		
2	39		
1.18	32		
0.6	24		
0.3	18		
0.15	13		
0.063	10		

Sample Proportions	% dry mass
Cobbles	0
Gravel	61
Sand	29
Fines <0.063mm	10

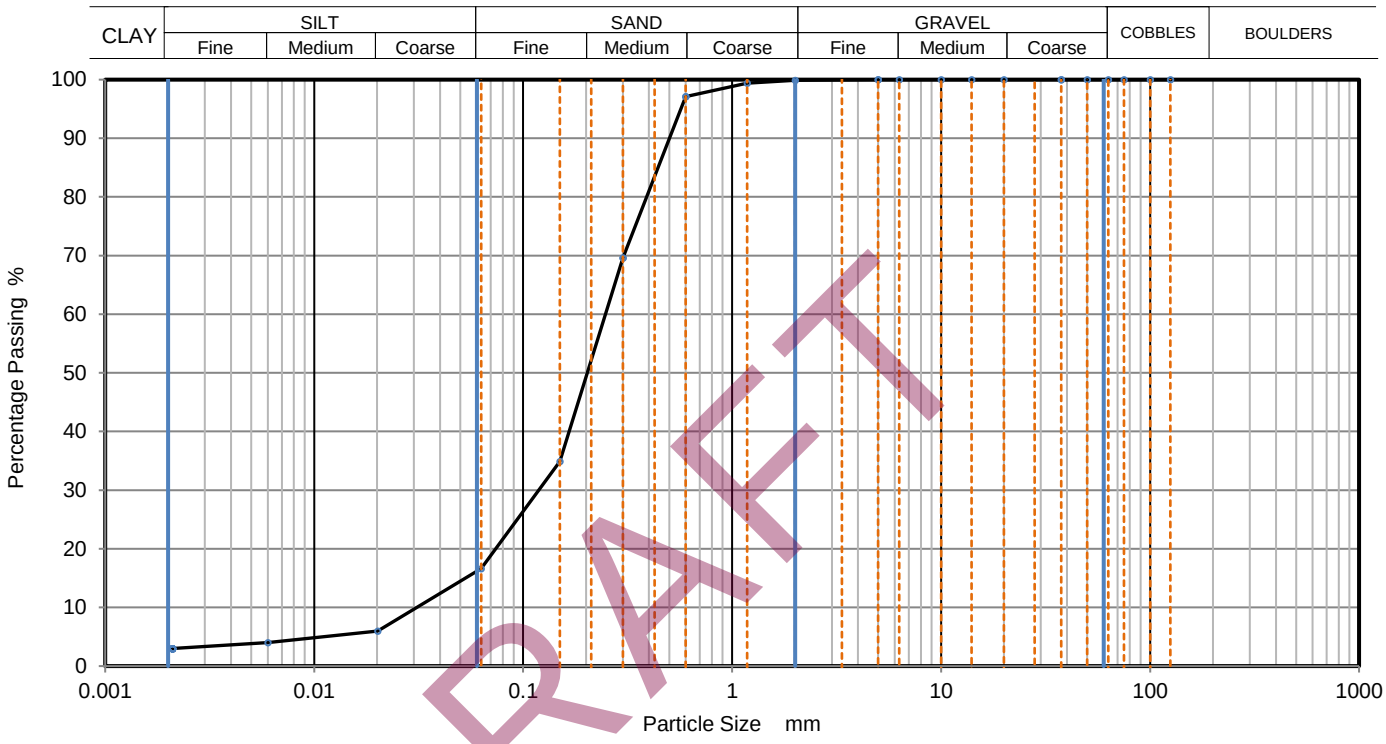
Grading Analysis		
D100	mm	63
D60	mm	7.57
D30	mm	1
D10	mm	0.0686
Uniformity Coefficient		110

Remarks	Sheet printed	Sheet
	05/12/2022	12

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	BH102
		Sample No.	
Project Number:	PN224453	Depth	15.50 - 15.95 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown silty SAND.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



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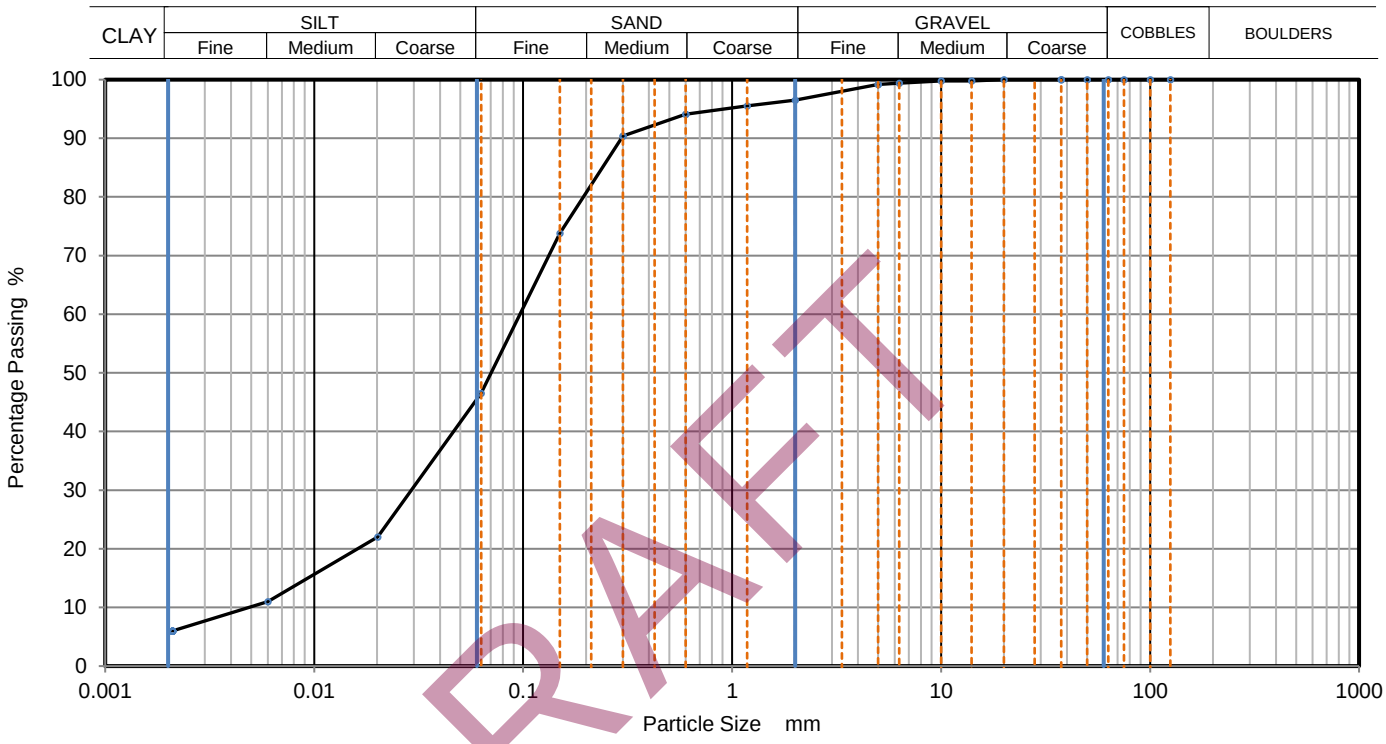
Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	6
100	100	0.006	4
75	100	0.002	3
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
2	100		
1.18	99		
0.6	97		
0.3	70		
0.15	35	Particle density (assumed)	
0.063	17	2.65	Mg/m3

Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	83
Silt	14
Clay	3

Grading Analysis		
D100	mm	5
D60	mm	0.248
D30	mm	0.119
D10	mm	0.031
Uniformity Coefficient		8

Remarks	Sheet printed	Sheet
	05/12/2022	13

GEOTECHNICS geotechnical and geoenvironmental specialists	**PARTICLE SIZE DISTRIBUTION**	Exploratory Hole No.	BH102
		Sample No.	
Project Number:	PN224453	Depth	24.50 - 24.95 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown slightly gravelly sandy SILT.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	22
100	100	0.006	11
75	100	0.002	6
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
2	97		
1.18	96		
0.6	94		
0.3	90		
0.15	74	Particle density (assumed)	
0.063	47	2.65	Mg/m3

Sample Proportions	% dry mass
Cobbles	0
Gravel	4
Sand	50
Silt	40
Clay	6

Grading Analysis		
D100	mm	20
D60	mm	0.0967
D30	mm	0.029
D10	mm	0.00468
Uniformity Coefficient		21

Remarks	Sheet printed	Sheet
	05/12/2022	14

Certificate of Analysis

Certificate Number	22-21834	*Issued:*	02-Nov-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	22-21834
Client Reference	PN224453
Order No	ON35179
Contract Title	Wrexham AFC - Kop Stand Redevelopment
Description	9 Soil samples.
Date Received	28-Oct-22
Date Started	28-Oct-22
Date Completed	02-Nov-22
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Approved By

Kirk Bridgewood
General Manager

2139

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-21834
Client Ref PN224453
Contract Title Wrexham AFC - Kop Stand Redevelopment

			Lab No	2077750	2077751	2077752	2077753	2077754	2077755	2077756	2077757	2077758
			Sample ID	BH100	BH100	BH100	BH100	BH101	BH101	BH101	BH102	BH102
			Depth	1.20-1.65	3.00-3.45	13.50	26.00-26.45	2.00-2.45	10.50	13.50	2.00-2.45	15.50-15.95
			Other ID									
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	28/09/2022	28/09/2022	30/09/2022	30/09/2022	06/10/2022	07/10/2022	12/10/2022	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**									
Inorganics												
pH	DETSC 2008#		pH	7.2	8.4	8.6	8.1	8.3	8.3	8.5	8.0	8.6
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	110	38	26	42	20	34	37	25	23

Key: # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 22-21834
Client Ref PN224453
Contract Wrexham AFC - Kop Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2077750	BH100 1.20-1.65 SOIL	28/09/22	PT 1L	pH + Conductivity (7 days)	
2077751	BH100 3.00-3.45 SOIL	28/09/22	PT 1L	pH + Conductivity (7 days)	
2077752	BH100 13.50 SOIL	30/09/22	PT 1L	pH + Conductivity (7 days)	
2077753	BH100 26.00-26.45 SOIL	30/09/22	PT 1L	pH + Conductivity (7 days)	
2077754	BH101 2.00-2.45 SOIL	06/10/22	PT 1L	pH + Conductivity (7 days)	
2077755	BH101 10.50 SOIL	07/10/22	PT 1L	pH + Conductivity (7 days)	
2077756	BH101 13.50 SOIL	12/10/22	PT 1L	pH + Conductivity (7 days)	
2077757	BH102 2.00-2.45 SOIL	12/10/22	PT 1L	pH + Conductivity (7 days)	
2077758	BH102 15.50-15.95 SOIL	12/10/22	PT 1L	pH + Conductivity (7 days)	

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

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Laboratory Test Certificate

	Geotechnics Ltd The Geotechnical Centre 203 Torrington Avenue Tile Hill Coventry, CV4 9AP	**Date of issue**	06.04.2023
		Issue No.	1
		Client Ref. No.	N/A
		Samples / Material Source	
		Samples Recv'd	08.03.2023
Testing Start Date	13.03.2023	Sample State	As received
Testing Complete	04.04.2023	Sampled by	Geotechnics Limited
Comments			
Project No	PN224453		
Project Name	Wrexham FC : New Kop Stand - Ground Investigation - Schedule 3		

Summary of Tests

Standard	Test Description	Test Quantity	UKAS
BS EN ISO 17892-1:2014	Water Content	3	Yes
BS EN ISO 17892-12:2018 Cl. 5.3 & 5.5	Liquid Limit and Plastic Limit (4 Points Method)	3	Yes
BS EN ISO 17892-4:2016 Cl. 5.2	Particle Size Distribution by Sieving Method	22	Yes
BS EN ISO 17892-4:2016 Cl. 5.4	Particle Size Distribution by Pipette Method	3	Yes
BS EN ISO 17892-8:2018	Shear Strength by Unconsolidated Undrained Triaxial Test - Single Stage	1	Yes

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Note: Any descriptions, opinions or interpretations are outside the scope of UKAS accreditation.
The results within this report relate only to the samples tested and received from the client.

UKAS TESTING 1365

Test Results checked and approved for issue.
Signed for and on behalf of Geotechnics Limited

Will Elson (Laboratory Systems Manager)

GEOTECHNICS
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203 Torrington Avenue, Tile Hill,
Coventry, CV4 9UT

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Summary of Classification Test Results

Project Number:
PN224453 Phase 2

Project Name:
Wrexham FC : New Kop Stand - Ground Investigation

Hole Number	Sample				Specimen Description	*w*	Passing 425µm	LL (Factor)	PL	PI	Particle Density	Remarks
	Sample ID	Top (m)	Base (m)	Type		%	%	%	%	%	Mg/m³	
BH104		5.80		D	Brown mottled reddish brown slightly sandy CLAY.	29.5	99	48-4pt	21	27		
BH105		10.50		D	Reddish brown slightly sandy slightly gravelly CLAY.	16.7	95	30-4pt	15	15		
BH106		13.50		D	Reddish brown slightly sandy slightly gravelly CLAY.	12.7	92	31-4pt	15	16		

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All tests performed in accordance with BS EN ISO 17892 unless specified otherwise.

Key:

Liquid Limit
80g / 30deg fall cone with increasing water content unless specified otherwise
Sample washed through 0.425mm sieve unless specified otherwise
1pt - single point test (inc factor)
* - BS1377 method

Particle density
sp - small pykno
gj - gas jar (BS1377)

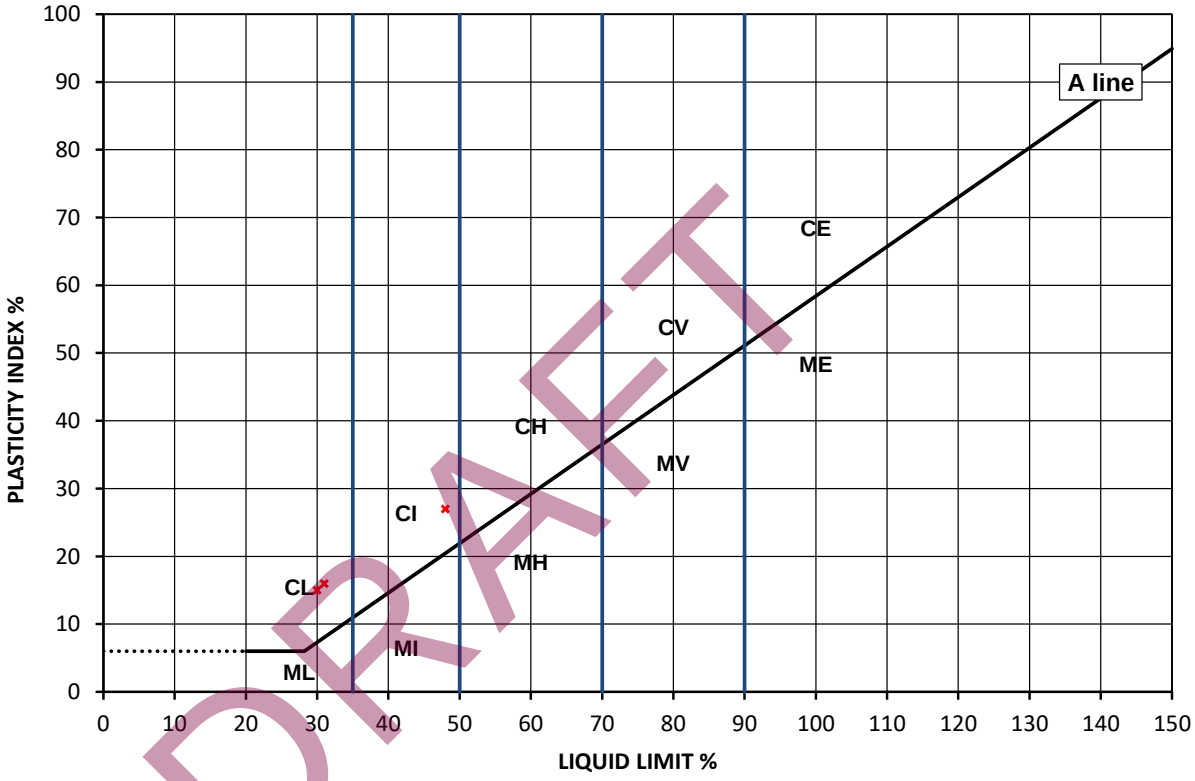
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Plasticity Chart

Project No.	Project Name
PN224453 Phase 2	Wrexham FC : New Kop Stand - Ground Investigation



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Legend, based on BS 5930:1999 +A2: 2010 Code of practice for site investigations

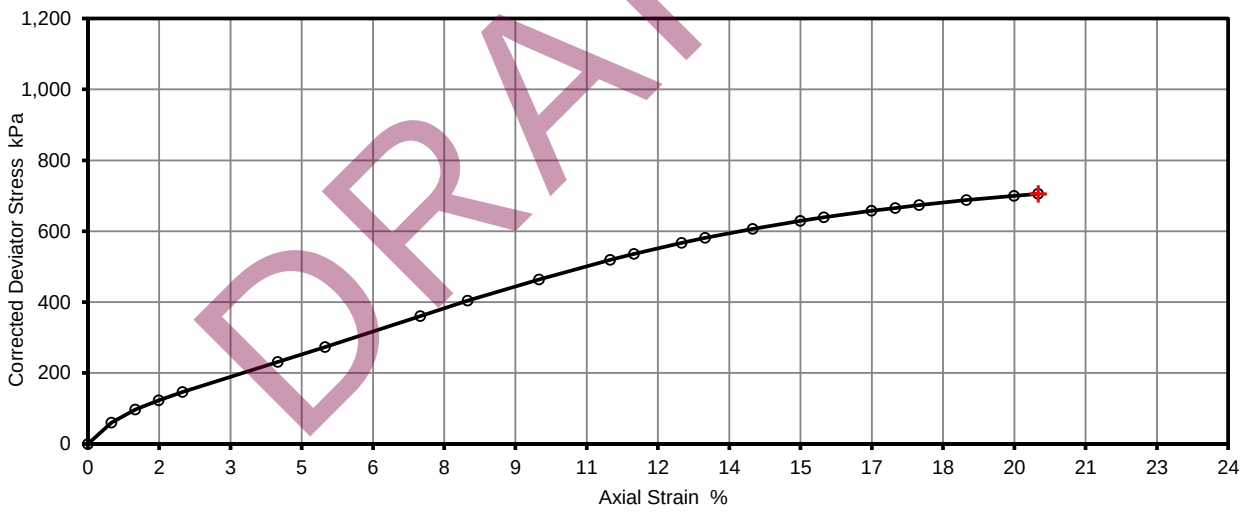
		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Notes	Date Printed	Sheet
Plotted test results from BS EN ISO 17892-12 includes 4pt and 1pt tests unless otherwise detailed on the classification summary report. See individual results for more detail. A' line derivation above PI of 6, PI = 0.73 (LL-20)	06/04/2023	1

GEOTECHNICS geotechnical and geoenvironmental specialists	Unconsolidated Undrained Triaxial Compression Test - single specimen			Project No.	PN224453 Phase 2
				Hole No.	BH106
Project Name	Wrexham FC : New Kop Stand - Ground Investigation			Sample ID.	
Specimen Reference	2	Specimen Depth	14.24 m	Depth	14.00 m
Specimen Description	Extremely high strength reddish brown slightly sandy slightly gravelly CLAY.			Sample Type	UT
Test Method	BS EN ISO 17892-8			Date of Test	09/03/2023

Test Number		1	
Length		210.3	mm
Diameter		104.3	mm
Bulk Density		2.24	Mg/m3
Water Content		13.2	%
Dry Density		1.98	Mg/m3
Rate of Strain		1.8	%/min
Cell Pressure		275	kPa
At failure	Axial Strain	20.0	%
	Deviator Stress, (σ1 - σ3)f	705	kPa
	Undrained Shear Strength, cu	353	kPa ½(σ1 - σ3)f
	Mode of Failure	Plastic	

Deviator Stress v Axial Strain



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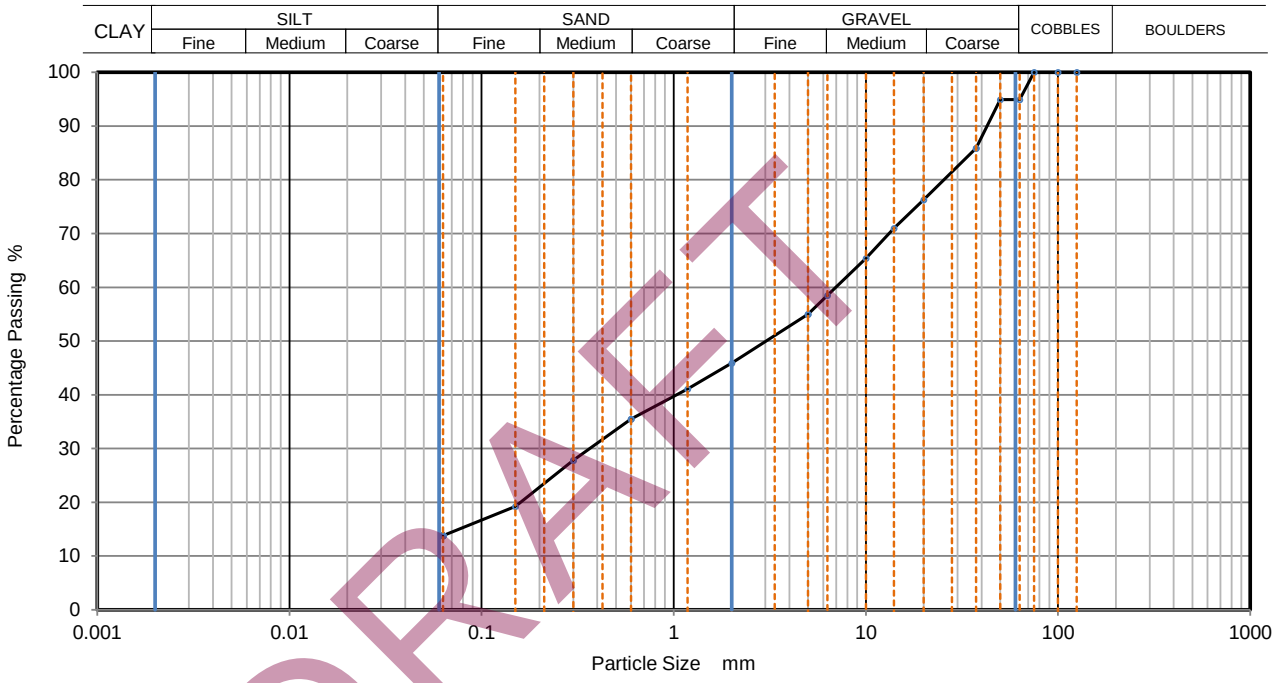
Remarks	Printed
WC at failure zone = 13.5% Gravel larger than one sixth of the diameter of the sample present, this may affect the test result.	11/04/2023

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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH104
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	0.00 - 0.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	MADE GROUND: Dark brown very sandy clayey gravel with a medium cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	95		
50	95		
37.5	86		
20	76		
14	71		
10	65		
6.3	59		
5	55		
2	46		
1.18	41		
0.6	36		
0.3	28		
0.15	19		
0.063	14		

Sample Proportions	% dry mass
Cobbles	5
Gravel	49
Sand	32
Fines <0.063mm	14

Grading Analysis		
D100	mm	75
D60	mm	6.98
D30	mm	0.365
D10	mm	
Uniformity Coefficient		

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

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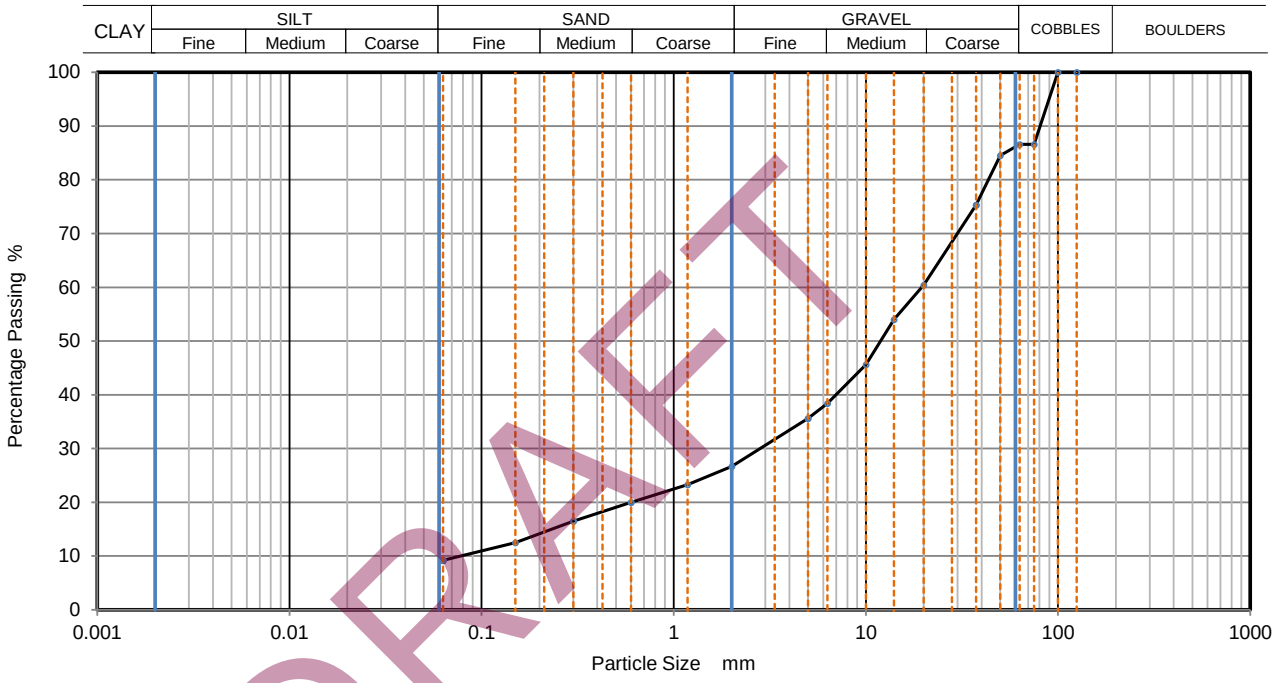
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH104
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	1.20 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	MADE GROUND: Brown sandy clayey gravel with a medium cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	87		
63	87		
50	85		
37.5	75		
20	60		
14	54		
10	46		
6.3	38		
5	36		
2	27		
1.18	23		
0.6	20		
0.3	17		
0.15	13		
0.063	9		

Sample Proportions	% dry mass
Cobbles	13
Gravel	60
Sand	18
Fines <0.063mm	9

Grading Analysis		
D100	mm	100
D60	mm	19.6
D30	mm	2.81
D10	mm	0.0784
Uniformity Coefficient		250

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

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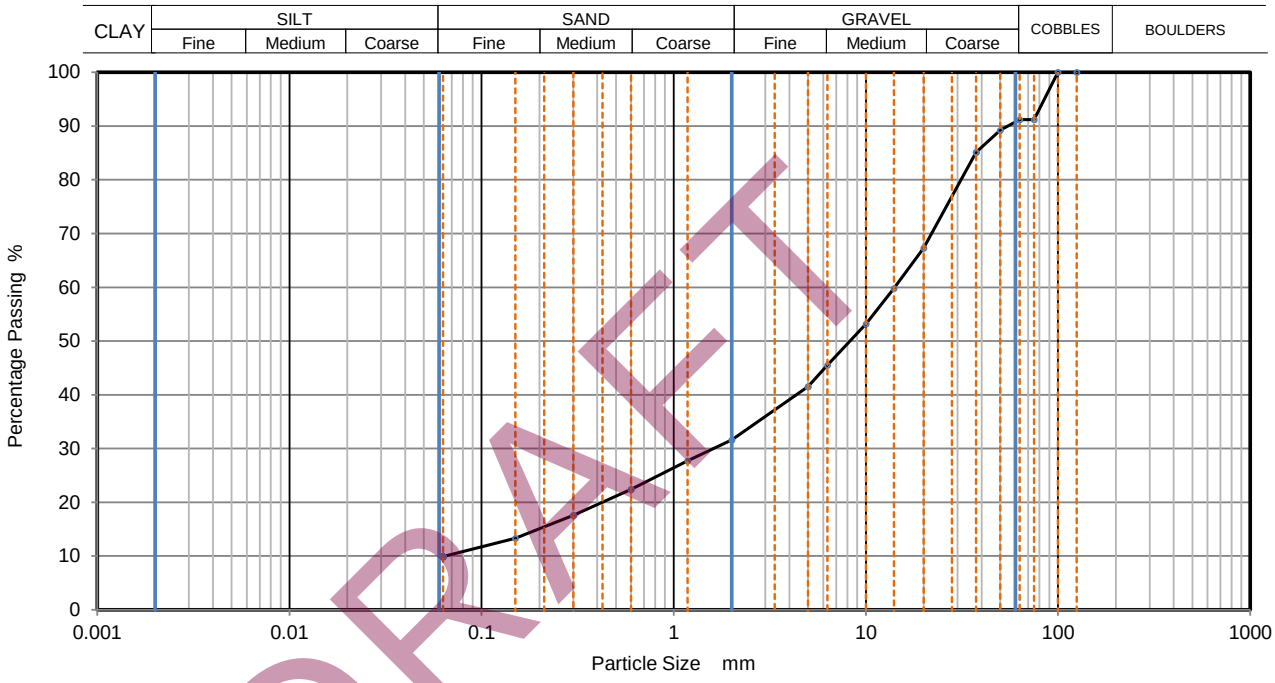
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH104
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	3.00 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy clayey GRAVEL with a medium cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	91		
63	91		
50	89		
37.5	85		
20	67		
14	60		
10	53		
6.3	46		
5	42		
2	32		
1.18	28		
0.6	22		
0.3	18		
0.15	13		
0.063	10		

Sample Proportions	% dry mass
Cobbles	9
Gravel	59
Sand	22
Fines <0.063mm	10

Grading Analysis		
D100	mm	100
D60	mm	14.1
D30	mm	1.61
D10	mm	0.065
Uniformity Coefficient		220

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

Printed

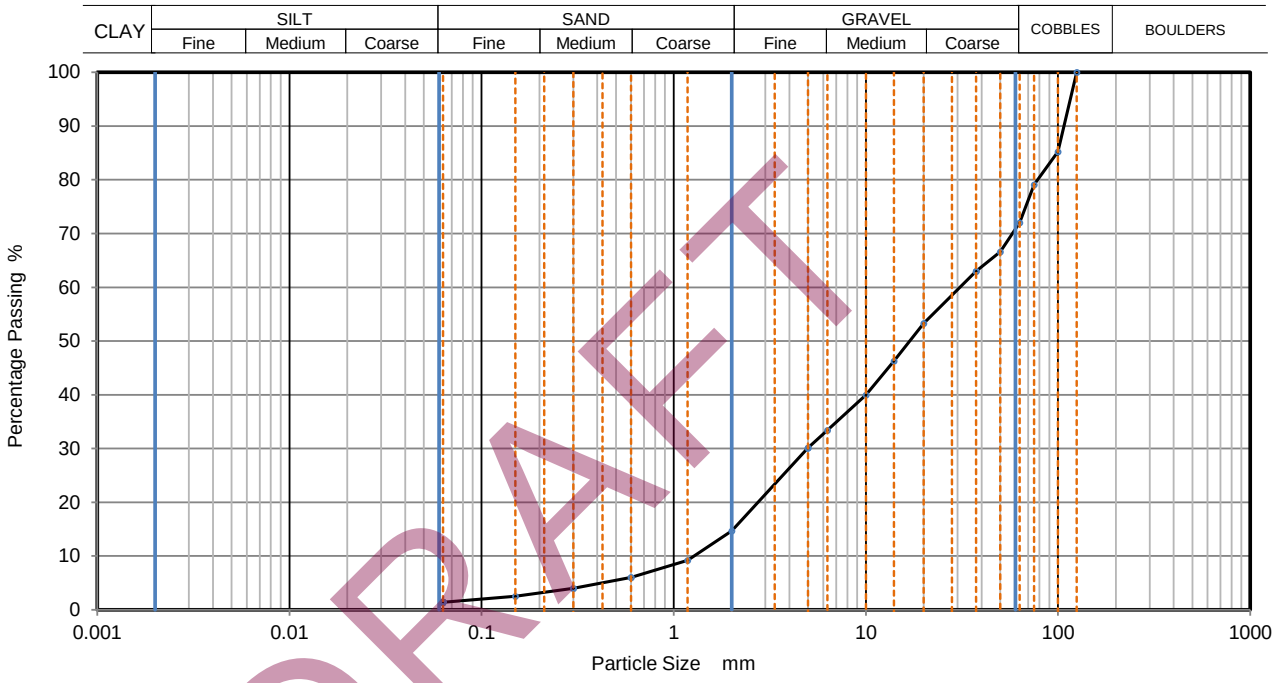
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH104
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	7.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown sandy slightly clayey GRAVEL with a high cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	85		
75	79		
63	72		
50	67		
37.5	63		
20	53		
14	46		
10	40		
6.3	33		
5	30		
2	15		
1.18	9		
0.6	6		
0.3	4		
0.15	3		
0.063	1		

Sample Proportions	% dry mass
Cobbles	28
Gravel	58
Sand	13
Fines <0.063mm	1

Grading Analysis		
D100	mm	125
D60	mm	30.9
D30	mm	4.97
D10	mm	1.27
Uniformity Coefficient		24

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

Printed

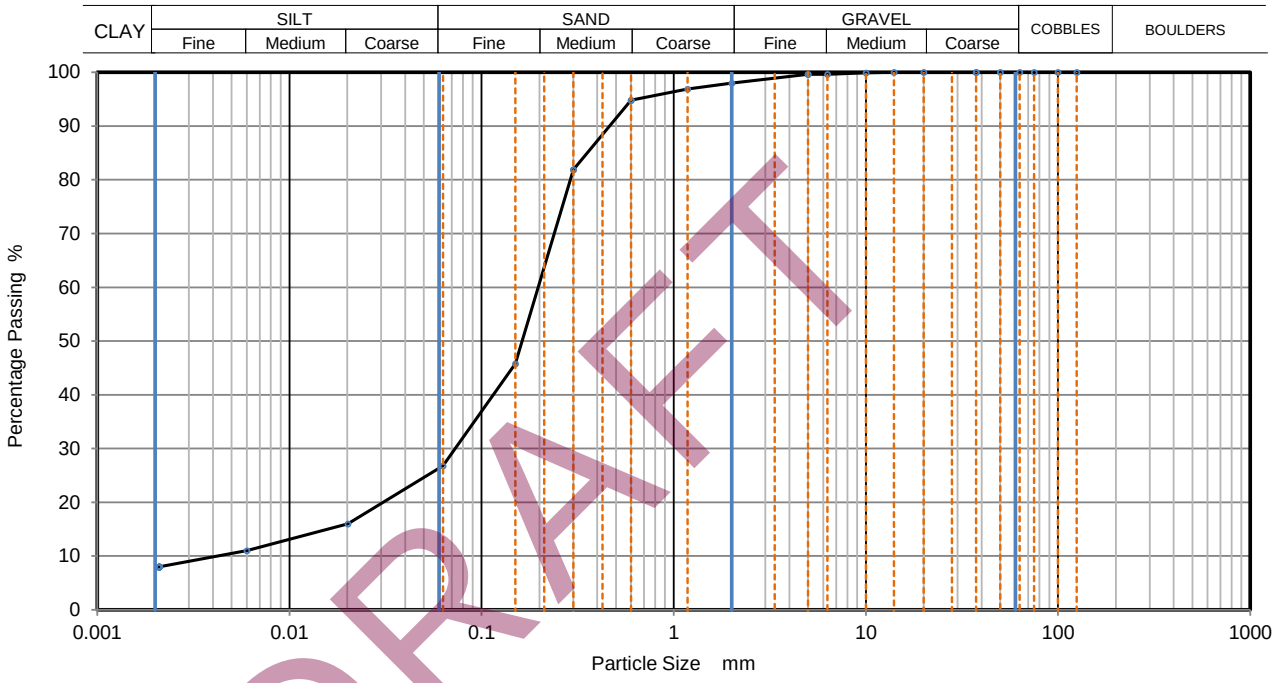
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH104
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	10.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very clayey SAND with traces of gravel.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	16
100	100	0.006	11
75	100	0.002	8
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
2	98		
1.18	97		
0.6	95		
0.3	82		
0.15	46	Particle density (assumed)	
0.063	27	6.30 Mg/m3	

Sample Proportions	% dry mass
Cobbles	0
Gravel	2
Sand	71
Silt	19
Clay	8

Grading Analysis		
D100	mm	14
D60	mm	0.197
D30	mm	0.073
D10	mm	0.00469
Uniformity Coefficient		42

Remarks

Printed

11/04/2023

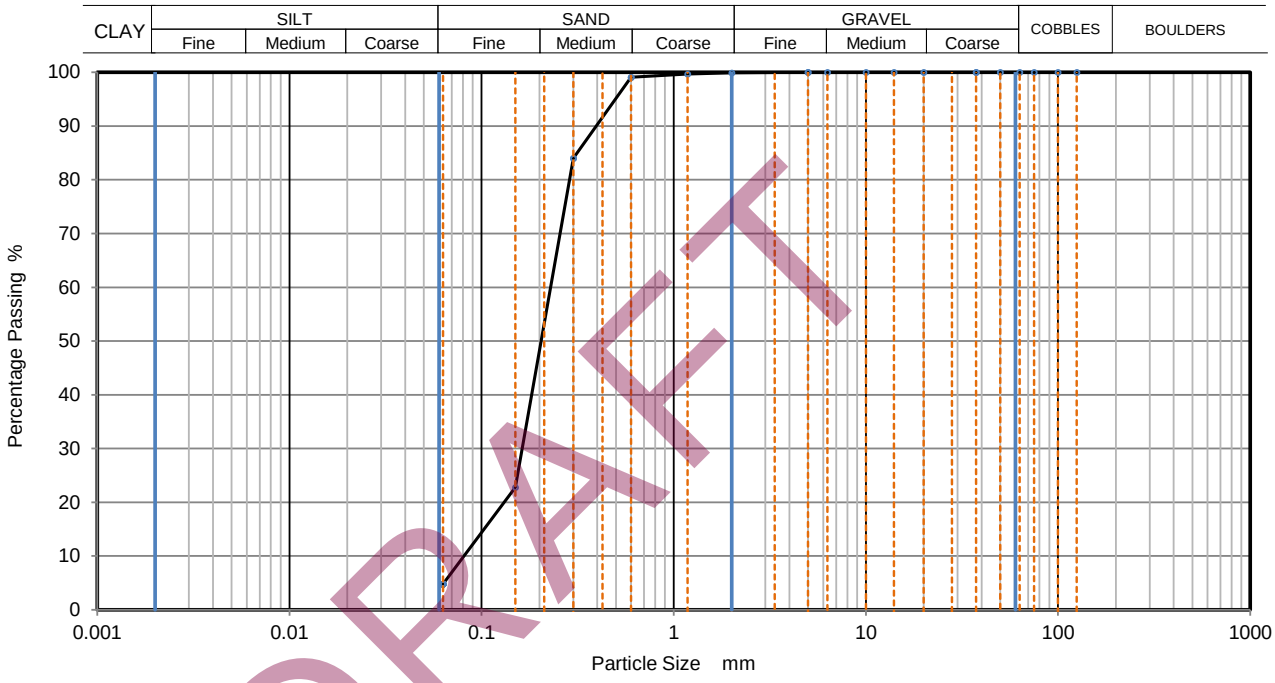
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH104
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	13.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown clayey SAND.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
2	100		
1.18	100		
0.6	99		
0.3	84		
0.15	23		
0.063	5		

Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	95
Fines <0.063mm	5

Grading Analysis		
D100	mm	5
D60	mm	0.229
D30	mm	0.163
D10	mm	0.0808
Uniformity Coefficient		2.8

Remarks

Printed

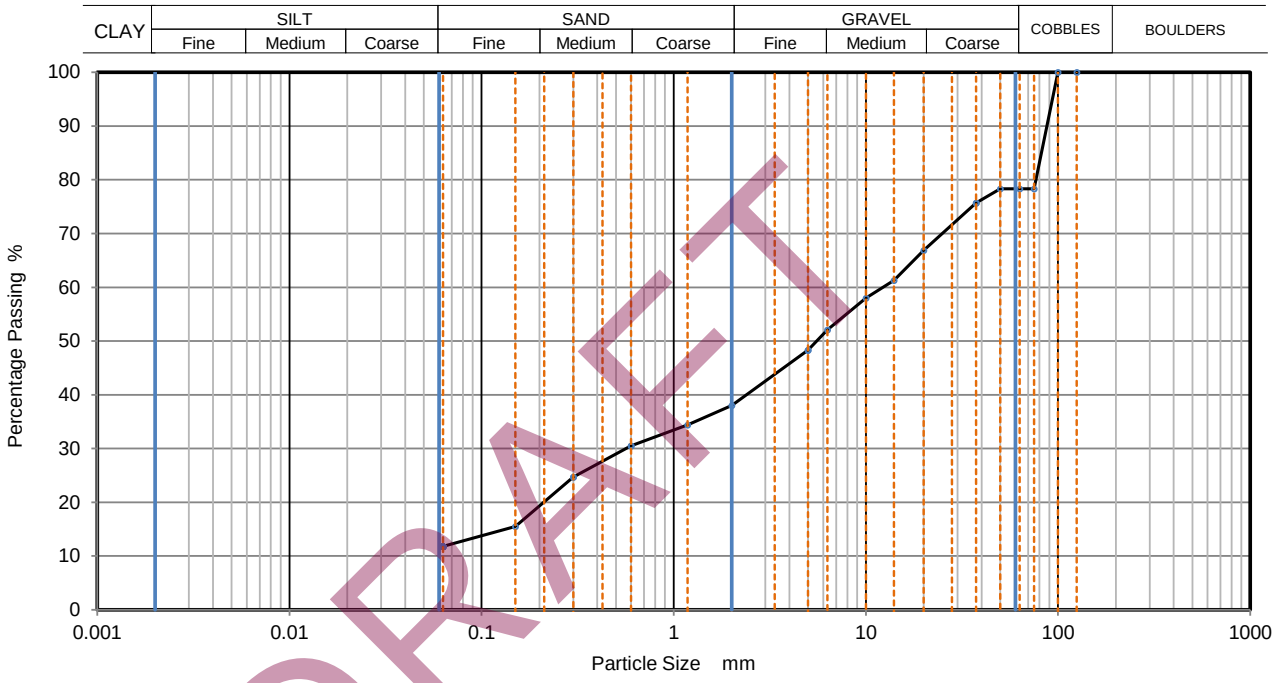
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH105
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	0.00 - 0.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	MADE GROUND: Dark brown very sandy clayey gravel with a high cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	78		
63	78		
50	78		
37.5	76		
20	67		
14	61		
10	58		
6.3	52		
5	48		
2	38		
1.18	34		
0.6	31		
0.3	25		
0.15	16		
0.063	12		

Sample Proportions	% dry mass
Cobbles	22
Gravel	40
Sand	26
Fines <0.063mm	12

Grading Analysis		
D100	mm	100
D60	mm	12.3
D30	mm	0.566
D10	mm	
Uniformity Coefficient		

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

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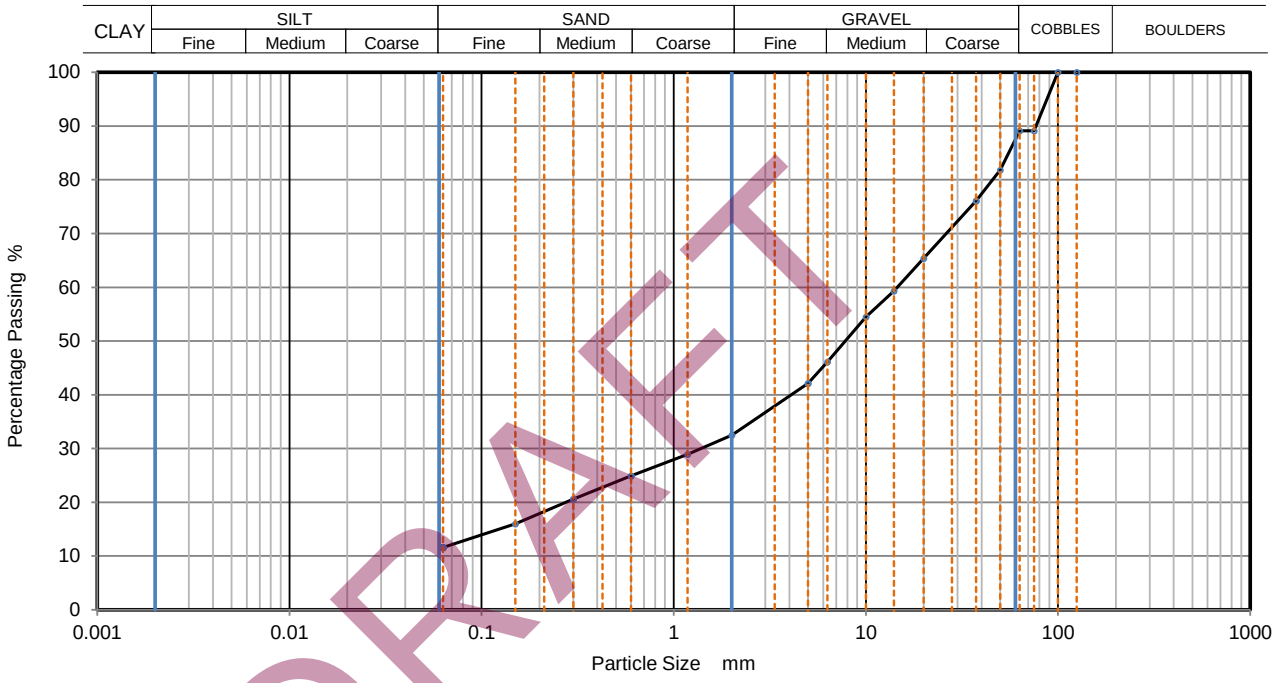
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH105
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	1.20 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	MADE GROUND: Dark brown very sandy clayey gravel with a medium cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	89		
63	89		
50	82		
37.5	76		
20	65		
14	59		
10	55		
6.3	46		
5	42		
2	33		
1.18	29		
0.6	25		
0.3	21		
0.15	16		
0.063	12		

Sample Proportions	% dry mass
Cobbles	11
Gravel	56
Sand	21
Fines <0.063mm	12

Grading Analysis		
D100	mm	100
D60	mm	14.6
D30	mm	1.38
D10	mm	
Uniformity Coefficient		

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

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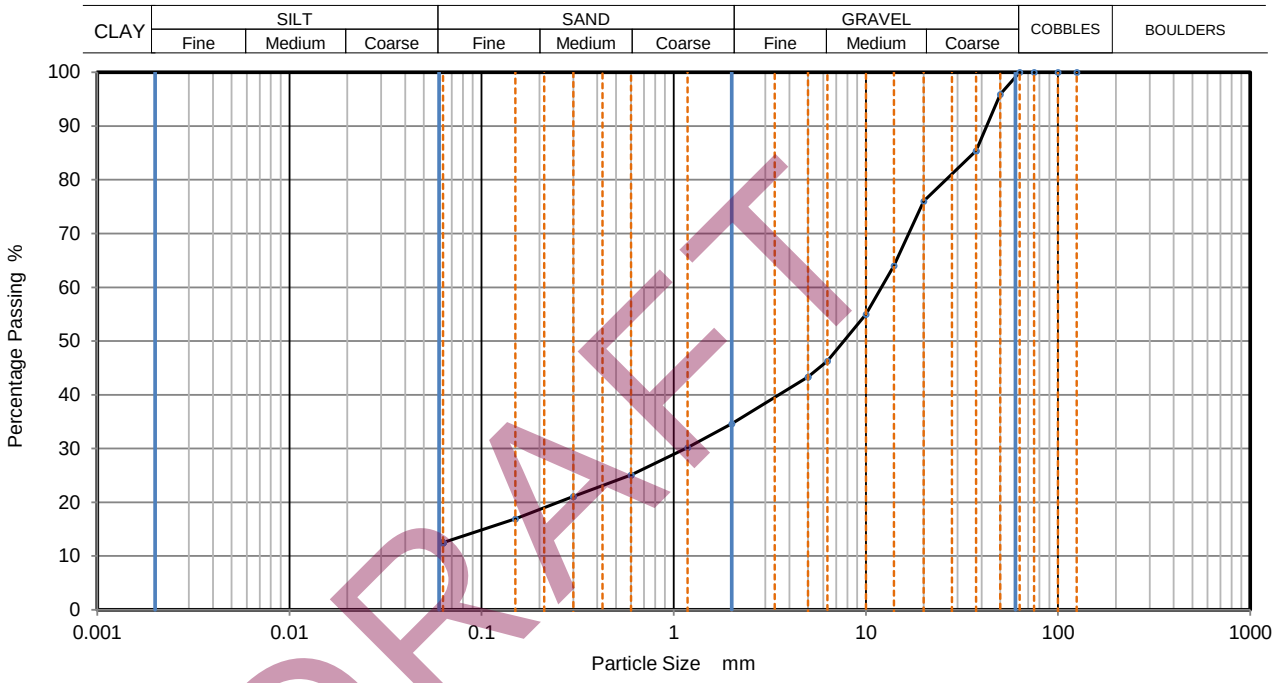
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH105
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	2.00 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	96		
37.5	85		
20	76		
14	64		
10	55		
6.3	46		
5	43		
2	35		
1.18	30		
0.6	25		
0.3	21		
0.15	17		
0.063	13		

Sample Proportions	% dry mass
Cobbles	0
Gravel	65
Sand	22
Fines <0.063mm	13

Grading Analysis		
D100	mm	63
D60	mm	12
D30	mm	1.14
D10	mm	
Uniformity Coefficient		

Remarks

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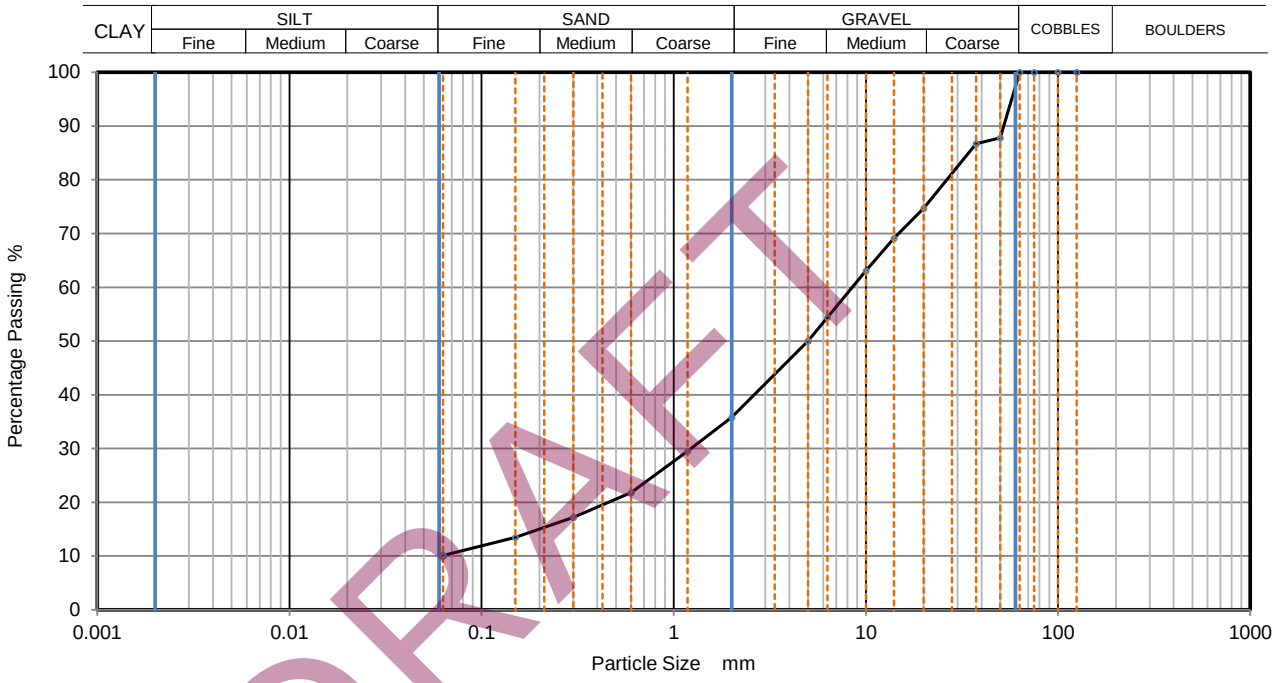
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH105
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	5.00 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brownish grey very sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	88		
37.5	87		
20	75		
14	69		
10	63		
6.3	54		
5	50		
2	36		
1.18	30		
0.6	22		
0.3	17		
0.15	14		
0.063	10		

Sample Proportions	% dry mass
Cobbles	0
Gravel	64
Sand	26
Fines <0.063mm	10

Grading Analysis		
D100	mm	63
D60	mm	8.48
D30	mm	1.23
D10	mm	
Uniformity Coefficient		

Initial sample mass less than BS EN ISO 17892 requirements

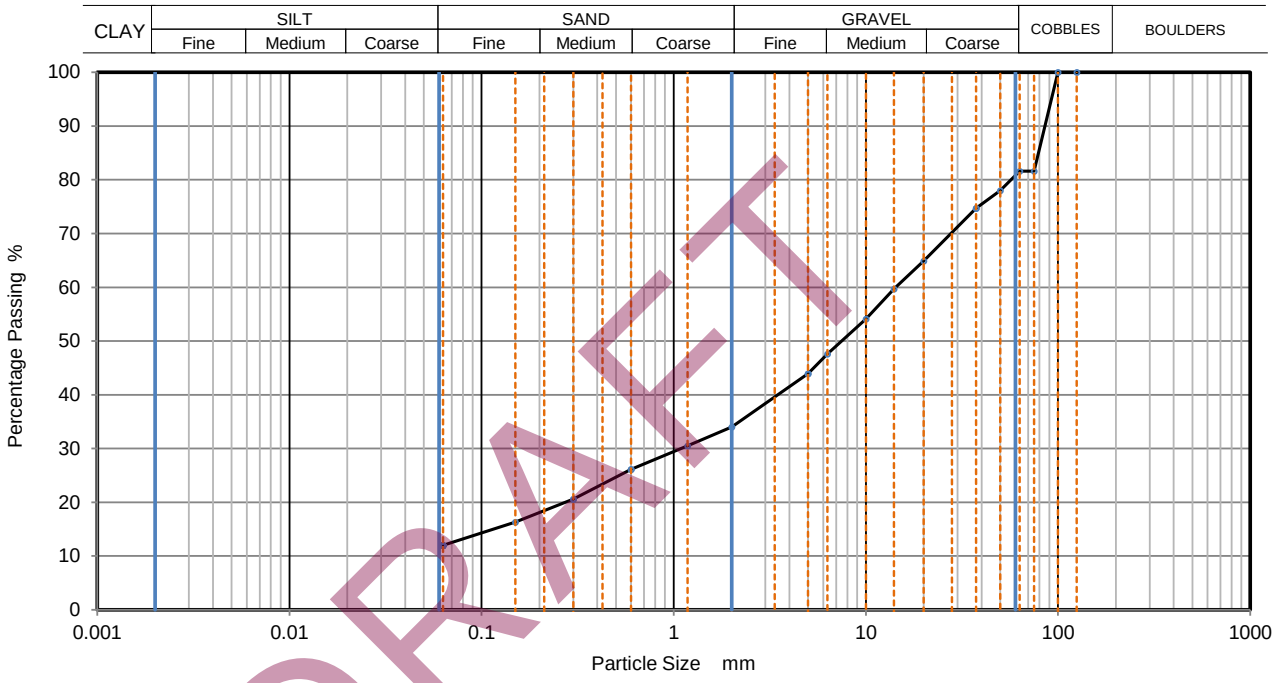
Remarks

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GEOTECHNICS geotechnical and geoenvironmental specialists	PARTICLE SIZE DISTRIBUTION	Hole No.	BH105
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	8.00 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Dark brown very sandy clayey GRAVEL with a medium cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	82		
63	82		
50	78		
37.5	75		
20	65		
14	60		
10	54		
6.3	48		
5	44		
2	34		
1.18	31		
0.6	26		
0.3	21		
0.15	16		
0.063	12		

Sample Proportions	% dry mass
Cobbles	18
Gravel	48
Sand	22
Fines <0.063mm	12

Grading Analysis		
D100	mm	100
D60	mm	14.3
D30	mm	1.09
D10	mm	
Uniformity Coefficient		

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

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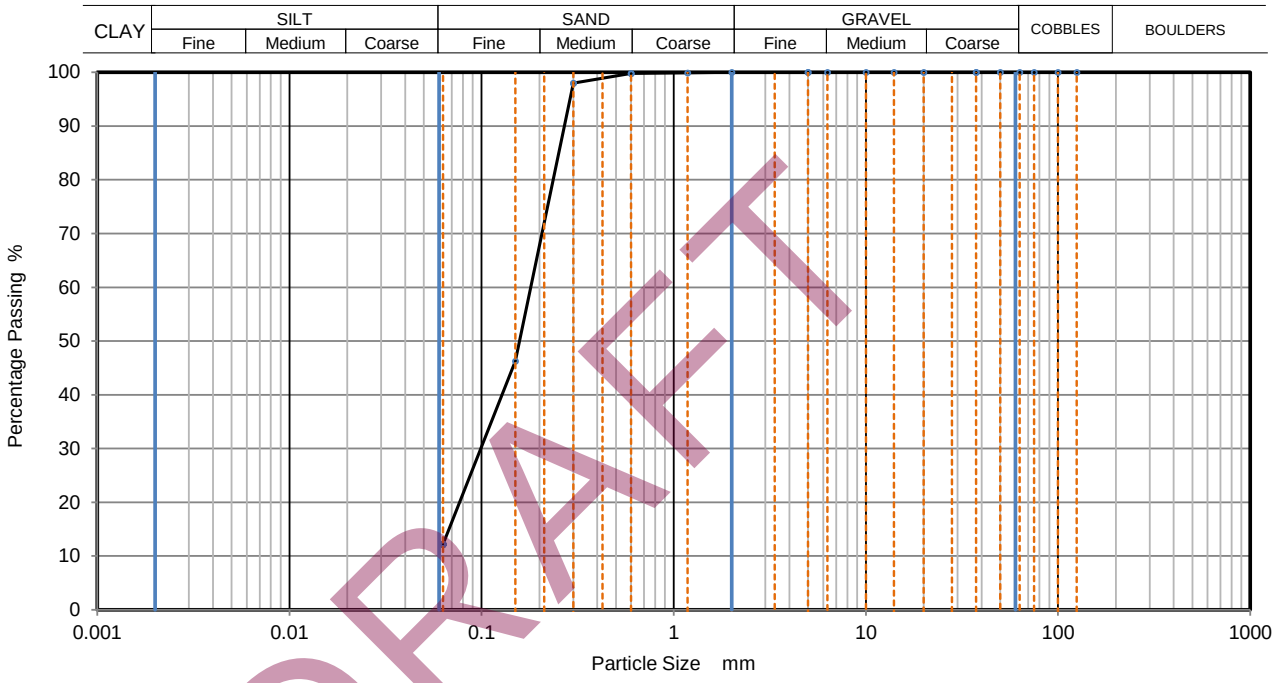
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH105
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	12.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown clayey SAND.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
2	100		
1.18	100		
0.6	100		
0.3	98		
0.15	46		
0.063	12		

Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	88
Fines <0.063mm	12

Grading Analysis		
D100	mm	2
D60	mm	0.18
D30	mm	0.0991
D10	mm	
Uniformity Coefficient		

Remarks

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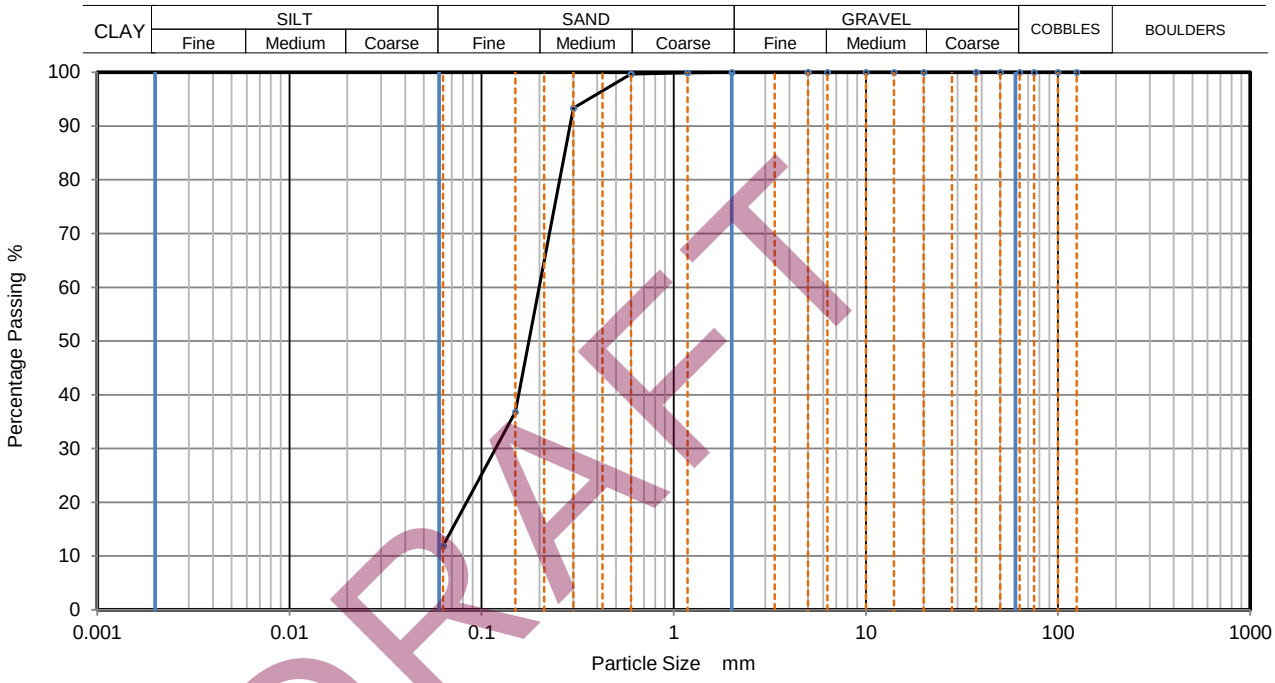
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH105
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	14.00 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown clayey SAND.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
2	100		
1.18	100		
0.6	100		
0.3	93		
0.15	37		
0.063	12		

Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	88
Fines <0.063mm	12

Grading Analysis		
D100	mm	2
D60	mm	0.199
D30	mm	0.118
D10	mm	
Uniformity Coefficient		

Remarks

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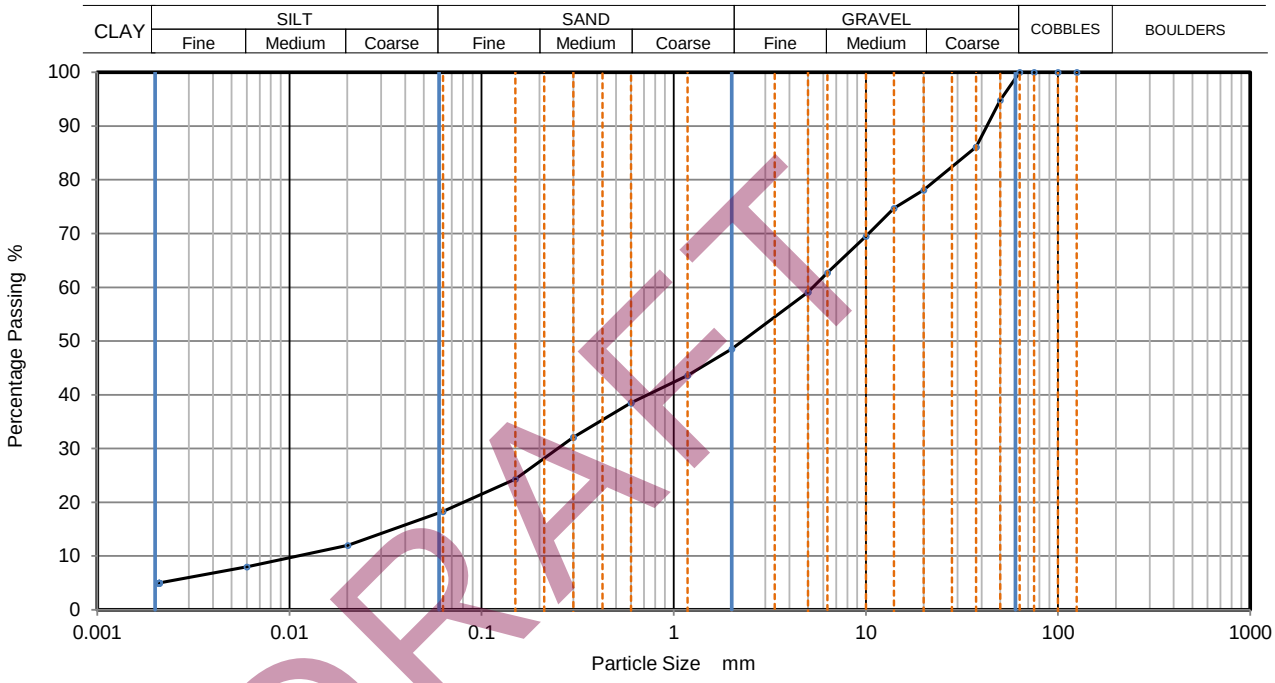
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH106
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	0.00 - 0.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	MADE GROUND: Dark brown very sandy clayey gravel.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	12
100	100	0.006	8
75	100	0.002	5
63	100		
50	95		
37.5	86		
20	78		
14	75		
10	70		
6.3	63		
5	59		
2	49		
1.18	44		
0.6	39		
0.3	32		
0.15	24	Particle density (assumed)	
0.063	18	2.65 Mg/m3	

Sample Proportions	% dry mass
Cobbles	0
Gravel	52
Sand	30
Silt	13
Clay	5

Grading Analysis		
D100	mm	63
D60	mm	5.31
D30	mm	0.249
D10	mm	0.0106
Uniformity Coefficient		500

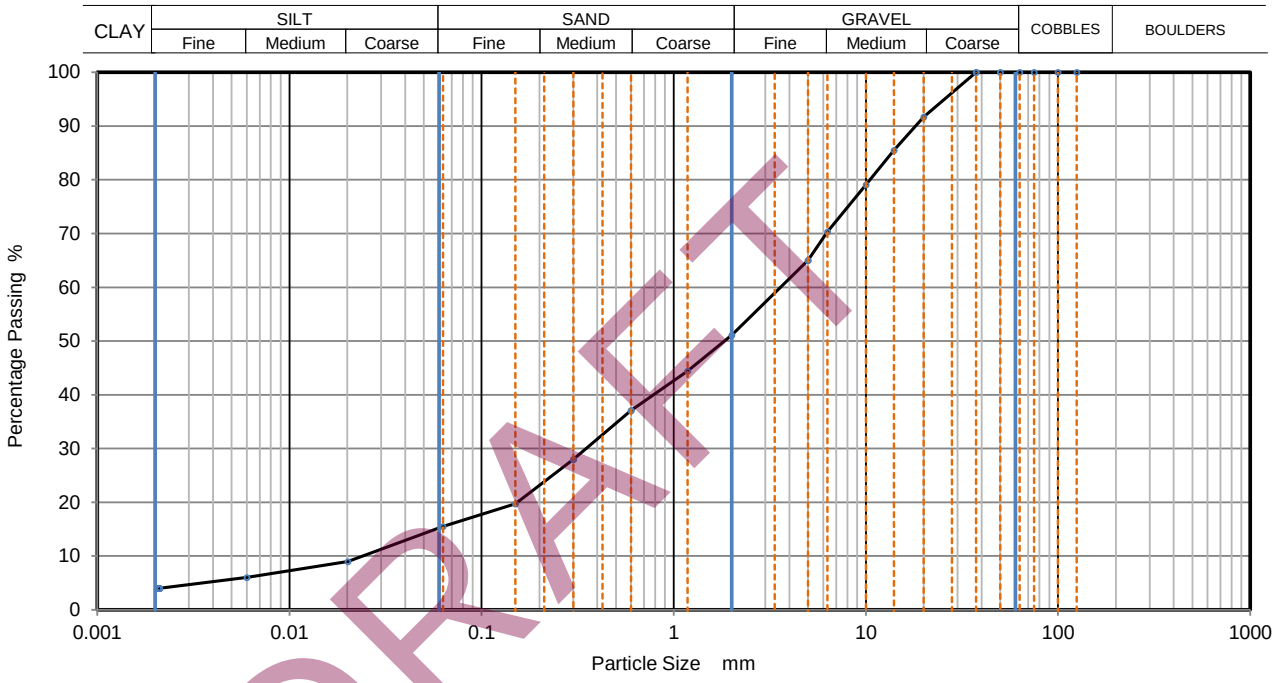
Remarks

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GEOTECHNICS geotechnical and geoenvironmental specialists	PARTICLE SIZE DISTRIBUTION	Hole No.	BH106
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	1.20 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	MADE GROUND: Brown very sandy clayey gravel.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	9
100	100	0.006	6
75	100	0.002	4
63	100		
50	100		
37.5	100		
20	92		
14	86		
10	79		
6.3	70		
5	65		
2	51		
1.18	44		
0.6	37		
0.3	28		
0.15	20	Particle density (assumed)	
0.063	16	2.65 Mg/m3	

Sample Proportions	% dry mass
Cobbles	0
Gravel	48
Sand	36
Silt	12
Clay	4

Grading Analysis		
D100	mm	37.5
D60	mm	3.6
D30	mm	0.35
D10	mm	0.0231
Uniformity Coefficient		160

Remarks

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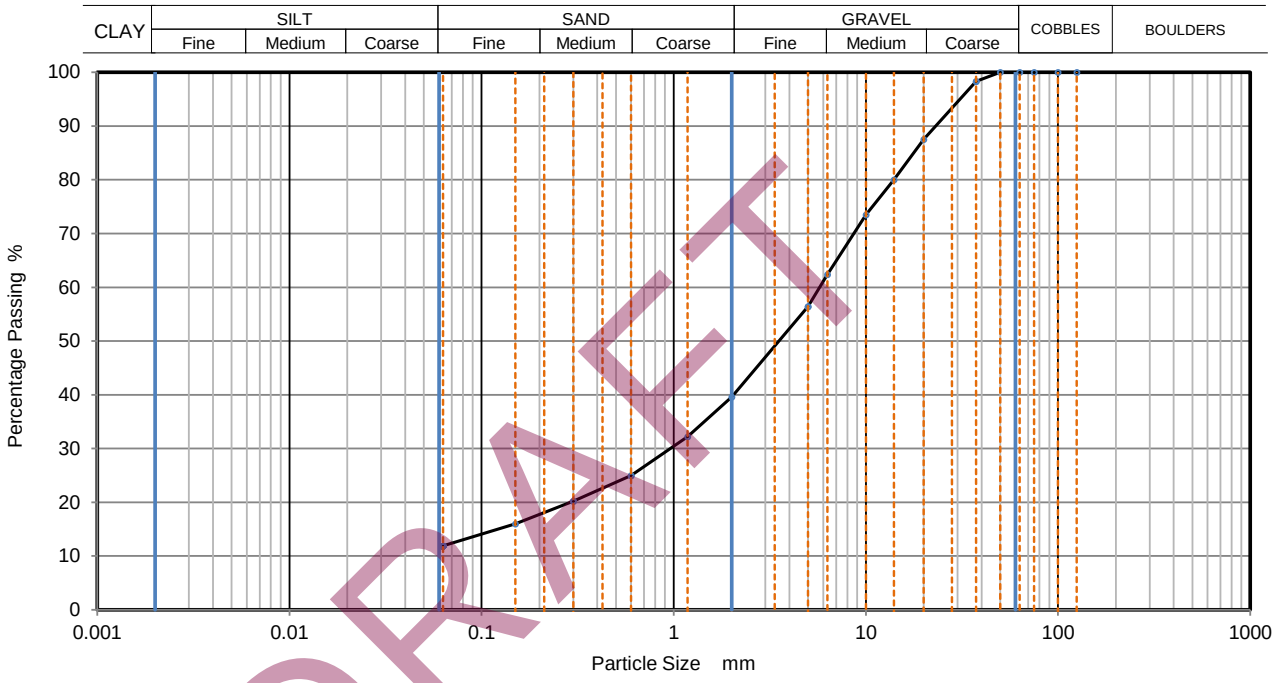
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH106
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	3.00 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	98		
20	88		
14	80		
10	74		
6.3	62		
5	56		
2	40		
1.18	32		
0.6	25		
0.3	20		
0.15	16		
0.063	12		

Sample Proportions	% dry mass
Cobbles	0
Gravel	60
Sand	28
Fines <0.063mm	12

Grading Analysis		
D100	mm	50
D60	mm	5.74
D30	mm	0.96
D10	mm	
Uniformity Coefficient		

Remarks

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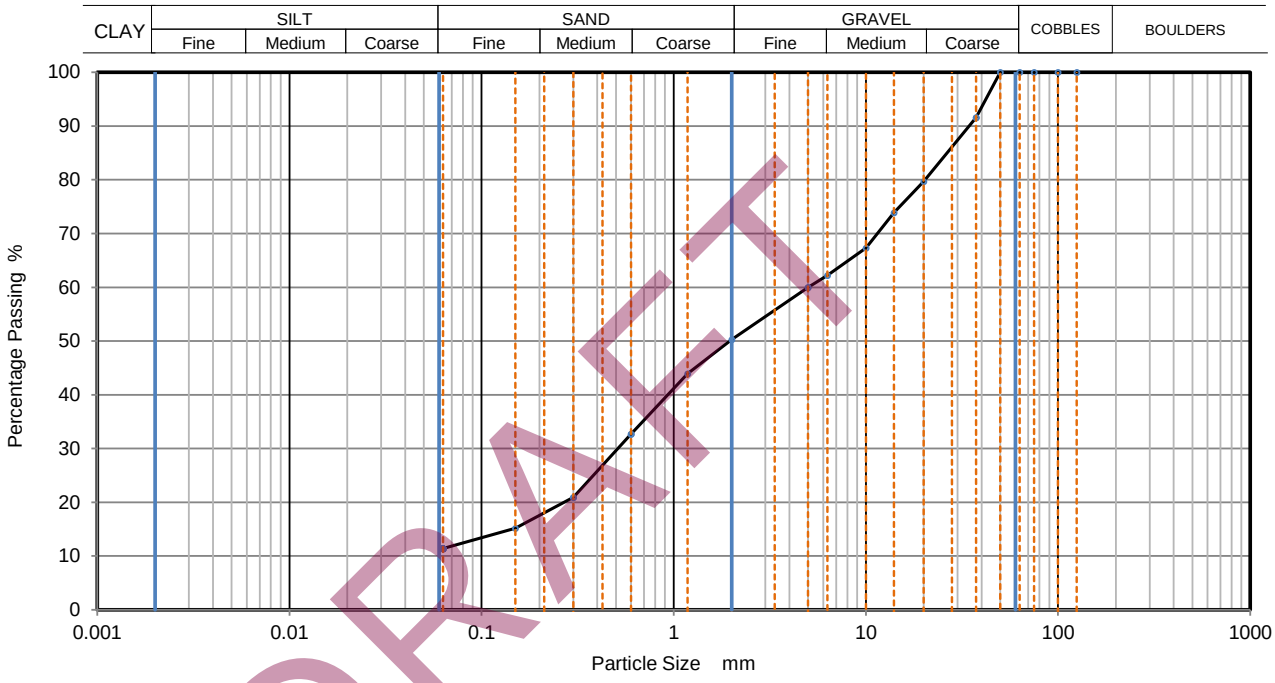
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH106
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	4.00 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown very sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	92		
20	80		
14	74		
10	67		
6.3	62		
5	60		
2	50		
1.18	44		
0.6	33		
0.3	21		
0.15	15		
0.063	11		

Sample Proportions	% dry mass
Cobbles	0
Gravel	50
Sand	39
Fines <0.063mm	11

Grading Analysis		
D100	mm	50
D60	mm	5.01
D30	mm	0.511
D10	mm	
Uniformity Coefficient		

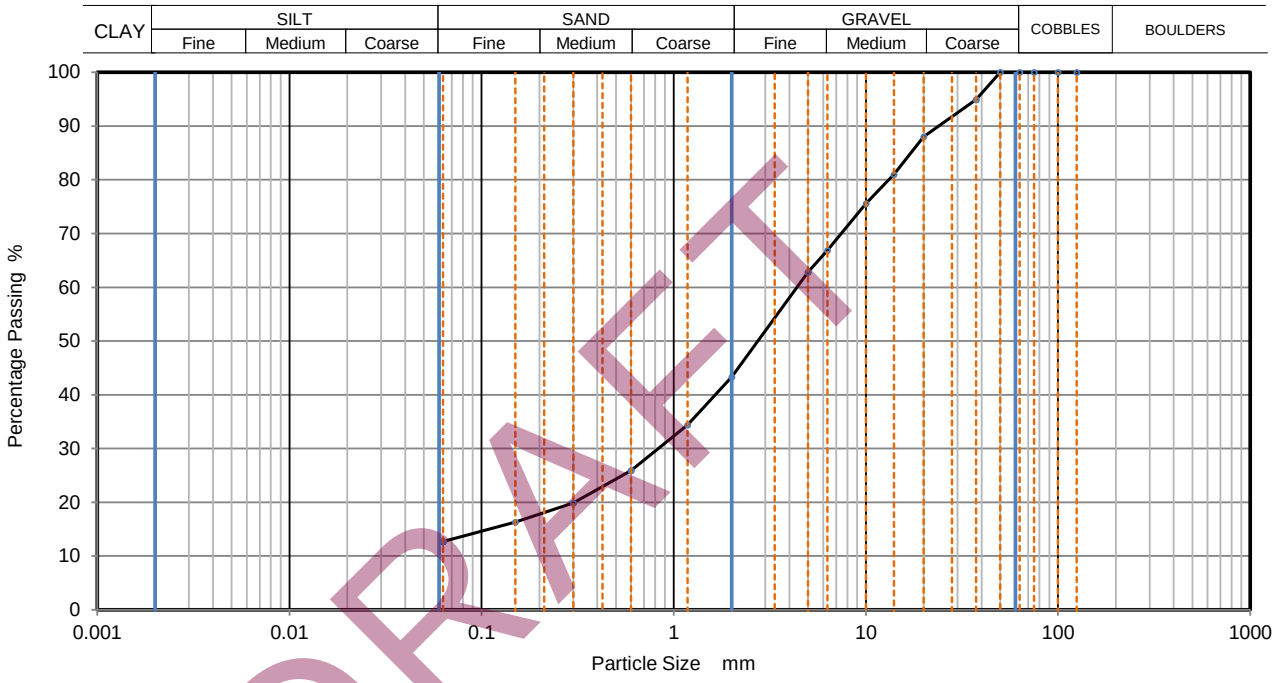
Remarks

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GEOTECHNICS geotechnical and geoenvironmental specialists	PARTICLE SIZE DISTRIBUTION	Hole No.	BH106
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	6.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Dark brown very sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	95		
20	88		
14	81		
10	76		
6.3	67		
5	63		
2	43		
1.18	34		
0.6	26		
0.3	20		
0.15	16		
0.063	13		

Sample Proportions	% dry mass
Cobbles	0
Gravel	56
Sand	31
Fines <0.063mm	13

Grading Analysis		
D100	mm	50
D60	mm	4.39
D30	mm	0.834
D10	mm	
Uniformity Coefficient		

Remarks

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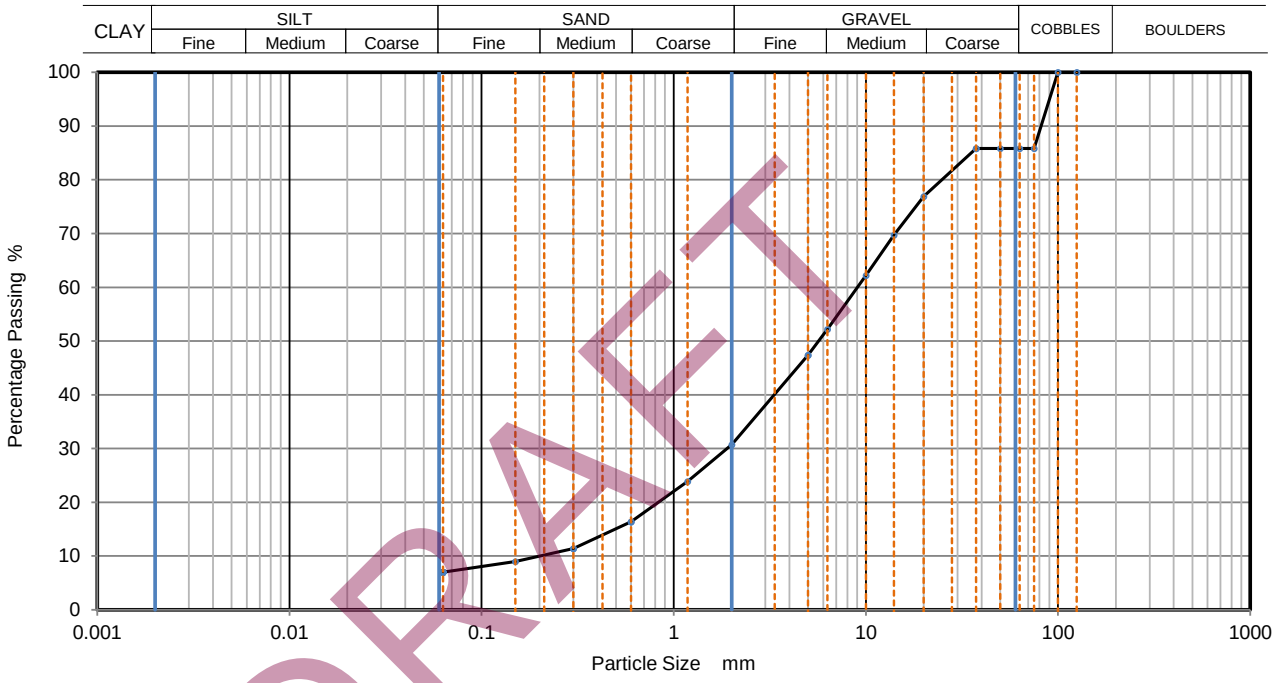
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH106
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	8.00 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Dark brown very sandy clayey GRAVEL with a medium cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	86		
63	86		
50	86		
37.5	86		
20	77		
14	70		
10	62		
6.3	52		
5	47		
2	31		
1.18	24		
0.6	16		
0.3	11		
0.15	9		
0.063	7		

Sample Proportions	% dry mass
Cobbles	14
Gravel	55
Sand	24
Fines <0.063mm	7

Grading Analysis		
D100	mm	100
D60	mm	9.01
D30	mm	1.9
D10	mm	0.198
Uniformity Coefficient		46

Remarks

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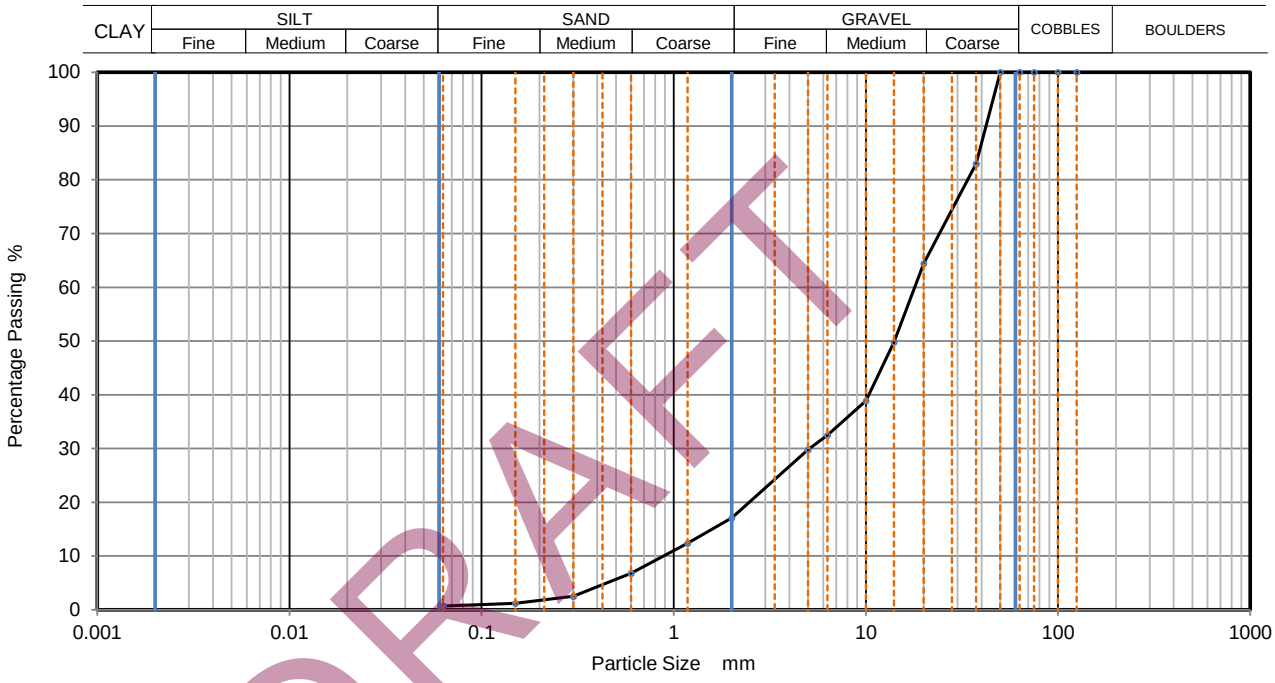
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PARTICLE SIZE DISTRIBUTION

		Hole No.	BH106
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	11.00 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown sandy slightly clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	83		
20	64		
14	50		
10	39		
6.3	33		
5	30		
2	17		
1.18	12		
0.6	7		
0.3	3		
0.15	1		
0.063	1		

Sample Proportions	% dry mass
Cobbles	0
Gravel	83
Sand	16
Fines <0.063mm	1

Grading Analysis		
D100	mm	50
D60	mm	18
D30	mm	5.11
D10	mm	0.886
Uniformity Coefficient		20

Remarks

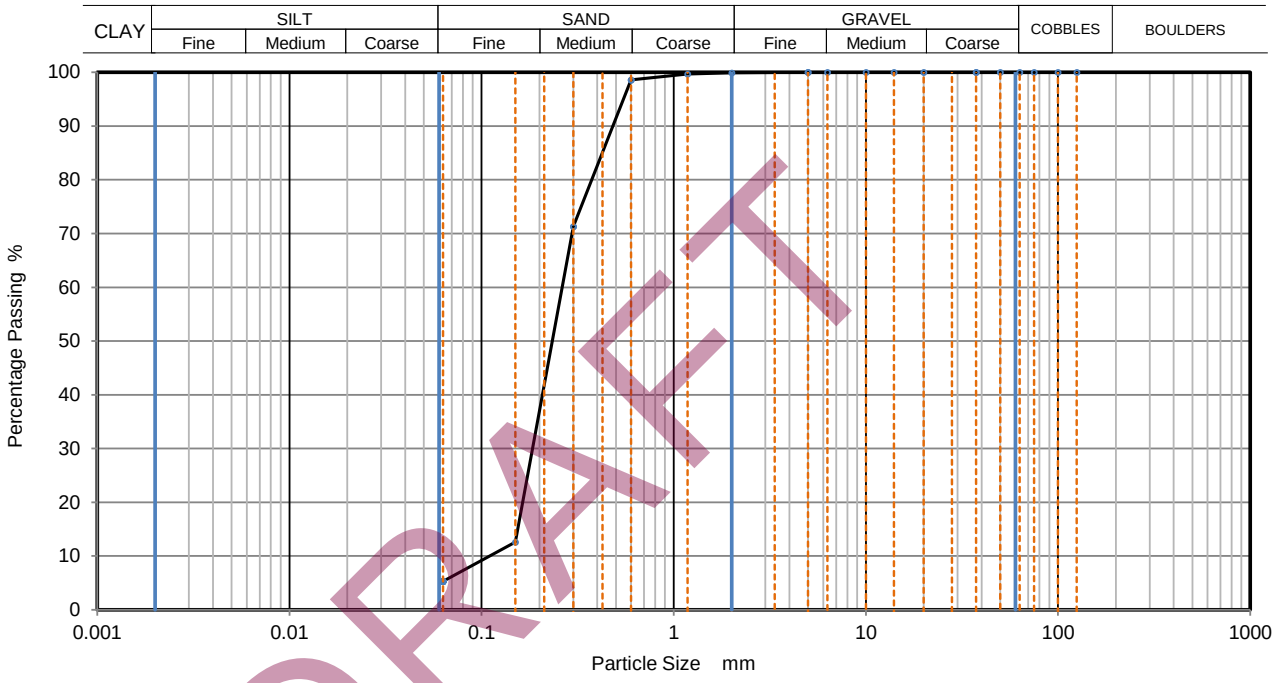
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GEOTECHNICS geotechnical and geoenvironmental specialists	PARTICLE SIZE DISTRIBUTION	Hole No.	BH106
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	15.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown clayey SAND.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
2	100		
1.18	100		
0.6	99		
0.3	71		
0.15	13		
0.063	5		

Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	95
Fines <0.063mm	5

Grading Analysis		
D100	mm	5
D60	mm	0.262
D30	mm	0.184
D10	mm	0.11
Uniformity Coefficient		2.4

Remarks

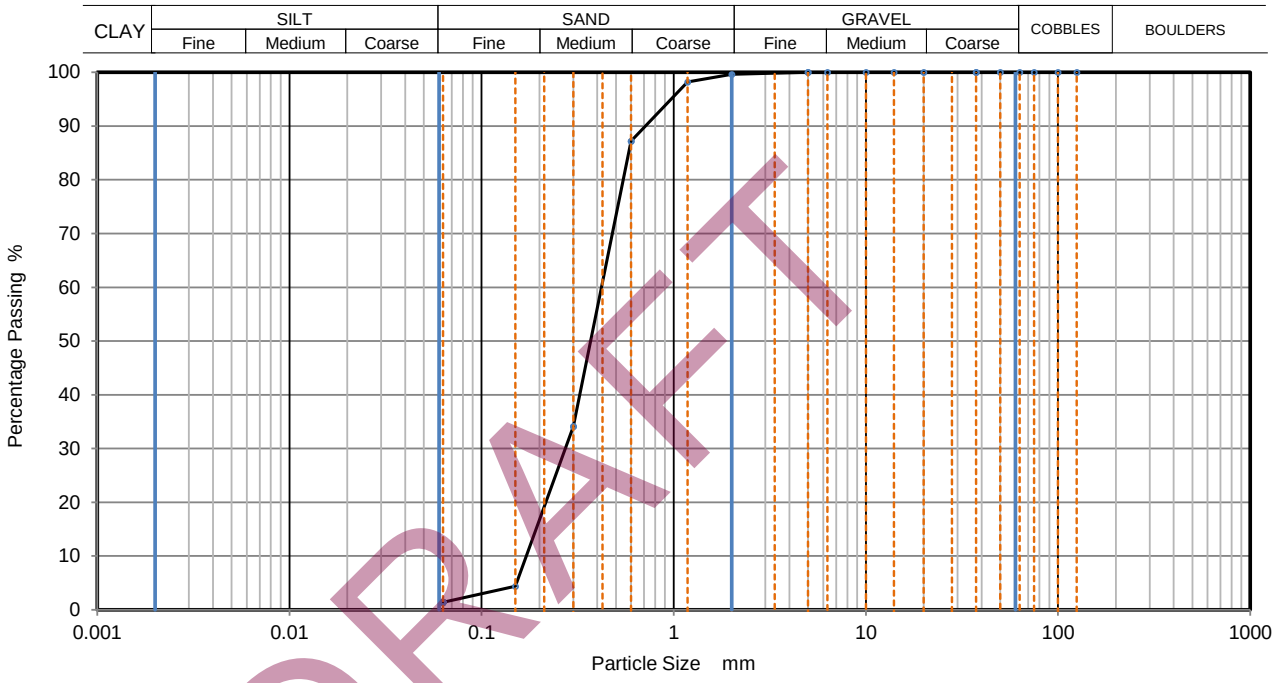
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GEOTECHNICS geotechnical and geoenvironmental specialists	PARTICLE SIZE DISTRIBUTION	Hole No.	BH106
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	18.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown slightly clayey SAND.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
2	100		
1.18	98		
0.6	87		
0.3	34		
0.15	4		
0.063	1		

Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	99
Fines <0.063mm	1

Grading Analysis		
D100	mm	5
D60	mm	0.421
D30	mm	0.273
D10	mm	0.171
Uniformity Coefficient		2.5

Remarks

Printed

11/04/2023

UKAS TESTING

1365

Laboratory Test Certificate

	Geotechnics Ltd The Geotechnical Centre 203 Torrington Avenue Tile Hill Coventry, CV4 9AP	**Date of issue**	09.03.23
		Issue No.	1
		Client Ref. No.	N/A
		Samples / Material Source	
		Samples Recv'd	28.02.23
Testing Start Date	02.03.23	Sample State	As received
Testing Complete	08.03.23	Sampled by	Geotechnics Limited
Comments			
Project No	PN224453		
Project Name	Wrexham FC : New Kop Stand - Ground Investigation - Phase 2		

Summary of Tests

Standard	Test Description	Test Quantity	UKAS
BS EN ISO 17892-4:2016 Cl. 5.2	Particle Size Distribution by Sieving Method	8	Yes

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Note: Any descriptions, opinions or interpretations are outside the scope of UKAS accreditation.
The results within this report relate only to the samples tested and received from the client.

UKAS TESTING 1365

Test Results checked and approved for issue.
Signed for and on behalf of Geotechnics Limited

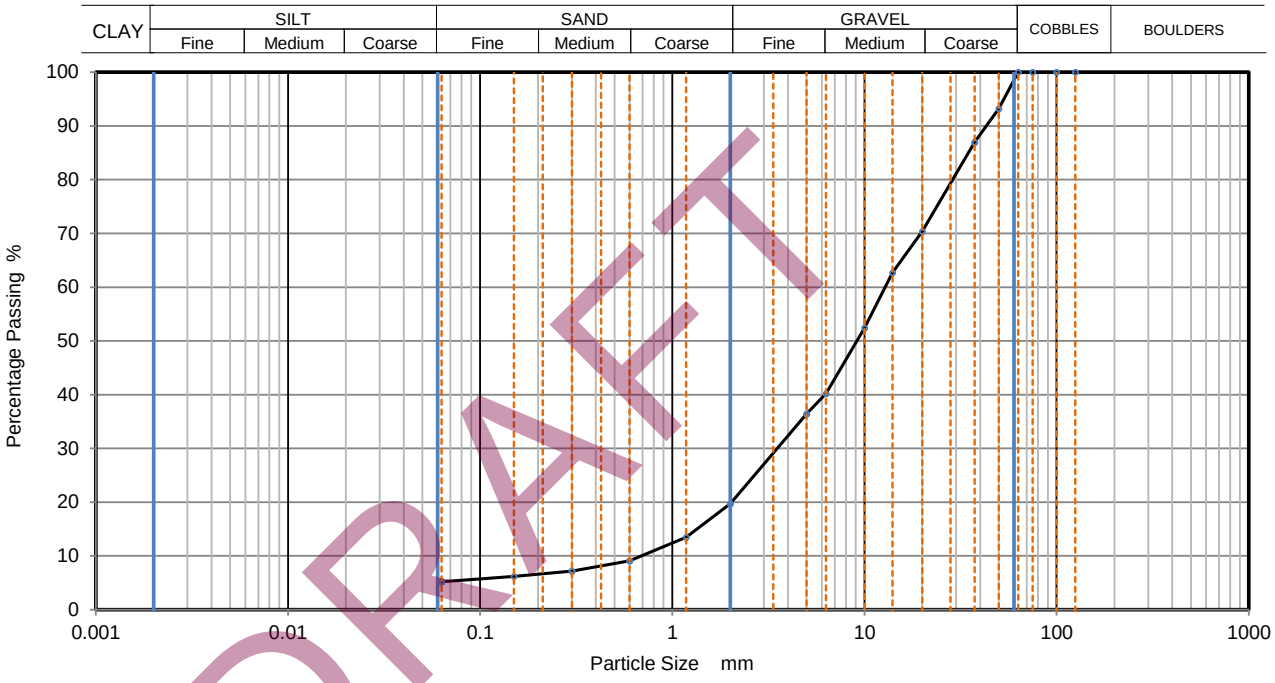
Will Elson (Laboratory Systems Manager)

GEOTECHNICS
geotechnical and geoenvironmental specialists
203 Torrington Avenue, Tile Hill,
Coventry, CV4 9UT

GEOTECHNICS
geotechnical and geoenvironmental specialists

PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	TP100
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	0.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	93		
37.5	87		
20	70		
14	63		
10	52		
6.3	40		
5	36		
2	20		
1.18	14		
0.6	9		
0.3	7		
0.15	6		
0.063	5		

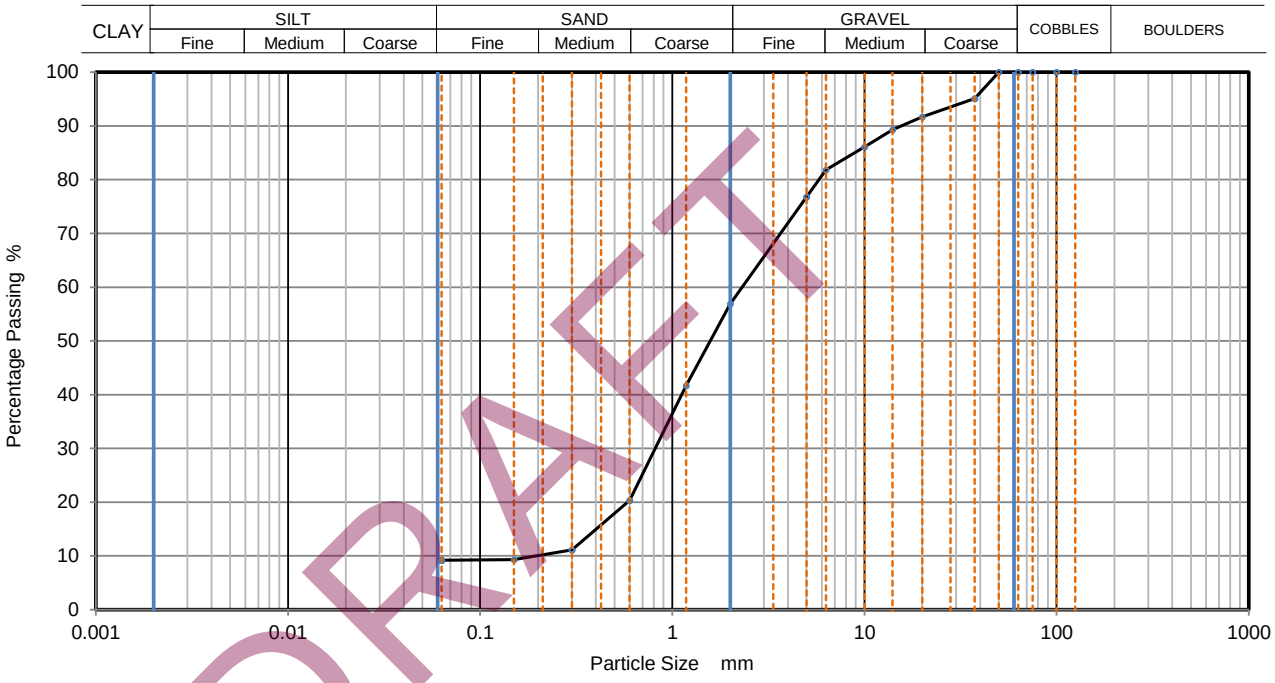
Sample Proportions	% dry mass
Cobbles	0
Gravel	81
Sand	14
Fines <0.063mm	5

Grading Analysis		
D100	mm	63
D60	mm	12.8
D30	mm	3.53
D10	mm	0.692
Uniformity Coefficient		18

Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Sheet printed	Sheet
	09/03/2023	1

GEOTECHNICS geotechnical and geoenvironmental specialists	**PARTICLE SIZE DISTRIBUTION**	Exploratory Hole No.	TP100
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	1.20 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown clayey SAND and GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



DRAFT

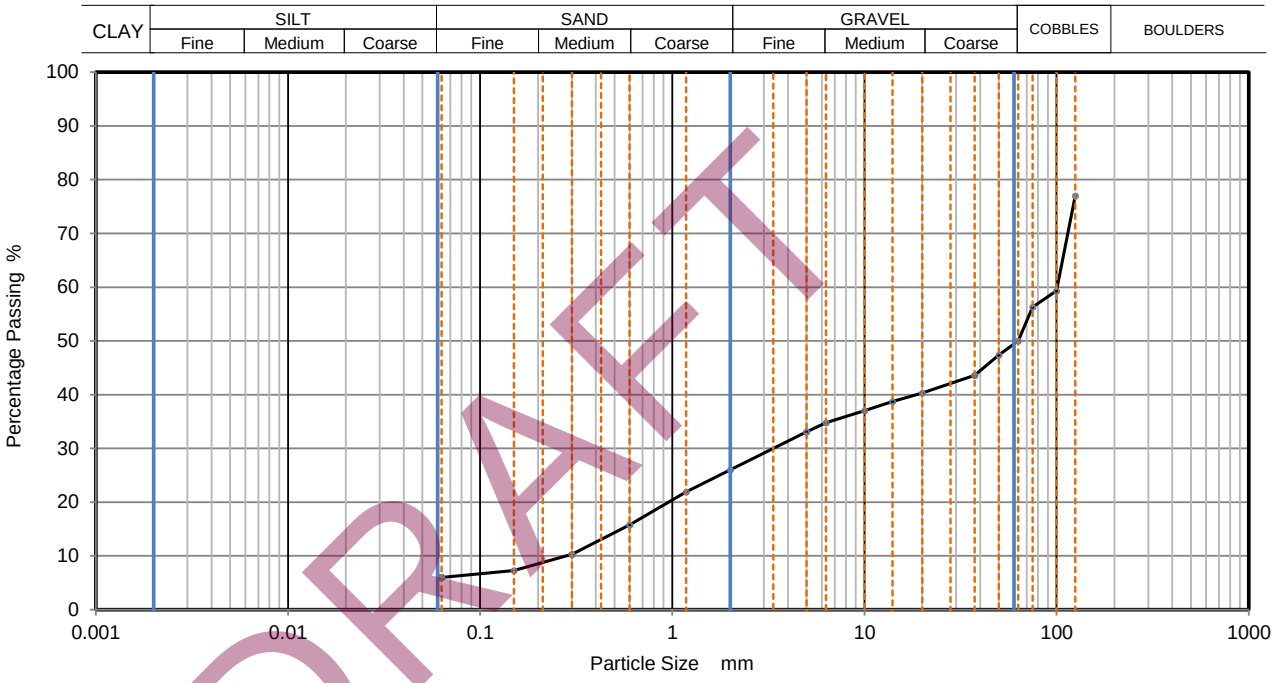
Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	95		
20	92		
14	89		
10	86		
6.3	82		
5	77		
2	57		
1.18	42		
0.6	20		
0.3	11		
0.15	9		
0.063	9		

Sample Proportions	% dry mass
Cobbles	0
Gravel	43
Sand	48
Fines <0.063mm	9

Grading Analysis		
D100	mm	50
D60	mm	2.3
D30	mm	0.815
D10	mm	0.197
Uniformity Coefficient		12

Remarks	Sheet printed	Sheet
	09/03/2023	2

GEOTECHNICS geotechnical and geoenvironmental specialists	**PARTICLE SIZE DISTRIBUTION**	Exploratory Hole No.	TP100
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	2.50 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown sandy clayey GRAVEL with a high cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	77		
100	59		
75	56		
63	50		
50	47		
37.5	44		
20	40		
14	39		
10	37		
6.3	35		
5	33		
2	26		
1.18	22		
0.6	16		
0.3	10		
0.15	7		
0.063	6		

Sample Proportions	% dry mass
Cobbles	50
Gravel	24
Sand	20
Fines <0.063mm	6

Grading Analysis		
D100	mm	
D60	mm	101
D30	mm	3.35
D10	mm	0.281
Uniformity Coefficient		360

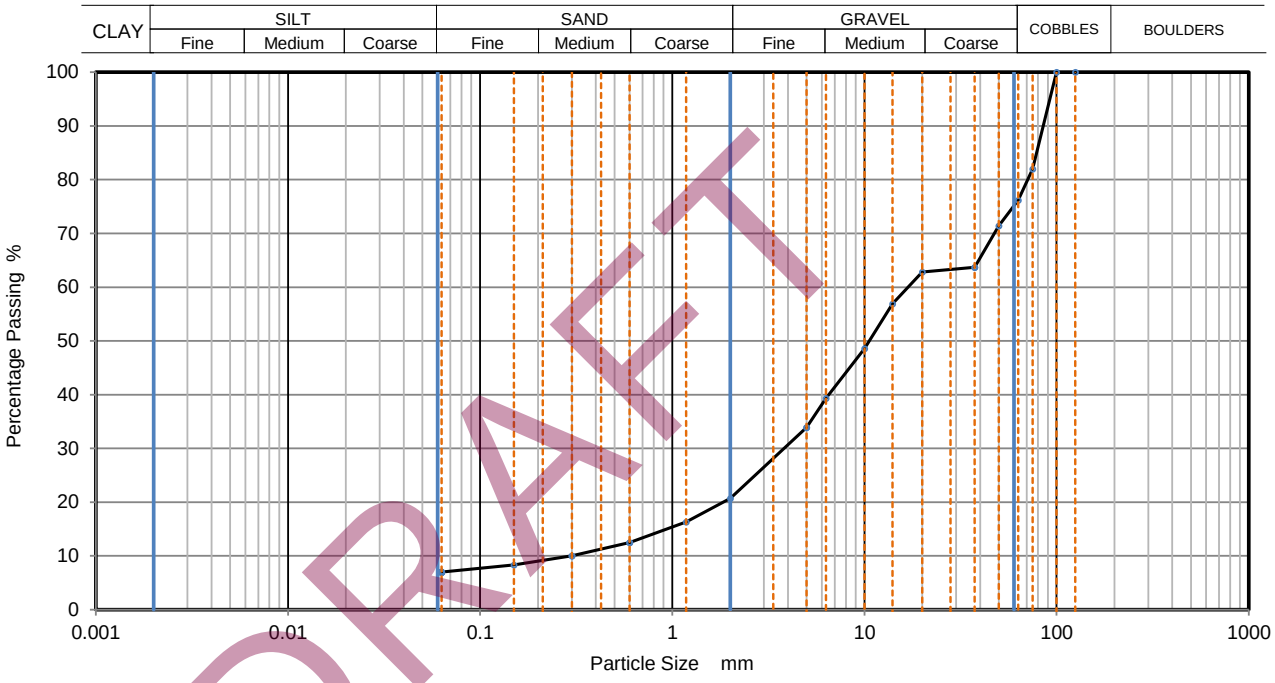
Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Sheet printed	Sheet
	09/03/2023	3

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	TP101
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	0.90 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown sandy clayey GRAVEL with a high cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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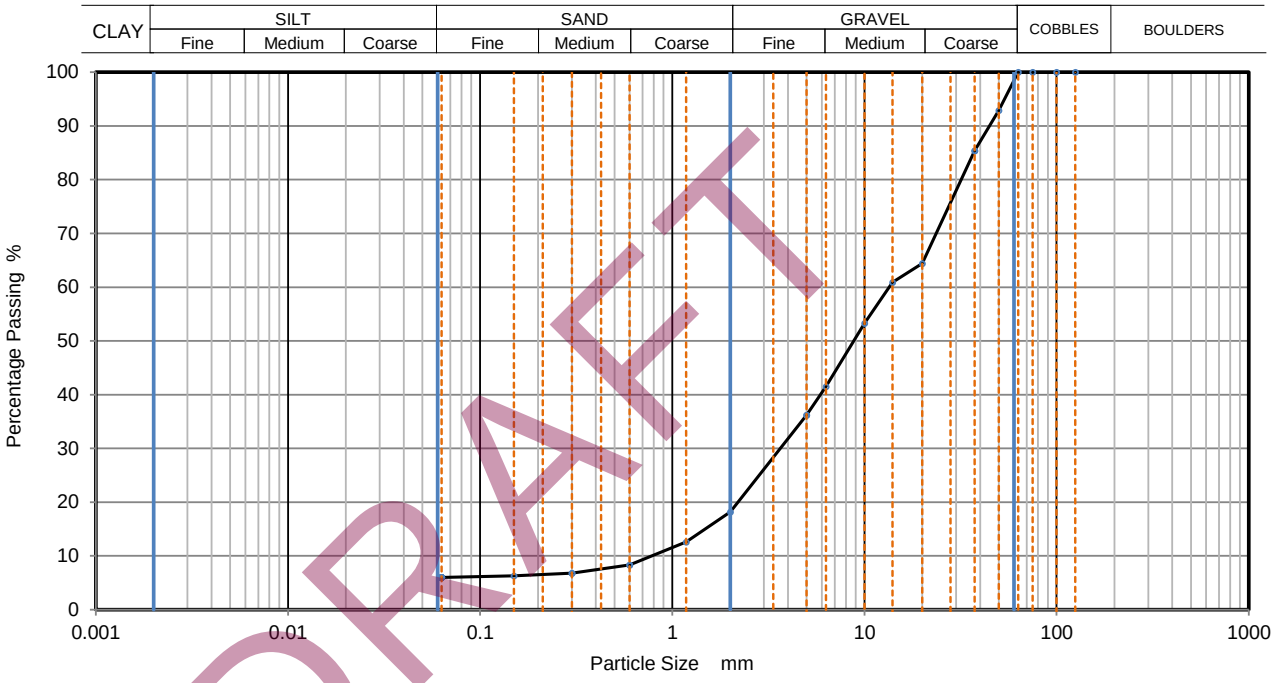
Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	82		
63	76		
50	71		
37.5	64		
20	63		
14	57		
10	49		
6.3	39		
5	34		
2	21		
1.18	16		
0.6	13		
0.3	10		
0.15	8		
0.063	7		

Sample Proportions	% dry mass
Cobbles	24
Gravel	55
Sand	14
Fines <0.063mm	7

Grading Analysis		
D100	mm	100
D60	mm	16.9
D30	mm	3.81
D10	mm	0.298
Uniformity Coefficient		57

Remarks	Sheet printed	Sheet
	09/03/2023	4

GEOTECHNICS geotechnical and geoenvironmental specialists	**PARTICLE SIZE DISTRIBUTION**	Exploratory Hole No.	TP101
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	1.90 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown sandy clayey GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	93		
37.5	85		
20	64		
14	61		
10	53		
6.3	42		
5	36		
2	18		
1.18	13		
0.6	8		
0.3	7		
0.15	6		
0.063	6		

Sample Proportions	% dry mass
Cobbles	0
Gravel	82
Sand	12
Fines <0.063mm	6

Grading Analysis		
D100	mm	63
D60	mm	13.4
D30	mm	3.65
D10	mm	0.786
Uniformity Coefficient		17

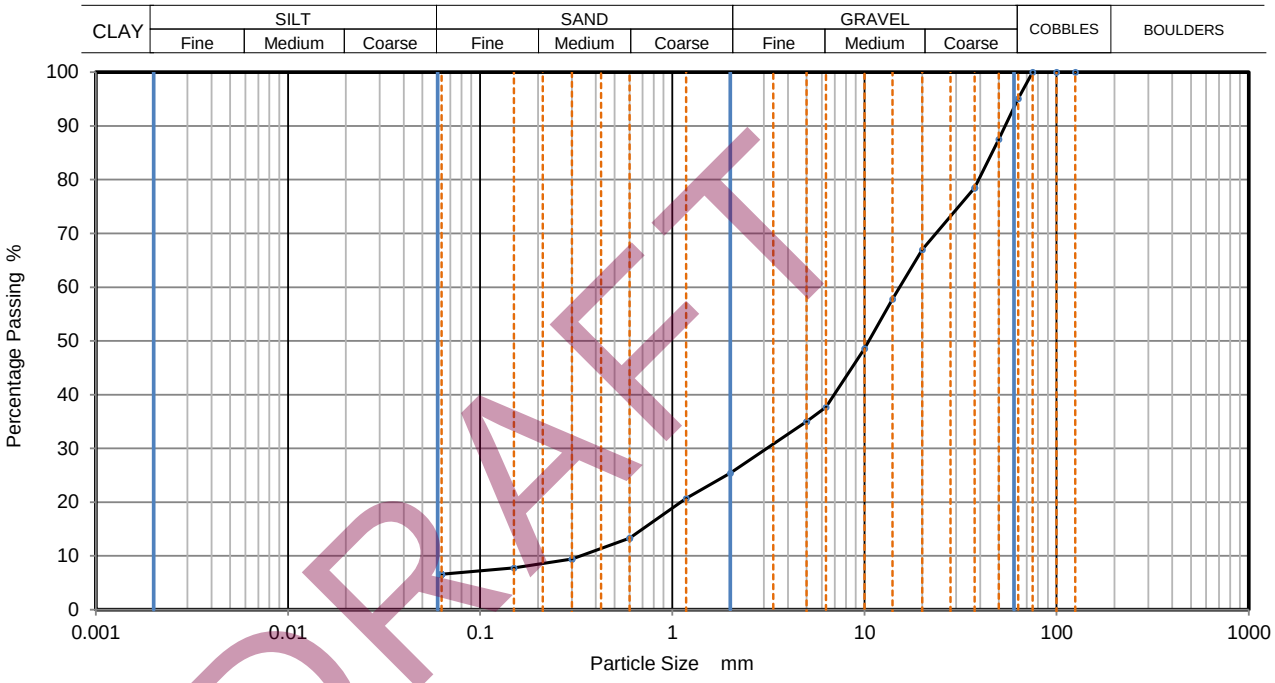
Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Sheet printed	Sheet
	09/03/2023	5

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	TP102
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	1.40 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Dark brown sandy clayey GRAVEL with a medium cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	95		
50	88		
37.5	79		
20	67		
14	58		
10	49		
6.3	38		
5	35		
2	25		
1.18	21		
0.6	13		
0.3	9		
0.15	8		
0.063	7		

Sample Proportions	% dry mass
Cobbles	5
Gravel	69
Sand	19
Fines <0.063mm	7

Grading Analysis		
D100	mm	75
D60	mm	15.3
D30	mm	3.1
D10	mm	0.331
Uniformity Coefficient		46

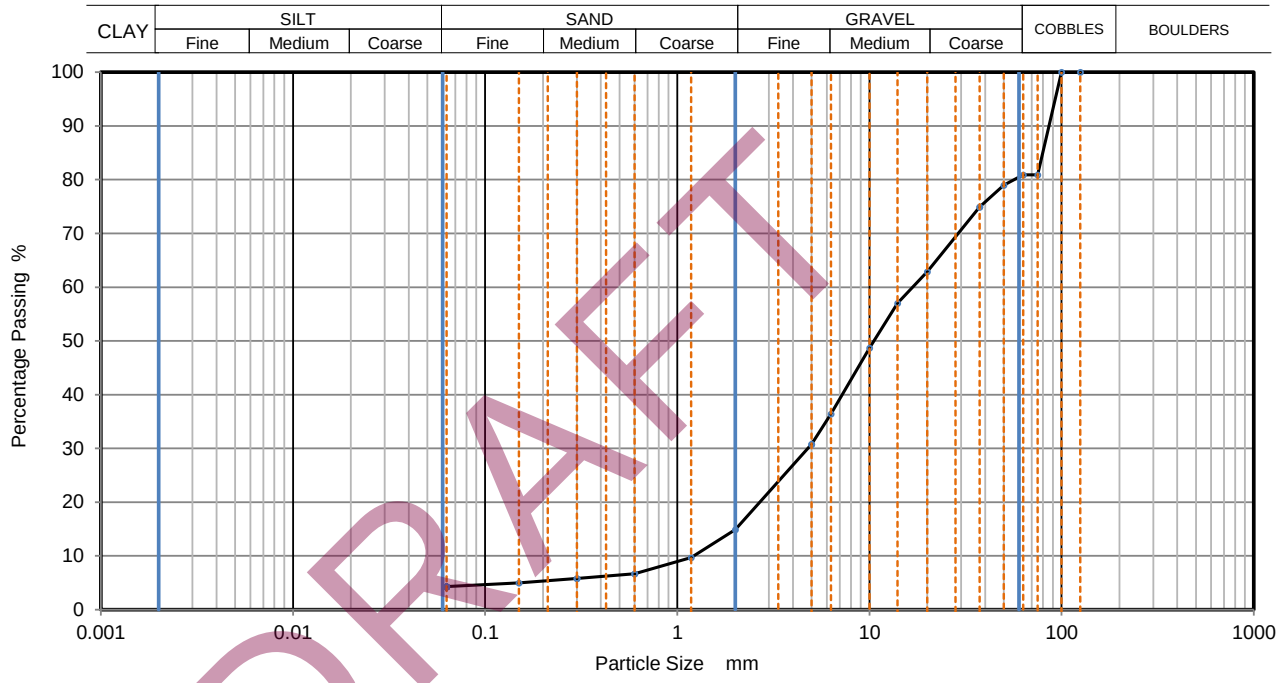
Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Sheet printed	Sheet
	09/03/2023	6

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PARTICLE SIZE DISTRIBUTION

		Exploratory Hole No.	TP103
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	0.90 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown sandy clayey GRAVEL with a medium cobble content.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	81		
63	81		
50	79		
37.5	75		
20	63		
14	57		
10	49		
6.3	36		
5	31		
2	15		
1.18	10		
0.6	7		
0.3	6		
0.15	5		
0.063	4		

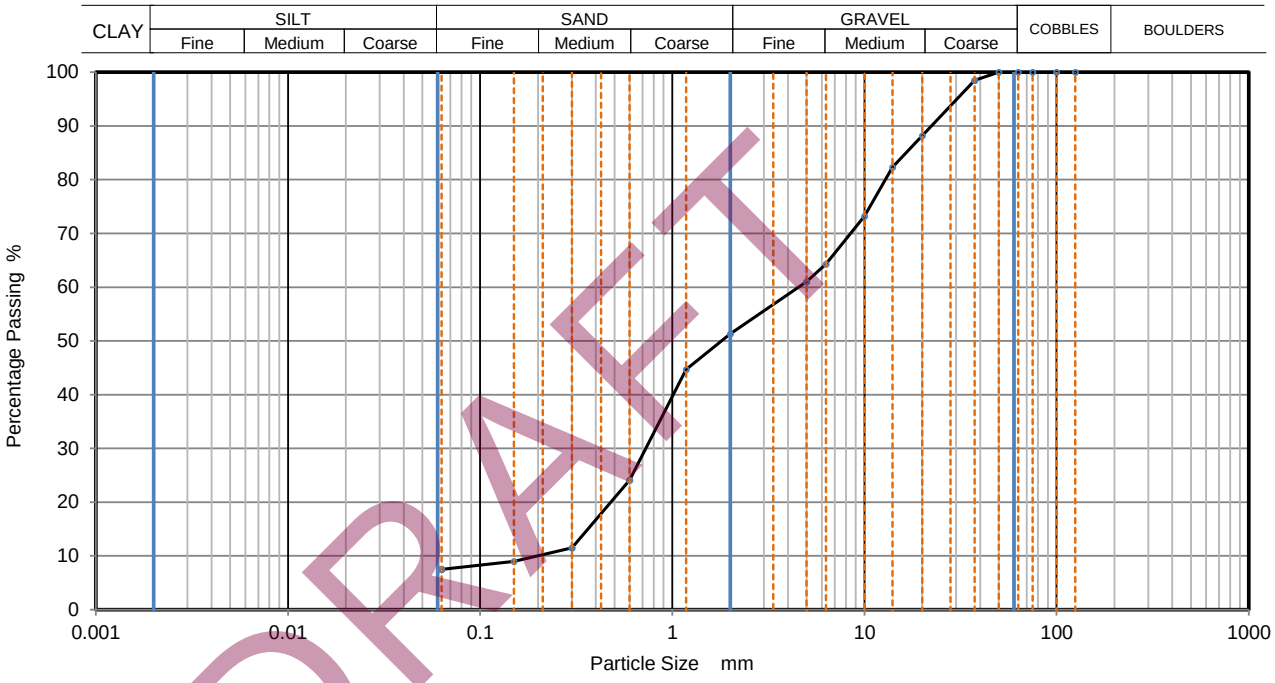
Sample Proportions	% dry mass
Cobbles	19
Gravel	66
Sand	11
Fines <0.063mm	4

Grading Analysis		
D100	mm	100
D60	mm	16.8
D30	mm	4.79
D10	mm	1.21
Uniformity Coefficient		14

Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Sheet printed	Sheet
	09/03/2023	7

GEOTECHNICS geotechnical and geoenvironmental specialists	**PARTICLE SIZE DISTRIBUTION**	Exploratory Hole No.	TP104
		Sample No.	
Project Number:	PN224453 Phase 2	Depth	1.20 m
Project Name:	Wrexham FC : New Kop Stand - Ground Investigation	Sample Type	B
Specimen Description	Brown clayey SAND and GRAVEL.	Specimen Depth	m
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



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Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	99		
20	88		
14	82		
10	73		
6.3	64		
5	61		
2	51		
1.18	45		
0.6	24		
0.3	12		
0.15	9		
0.063	8		

Sample Proportions	% dry mass
Cobbles	0
Gravel	48
Sand	44
Fines <0.063mm	8

Grading Analysis		
D100	mm	50
D60	mm	4.55
D30	mm	0.728
D10	mm	0.199
Uniformity Coefficient		23

Remarks	Sheet printed	Sheet
	09/03/2023	8

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APPENDIX 9

Laboratory Test Results - Contamination (Soil)

Certificate of Analysis

Certificate Number	22-19525	*Issued:*	11-Oct-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	22-19525
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP Stand Redevelopment
Description	4 Soil samples, 4 Leachate samples.
Date Received	30-Sep-22
Date Started	30-Sep-22
Date Completed	11-Oct-22
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065564	2065565	2065566	2065567
			.Sample ID	BH100	BH100	BH100	BH100
			Depth	0.15	0.40	1.00	3.00
			Other ID	2	4	8	15
			Sample Type	ES	ES	ES	ES
			Sampling Date	28/09/2022	28/09/2022	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
Moisture Content	DETSC 1004	0.1	%	5.1	12	8.7	8.8
Metals							
Antimony	DETSC 2301*	1	mg/kg	< 1.0	1.8	2.2	2.7
Arsenic	DETSC 2301#	0.2	mg/kg	2.6	13	14	8.7
Barium	DETSC 2301#	1.5	mg/kg	24	150	53	82
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.5	0.3	0.3	< 0.1
Chromium III	DETSC 2301*	0.15	mg/kg	54	87	25	14
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	11	24	25	14
Lead	DETSC 2301#	0.3	mg/kg	21	22	60	17
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	4.8	14	25	18
Selenium	DETSC 2301#	0.5	mg/kg	0.9	1.1	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	18	41	29	27
Zinc	DETSC 2301#	1	mg/kg	61	55	87	68
Inorganics							
pH	DETSC 2008#		pH	10.2	8.2	7.0	7.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	5.8	1.4	0.6	< 0.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	0.93	1.0	1.7	0.96
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	17	30	35	22
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065564	2065565	2065566	2065567
			.Sample ID	BH100	BH100	BH100	BH100
			Depth	0.15	0.40	1.00	3.00
			Other ID	2	4	8	15
			Sample Type	ES	ES	ES	ES
			Sampling Date	28/09/2022	28/09/2022	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10

DRAFT

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065565	2065566	2065567
			.Sample ID	BH100	BH100	BH100
			Depth	0.40	1.00	3.00
			Other ID	4	8	15
			Sample Type	ES	ES	ES
			Sampling Date	28/09/2022	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
VOCs						
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065565	2065566	2065567
			.Sample ID	BH100	BH100	BH100
			Depth	0.40	1.00	3.00
			Other ID	4	8	15
			Sample Type	ES	ES	ES
			Sampling Date	28/09/2022	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
SVOCs						
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065565	2065566	2065567
			.Sample ID	BH100	BH100	BH100
			Depth	0.40	1.00	3.00
			Other ID	4	8	15
			Sample Type	ES	ES	ES
			Sampling Date	28/09/2022	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2065568	2065569
.Sample ID	BH100	BH100
Depth	0.40	1.00
Other ID	4	8
Sample Type	ES	ES
Sampling Date	28/09/2022	28/09/2022
Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Antimony, Dissolved	DETSC 2306	0.17	ug/l	< 0.17	< 0.17
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	2.7	0.63
Barium, Dissolved	DETSC 2306	0.26	ug/l	12	5.6
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	1.3	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.0	0.6
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.64	0.18
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.07	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.33	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	6.5	0.9
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	< 1.3
Inorganics					
Conductivity	DETSC 2009	1	uS/cm	53.2	34.6
pH	DETSC 2008		pH	7.0	6.9
Dissolved Organic Carbon	DETSC 2085	2	mg/l	< 2.0	< 2.0
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	29.7	13.8
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.042	0.015
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065568	2065569
			.Sample ID	BH100	BH100
			Depth	0.40	1.00
			Other ID	4	8
			Sample Type	ES	ES
			Sampling Date	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
PAHs					
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.02	0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.03	0.02
Pyrene	DETSC 3304	0.01	ug/l	0.02	0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	< 0.20

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Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id BH100 4 0.40
Sample Numbers 2065565 2065570
Date Analysed 10/10/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	1.4	3	5	6
DETSC 2003# Loss On Ignition	%	4.5	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	5.7	0.057	0.5	2	25
DETSC 2306 Barium as Ba	6.5	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	1.9	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2	0.02	2	50	100
DETSC 2306 Mercury as Hg	0.1	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	2.4	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.42	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.32	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	670	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	860	8.6	10	150	500
DETSC 2055 Sulphate as SO4	2700	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	34000	340	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2900	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	6.8
DETSC 2009 Conductivity uS/cm	48.7
* Temperature*	18.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.097

Stage 1

Volume of Leachant L2*	0.954
Volume of Eluate VE1*	0.904

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id BH100 8 1.00
Sample Numbers 2065566 2065571
Date Analysed 10/10/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.6	3	5	6
DETSC 2003# Loss On Ignition	%	3.4	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.86	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	3.1	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	0.48	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.41	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	1100	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	110	1.1	10	150	500
DETSC 2055 Sulphate as SO4	3500	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	21000	210	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2100	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.0
DETSC 2009 Conductivity uS/cm	29.7
* Temperature*	18.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.100

Stage 1

Volume of Leachant L2*	0.994
Volume of Eluate VE1*	0.946

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2065565	BH100 4 0.40	SOIL	NAD	none	Keith Wilson
2065566	BH100 8 1.00	SOIL	NAD	none	Keith Wilson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

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Information in Support of the Analytical Results

Our Ref 22-19525
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2065564	BH100 0.15 SOIL	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065565	BH100 0.40 SOIL	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065566	BH100 1.00 SOIL	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065567	BH100 3.00 SOIL	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065568	BH100 0.40 LEACHATE	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065569	BH100 1.00 LEACHATE	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065570	BH100 0.40 LEACHATE	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065571	BH100 1.00 LEACHATE	28/09/22	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

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Certificate of Analysis

Certificate Number	22-20189	*Issued:*	18-Oct-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference 22-20189

Client Reference PN224453

Order No ON34994

Contract Title Wrexham AFC - KOP Stand Redevelopment

Description 5 Soil samples, 6 Leachate samples.

Date Received 10-Oct-22

Date Started 10-Oct-22

Date Completed 18-Oct-22

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068906	2068907	2068908	2068909	2068910
			.Sample ID	BH101	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	1.00	2.00	4.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Preparation								
Moisture Content	DETSC 1004	0.1	%	11	13	9.5	7.1	8.5
Metals								
Antimony	DETSC 2301*	1	mg/kg	1.5	< 1.0	1.7	< 1.0	1.4
Arsenic	DETSC 2301#	0.2	mg/kg	6.3	6.3	12	3.2	7.6
Barium	DETSC 2301#	1.5	mg/kg	86	51	51	28	63
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.3	0.5	0.4	0.2	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	< 0.1	0.3	< 0.1	0.3
Chromium III	DETSC 2301*	0.15	mg/kg	12	13	20	4.9	9.8
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	31	15	25	5.5	15
Lead	DETSC 2301#	0.3	mg/kg	20	37	90	9.8	36
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	11	12	24	6.1	13
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	1.4	0.7	0.9
Vanadium	DETSC 2301#	0.8	mg/kg	18	23	24	5.0	12
Zinc	DETSC 2301#	1	mg/kg	56	49	84	16	60
Inorganics								
pH	DETSC 2008#		pH	9.4	7.5	7.7	8.6	8.2
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.3	0.2	0.1	0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5	0.7	< 0.5	< 0.5	< 0.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	1.1	2.3	2.2	0.76	0.76
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	84	26	12	11	23
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068906	2068907	2068908	2068909	2068910
			.Sample ID	BH101	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	1.00	2.00	4.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
PAHs								
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

	Lab No	2068906	2068907	2068908	2068909	2068910
	.Sample ID	BH101	BH101	BH101	BH101	BH101
	Depth	0.20	0.50	1.00	2.00	4.00
	Other ID					
	Sample Type	ES	ES	ES	ES	ES
	Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
	Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
VOCs						
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068906	2068907	2068908	2068909	2068910
			.Sample ID	BH101	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	1.00	2.00	4.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs								
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068906	2068907	2068908	2068909	2068910
			.Sample ID	BH101	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	1.00	2.00	4.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068911	2068912	2068913	2068914
			.Sample ID	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	2.00	4.00
			Other ID				
			Sample Type	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Metals							
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.46	< 0.17	< 0.17	0.17
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	4.6	0.84	0.34	0.52
Barium, Dissolved	DETSC 2306	0.26	ug/l	5.7	3.8	3.1	3.7
Boron, Dissolved	DETSC 2306*	12	ug/l	14	19	17	17
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	2.8	< 1.0	< 1.0	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	5.6	1.6	2.8	2.9
Lead, Dissolved	DETSC 2306	0.09	ug/l	1.3	1.3	0.76	0.27
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.44	0.32	0.30	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	14	2.2	< 0.6	< 0.6
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	1.4	< 1.3	< 1.3
Inorganics							
Conductivity	DETSC 2009	1	uS/cm	71.1	28.5	23.3	42.8
pH	DETSC 2008		pH	9.5	8.4	6.7	6.6
Dissolved Organic Carbon	DETSC 2085	2	mg/l	4.7	4.1	3.9	2.7
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	26.4	8.90	7.03	19.7
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.040	0.018	< 0.015	< 0.015
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	1.9	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	1.9	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	1.9	< 1.0	< 1.0
PAHs							

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068911	2068912	2068913	2068914
			.Sample ID	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	2.00	4.00
			Other ID				
			Sample Type	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Naphthalene	DETSC 3304	0.05	ug/l	0.12	0.17	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	0.02	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.02	0.04	0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	0.02	0.03	0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.08	< 0.01	< 0.01	0.02
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.02	0.02	0.02	0.02
Pyrene	DETSC 3304	0.01	ug/l	0.03	0.02	0.03	0.03
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	0.01	0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.31	0.32	< 0.20	< 0.20

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Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id BH101 0.50

Sample Numbers 2068907 2068915
Date Analysed 18/10/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.7	3	5	6
DETSC 2003# Loss On Ignition	%	2.6	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.45	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	4.1	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.74	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.1	0.031	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.6	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	1.9	0.019	4	50	200
DETSC 2055 Chloride as Cl	1100	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	1100	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	14000	140	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3400	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	6.6
DETSC 2009 Conductivity uS/cm	19.9
* Temperature*	15.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.096

Stage 1

Volume of Leachant L2*	0.948
Volume of Eluate VE1*	0.9

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id BH101 1.00

Sample Numbers 2068908 2068916
Date Analysed 18/10/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	< 0.5	3	5	6
DETSC 2003# Loss On Ignition	%	1.5	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.64	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	2.1	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.4	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2.9	0.029	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.35	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	1.3	0.013	4	50	200
DETSC 2055 Chloride as Cl	520	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	530	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	12000	120	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3200	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	6.5
DETSC 2009 Conductivity uS/cm	17.6
* Temperature*	15.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.100

Stage 1

Volume of Leachant L2*	0.985
Volume of Eluate VE1*	0.94

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2068906	BH101 0.20	SOIL	NAD	none	Lee Kerridge
2068907	BH101 0.50	SOIL	NAD	none	Lee Kerridge
2068908	BH101 1.00	SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

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Information in Support of the Analytical Results

Our Ref 22-20189
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2068906	BH101 0.20 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068907	BH101 0.50 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068908	BH101 1.00 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068909	BH101 2.00 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068910	BH101 4.00 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068911	BH101 0.20 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068912	BH101 0.50 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068913	BH101 2.00 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068914	BH101 4.00 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068915	BH101 0.50 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068916	BH101 1.00 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

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Certificate of Analysis

Certificate Number	22-20338	*Issued:*	17-Oct-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	22-20338
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP Stand Redevelopment
Description	1 Soil sample, 1 Leachate sample.
Date Received	11-Oct-22
Date Started	11-Oct-22
Date Completed	17-Oct-22
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069738
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	10
Metals				
Antimony	DETSC 2301*	1	mg/kg	2.2
Arsenic	DETSC 2301#	0.2	mg/kg	10
Barium	DETSC 2301#	1.5	mg/kg	110
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2
Chromium III	DETSC 2301*	0.15	mg/kg	12
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	15
Lead	DETSC 2301#	0.3	mg/kg	18
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05
Nickel	DETSC 2301#	1	mg/kg	16
Selenium	DETSC 2301#	0.5	mg/kg	1.1
Vanadium	DETSC 2301#	0.8	mg/kg	21
Zinc	DETSC 2301#	1	mg/kg	43
Inorganics				
pH	DETSC 2008#		pH	7.9
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	0.84
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	19
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	0.14
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069738
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069738
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
VOCs				
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069738
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069738
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1

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Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069739
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
BS EN 12457 10:1	DETSC 1009*			Y
Metals				
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.20
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.68
Barium, Dissolved	DETSC 2306	0.26	ug/l	12
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.05
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.3
Lead, Dissolved	DETSC 2306	0.09	ug/l	1.0
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.03
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	1.5
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	0.8
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3
Inorganics				
Conductivity	DETSC 2009	1	uS/cm	54.8
pH	DETSC 2008		pH	6.8
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.2
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	53.8
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	< 0.015
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069739
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0
PAHs				
Naphthalene	DETSC 3304	0.05	ug/l	0.11
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.03
Anthracene	DETSC 3304	0.01	ug/l	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.04
Pyrene	DETSC 3304	0.01	ug/l	0.04
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.01
Chrysene	DETSC 3304	0.01	ug/l	0.02
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.26

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Key: * -not accredited. n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 22-20338
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2069738	BH101 6.00 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2069739	BH101 6.00 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

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Certificate of Analysis

Certificate Number	22-20772	*Issued:*	24-Oct-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	22-20772
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP Stand Redevelopment
Description	5 Soil samples, 3 Leachate samples.
Date Received	17-Oct-22
Date Started	17-Oct-22
Date Completed	24-Oct-22
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072155	2072156	2072157	2072158	2072159
			.Sample ID	BH102	BH102	BH102	BH102	BH102
			Depth	0.10	0.50	1.00	3.00	5.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Preparation								
Moisture Content	DETSC 1004	0.1	%	8.7	13	12	8.8	7.3
Metals								
Antimony	DETSC 2301*	1	mg/kg	2.2	2.5	2.3	1.7	1.4
Arsenic	DETSC 2301#	0.2	mg/kg	8.6	15	11	8.6	12
Barium	DETSC 2301#	1.5	mg/kg	110	290	66	74	78
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.4	0.5	0.3	0.2	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.4	0.5	0.3	0.3	0.1
Chromium III	DETSC 2301*	0.15	mg/kg	14	13	18	13	14
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	31	73	23	20	17
Lead	DETSC 2301#	0.3	mg/kg	110	190	91	37	19
Mercury	DETSC 2325#	0.05	mg/kg	0.07	0.16	0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	18	29	20	20	16
Selenium	DETSC 2301#	0.5	mg/kg	0.8	0.5	0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	20	36	27	16	14
Zinc	DETSC 2301#	1	mg/kg	220	260	90	66	49
Inorganics								
pH	DETSC 2008#		pH	8.0	7.7	7.5	7.8	8.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.8	0.1	< 0.1	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	2.9	12	1.0	< 0.5	< 0.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	2.6	1.8	4.1	1.6	1.6
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	21	26	15	12	16
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	2.2	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	1.5	4.7	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	1.7	5.0	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	14	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072155	2072156	2072157	2072158	2072159
			.Sample ID	BH102	BH102	BH102	BH102	BH102
			Depth	0.10	0.50	1.00	3.00	5.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	14	< 10
PAHs								
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.07	0.28	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	0.08	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.17	0.90	0.05	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	0.17	0.84	0.06	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.07	0.35	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	0.11	0.43	0.04	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.13	0.50	0.06	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.05	0.21	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.07	0.31	0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.04	0.13	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.04	0.16	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.93	4.3	0.21	< 0.10	< 0.10

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

				Lab No	2072155	2072156	2072157	2072158	2072159
				.Sample ID	BH102	BH102	BH102	BH102	BH102
				Depth	0.10	0.50	1.00	3.00	5.00
				Other ID					
				Sample Type	ES	ES	ES	ES	ES
				Sampling Date	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
				Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
VOCs									
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

	Lab No	2072155	2072156	2072157	2072158	2072159
	.Sample ID	BH102	BH102	BH102	BH102	BH102
	Depth	0.10	0.50	1.00	3.00	5.00
	Other ID					
	Sample Type	ES	ES	ES	ES	ES
	Sampling Date	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
	Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs								
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	0.8	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072155	2072156	2072157	2072158	2072159
			.Sample ID	BH102	BH102	BH102	BH102	BH102
			Depth	0.10	0.50	1.00	3.00	5.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072160	2072161
			.Sample ID	BH102	BH102
			Depth	0.50	1.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.80	0.27
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	2.5	0.78
Barium, Dissolved	DETSC 2306	0.26	ug/l	6.4	3.3
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	3.3	1.0
Lead, Dissolved	DETSC 2306	0.09	ug/l	2.1	1.6
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.49	0.30
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	1.1	1.0
Zinc, Dissolved	DETSC 2306	1.3	ug/l	2.8	2.3
Inorganics					
Conductivity	DETSC 2009	1	uS/cm	59.7	35.0
pH	DETSC 2008		pH	7.8	8.7
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.1	2.9
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	19.5	7.91
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.038	0.022
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072160	2072161
			.Sample ID	BH102	BH102
			Depth	0.50	1.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
PAHs					
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.02	0.02
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	< 0.01	0.06
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	0.03
Fluoranthene	DETSC 3304	0.01	ug/l	0.01	0.09
Pyrene	DETSC 3304	0.01	ug/l	0.01	0.11
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	0.05
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	0.07
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.07
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.02
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.04
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.05
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	0.07
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	0.67

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Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id BH102 0.50
Sample Numbers 2072156 2072162
Date Analysed 24/10/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	12.0	3	5	6
DETSC 2003# Loss On Ignition	%	7.7	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	2.5	0.025	0.5	2	25
DETSC 2306 Barium as Ba	6.4	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.52	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.8	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.8	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	3.2	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.69	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.31	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	4.4	0.044	4	50	200
DETSC 2055 Chloride as Cl	1100	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	240	2.4	10	150	500
DETSC 2055 Sulphate as SO4	3800	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	42000	420	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3400	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.0
DETSC 2009 Conductivity uS/cm	60.1
* Temperature*	18.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.096

Stage 1

Volume of Leachant L2*	0.946
Volume of Eluate VE1*	0.897

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2072155	BH102 0.10	SOIL	NAD	none	Lee Kerridge
2072156	BH102 0.50	SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

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Information in Support of the Analytical Results

Our Ref 22-20772
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2072155	BH102 0.10 SOIL	12/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2072156	BH102 0.50 SOIL	12/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2072157	BH102 1.00 SOIL	12/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2072158	BH102 3.00 SOIL	12/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2072159	BH102 5.00 SOIL	12/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2072160	BH102 0.50 LEACHATE	12/10/22	GJ 250ml, GJ 60ml, PT 1L		
2072161	BH102 1.00 LEACHATE	12/10/22	GJ 250ml, GJ 60ml, PT 1L		
2072162	BH102 0.50 LEACHATE	12/10/22	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

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Certificate of Analysis

Certificate Number	22-21858	*Issued:*	10-Nov-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	22-21858
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP Stand Redevelopment
Description	6 Soil samples, 8 Leachate samples.
Date Received	28-Oct-22
Date Started	28-Oct-22
Date Completed	10-Nov-22
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

				Lab No	2077874	2077875	2077876	2077877	2077878	2077879
				.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
				Depth	0.30	0.80	1.20	0.20	1.00	1.20
				Other ID						
				Sample Type	ES	ES	ES	ES	ES	ES
				Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Asbestos Quantification	DETSC 1102	0.001	%				< 0.001		
Preparation										
Moisture Content	DETSC 1004	0.1	%	6.6	12	14	8.4	15	18
Metals										
Antimony	DETSC 2301*	1	mg/kg	2.2	3.1	3.0	5.2	3.4	1.8
Arsenic	DETSC 2301#	0.2	mg/kg	11	20	7.8	11	21	7.4
Barium	DETSC 2301#	1.5	mg/kg	130	320	170	310	150	83
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.4	0.4	0.3	0.3	0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.5	0.7	0.3	0.7	0.8	0.4
Chromium III	DETSC 2301*	0.15	mg/kg	78	32	180	220	95	20
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	32	79	20	50	33	18
Lead	DETSC 2301#	0.3	mg/kg	76	81	36	130	76	46
Mercury	DETSC 2325#	0.05	mg/kg	0.06	0.13	< 0.05	0.07	0.12	< 0.05
Nickel	DETSC 2301#	1	mg/kg	18	40	21	29	22	14
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.6	0.6	0.6	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	36	48	56	64	35	28
Zinc	DETSC 2301#	1	mg/kg	440	530	250	480	390	210
Inorganics										
pH	DETSC 2008#		pH	8.9	8.0	9.3	9.4	8.6	7.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.5	0.2	0.8	0.3	0.4
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Total Organic Carbon	DETSC 2084#	0.5	%	4.5	4.5	2.0	6.8	3.4	1.4
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	2.1	2.9	2.9	1.9	3.5	5.3
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	87	39	55	35	70	14
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	1.8	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	4.9	< 1.2	< 1.2	1.4	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	3.8	< 1.5	< 1.5	9.4	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	160	< 3.4	< 3.4	54	29	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	110	< 3.4	< 3.4	38	19	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	280	< 10	< 10	100	48	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	2.3	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	1.8	< 0.5	< 0.5	4.8	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	8.3	2.6	< 0.6	21	4.2	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	320	23	< 1.4	110	110	< 1.4

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077874	2077875	2077876	2077877	2077878	2077879
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	250	50	< 1.4	110	100	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	580	77	< 10	250	220	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	850	77	< 10	350	270	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.22	0.33	< 0.03	0.30	0.21	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	0.07	< 0.03	< 0.03	0.04	0.04
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.36	0.56	0.04	0.50	0.43	0.03
Pyrene	DETSC 3303#	0.03	mg/kg	0.35	0.52	0.04	0.54	0.44	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.15	0.22	< 0.03	0.20	0.21	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	0.22	0.27	< 0.03	0.29	0.24	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.21	0.27	< 0.03	0.31	0.24	0.04
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.11	0.12	< 0.03	0.14	0.10	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.15	0.24	< 0.03	0.23	0.18	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.07	0.06	< 0.03	0.08	0.07	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.10	0.08	< 0.03	0.11	0.11	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	1.9	2.7	< 0.10	2.7	2.3	< 0.10

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077874	2077875	2077876	2077877	2077878	2077879
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
VOCs									
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077874	2077875	2077876	2077877	2077878	2077879
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs									
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077874	2077875	2077876	2077877	2077878	2077879
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Leachate Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077880	2077881	2077882	2077883	2077884	2077885
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y	Y	Y
Metals									
Antimony, Dissolved	DETSC 2306	0.17	ug/l	< 0.17	1.4	2.3	1.1	1.2	1.2
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.90	1.1	3.0	1.6	1.7	1.0
Barium, Dissolved	DETSC 2306	0.26	ug/l	3.3	8.0	22	22	9.0	5.4
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12	16	< 12	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	< 1.0	4.8	< 1.0	1.9	2.4
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.4	0.8	1.0	2.3	1.4	1.0
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.84	1.6	1.2	2.8	4.5	3.9
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	0.29	< 0.25	< 0.25	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	1.9	0.7	0.7	2.1	0.9	0.6
Zinc, Dissolved	DETSC 2306	1.3	ug/l	4.1	3.8	< 1.3	3.2	4.8	2.6
Inorganics									
Conductivity	DETSC 2009	1	uS/cm	35.5	36.8	72.3	53.9	55.5	40.6
pH	DETSC 2008		pH	7.7	7.2	7.6	8.2	7.8	8.4
Dissolved Organic Carbon	DETSC 2085	2	mg/l	< 2.0	2.9	3.3	2.7	3.6	3.6
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	14.4	21.9	27.2	17.1	17.8	11.6
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	< 0.015	< 0.015	0.049	0.043	0.026	0.11
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	14	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077880	2077881	2077882	2077883	2077884	2077885
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PAHs									
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.03	< 0.01	0.01	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.05	0.02	< 0.01	0.02	0.02	0.01
Anthracene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.04	0.03	< 0.01	0.02	0.02	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	0.03	0.03	< 0.01	0.02	0.02	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	0.02	< 0.01	< 0.01	0.02	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.02	0.02	< 0.01	0.01	0.02	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.21	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id IP100 0.80
Sample Numbers 2077875 2077886
Date Analysed 07/11/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	4.5	3	5	6
DETSC 2003# Loss On Ignition	%	5.0	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.5	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	7.5	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	1.3	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2.3	0.023	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	2.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.59	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.97	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.3	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	7.6	0.076	4	50	200
DETSC 2055 Chloride as Cl	1900	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	290	2.9	10	150	500
DETSC 2055 Sulphate as SO4	5100	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	29000	290	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2100	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.3
DETSC 2009 Conductivity uS/cm	41.2
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.096

Stage 1

Volume of Leachant L2*	0.949
Volume of Eluate VE1*	0.901

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id IP101 1..00
Sample Numbers 2077878 2077887
Date Analysed 10/11/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	1.4	3	5	6
DETSC 2003# Loss On Ignition	%	3.7	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1	0.01	0.5	2	25
DETSC 2306 Barium as Ba	6.6	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	1.3	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.2	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.76	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.78	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.95	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	5.4	0.054	4	50	200
DETSC 2055 Chloride as Cl	840	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	120	1.2	10	150	500
DETSC 2055 Sulphate as SO4	4100	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	25000	250	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.8
DETSC 2009 Conductivity uS/cm	36.3
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.094

Stage 1

Volume of Leachant L2*	0.924
Volume of Eluate VE1*	0.879

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2077874	IP100 0.30	SOIL	NAD	none	Michael Kay
2077875	IP100 0.80	SOIL	NAD	none	Michael Kay
2077876	IP100 1.20	SOIL	NAD	none	Michael Kay
2077877	IP101 0.20	SOIL	Chrysotile	bundle of chrysotile	Michael Kay
2077878	IP101 1.00	SOIL	NAD	none	Michael Kay
2077879	IP101 1.20	SOIL	NAD	none	Michael Kay

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

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Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2077877
.Sample ID	IP101
Depth	0.20
Other ID	
Sample Type	ES
Sampling Date	20/10/2022
Sampling Time	

Test	Method	Units	
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**< 0.001**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	<0.001
Quantification by PCOM (c)	DETSC 1102	Mass %	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na
Breakdown of Gravimetric Analysis (a)			
Mass of Sample		g	541.35
ACMs present*		type	
Mass of ACM in sample		g	
% ACM by mass		%	
% asbestos in ACM		%	
% asbestos in sample		%	
Breakdown of Detailed Gravimetric Analysis (b)			
% Amphibole bundles in sample		Mass %	na
% Chrysotile bundles in sample		Mass %	<0.001
Breakdown of PCOM Analysis (c)			
% Amphibole fibres in sample		Mass %	na
% Chrysotile fibres in sample		Mass %	na
Breakdown of Potentially Respirable Fibre Analysis (d)			
Amphibole fibres		Fibres/g	na
Chrysotile fibres		Fibres/g	na

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* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
denotes deviating sample

Information in Support of the Analytical Results

Our Ref 22-21858
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2077874	IP100 0.30 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077875	IP100 0.80 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077876	IP100 1.20 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077877	IP101 0.20 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077878	IP101 1.00 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077879	IP101 1.20 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077880	IP100 0.30 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077881	IP100 0.80 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077882	IP100 1.20 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077883	IP101 0.20 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077884	IP101 1.00 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077885	IP101 1.20 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077886	IP100 0.80 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077887	IP101 1.00 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-04211	*Issued:*	01-Mar-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-04211
Client Reference	PN224455
Order No	ON34994
Contract Title	Wrexham AFC - KOP STAND REDEVELOPMENT
Description	10 Soil samples, 20 Leachate samples.
Date Received	21-Feb-23
Date Started	21-Feb-23
Date Completed	01-Mar-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128135	2128136	2128137	2128138	2128139	2128140
			.Sample ID	TP100	TP100	TP101	TP101	TP102	TP102
			Depth	0.05	1.20	0.25	0.90	0.50	0.70
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
Moisture Content	DETSC 1004	0.1	%	9.3	7.9	8.0	8.2	13	20
Metals									
Antimony	DETSC 2301*	1	mg/kg	6.1	1.2	1.4	1.9	2.4	2.2
Arsenic	DETSC 2301#	0.2	mg/kg	8.3	12	5.7	12	12	15
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2	0.3	< 0.2	0.7	1.9
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.3	0.6	1.0	5.6	1.2
Chromium	DETSC 2301#	0.15	mg/kg	440	18	16	18	16	16
Chromium III	DETSC 2301*	0.15	mg/kg	440	18	16	18	16	16
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	30	26	22	25	60	51
Lead	DETSC 2301#	0.3	mg/kg	95	59	120	90	200	250
Mercury	DETSC 2325#	0.05	mg/kg	0.09	< 0.05	0.08	0.06	0.18	0.35
Nickel	DETSC 2301#	1	mg/kg	22	23	9.6	22	16	19
Selenium	DETSC 2301#	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	77	73	120	93	940	300
Inorganics									
pH	DETSC 2008#		pH	10.2	7.8	9.9	8.0	8.2	6.7
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.8	0.3
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Total Organic Carbon	DETSC 2084#	0.5	%	2.9	0.5	3.3	0.8	9.8	6.0
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	4.8	3.3	1.8	4.2	3.2	14
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	52	11	1500	82	86	180
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	22	< 3.4	< 3.4	< 3.4	14	20
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	14	< 3.4	< 3.4	< 3.4	3.6	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	37	< 10	< 10	< 10	18	20
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	5.7	< 0.6	1.2	< 0.6	9.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	160	< 1.4	58	< 1.4	77	42
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	180	< 1.4	79	< 1.4	74	27
Aromatic C10-C44	DETSC 3072*	10	mg/kg	350	< 10	140	< 10	160	69

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128135	2128136	2128137	2128138	2128139	2128140
			.Sample ID	TP100	TP100	TP101	TP101	TP102	TP102
			Depth	0.05	1.20	0.25	0.90	0.50	0.70
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	390	< 10	140	< 10	180	89
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.2
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1	0.4	0.8
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3
Fluoranthene	DETSC 3301	0.1	mg/kg	0.2	< 0.1	0.4	< 0.1	1.0	2.0
Pyrene	DETSC 3301	0.1	mg/kg	0.5	< 0.1	0.4	< 0.1	1.0	2.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1	0.6	1.1
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1	0.6	1.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.7
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.4
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.6	1.3
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.5	0.8
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.7
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6	6.2	12
SVOCs									
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.3	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128135	2128136	2128137	2128138	2128139	2128140
			.Sample ID	TP100	TP100	TP101	TP101	TP102	TP102
			Depth	0.05	1.20	0.25	0.90	0.50	0.70
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

	Lab No	2128141	2128142	2128143	2128144
	.Sample ID	TP103	TP103	TP104	TP104
	Depth	0.20	0.40	0.25	1.50
	Other ID				
	Sample Type	SOIL	SOIL	SOIL	SOIL
	Sampling Date	15/02/2023	15/02/2023	16/02/2023	16/02/2023
	Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Preparation							
Moisture Content	DETSC 1004	0.1	%	7.7	16	11	11
Metals							
Antimony	DETSC 2301*	1	mg/kg	1.4	3.1	2.2	1.4
Arsenic	DETSC 2301#	0.2	mg/kg	7.4	16	10	13
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.8	1.8	0.3	0.7
Cadmium	DETSC 2301#	0.1	mg/kg	0.9	2.5	0.4	0.4
Chromium	DETSC 2301#	0.15	mg/kg	28	20	20	16
Chromium III	DETSC 2301*	0.15	mg/kg	28	20	20	16
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	28	57	32	26
Lead	DETSC 2301#	0.3	mg/kg	78	240	150	150
Mercury	DETSC 2325#	0.05	mg/kg	0.08	0.76	0.80	0.07
Nickel	DETSC 2301#	1	mg/kg	15	23	18	23
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	180	1500	410	290
Inorganics							
pH	DETSC 2008#		pH	10.9	7.1	9.5	7.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.1	0.9	0.3	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	2.7	4.7	4.6	2.0
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	3.1	15	4.5	5.2
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	190	61	410	110
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.02
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.05
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	5.3	6.1
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	3.0	8.6
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	3.7	22
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	61	< 3.4	88	1300
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	21	< 3.4	18	86
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	83	< 10	120	1400
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.02
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.16
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	1.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	10
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	9.3	< 0.6	1.0	50
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	190	< 1.4	97	820
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	170	< 1.4	81	120
Aromatic C10-C44	DETSC 3072*	10	mg/kg	370	< 10	180	1000

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128141	2128142	2128143	2128144
			.Sample ID	TP103	TP103	TP104	TP104
			Depth	0.20	0.40	0.25	1.50
			Other ID				
			Sample Type	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	16/02/2023	16/02/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	450	< 10	300	2400
PAHs							
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.5
Acenaphthylene	DETSC 3301	0.1	mg/kg	0.1	< 0.1	0.2	0.7
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.4	1.0
Phenanthrene	DETSC 3301	0.1	mg/kg	0.4	0.7	0.4	0.5
Anthracene	DETSC 3301	0.1	mg/kg	0.1	0.2	0.1	1.8
Fluoranthene	DETSC 3301	0.1	mg/kg	1.0	1.6	1.1	0.9
Pyrene	DETSC 3301	0.1	mg/kg	1.1	1.6	1.3	2.0
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.7	1.2	1.2	5.7
Chrysene	DETSC 3301	0.1	mg/kg	0.7	1.1	3.2	5.3
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.4	0.8	0.8	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.3	0.5	0.5	1.6
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	0.7	1.2	1.0	0.6
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	0.4	0.7	0.7	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	0.4	0.7	1.1	0.4
PAH 16 Total	DETSC 3301	1.6	mg/kg	6.3	10	12	21
SVOCs							
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128141	2128142	2128143	2128144
			.Sample ID	TP103	TP103	TP104	TP104
			Depth	0.20	0.40	0.25	1.50
			Other ID				
			Sample Type	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	16/02/2023	16/02/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	0.4	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	0.9	5.2
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No				2128145	2128146	2128147	2128148	2128149	2128150
.Sample ID				TP100	TP100	TP101	TP101	TP102	TP102
Depth				0.05	1.20	0.25	0.90	0.50	0.70
Other ID									
Sample Type				LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date				15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y	Y	Y
Metals									
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.21	< 0.17	0.60	0.29	0.58	0.82
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.66	0.25	0.79	0.31	1.5	1.2
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12	< 12	< 12	< 12	49
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	0.05	< 0.03	0.17	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	5.0	6.3	6.4	5.5	5.5	5.7
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	6.3	6.4	5.5	5.4	5.7
Chromium, Hexavalent	DETSC 2203	7	ug/l	15	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.7	1.0	2.2	0.9	4.7	2.0
Lead, Dissolved	DETSC 2306	0.09	ug/l	3.7	1.1	3.2	0.96	7.0	4.2
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	1.8	2.6	1.5	2.1	2.2	2.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	4.6	1.5	2.8	3.0	32	17
Inorganics									
Conductivity	DETSC 2009	1	uS/cm	174	145	488	151	223	236
pH	DETSC 2008		pH	7.0	6.8	6.9	6.9	7.4	7.0
Dissolved Organic Carbon	DETSC 2085	2	mg/l	6.1	4.2	3.4	5.3	5.9	3.7
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.47	0.13	0.084	0.079	0.077	0.19
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PAHs									

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128145	2128146	2128147	2128148	2128149	2128150
			.Sample ID	TP100	TP100	TP101	TP101	TP102	TP102
			Depth	0.05	1.20	0.25	0.90	0.50	0.70
			Other ID						
			Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05	< 0.05	0.07	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.07	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	0.04	0.02	< 0.01	0.02	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	0.03	0.01	< 0.01	0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.04	0.06	0.03	0.02	0.16	0.02
Anthracene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.06	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.12	0.02	0.03	< 0.01	0.47	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	0.13	0.01	0.02	< 0.01	0.42	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.06	< 0.01	< 0.01	< 0.01	0.22	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.07	< 0.01	< 0.01	< 0.01	0.28	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.10	< 0.01	0.02	< 0.01	0.40	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	0.17	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.08	< 0.01	< 0.01	< 0.01	0.34	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.06	< 0.01	< 0.01	< 0.01	0.34	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.08	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.07	< 0.01	< 0.01	< 0.01	0.32	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.78	< 0.20	< 0.20	< 0.20	3.4	< 0.20

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128151	2128152	2128153	2128154
			.Sample ID	TP103	TP103	TP104	TP104
			Depth	0.20	0.40	0.25	1.50
			Other ID				
			Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date	15/02/2023	15/02/2023	16/02/2023	16/02/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y
Metals							
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.87	1.5	0.87	0.36
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.3	1.6	0.96	0.74
Boron, Dissolved	DETSC 2306*	12	ug/l	18	31	< 12	22
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.06	< 0.03	< 0.03	0.04
Chromium, Dissolved	DETSC 2306	0.25	ug/l	4.1	5.0	3.4	2.8
Chromium III, Dissolved	DETSC 2306*	1	ug/l	4.0	5.0	3.4	2.8
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	3.7	2.5	1.8	0.6
Lead, Dissolved	DETSC 2306	0.09	ug/l	6.0	2.3	1.8	1.2
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	1.7	2.2	1.4	1.3
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	13	9.1	11	7.3
Inorganics							
Conductivity	DETSC 2009	1	uS/cm	64.7	41.8	72.1	87.4
pH	DETSC 2008		pH	8.0	7.7	7.3	6.3
Dissolved Organic Carbon	DETSC 2085	2	mg/l	6.6	3.9	4.5	7.9
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.15	0.089	0.086	0.082
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	270
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	300
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	2.4
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	3.3
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	19
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	190
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	28
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	240
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	510
PAHs							

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128151	2128152	2128153	2128154
			.Sample ID	TP103	TP103	TP104	TP104
			Depth	0.20	0.40	0.25	1.50
			Other ID				
			Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date	15/02/2023	15/02/2023	16/02/2023	16/02/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	0.03	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	0.02	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.03	0.12	0.03	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	0.01	0.02	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.09	0.08	0.05	0.02
Pyrene	DETSC 3304	0.01	ug/l	0.09	0.07	0.05	0.14
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.04	0.03	0.03	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.05	0.04	0.02	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.06	0.03	0.05	0.04
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.02	< 0.01	0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.05	0.02	0.04	0.05
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.05	0.02	0.04	0.12
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.05	0.02	0.06	0.26
PAH Total	DETSC 3304	0.2	ug/l	0.55	0.50	0.37	0.63

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Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP100 0.05
Sample Numbers 2128135 2128155
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.9	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	440.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.74	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	8.3	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	4.8	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3	0.03	2	50	100
DETSC 2306 Mercury as Hg	0.018	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.2	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.6	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.4	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.25	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	2.1	0.021	4	50	200
DETSC 2055 Chloride as Cl	870	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	310	3.1	10	150	500
DETSC 2055 Sulphate as SO4	3600	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	34000	340	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	4200	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.7
DETSC 2009 Conductivity uS/cm	47.9
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.100

Stage 1

Volume of Leachant L2*	0.987
Volume of Eluate VE1*	0.94

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V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP100 1.20
Sample Numbers 2128136 2128156
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.5	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.35	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	0.85	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	4.5	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2.3	0.023	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.8	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.76	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	820	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	1500	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	5500	55	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3500	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.0
DETSC 2009 Conductivity uS/cm	7.8
* Temperature*	17.0

Mass of Sample Kg*	0.100
Mass of dry Sample Kg*	0.092

Stage 1

Volume of Leachant L2*	0.913
Volume of Eluate VE1*	0.869

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP101 0.25
Sample Numbers 2128137 2128157
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	3.3	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	120.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.64	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	20	0.2	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	5.9	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2.9	0.029	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.7	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.3	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.73	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	960	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	210000	2100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	340000	3400	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3000	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.1
DETSC 2009 Conductivity uS/cm	482.0
* Temperature*	17.0
Mass of Sample Kg*	0.100
Mass of dry Sample Kg*	0.092
Stage 1	
Volume of Leachant L2*	0.913
Volume of Eluate VE1*	0.865

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP101 0.90
Sample Numbers 2128138 2128158
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result
DETSC 2084# Total Organic Carbon	%	0.8
DETSC2003# Loss On Ignition	%	
DETSC 3321# BTEX	mg/kg	< 0.04
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10
DETSC 3301 PAHs	mg/kg	< 1.6
DETSC2008# pH	pH Units	
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg	
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg	

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l	Amount Leached* mg/kg
	10:1	LS10
DETSC 2306 Arsenic as As	0.21	< 0.01
DETSC 2306 Barium as Ba	2.8	< 0.1
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02
DETSC 2306 Chromium as Cr	4.4	< 0.1
DETSC 2306 Copper as Cu	3.3	0.033
DETSC 2306 Mercury as Hg	< 0.010	< 0.002
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1
DETSC 2306 Nickel as Ni	1.8	< 0.1
DETSC 2306 Lead as Pb	0.33	< 0.05
DETSC 2306 Antimony as Sb	< 0.17	< 0.05
DETSC 2306 Selenium as Se	< 0.25	< 0.03
DETSC 2306 Zinc as Zn	< 1.3	< 0.01
DETSC 2055 Chloride as Cl	1200	< 100
DETSC 2055* Fluoride as F	< 100	< 0.1
DETSC 2055 Sulphate as SO4	15000	150
DETSC 2009* Total Dissolved Solids	30000	300
DETSC 2130 Phenol Index	< 100	< 1
DETSC 2085 Dissolved Organic Carbon	3500	< 50

WAC Limit Values Limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.5
DETSC 2009 Conductivity uS/cm	43.2
* Temperature*	17.0

Mass of Sample Kg*	0.100
Mass of dry Sample Kg*	0.092

Stage 1

Volume of Leachant L2*	0.91
Volume of Eluate VE1*	0.865

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP102 0.50
Sample Numbers 2128139 2128159
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	9.8	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	140.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	6.2	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.6	0.016	0.5	2	25
DETSC 2306 Barium as Ba	12	0.12	20	100	300
DETSC 2306 Cadmium as Cd	0.11	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2.9	0.029	2	50	100
DETSC 2306 Mercury as Hg	0.023	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	4.2	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.84	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	2.3	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.65	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	1.4	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	8.3	0.083	4	50	200
DETSC 2055 Chloride as Cl	1300	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	200	2	10	150	500
DETSC 2055 Sulphate as SO4	8800	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	51000	510	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5600	56	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.3
DETSC 2009 Conductivity uS/cm	72.2
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.095

Stage 1

Volume of Leachant L2*	0.937
Volume of Eluate VE1*	0.89

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP102 0.70
Sample Numbers 2128140 2128160
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	6.0	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	120.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	12.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.1	0.011	0.5	2	25
DETSC 2306 Barium as Ba	15	0.15	20	100	300
DETSC 2306 Cadmium as Cd	0.032	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3	0.03	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.8	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.28	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.59	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.57	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	7	0.07	4	50	200
DETSC 2055 Chloride as Cl	1100	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	140	1.4	10	150	500
DETSC 2055 Sulphate as SO4	31000	310	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	59000	590	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	4500	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.1
DETSC 2009 Conductivity uS/cm	84.8
* Temperature*	17.0
Mass of Sample Kg*	0.120
Mass of dry Sample Kg*	0.096
Stage 1	
Volume of Leachant L2*	0.931
Volume of Eluate VE1*	0.884

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP103 0.20
Sample Numbers 2128141 2128161
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.7	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	890.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	6.3	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.6	0.016	0.5	2	25
DETSC 2306 Barium as Ba	7.9	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	0.045	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.74	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.2	0.032	2	50	100
DETSC 2306 Mercury as Hg	0.018	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.2	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	5.6	0.06	0.5	10	50
DETSC 2306 Antimony as Sb	0.73	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.34	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	14	0.14	4	50	200
DETSC 2055 Chloride as Cl	1400	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	110	1.1	10	150	500
DETSC 2055 Sulphate as SO4	4900	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	45000	450	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	8800	88	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.3
DETSC 2009 Conductivity uS/cm	64.3
* Temperature*	17.0
Mass of Sample Kg*	0.100
Mass of dry Sample Kg*	0.092
Stage 1	
Volume of Leachant L2*	0.915
Volume of Eluate VE1*	0.87

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP103 0.40
Sample Numbers 2128142 2128162
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	4.7	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	10.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.9	0.019	0.5	2	25
DETSC 2306 Barium as Ba	4.1	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.4	0.034	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.1	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.73	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	7.9	0.079	4	50	200
DETSC 2055 Chloride as Cl	710	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	210	2.1	10	150	500
DETSC 2055 Sulphate as SO4	6000	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	22000	220	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5600	56	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.4
DETSC 2009 Conductivity uS/cm	31.1
* Temperature*	17.0

Mass of Sample Kg*	0.120
Mass of dry Sample Kg*	0.101

Stage 1

Volume of Leachant L2*	0.995
Volume of Eluate VE1*	0.936

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP104 0.25
Sample Numbers 2128143 2128163
Date Analysed 01/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	4.6	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	1300.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	12.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1	0.01	0.5	2	25
DETSC 2306 Barium as Ba	6	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.55	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.7	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.1	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.6	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.44	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	6.7	0.067	4	50	200
DETSC 2055 Chloride as Cl	780	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	130	1.3	10	150	500
DETSC 2055 Sulphate as SO4	7100	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	33000	330	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5200	52	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.2
DETSC 2009 Conductivity uS/cm	47.1
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.098

Stage 1

Volume of Leachant L2*	0.968
Volume of Eluate VE1*	0.92

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP104 1.50
Sample Numbers 2128144 2128164
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.0	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	7000.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	21.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.84	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	24	0.24	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	0.61	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.2	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.3	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.91	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.3	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	5.4	0.054	4	50	200
DETSC 2055 Chloride as Cl	1000	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	150	1.5	10	150	500
DETSC 2055 Sulphate as SO4	24000	240	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	35000	350	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	8400	84	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.0
DETSC 2009 Conductivity uS/cm	49.5
* Temperature*	17.0
Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.098
Stage 1	
Volume of Leachant L2*	0.964
Volume of Eluate VE1*	0.919

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Summary of Asbestos Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2128135	TP100 0.05	SOIL	NAD	none	Michael Kay
2128136	TP100 1.20	SOIL	NAD	none	Michael Kay
2128137	TP101 0.25	SOIL	NAD	none	Michael Kay
2128138	TP101 0.90	SOIL	NAD	none	Michael Kay
2128139	TP102 0.50	SOIL	NAD	none	Michael Kay
2128140	TP102 0.70	SOIL	NAD	none	Michael Kay
2128141	TP103 0.20	SOIL	NAD	none	Michael Kay
2128142	TP103 0.40	SOIL	NAD	none	Michael Kay
2128143	TP104 0.25	SOIL	NAD	none	Michael Kay
2128144	TP104 1.50	SOIL	NAD	none	Michael Kay

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

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Information in Support of the Analytical Results

Our Ref 23-04211
Client Ref PN224455
Contract Wrexham AFC - KOP STAND REDEVELOPMENT

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2128135	TP100 0.05 SOIL	15/02/23	GJ 250ml x2, GJ 60ml	Ammonia (3 days)	
2128136	TP100 1.20 SOIL	15/02/23	GJ 250ml x2, GJ 60ml	Ammonia (3 days)	
2128137	TP101 0.25 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128138	TP101 0.90 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128139	TP102 0.50 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128140	TP102 0.70 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128141	TP103 0.20 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128142	TP103 0.40 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128143	TP104 0.25 SOIL	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128144	TP104 1.50 SOIL	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128145	TP100 0.05 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml		
2128146	TP100 1.20 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml		
2128147	TP101 0.25 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128148	TP101 0.90 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128149	TP102 0.50 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128150	TP102 0.70 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128151	TP103 0.20 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128152	TP103 0.40 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128153	TP104 0.25 LEACHATE	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128154	TP104 1.50 LEACHATE	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128155	TP100 0.05 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml		
2128156	TP100 1.20 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml		
2128157	TP101 0.25 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128158	TP101 0.90 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128159	TP102 0.50 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128160	TP102 0.70 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128161	TP103 0.20 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128162	TP103 0.40 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128163	TP104 0.25 LEACHATE	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128164	TP104 1.50 LEACHATE	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass J-Jar P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

DRAFT

Information in Support of the Analytical Results

Our Ref 23-04211
Client Ref PN224455
Contract Wrexham AFC - KOP STAND REDEVELOPMENT

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

DRAFT

Certificate of Analysis

Certificate Number	23-04867	*Issued:*	08-Mar-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-04867
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP STAND REDEVELOPMENT
Description	8 Soil samples, 13 Leachate samples.
Date Received	28-Feb-23
Date Started	28-Feb-23
Date Completed	08-Mar-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

				Lab No	2132118	2132119	2132120	2132121	2132122	2132123
				.Sample ID	BH106	BH106	BH106	BH106	BH106	BH104
				Depth	0.20	2.00	3.00	5.00	16.00	5.00
				Other ID						
				Sample Type	ES	ES	ES	ES	ES	ES
				Sampling Date	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Moisture Content	DETSC 1004	0.1	%	10	15	12	6.9	16	9.5
Metals										
Antimony	DETSC 2301*	1	mg/kg	2.1	2.1	1.4	1.1	< 1.0	1.5
Arsenic	DETSC 2301#	0.2	mg/kg	11	13	12	9.9	3.7	10
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.4	0.8	0.3	0.3	< 0.2	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.5	0.4	0.4	0.5	0.1	0.6
Chromium	DETSC 2301#	0.15	mg/kg	37	19	18	13	6.2	14
Chromium III	DETSC 2301*	0.15	mg/kg	37	19	18	13	6.2	14
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	39	34	25	23	10	34
Lead	DETSC 2301#	0.3	mg/kg	110	95	56	46	12	52
Mercury	DETSC 2325#	0.05	mg/kg	0.22	0.11	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	20	20	21	20	7.2	20
Selenium	DETSC 2301#	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Zinc	DETSC 2301#	1	mg/kg	200	140	84	95	23	99
Inorganics										
pH	DETSC 2008#		pH	9.4	8.3	8.1	8.5	8.8	8.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.3	< 0.1	< 0.1	< 0.1	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	5.2	4.4	2.0	0.5	< 0.5	0.8
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	4.7	5.0	3.4	2.4	2.3	2.4
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	200	120	85	52	55	84
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5			
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2			
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5			
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4			
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4			
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10			
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9			
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5			
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6			
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4			
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4			
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10			

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

	Lab No	2132118	2132119	2132120	2132121	2132122	2132123
	.Sample ID	BH106	BH106	BH106	BH106	BH106	BH104
	Depth	0.20	2.00	3.00	5.00	16.00	5.00
	Other ID						
	Sample Type	ES	ES	ES	ES	ES	ES
	Sampling Date	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023
	Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10			
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	0.1	< 0.1			
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Phenanthrene	DETSC 3301	0.1	mg/kg	0.4	0.2	< 0.1			
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Fluoranthene	DETSC 3301	0.1	mg/kg	0.8	0.4	0.2			
Pyrene	DETSC 3301	0.1	mg/kg	0.8	0.5	0.2			
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.6	0.4	< 0.1			
Chrysene	DETSC 3301	0.1	mg/kg	0.5	0.2	< 0.1			
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.3	0.2	< 0.1			
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.2	0.1	< 0.1			
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	0.5	0.3	< 0.1			
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
PAH 16 Total	DETSC 3301	1.6	mg/kg	4.3	2.6	< 1.6			

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	2132124	2132125
.Sample ID	BH105	BH105
Depth	0.20	1.00
Other ID		
Sample Type	ES	ES
Sampling Date	23/02/2023	23/02/2023
Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Preparation					
Moisture Content	DETSC 1004	0.1	%	13	10
Metals					
Antimony	DETSC 2301*	1	mg/kg	2.5	3.7
Arsenic	DETSC 2301#	0.2	mg/kg	12	12
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.8	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.6	0.5
Chromium	DETSC 2301#	0.15	mg/kg	46	220
Chromium III	DETSC 2301*	0.15	mg/kg	46	220
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	42	59
Lead	DETSC 2301#	0.3	mg/kg	590	120
Mercury	DETSC 2325#	0.05	mg/kg	0.16	0.13
Nickel	DETSC 2301#	1	mg/kg	17	22
Selenium	DETSC 2301#	0.5	mg/kg	0.8	1.1
Zinc	DETSC 2301#	1	mg/kg	150	130
Inorganics					
pH	DETSC 2008#		pH	8.0	8.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.3	0.2
Cyanide, Free	DETSC 2130#	0.1	mg/kg	0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	6.0	2.0
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	6.7	3.7
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	200	35
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2132124	2132125
			.Sample ID	BH105	BH105
			Depth	0.20	1.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	23/02/2023	23/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10
PAHs					
Naphthalene	DETSC 3301	0.1	mg/kg	0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	0.6	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	0.2	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	0.4	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	2.5	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	0.8	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	4.5	0.3
Pyrene	DETSC 3301	0.1	mg/kg	4.3	0.4
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	3.0	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	2.5	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	1.7	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	1.2	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	2.8	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	1.8	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	0.2	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	2.2	< 0.1
PAH 16 Total	DETSC 3301	1.6	mg/kg	29	< 1.6

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Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2132118	2132119	2132120	2132124	2132125
			.Sample ID	BH106	BH106	BH106	BH105	BH105
			Depth	0.20	2.00	3.00	0.20	1.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	21/02/2023	21/02/2023	21/02/2023	23/02/2023	23/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
SVOCs								
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	0.4	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2132118	2132119	2132120	2132124	2132125
			.Sample ID	BH106	BH106	BH106	BH105	BH105
			Depth	0.20	2.00	3.00	0.20	1.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	21/02/2023	21/02/2023	21/02/2023	23/02/2023	23/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Carbazole	DETSC 3433*	0.1	mg/kg	0.4	< 0.1	< 0.1	< 0.1	< 0.1

DRAFT

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2132126	2132127	2132128	2132129	2132130	2132131
			.Sample ID	BH106	BH106	BH106	BH106	BH106	BH104
			Depth	0.20	2.00	3.00	5.00	16.00	5.00
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y	Y	Y
Metals									
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.51	0.22	< 0.17	0.41	0.42	0.39
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.2	0.68	0.33	0.26	0.18	0.21
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12	< 12	< 12	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	2.7	0.57	3.1	0.80	0.69	0.63
Chromium III, Dissolved	DETSC 2306*	1	ug/l	2.7	< 1.0	3.1	< 1.0	< 1.0	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	4.0	3.2	2.8	2.6	0.7	2.3
Lead, Dissolved	DETSC 2306	0.09	ug/l	2.6	0.68	0.37	0.16	< 0.09	< 0.09
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	1.3	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.29	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	3.4	1.5	< 1.3	< 1.3	< 1.3	< 1.3
Inorganics									
Conductivity	DETSC 2009	1	uS/cm	71.5	86.5	90.8	32.0	50.7	78.4
pH	DETSC 2008		pH	6.7	6.6	7.0	7.4	7.0	6.8
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.7	3.9	2.9	4.0	2.8	2.8
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.23	0.055	0.030	0.022	0.030	0.033
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	18	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PAHs									

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2132126	2132127	2132128	2132129	2132130	2132131
			.Sample ID	BH106	BH106	BH106	BH106	BH106	BH104
			Depth	0.20	2.00	3.00	5.00	16.00	5.00
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	0.10	0.07	0.13	0.15	0.12
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.03	0.01	0.02	< 0.01	< 0.01	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.08	0.02	0.02	< 0.01	< 0.01	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	0.07	0.02	0.02	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.03	0.01	0.01	< 0.01	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.04	0.02	0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.37	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMEN

	Lab No	2132132	2132133
	.Sample ID	BH105	BH105
	Depth	0.20	1.00
	Other ID		
	Sample Type	ES	ES
	Sampling Date	23/02/2023	23/02/2023
	Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.46	0.38
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.3	1.1
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	1.4	2.9
Chromium III, Dissolved	DETSC 2306*	1	ug/l	1.4	2.9
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.0	1.5
Lead, Dissolved	DETSC 2306	0.09	ug/l	3.2	2.1
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	0.03
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.55	0.26
Zinc, Dissolved	DETSC 2306	1.3	ug/l	3.5	2.0
Inorganics					
Conductivity	DETSC 2009	1	uS/cm	105	44.2
pH	DETSC 2008		pH	7.0	6.9
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.7	3.6
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.088	0.089
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
PAHs					

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMEN

			Lab No	2132132	2132133
			.Sample ID	BH105	BH105
			Depth	0.20	1.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	23/02/2023	23/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Naphthalene	DETSC 3304	0.05	ug/l	0.07	0.11
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.06	0.02
Anthracene	DETSC 3304	0.01	ug/l	0.02	0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.20	0.11
Pyrene	DETSC 3304	0.01	ug/l	0.20	0.11
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.09	0.04
Chrysene	DETSC 3304	0.01	ug/l	0.11	0.05
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.10	0.06
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.05	0.03
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.10	0.06
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.06	0.05
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.05	0.05
PAH Total	DETSC 3304	0.2	ug/l	1.1	0.71

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Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH106 0.20
Sample Numbers 2132118 2132134
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	5.2	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	4.3	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.6	0.016	0.5	2	25
DETSC 2306 Barium as Ba	10	0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	1.6	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.8	0.038	2	50	100
DETSC 2306 Mercury as Hg	0.024	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	5.9	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	2.4	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	1	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.43	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	4	0.04	4	50	200
DETSC 2055 Chloride as Cl	1800	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	280	2.8	10	150	500
DETSC 2055 Sulphate as SO4	31000	310	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	56000	560	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	6300	63	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.3
DETSC 2009 Conductivity uS/cm	79.9
* Temperature*	16.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.099

Stage 1

Volume of Leachant L2*	0.974
Volume of Eluate VE1*	0.922

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH106 2.00
Sample Numbers 2132119 2132135
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	4.4	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	120.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	2.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.51	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	8.2	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.4	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.8	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.97	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.41	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.31	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	3.4	0.034	4	50	200
DETSC 2055 Chloride as Cl	1700	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	130	1.3	10	150	500
DETSC 2055 Sulphate as SO4	19000	190	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	64000	640	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5800	58	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.0
DETSC 2009 Conductivity uS/cm	92.0
* Temperature*	16.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.094

Stage 1

Volume of Leachant L2*	0.925
Volume of Eluate VE1*	0.879

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH106 3.00
Sample Numbers 2132120 2132136
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.0	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.26	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	4.9	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	0.82	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.41	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	1.5	0.015	4	50	200
DETSC 2055 Chloride as Cl	1500	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	18000	180	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	47000	470	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	4600	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.8
DETSC 2009 Conductivity uS/cm	66.4
* Temperature*	16.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.097

Stage 1

Volume of Leachant L2*	0.956
Volume of Eluate VE1*	0.908

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH105 0.20
Sample Numbers 2132124 2132137
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result
DETSC 2084# Total Organic Carbon	%	6.0
DETSC2003# Loss On Ignition	%	
DETSC 3321# BTEX	mg/kg	< 0.04
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01
DETSC 3311# TPH (C10 - C40)	mg/kg	120.0
DETSC 3301 PAHs	mg/kg	29.0
DETSC2008# pH	pH Units	
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg	
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg	

WAC Limit Values		
Inert Waste	SNRHW	Hazardous Waste
3	5	6
n/a	n/a	10
6	n/a	n/a
1	n/a	n/a
500	n/a	n/a
100	n/a	n/a
n/a	>6	n/a
n/a	TBE	TBE
n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10
DETSC 2306 Arsenic as As	1.2	0.012
DETSC 2306 Barium as Ba	10	0.1
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02
DETSC 2306 Chromium as Cr	< 0.25	< 0.1
DETSC 2306 Copper as Cu	3.7	0.037
DETSC 2306 Mercury as Hg	< 0.010	< 0.002
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1
DETSC 2306 Nickel as Ni	< 0.50	< 0.1
DETSC 2306 Lead as Pb	3.7	< 0.05
DETSC 2306 Antimony as Sb	0.38	< 0.05
DETSC 2306 Selenium as Se	0.29	< 0.03
DETSC 2306 Zinc as Zn	4.8	0.048
DETSC 2055 Chloride as Cl	1400	< 100
DETSC 2055* Fluoride as F	120	1.2
DETSC 2055 Sulphate as SO4	19000	190
DETSC 2009* Total Dissolved Solids	54000	540
DETSC 2130 Phenol Index	< 100	< 1
DETSC 2085 Dissolved Organic Carbon	5000	50

WAC Limit Values Limit values for LS10 Leachate		
Inert Waste	SNRHW	Hazardous Waste
0.5	2	25
20	100	300
0.04	1	5
0.5	10	70
2	50	100
0.01	0.2	2
0.5	10	30
0.4	10	40
0.5	10	50
0.06	0.7	5
0.1	0.5	7
4	50	200
800	15,000	25,000
10	150	500
1000	20,000	50,000
4000	60,000	100,000
1	n/a	n/a
500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.3
DETSC 2009 Conductivity uS/cm	76.6
* Temperature*	16.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.095

Stage 1

Volume of Leachant L2*	0.938
Volume of Eluate VE1*	0.89

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH105 1.00
Sample Numbers 2132125 2132138
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.0	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.83	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	4.9	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.3	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	0.026	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	2.9	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	2.2	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.29	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	2.5	0.025	4	50	200
DETSC 2055 Chloride as Cl	750	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	410	4.1	10	150	500
DETSC 2055 Sulphate as SO4	2300	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	32000	320	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	4900	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.2
DETSC 2009 Conductivity uS/cm	46.0
* Temperature*	16.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.099

Stage 1

Volume of Leachant L2*	0.974
Volume of Eluate VE1*	0.922

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Summary of Asbestos Analysis
Soil Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2132118	BH106 0.20	SOIL	NAD	none	Michael Kay
2132119	BH106 2.00	SOIL	NAD	none	Michael Kay
2132124	BH105 0.20	SOIL	NAD	none	Michael Kay
2132125	BH105 1.00	SOIL	NAD	none	Michael Kay

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

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Information in Support of the Analytical Results

Our Ref 23-04867
Client Ref PN224453
Contract Wrexham AFC - KOP STAND REDEVELOPMENT

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2132118	BH106 0.20 SOIL	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132119	BH106 2.00 SOIL	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132120	BH106 3.00 SOIL	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132121	BH106 5.00 SOIL	22/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132122	BH106 16.00 SOIL	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132123	BH104 5.00 SOIL	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days)	
2132124	BH105 0.20 SOIL	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132125	BH105 1.00 SOIL	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132126	BH106 0.20 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132127	BH106 2.00 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132128	BH106 3.00 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132129	BH106 5.00 LEACHATE	22/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132130	BH106 16.00 LEACHATE	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132131	BH104 5.00 LEACHATE	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132132	BH105 0.20 LEACHATE	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132133	BH105 1.00 LEACHATE	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132134	BH106 0.20 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132135	BH106 2.00 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132136	BH106 3.00 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132137	BH105 0.20 LEACHATE	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132138	BH105 1.00 LEACHATE	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-04487	*Issued:*	08-Mar-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-04487
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP STAND REDEVELOPMENT
Description	2 Soil samples, 4 Leachate samples.
Date Received	23-Feb-23
Date Started	23-Feb-23
Date Completed	08-Mar-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	2129907	2129908
.Sample ID	BH104	BH104
Depth	0.20	2.00
Other ID		
Sample Type	ES	ES
Sampling Date	20/02/2023	20/02/2023
Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Preparation					
Moisture Content	DETSC 1004	0.1	%	15	14
Metals					
Antimony	DETSC 2301*	1	mg/kg	4.8	1.9
Arsenic	DETSC 2301#	0.2	mg/kg	13	12
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.4	1.1
Cadmium	DETSC 2301#	0.1	mg/kg	2.9	0.8
Chromium	DETSC 2301#	0.15	mg/kg	17	18
Chromium III	DETSC 2301*	0.15	mg/kg	17	18
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	93	44
Lead	DETSC 2301#	0.3	mg/kg	1300	150
Mercury	DETSC 2325#	0.05	mg/kg	1.1	0.15
Nickel	DETSC 2301#	1	mg/kg	20	21
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.5
Zinc	DETSC 2301#	1	mg/kg	520	150
Inorganics					
pH	DETSC 2008#		pH	9.0	8.0
Cyanide, Total	DETSC 2130#	0.1	mg/kg	4.1	11
Cyanide, Free	DETSC 2130#	0.1	mg/kg	0.3	0.9
Total Organic Carbon	DETSC 2084#	0.5	%	6.1	2.6
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	3.5	3.9
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	68	110
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic >EC10-EC12	DETSC 3521#	1.5	mg/kg	< 1.50	< 1.50
Aliphatic >EC12-EC16	DETSC 3521#	1.2	mg/kg	< 1.20	< 1.20
Aliphatic >EC16-EC21	DETSC 3521#	1.5	mg/kg	< 1.50	< 1.50
Aliphatic >EC21-EC35	DETSC 3521#	3.4	mg/kg	< 3.40	< 3.40
Aliphatic >EC35-EC40	DETSC 3521#	3.4	mg/kg	< 3.40	< 3.40
Aliphatic >EC40-EC44	DETSC 3521*	3.4	mg/kg	< 3.40	< 3.40
Aliphatic C5-C44	DETSC 3521*	10	mg/kg	< 10.00	< 10.00
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic >EC10-EC12	DETSC 3521#	0.9	mg/kg	< 0.90	< 0.90
Aromatic >EC12-EC16	DETSC 3521#	0.5	mg/kg	< 0.50	< 0.50
Aromatic >EC16-EC21	DETSC 3521#	0.6	mg/kg	5.38	3.53
Aromatic >EC21-EC35	DETSC 3521#	1.4	mg/kg	8.55	5.23
Aromatic >EC35-EC40	DETSC 3521*	1.4	mg/kg	< 1.40	< 1.40

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2129907	2129908
			.Sample ID	BH104	BH104
			Depth	0.20	2.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	20/02/2023	20/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Aromatic >EC40-EC44	DETSC 3521*	1.4	mg/kg	< 1.40	< 1.40
Aromatic C5-C44	DETSC 3521*	10	mg/kg	13.93	< 10.00
TPH Ali/Aro C5-C44	DETSC 3521*	10	mg/kg	13.93	< 10.00
PAHs					
Naphthalene	DETSC 3301	0.1	mg/kg	0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	0.4	0.3
Anthracene	DETSC 3301	0.1	mg/kg	0.2	0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	1.7	0.8
Pyrene	DETSC 3301	0.1	mg/kg	1.9	0.9
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	1.0	0.5
Chrysene	DETSC 3301	0.1	mg/kg	1.2	0.5
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.7	0.4
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.5	0.2
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	1.4	0.7
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	1.1	0.7
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	0.4	0.3
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	0.8	0.3
PAH 16 Total	DETSC 3301	1.6	mg/kg	11	5.7
SVOCs					
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2129907	2129908
			.Sample ID	BH104	BH104
			Depth	0.20	2.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	20/02/2023	20/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

	Lab No	2129909	2129910
	.Sample ID	BH104	BH104
	Depth	0.20	2.00
	Other ID		
	Sample Type	ES	ES
	Sampling Date	20/02/2023	20/02/2023
	Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Antimony, Dissolved	DETSC 2306	0.17	ug/l	4.9	3.4
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	3.7	1.2
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	27
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.05	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	2.7	2.4
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	2.4
Chromium, Hexavalent	DETSC 2203	7	ug/l	27	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	8.1	2.4
Lead, Dissolved	DETSC 2306	0.09	ug/l	30	12
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.15	0.03
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.66	0.45
Zinc, Dissolved	DETSC 2306	1.3	ug/l	7.3	3.9
Inorganics					
Conductivity	DETSC 2009	1	uS/cm	191	178
pH	DETSC 2008		pH	7.8	7.7
Dissolved Organic Carbon	DETSC 2085	2	mg/l	4.7	3.8
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.078	0.035
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	35	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
PAHs					

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2129909	2129910
			.Sample ID	BH104	BH104
			Depth	0.20	2.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	20/02/2023	20/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.01	0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.07	0.02
Anthracene	DETSC 3304	0.01	ug/l	0.04	0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.25	0.06
Pyrene	DETSC 3304	0.01	ug/l	0.29	0.07
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.10	0.03
Chrysene	DETSC 3304	0.01	ug/l	0.14	0.04
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.16	0.06
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.08	0.02
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.14	0.05
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.13	0.04
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	0.02	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.09	0.03
PAH Total	DETSC 3304	0.2	ug/l	1.5	0.46

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Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH104 0.20
Sample Numbers 2129907 2129911
Date Analysed 06/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	6.1	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	79.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	11.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.8	0.018	0.5	2	25
DETSC 2306 Barium as Ba	16	0.16	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	8.2	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	4.4	0.044	2	50	100
DETSC 2306 Mercury as Hg	0.076	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	11	0.11	0.5	10	30
DETSC 2306 Nickel as Ni	2.1	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	17	0.17	0.5	10	50
DETSC 2306 Antimony as Sb	1.6	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.47	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	3.8	0.038	4	50	200
DETSC 2055 Chloride as Cl	5200	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	130000	1300	10	150	500
DETSC 2055 Sulphate as SO4	13000	130	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	51000	510	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5000	50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	9.0
DETSC 2009 Conductivity uS/cm	73.2
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.094

Stage 1

Volume of Leachant L2*	0.92
Volume of Eluate VE1*	0.876

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH104 2.00
Sample Numbers 2129908 2129912
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.6	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	5.7	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.33	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	15	0.15	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	2	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.2	0.032	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.3	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.74	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.63	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.26	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	3.4	0.034	4	50	200
DETSC 2055 Chloride as Cl	11000	110	800	15,000	25,000
DETSC 2055* Fluoride as F	200	2	10	150	500
DETSC 2055 Sulphate as SO4	30000	300	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	85000	850	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3700	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.6
DETSC 2009 Conductivity uS/cm	121.0
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.095

Stage 1

Volume of Leachant L2*	0.936
Volume of Eluate VE1*	0.892

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2129907	BH104 0.20	SOIL	NAD	none	Steven Lambert
2129908	BH104 2.00	SOIL	NAD	none	Steven Lambert

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

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Information in Support of the Analytical Results

Our Ref 23-04487
Client Ref PN224453
Contract Wrexham AFC - KOP STAND REDEVELOPMENT

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2129907	BH104 0.20 SOIL	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2129908	BH104 2.00 SOIL	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2129909	BH104 0.20 LEACHATE	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2129910	BH104 2.00 LEACHATE	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2129911	BH104 0.20 LEACHATE	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2129912	BH104 2.00 LEACHATE	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

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Certificate of Analysis

Certificate Number	23-05136	*Issued:*	16-Mar-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-05136
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP STAND REDEVELOPMENT
Description	2 Soil samples, 3 Leachate samples.
Date Received	02-Mar-23
Date Started	02-Mar-23
Date Completed	16-Mar-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2133731	2133732
			.Sample ID	BH105	BH105
			Depth	5.00	13.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	24/02/2023	24/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Moisture Content	DETSC 1004	0.1	%	6.1	16
Metals					
Antimony	DETSC 2301*	1	mg/kg	< 1.0	< 1.0
Arsenic	DETSC 2301#	0.2	mg/kg	4.9	2.8
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	7.6	5.2
Chromium III	DETSC 2301*	0.15	mg/kg	7.6	5.2
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	10	8.0
Lead	DETSC 2301#	0.3	mg/kg	17	8.5
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	11	7.5
Selenium	DETSC 2301#	0.5	mg/kg	0.7	< 0.5
Zinc	DETSC 2301#	1	mg/kg	32	18
Inorganics					
pH	DETSC 2008#		pH	8.4	8.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5	< 0.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	< 0.50	< 0.50
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	38	19
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	

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Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2133731	2133732
			.Sample ID	BH105	BH105
			Depth	5.00	13.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	24/02/2023	24/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	
PAHs					
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	

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Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	2133731
.Sample ID	BH105
Depth	5.00
Other ID	
Sample Type	ES
Sampling Date	24/02/2023
Sampling Time	n/s

Test	Method	LOD	Units	
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	2133731
.Sample ID	BH105
Depth	5.00
Other ID	
Sample Type	ES
Sampling Date	24/02/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2133733	2133734
			.Sample ID	BH105	BH105
			Depth	5.00	13.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	24/02/2023	24/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Antimony, Dissolved	DETSC 2306	0.17	ug/l	< 0.17	< 0.17
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.29	< 0.16
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.48	1.9
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	1.9
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.9	1.4
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.31	0.25
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	< 1.3
Inorganics					
Conductivity	DETSC 2009	1	uS/cm	47.0	50.6
pH	DETSC 2008		pH	9.8	9.1
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.1	3.2
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.18	0.20
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
PAHs					

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	2133733	2133734
.Sample ID	BH105	BH105
Depth	5.00	13.00
Other ID		
Sample Type	ES	ES
Sampling Date	24/02/2023	24/02/2023
Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Naphthalene	DETSC 3304	0.05	ug/l	0.09	0.10
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	0.06
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	0.04
Phenanthrene	DETSC 3304	0.01	ug/l	0.01	0.21
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	0.05
Fluoranthene	DETSC 3304	0.01	ug/l	0.01	0.24
Pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.20
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	0.07
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	0.12
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.14
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.04
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.09
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.08
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	0.02
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	0.08
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	1.5

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Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH105 5.00
Sample Numbers 2133731 2133735
Date Analysed 13/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	< 0.5	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.19	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	7.3	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	2.5	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.8	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	2.6	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.89	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.6	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	1.5	0.015	4	50	200
DETSC 2055 Chloride as Cl	1000	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	200	2	10	150	500
DETSC 2055 Sulphate as SO4	2800	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	29000	290	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3300	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.4
DETSC 2009 Conductivity uS/cm	41.1
* Temperature*	17.0

Mass of Sample Kg*	0.100
Mass of dry Sample Kg*	0.094

Stage 1

Volume of Leachant L2*	0.934
Volume of Eluate VE1*	0.884

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Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Information in Support of the Analytical Results

Our Ref 23-05136
Client Ref PN224453
Contract Wrexham AFC - KOP STAND REDEVELOPMENT

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2133731	BH105 5.00 SOIL	24/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2133732	BH105 13.00 SOIL	24/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2133733	BH105 5.00 LEACHATE	24/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2133734	BH105 13.00 LEACHATE	24/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2133735	BH105 5.00 LEACHATE	24/02/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

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APPENDIX 10

Laboratory Test Results - Contamination (Groundwater)

Certificate of Analysis

Certificate Number	22-23681	*Issued:*	24-Nov-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	22-23681
Client Reference	PN22453
Order No	ON34994
Contract Title	Wrexham AFC - KOP Stand Redevelopment
Description	4 Water samples.
Date Received	18-Nov-22
Date Started	18-Nov-22
Date Completed	24-Nov-22
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Water Samples

Our Ref 22-23681
Client Ref PN22453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2087265	2087266	2087267	2087268
			.Sample ID	BH100	BH101	BH102	BH103
			Depth				
			Other ID				
			Sample Type	EW	EW	EW	EW
			Sampling Date	16/11/2022	16/11/2022	16/11/2022	16/11/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y
Metals							
Antimony, Dissolved	DETSC 2306	0.17	ug/l	1.3	0.35	0.27	1.6
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.65	0.53	0.35	0.84
Barium, Dissolved	DETSC 2306	0.26	ug/l	65	86	72	16
Boron, Dissolved	DETSC 2306*	12	ug/l	54	51	50	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	0.12	0.06	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	1.4	< 1.0	6.1
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.2	2.8	6.3	4.0
Lead, Dissolved	DETSC 2306	0.09	ug/l	< 0.09	1.2	0.38	0.37
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	0.03	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	2.0	4.1	2.1	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.92	1.8	0.84	0.28
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	1.4	1.2	< 0.6	8.3
Zinc, Dissolved	DETSC 2306	1.3	ug/l	4.7	8.5	22	1.3
Inorganics							
Conductivity	DETSC 2009	1	uS/cm	639	831	716	103
pH	DETSC 2008		pH	6.7	7.3	6.9	8.6
Dissolved Organic Carbon	DETSC 2085	2	mg/l	4.3	< 2.0	< 2.0	< 2.0
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	137	301	290	14.5
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.18	0.022	0.052	0.056
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	16	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	15	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Water Samples

Our Ref 22-23681
Client Ref PN22453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2087265	2087266	2087267	2087268
			.Sample ID	BH100	BH101	BH102	BH103
			Depth				
			Other ID				
			Sample Type	EW	EW	EW	EW
			Sampling Date	16/11/2022	16/11/2022	16/11/2022	16/11/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	16	< 1.0	< 1.0	< 1.0
PAHs							
Naphthalene	DETSC 3304	0.05	ug/l	0.11	< 0.05	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	0.01	0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	0.02	0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	< 0.20	< 0.20	< 0.20

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Key: * -not accredited. n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 22-23681
Client Ref PN22453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2087265	BH100 WATER	16/11/22	GB 1L, GB to 500ml x2, PB 1L	pH/Cond/TDS (1 days)	
2087266	BH101 WATER	16/11/22	GB 1L, GB to 500ml x2, PB 1L	pH/Cond/TDS (1 days)	
2087267	BH102 WATER	16/11/22	GB 1L, GB to 500ml x2, PB 1L	pH/Cond/TDS (1 days)	
2087268	BH103 WATER	16/11/22	GB 1L, GB to 500ml x2, PB 1L	pH/Cond/TDS (1 days)	

Key: G-Glass P-Plastic B-Bottle

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

DRAFT

Certificate of Analysis

Certificate Number	22-25552	*Issued:*	03-Jan-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	22-25552
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP Stand Redevelopment
Description	4 Water samples.
Date Received	09-Dec-22
Date Started	09-Dec-22
Date Completed	03-Jan-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Water Samples

Our Ref 22-25552
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2096794	2096795	2096796	2096797
			.Sample ID	BH100	BH101	BH102	BH103
			Depth				
			Other ID				
			Sample Type	WATER	WATER	WATER	WATER
			Sampling Date	07/12/2022	07/12/2022	07/12/2022	07/12/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y
Metals							
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.46	< 0.17	< 0.17	0.35
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.81	< 0.16	0.17	0.17
Barium, Dissolved	DETSC 2306	0.26	ug/l	66	66	68	60
Boron, Dissolved	DETSC 2306*	12	ug/l	61	46	54	29
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	0.9	0.9	1.2	1.6
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.11	< 0.09	< 0.09	< 0.09
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	3.6	1.7	0.8	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	1.0	0.53	0.34	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	0.9	< 0.6	< 0.6	0.8
Zinc, Dissolved	DETSC 2306	1.3	ug/l	7.3	5.9	19	12
Inorganics							
Conductivity	DETSC 2009	1	uS/cm	598	745	676	570
pH	DETSC 2008		pH	7.6	6.6	7.4	7.4
Dissolved Organic Carbon	DETSC 2085	2	mg/l	5.2	< 2.0	< 2.0	< 2.0
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	138	354	310	211
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.18	0.025	0.016	0.054

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Water Samples

Our Ref 22-25552
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2096794	2096795	2096796	2096797
			.Sample ID	BH100	BH101	BH102	BH103
			Depth				
			Other ID				
			Sample Type	WATER	WATER	WATER	WATER
			Sampling Date	07/12/2022	07/12/2022	07/12/2022	07/12/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	11	< 1.0	< 1.0	25
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	6.7	< 1.0	< 1.0	18
Aliphatic C21-C35	DETSC 3072*	1	ug/l	3.6	< 1.0	< 1.0	6.1
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	11	< 1.0	< 1.0	25
PAHs							
Naphthalene	DETSC 3304	0.05	ug/l	0.09	< 0.05	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	< 0.20	< 0.20	< 0.20

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Key: * -not accredited. n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 22-25552
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2096794	BH100 WATER	07/12/22	GB 1L, GV x2, PB 1L	pH/Cond/TDS (1 days)	
2096795	BH101 WATER	07/12/22	GB 1L, GV x2, PB 1L	pH/Cond/TDS (1 days)	
2096796	BH102 WATER	07/12/22	GB 1L, GV x2, PB 1L	pH/Cond/TDS (1 days)	
2096797	BH103 WATER	07/12/22	GB 1L, GV x2, PB 1L	pH/Cond/TDS (1 days)	

Key: G-Glass P-Plastic B-Bottle V-Vial

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

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Certificate of Analysis

Certificate Number	23-06354	*Issued:*	30-Mar-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-06354
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP Stand Redevelopment
Description	3 Water samples.
Date Received	16-Mar-23
Date Started	16-Mar-23
Date Completed	30-Mar-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

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Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Water Samples

Our Ref 23-06354
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2141405	2141406	2141407
			.Sample ID	BH104	BH105	BH106
			Depth			
			Other ID			
			Sample Type	WATER	WATER	WATER
			Sampling Date	14/03/2023	14/03/2023	14/03/2023
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Metals						
Antimony, Dissolved	DETSC 2306	0.17	ug/l	1.2	1.0	1.4
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.30	0.32	0.32
Barium, Dissolved	DETSC 2306	0.26	ug/l	57	40	28
Boron, Dissolved	DETSC 2306*	12	ug/l	30	33	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.05	< 0.03	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	< 1.0	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.4	1.8	2.1
Lead, Dissolved	DETSC 2306	0.09	ug/l	< 0.09	< 0.09	< 0.09
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	2.5	1.3	1.3
Selenium, Dissolved	DETSC 2306	0.25	ug/l	1.1	3.0	0.54
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	< 0.6	< 0.6	0.6
Zinc, Dissolved	DETSC 2306	1.3	ug/l	31	20	65
Inorganics						
Conductivity	DETSC 2009	1	uS/cm	524	354	264
pH	DETSC 2008		pH	7.3	6.4	6.6
Dissolved Organic Carbon	DETSC 2085	2	mg/l	< 2.0	< 2.0	2.3
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	223	122	90.1
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	< 0.015	< 0.015	< 0.015
Petroleum Hydrocarbons						
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Water Samples

Our Ref 23-06354
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2141405	2141406	2141407
			.Sample ID	BH104	BH105	BH106
			Depth			
			Other ID			
			Sample Type	WATER	WATER	WATER
			Sampling Date	14/03/2023	14/03/2023	14/03/2023
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
PAHs						
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.01	< 0.01	0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.02	0.01	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.02	0.02	0.03
Pyrene	DETSC 3304	0.01	ug/l	0.02	0.02	0.04
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	< 0.20	< 0.20

DRAFT

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Water Samples

Our Ref 23-06354
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2141405	2141406	2141407
			.Sample ID	BH104	BH105	BH106
			Depth			
			Other ID			
			Sample Type	WATER	WATER	WATER
			Sampling Date	14/03/2023	14/03/2023	14/03/2023
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
VOCs						
Dichlorodifluoromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Chloromethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Vinyl Chloride	DETSC 3432	1	ug/l	< 1	< 1	< 1
Bromomethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Chloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Trichlorofluoromethane	DETSC 3432*	1	ug/l	< 1	< 1	< 1
1,1-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Methylene Chloride	DETSC 3432*	27	ug/l	< 27	< 27	< 27
Trans-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Cis-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1
2,2-dichloropropane	DETSC 3432*	2	ug/l	< 2	< 2	< 2
Bromochloromethane	DETSC 3432	4	ug/l	< 4	< 4	< 4
Chloroform	DETSC 3432	1	ug/l	3	7	9
1,1,1-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Carbon tetrachloride	DETSC 3432	1	ug/l	< 1	< 1	< 1
Benzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2-dichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Trichloroethylene	DETSC 3432*	1	ug/l	< 1	< 1	< 1
1,2-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Dibromomethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Bromodichloromethane	DETSC 3432	4	ug/l	< 4	< 4	5
cis-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Toluene	DETSC 3432	1	ug/l	< 1	< 1	< 1
trans-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1,2-trichloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Tetrachloroethylene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,3-dichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Dibromochloromethane	DETSC 3432	1	ug/l	< 1	1	2
1,2-dibromoethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Chlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1,1,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Ethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
m+p-Xylene	DETSC 3432	2	ug/l	< 2	< 2	< 2
o-Xylene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Styrene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Bromoform	DETSC 3432	1	ug/l	< 1	< 1	< 1
Isopropylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,1,2,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1	< 1	< 1
Bromobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Water Samples

Our Ref 23-06354
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2141405	2141406	2141407
			.Sample ID	BH104	BH105	BH106
			Depth			
			Other ID			
			Sample Type	WATER	WATER	WATER
			Sampling Date	14/03/2023	14/03/2023	14/03/2023
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
1,2,3-trichloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1
n-propylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
2-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,3,5-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
4-chlorotoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Tert-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2,4-trimethylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
sec-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
p-isopropyltoluene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,3-dichlorobenzene	DETSC 3432	2	ug/l	< 2	< 2	< 2
1,4-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
n-butylbenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2-dichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2-dibromo-3-chloropropane	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2,4-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
Hexachlorobutadiene	DETSC 3432	1	ug/l	< 1	< 1	< 1
1,2,3-trichlorobenzene	DETSC 3432	1	ug/l	< 1	< 1	< 1
MTBE	DETSC 3432*	1	ug/l	< 1	< 1	< 1
SVOCs						
Phenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Aniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2-Chlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Benzyl Alcohol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Bis(2-chloroisopropyl)ether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
3&4-Methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Bis(2-chloroethoxy)methane	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,4-Dimethylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,4-Dichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
4-Chloro-3-methylphenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Hexachlorocyclopentadiene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,4,6-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,4,5-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2-Chloronaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,4-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
3-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
4-Nitrophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Dibenzofuran	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,6-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0

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Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Water Samples

Our Ref 23-06354
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2141405	2141406	2141407
			.Sample ID	BH104	BH105	BH106
			Depth			
			Other ID			
			Sample Type	WATER	WATER	WATER
			Sampling Date	14/03/2023	14/03/2023	14/03/2023
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
2,3,4,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Diethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
4-Chlorophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
4-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Diphenylamine	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
4-Bromophenylphenylether	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Hexachlorobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Bis(2-ethylhexyl)ester	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Pentachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Di-n-butylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Butylbenzylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Bis(2-ethylhexyl)phthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Di-n-octylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
1,4-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Dimethylphthalate	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
1,3-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
2,3,5,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Azobenzene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
Carbazole	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0
1-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0	< 1.0	< 1.0

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Key: * -not accredited. n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 23-06354
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2141405	BH104 WATER	14/03/23	GB 1L, GV, PB 1L	pH/Cond/TDS (1 days)	
2141406	BH105 WATER	14/03/23	GB 1L	pH/Cond/TDS (1 days)	
2141407	BH106 WATER	14/03/23	GB 1L, GV x2, PB 1L x2	pH/Cond/TDS (1 days)	

Key: G-Glass P-Plastic B-Bottle V-Vial

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

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APPENDIX 11

Exploratory Hole Location Plan



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Legend

- Locations By Type - CP+RC
- Locations By Type - IP
- Locations By Type - RO
- Locations By Type - TP

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Client:
Wrexham AFC

Project:
Wrexham FC : New Kop Stand - Ground Investigation

Drawing Title:
Exploratory Hole Location Plan

Scale:	Date:
1:1000 at A3	**27/02/2023**
Project No.: **PN224453**	**Exploratory Hole Location Plan**

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APPENDIX 12

Investigation Techniques and General Notes

INVESTIGATION TECHNIQUES

INTRODUCTION

The following brief review of Ground Investigation techniques, generally used as part of most Site Investigations in the UK, summarises their methodology, advantages and limitations. Detailed descriptions of the techniques are available and can be provided on request. This review should be read in conjunction with the accompanying General Notes.

TRIAL PITS

The trial pit is amongst the simplest yet most effective means of identifying shallow ground conditions on a site. Its advantages include simplicity, speed, potential accuracy and cost-effectiveness. The trial pit is most commonly formed using a back-acting excavator which can typically determine ground conditions to some 4 metres below ground level. Hand excavation is often used to locate, expose and detail existing foundations, features or services. In general, it is difficult to extend pits significantly below the water table in predominantly granular soils, where flows can cause instability. Unless otherwise stated, the trial pits will not have been provided with temporary side support during their construction. Under such circumstances, entrance into the pit is not permitted and hence observations will have been made from the ground surface and samples taken from the excavator bucket.

Where access for personnel is required to allow close observation of the exposed strata, the taking of samples and the carrying out of in situ tests, the sides of the trial pits (Observation Pits in BS 5930:2015) will be made safe using temporary supports or the sides battered back to a stable angle. Some limited access to such Trial Pits (Observation Pits) at depths less than 1m may be allowed in stable conditions or where the sides are benched or battered back to a safe angle.

Trends in strata type, level and thickness can be determined, shear surfaces identified and the behaviour of plant, excavation sides and excavated materials can be related to the construction process. They are particularly valuable in land slip investigations. Some types of in situ test can be undertaken in such pits and large disturbed or block samples obtained.

CABLE PERCUSSION BORING

The light Cable Percussion technique of soft ground boring, typically at a diameter of 150mm, is a well-established simple and flexible method of boring vertical holes and generally allows data to be obtained in respect of strata conditions other than rock. A tubular cutter (for cohesive soils) or shell with a flap valve (for granular soils) is repeatedly lifted and dropped using a winch and rope operating from an "A" frame. Soil which enters these tools is regularly removed and either sampled for subsequent examination or test, or laid to one side for later removal off site and licensed disposal or, if permitted by the Client, use as backfill. Steel casing will have been used to prevent collapse of the borehole sides where necessary. A degree of disturbance of soil and mixing of layers is inevitable and the presence of very thin layers of different soils within a particular stratum may not be identified. Changes in strata type can only be detected on recognition of a change in soil samples at the surface, after the interface has been passed. For the foregoing reasons, depth measurements should not be considered to be more accurate than 0.10 metre. The technique can determine ground conditions to depths in excess of 30 metres under suitable circumstances and usually causes less surface disturbance than trial pitting.

In cohesive soils cylindrical samples are retrieved by driving or pushing in 100mm nominal diameter tubes. In soft soils, piston sampling or vane testing may be undertaken. In granular soils and often in cohesive materials, in situ Standard Penetration Tests (SPT's) are performed. The SPT records the number of standard blows required to drive a 50mm diameter open or cone ended probe for 300mm after an initial 150mm penetration. A modified method of recording is used in denser strata. Small disturbed samples are obtained throughout.

ROTARY DRILLING

Rotary Drilling to produce cores by rotating an annular diamond-impregnated tube or barrel into the ground is the technique most appropriate to the forming of site investigation boreholes through rock or other hard strata. It has the advantage of being able to be used vertically or at an angle. Core diameters of less than 100mm are most common for site investigation purposes. Core is normally retrieved in plastic lining tubes. A flushing fluid such as air, water or foam is used to cool the bit and carry cuttings to the surface. Depths in excess of 60 metres can be achieved under suitable circumstances using rotary techniques, with minimal surface disturbance.

Examination of cores allows detailed rock description and generally enables angled discontinuity surfaces to be observed. However, vertical holes do not necessarily reveal the presence of vertical or near-vertical fissures or joint discontinuities. The core type and/or techniques used will depend on the ground conditions. Where open hole rotary drilling is employed, descriptions of strata result from examination at the surface of small particles ejected from the borehole in the flushing medium. In consequence, no indication of fissuring, bedding, consistency or degree of weathering can be obtained.

DYNAMIC SAMPLING

This technique involves the driving of an open-ended tube into the ground and retrieval of the soil which enters the tube. It was previously called window or windowless sampling. The term "window sample" arose from the original device which had a "window" or slot cut into the side of the tube through which samples were taken. This was superseded by the use of a thin-walled plastic liner to retrieve the soil sample from within a sampler (windowless sampling) which has a solid wall. Line diameters range from 36 to 86mm. Such samples can be used for qualitative logging, selection of samples for classification and chemical analysis and for obtaining a rudimentary assessment of strength.

Driving devices can be hand-held or machine mounted and the drive tubes are typically in 1m lengths. Depending on the type of rig used, the hole formed can be cased to prevent collapse of the borehole sides. Where the type of rig does not allow the insertion of casing, the success of this technique can be limited when soils and groundwater conditions are such that the sides of the hole collapse on withdrawal of the sampler. Obstructions within the ground, the density of the material or its strength can also limit the depth and rate of penetration of this light-weight investigation technique. Nevertheless, it is a valuable tool where access is constrained such as within buildings or on embankments. Depths of up to 10m can be achieved in suitable circumstances depending on the rig type but depths of 5m to 6m are more common.

EXPLORATORY HOLE RECORDS

The data obtained by these techniques are generally presented on Trial Pit, Borehole, Drillhole or Dynamic Sample Records. The descriptions of strata result from information gathered from a number of sources which may include published geological data, preliminary field observations and descriptions, in situ test results, laboratory test results and specimen descriptions. A key to the symbols and abbreviations used accompanies the records. The descriptions on the exploratory hole records accommodate but may not necessarily be identical to those on any preliminary records or the laboratory summaries.

The records show ground conditions at the exploratory hole locations. The degree to which they can be used to represent conditions between or beyond such holes, however, is a matter for geological interpretation rather than factual reporting and the associated uncertainties must be recognised.

DYNAMIC PROBING

This technique typically measures the number of blows of a standard weight falling over a standard height to advance a cone-ended rod over sequential standard distances (typically 100mm). Some devices measure the penetration of the probe per standard blow. It is essentially a profiling tool and is best used in conjunction with other investigation techniques where site-specific correlation can be used to delineate the distribution of soft or loose soils or the upper horizon of a dense or strong layer such as rock.

Both machine-driven and hand-driven equipment is available, the selection depending upon access restrictions and the depth of penetration required. It is particularly useful where access for larger equipment is not available, disturbance is to be minimised or where there are cost constraints. No samples are recovered and some techniques leave a sacrificial cone head in the ground. As with other lightweight techniques, progress is limited in strong or dense soils. The results are presented both numerically and graphically. Depths of up to 10m are commonly achieved in suitable circumstances.

The hand-driven DCP probing device has been calibrated by the Highways Agency to provide a profile of CBR values over a range of depths.

INSTRUMENTATION

The most common form of instrument used in site investigation is either the standpipe or else the standpipe piezometer which can be installed in investigation holes. They are used to facilitate monitoring of groundwater levels and water sampling over a period of time following site work. Normally a standpipe would be formed using rigid plastic tubing which has been perforated or slotted over much of its length whilst a standpipe piezometer would have a filter tip which would be placed at a selected level and the hole sealed above and sometimes below to isolate the zone of interest. Groundwater levels are determined using an electronic "dip meter" to measure the depth to the water surface from ground level. Piezometers can also be used to measure permeability. They are simple and inexpensive instruments for long term monitoring but response times can limit their use in tidal areas and access to the ground surface at each instrument is necessary. Remote reading requires more sophisticated hydraulic, electronic or pneumatic equipment.

Settlement can be monitored using surface or buried target plates whilst lateral movement over a range of depths is monitored using slip indicator or inclinometer equipment.

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GENERAL NOTES

1. The report is prepared for the exclusive use of the Client named in the document and copyright subsists with Geotechnics Limited. Prior written permission must be obtained to reproduce all or part of the report. It is prepared on the understanding that its contents are only disclosed to parties directly involved in the current investigation, preparation and development of the site.

2. Further copies may be obtained with the Client's written permission, from Geotechnics Limited with whom the master copy of the document will be retained.

3. The report and/or opinion is prepared for the specific purpose stated in the document and in relation to the nature and extent of proposals made available to Geotechnics Limited at that time. Re-consideration will be necessary should those details change. The recommendations should not be used for other schemes on or adjacent to the site without further reference to Geotechnics Limited.

4. The assessment of the significance of the factual data, where called for, is provided to assist the Client and their Engineer and/or Advisers in the preparation of their designs.

5. The report is based on the ground conditions encountered in the exploratory holes together with the results of field and laboratory testing in the context of the proposed development. The data from any commissioned desk study and site reconnaissance are also drawn upon. There may be special conditions appertaining to the site, however, which are not revealed by the investigation and which may not be taken into account in the report.

6. Methods of construction and/or design other than those proposed by the designers or referred to in the report may require consideration during the evolution of the proposals and further assessment of the geotechnical and any geoenvironmental data would be required to provide discussion and evaluations appropriate to these methods.

7. The accuracy of results reported depends upon the technique of measurement, investigation and test used and these values should not be regarded necessarily as characteristics of the strata as a whole (see accompanying notes on Investigation Techniques). Where such measurements are critical, the technique of investigation will need to be reviewed and supplementary investigation undertaken in accordance with the advice of the Company where necessary.

8. The samples selected for laboratory test are prepared and tested in accordance with the relevant Clauses and Parts of BS EN ISO 17892 and BS 1377 Parts 1 to 8, where appropriate, in Geotechnics Limited's UKAS accredited Laboratory, where possible. A list of tests is given.

9. Tests requiring the use of another laboratory having UKAS accreditation where possible are identified.

10. Any unavoidable variations from specified procedures are identified in the report.

11. Specimens are cut vertically, where this is relevant and can be identified, unless otherwise stated

12. All the data required by the test procedures are recorded on individual test sheets but the results in the report are presented in summary form to aid understanding and assimilation for design purposes. Where all details are required, these can be made available.

13. Whilst the report may express an opinion on possible configurations of strata between or beyond exploratory holes, or on the possible presence of features based on either visual, verbal, written, cartographical, photographic or published evidence, this is for guidance only and no liability can be accepted for its accuracy.

14. The Code of Practice for Ground Investigations – BS 5930:2015 calls for man-made soils to be described as Anthropogenic Ground with soils placed in an un-controlled manner classified as Made Ground and soils placed in a controlled manner as Fill. In view of the difficulty in always accurately determining the origin of man-made soils in exploratory holes, Geotechnics Limited classify such materials as Made Ground. Where soils can be clearly identified as being placed in a controlled manner then further classification of the soils as Fill has been added to the Exploratory Hole Records.

15. Classification of man-made soils is based on the inspection of retrieved samples or exposed excavations. Where it is obvious that foreign matter such as paper, plastic or metal is present, classification is clear. Frequently, however, for man-made soils that arise from the adjacent ground or from the backfilling of excavations, their visual characteristics can closely resemble those of undisturbed ground. Other evidence such as site history, exploratory hole location or other tests may need to be drawn upon to provide clarification. For these reasons, classification of soils on the exploratory hole records as either Made Ground or naturally occurring strata, the boundary between them and any interpretation that this gives rise to should be regarded as provisional and subject to re-evaluation in the light of further data.

16. The classification of materials as Topsoil is generally based on visual description and should not be interpreted to mean that the material so described complies with the criteria for Topsoil used in BS 3882:2015. Specific testing would be necessary where such a definition is a requirement.

17. Ground conditions should be monitored during the construction of the works and the report should be re-evaluated in the light of these data by the supervising geotechnical engineers.

18. Any comments on groundwater conditions are based on observations made at the time of the investigation, unless specifically stated otherwise. It should be noted, however, that the observations are subject to the method and speed of boring, drilling or excavation and that groundwater levels will vary due to seasonal or other effects.

19. Any bearing capacities for conventional spread foundations which are given in the report and interpreted from the investigation are for bases at a minimum depth of 1m below finished ground level in naturally occurring strata and at broadly similar levels throughout individual structures, unless otherwise stated. Typically they are based on serviceability criteria taking account of an assessment of the shear strength and/or density data obtained by the investigation. The foundations should be designed in accordance with the good practice embodied in BS 8004:2015 - Foundations, supplemented for housing by NHBC Standards. Foundation design is an iterative process and bearing pressures may need adjustment or other measures may need to be taken in the context of final layouts and levels prior to finalisation of proposals.

20. Unless specifically stated, the investigation does not take account of the possible effects of mineral extraction or of gases from fill or natural sources within, below or outside the site.

21. The costs or economic viability of the proposals referred to in the report, or of the solutions put forward to any problems encountered, will depend on very many factors in addition to geotechnical or geoenvironmental considerations and hence their evaluation is outside the scope of the report.

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APPENDIX 3
LABORATORY TESTING RESULTS – SUMMARY TABLES

RAMBOLL GENERIC ASSESSMENT CRITERIA (GAC) - Commercial- Wrexham AFC SOIL ANALYSIS

			Lab No							2128135	2128136	2128137	2128138	2128139	2128140	2128141	2128142	2128143	2128144	2132118	2132119	2132120	2132121	2132122	2132123	2132124	2132125	2129907	2129908
			.Sample ID							**TP100**	**TP100**	**TP101**	**TP101**	**TP102**	**TP102**	**TP103**	**TP103**	**TP104**	**TP104**	**BH106**	**BH106**	**BH106**	**BH106**	**BH106**	**BH104**	**BH105**	**BH105**	**BH104**	**BH104**
			Depth							**0.05**	**1.20**	**0.25**	**0.90**	**0.50**	**0.70**	**0.20**	**0.40**	**0.25**	**1.50**	**0.20**	**2.00**	**3.00**	**5.00**	**16.00**	**5.00**	**0.20**	**1.00**	**0.20**	**2.00**
			Other ID							MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	GFS	GFS	GFS	GFS	MG	MG	MG	MG
			Sample Type							SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
			Sampling Date							15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	16/02/2023	16/02/2023	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023	23/02/2023	23/02/2023	20/Feb/2023	20/Feb/2023
			Sampling Time							n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**																										
Preparation				**Commercial/Industrial GAC**	**No. GAC Exceedances**	**Min**	**Max**	**Samples above LOD**	**Theoretical Saturation Limit**																				
Asbestos Quantification	DETSC 1102	0.001	%																										
Abestos in Soil Screen										NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	n/a	n/a	n/a	n/a	NAD	NAD	NAD	NAD
Moisture Content	DETSC 1004	0.1	%							9.3	7.9	8.0	8.2	13	20	7.7	16	11	11	10	15	12	6.9	16	9.5	13	10	15	14
Metals																													
Antimony	DETSC 2301*	1	mg/kg	7400	**0**	<1.0	6.1	37		6.1	1.2	1.4	1.9	2.4	2.2	1.4	3.1	2.2	1.4	2.1	2.1	1.4	1.1	< 1.0	1.5	2.5	3.7	4.8	1.9
Arsenic	DETSC 2301#	0.2	mg/kg	640	**0**	2.6	21	41		8.3	12	5.7	12	12	15	7.4	16	10	13	11	13	12	9.9	3.7	10	12	12	13	12
Barium	DETSC 2301#	1.5	mg/kg	22000	**0**	24	320	21																					
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	240000	**0**	<0.2	1.9	31		< 0.2	< 0.2	0.3	< 0.2	0.7	1.9	0.8	1.8	0.3	0.7	0.4	0.8	0.3	0.3	< 0.2	0.4	0.8	0.3	0.4	1.1
Cadmium	DETSC 2301#	0.1	mg/kg	410	**0**	<0.1	5.6	38		0.3	0.3	0.6	1.0	5.6	1.2	0.9	2.5	0.4	0.4	0.5	0.4	0.4	0.5	0.1	0.6	0.6	0.5	2.9	0.8
Chromium	DETSC 2301#	0.15	mg/kg	-						440	18	16	18	16	16	28	20	20	16	37	19	18	13	6.2	14	46	220	17	18
Chromium III	DETSC 2301*	0.15	mg/kg	8600	**0**	<1.0	440	21		440	18	16	18	16	16	28	20	20	16	37	19	18	13	6.2	14	46	220	17	18
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	49	**0**	<1.0	1.2	21		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	68000	**0**	9.8	93	41		30	26	22	25	60	51	28	57	32	26	39	34	25	23	10	34	42	59	93	44
Lead	DETSC 2301#	0.3	mg/kg	2300	**0**	<0.05	1300	28		95	59	120	90	200	250	78	240	150	150	110	95	56	46	12	52	590	120	1300	150
Mercury	DETSC 2325#	0.05	mg/kg	1100	**0**	<0.05	1.1	36		0.09	< 0.05	0.08	0.06	0.18	0.35	0.08	0.76	0.8	0.07	0.22	0.11	< 0.05	< 0.05	< 0.05	< 0.05	0.16	0.13	1.1	0.15
Nickel	DETSC 2301#	1	mg/kg	980	**0**	<0.5	40	32		22	23	9.6	22	16	19	15	23	18	23	20	20	21	20	7.2	20	17	22	20	21
Selenium	DETSC 2301#	0.5	mg/kg	12000	**0**	<0.5	1.4	27		1.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.7	< 0.5	< 0.5	< 0.5	< 0.5	0.5	0.8	1.1	< 0.5	0.5
Zinc	DETSC 2301#	1	mg/kg	730000	**0**	16	1500	41		77	73	120	93	940	300	180	1500	410	290	200	140	84	95	23	99	150	130	520	150
Vanadium	DETSC 2301#	1	mg/kg	9000	**0**	5	64	21																					
Inorganics																													
pH	DETSC 2008#		pH	<5, >9		6.7	10.9			10.2	7.8	9.9	8.0	8.2	6.7	10.9	7.1	9.5	7.5	9.4	8.3	8.1	8.5	8.8	8.3	8.0	8.4	9	8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	49		<0.1	11			< 0.1	< 0.1	< 0.1	< 0.1	0.8	0.3	0.1	0.9	0.3	< 0.1	0.2	0.3	< 0.1	< 0.1	< 0.1	< 0.1	0.3	0.2	4.1	11
Cyanide, Free	DETSC 2130#	0.1	mg/kg			<0.1				< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	0.3	0.9
Total Organic Carbon	DETSC 2084#	0.5	%	-						2.9	0.5	3.3	0.8	9.8	6.0	2.7	4.7	4.6	2.0	5.2	4.4	2.0	0.5	< 0.5	0.8	6.0	2.0	6.1	2.6
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	-						4.8	3.3	1.8	4.2	3.2	14	3.1	15	4.5	5.2	4.7	5.0	3.4	2.4	2.3	2.4	6.7	3.7	3.5	3.9
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	-		11	1500			52	11	1500	82	86	180	190	61	410	110	200	120	85	52	55	84	200	35	68	110
Petroleum Hydrocarbons																													
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	2400	**0**	<0.01	0.14	1	370	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01				< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	5300	**0**	<0.01	0.02	1	160	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01				< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	1300	**0**	<0.01	0.05	1	79	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05	< 0.01	< 0.01	< 0.01				< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	6100	**0**	<1.5	6.1	4	48	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	5.3	6.1	< 1.5	< 1.5	< 1.5				< 1.5	< 1.5	< 1.50	< 1.50
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	43000	**0**	<1.2	8.6	6	24	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	3.0	8.6	< 1.2	< 1.2	< 1.2				< 1.2	< 1.2	< 1.20	< 1.20
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	-	-	<1.5	22	6		< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	3.7	22	< 1.5	< 1.5	< 1.5				< 1.5	< 1.5	< 1.50	< 1.50
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	-	-	<3.4	1300	9		22	< 3.4	< 3.4	< 3.4	14	20	61	< 3.4	88	1300	< 3.4	< 3.4	< 3.4				< 3.4	< 3.4	< 3.40	< 3.40
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	-	-	<3.4	110	8		14	< 3.4	< 3.4	< 3.4	3.6	< 3.4	21	< 3.4	18	86	< 3.4	< 3.4	< 3.4				< 3.4	< 3.4	< 3.40	< 3.40
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	-	-	<10	1400	10		37	< 10	< 10	< 10	18	20	83	< 10	120	1400	< 10	< 10	< 10				< 10	< 10	< 3.40	< 3.40
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	-	-	<0.01	<0.01	0		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01				< 0.01	< 0.01	< 10.00	< 10.00
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	-	-	<0.01	0.02	1		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01				< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	2200	**0**	<0.01	0.16	1	610	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.16	< 0.01	< 0.01	< 0.01				< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	11000	**0**	<0.9	2.3	2	360	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	1.9	< 0.9	< 0.9	< 0.9				< 0.9	< 0.9	< 0.01	< 0.01
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	35000	**0**	<0.5	10	3	170	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	10	< 0.5	< 0.5	< 0.5				< 0.5	< 0.5	< 0.90	< 0.90
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	29000	**0**	<0.6	50	10	54	5.7	< 0.6	1.2	< 0.6	9.6	< 0.6	9.3	< 0.6	1.0	50	< 0.6	< 0.6	< 0.6				< 0.6	< 0.6	< 0.50	< 0.50
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	29000	**0**	<1.4	820	13	4.8	160	< 1.4	58	< 1.4	77	42	190	< 1.4	97	820	< 1.4	< 1.4	< 1.4				< 1.4	< 1.4	5.38	3.53
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	29000	**0**	<1.4	250	13	4.8	180	< 1.4	79	< 1.4	74	27	170	< 1.4	81	120	< 1.4	< 1.4	< 1.4				< 1.4	< 1.4	8.55	5.23
Aromatic C10-C44	DETSC 3072*	10	mg/kg		-	<10	1000	11		350	< 10	140	< 10	160	69	370	< 10	180	1000	< 10	< 10	< 10				< 10	< 10	< 1.40	< 1.40
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg		-	<10	2400	13		390	< 10	140	< 10	180	89	450	< 10	300	2400	< 10	< 10	< 10				< 10	< 10	13.93	< 10.00
PAHs																													
Naphthalene	DETSC 3301	0.1	mg/kg	110	**0**	<0.1	0.5	5		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.5	< 0.1	0.1	< 0.1				0.1	< 0.1	0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	76000	**0**	<0.1	0.7	6		< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.2	0.1	< 0.1	0.2	0.7	< 0.1	< 0.1	< 0.1				0.6	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	75000	**0**	<0.1	0.2	2		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1				0.2	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	60000	**0**	<0.1	1	3		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.4	1.0	< 0.1	< 0.1	< 0.1				0.4	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	22000	**0**	<0.1	2.5	18		< 0.1	< 0.1	0.2	< 0.1	0.4	0.8	0.4	0.7	0.4	0.5	0.4	0.2	< 0.1				2.5	< 0.1	0.4	0.3
Anthracene	DETSC 3301	0.1	mg/kg	520000	**0**	<0.1	1.8	12		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3	0.1	0.2	0.1	1.8	< 0.1	< 0.1	< 0.1				0.8	< 0.1	0.2	0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	23000	**0**	<0.1	4.5	25		0.2	< 0.1	0.4	< 0.1	1.0	2.0	1.0	1.6	1.1	0.9	0.8	0.4	0.2				4.5	0.3	1.7	0.8
Pyrene	DETSC 3301	0.1	mg/kg	54000	**0**	<0.1	4.3	24		0.5	< 0.1	0.4	< 0.1	1.0	2.1	1.1	1.6	1.3	2.0	0.8	0.5	0.2				4.3	0.4	1.9	0.9
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg							< 0.1	< 0.1	0.1	< 0.1	0.6	1.1	0.7	1.2	1.2	5.7	0.6	0.4	< 0.1				3.0	< 0.1	1	0.5
Chrysene	DETSC 3301	0.1	mg/kg							< 0.1	< 0.1	0.2	< 0.1	0.6	1.1	0.7	1.1	3.2	5.3	0.5	0.2	< 0.1				2.5	< 0.1	1.2	0.5
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg							< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.7	0.4	0.8	0.8	< 0.1	0.3	0.2	< 0.1				1.7	< 0.1	0.7	0.4
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg							< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.4	0.3	0.5	0.5	1.6	0.2	0.1	< 0.1				1.2	< 0.1	0.5	0.2
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	76	**0**	<0.1	2.8	18		< 0.1	< 0.1	< 0.1	< 0.1	0.6	1.3	0.7	1.2	1.0	0.6	0.5	0.3	< 0.1				2.8	< 0.1	1.4	0.7
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg							< 0.1	< 0.1	< 0.1	< 0.1	0.5	0.8	0.4	0.7	0.7	< 0.1	< 0.1	< 0.1	< 0.1				1.8	< 0.1	1.1	0.7
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg							< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				0.2	< 0.1	0.4	0.3
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg							< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.7	0.4	0.7	1.1	0.4	< 0.1	< 0.1	< 0.1				2.2	< 0.1	0.8	0.3
PAH 16 Total	DETSC 3301	1.6	mg/kg			<1.6	29	18		< 1.6	< 1.6	< 1.6	< 1.6	6.2	12	6.3	10	12	21	4.3	2.6	< 1.6				29	< 1.6	11	5.7
SVOCs																													
Phenol	DETSC 3433	0.1	mg/kg		**0**	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg		**0**	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg		**0**	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg		**0**	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg		**0**	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg		**0**	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1

RAMBOLL GENERIC ASSESSMENT CRITERIA (GAC) - Commercial- Wrexham AFC SOIL ANALYSIS

									Lab No	2128135	2128136	2128137	2128138	2128139	2128140	2128141	2128142	2128143	2128144	2132118	2132119	2132120	2132121	2132122	2132123	2132124	2132125	2129907	2129908
									.Sample ID	TP100	TP100	TP101	TP101	TP102	TP102	TP103	TP103	TP104	TP104	BH106	BH106	BH106	BH106	BH106	BH104	BH105	BH105	BH104	BH104
									Depth	0.05	1.20	0.25	0.90	0.50	0.70	0.20	0.40	0.25	1.50	0.20	2.00	3.00	5.00	16.00	5.00	0.20	1.00	0.20	2.00
									Other ID	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	GFS	GFS	GFS	GFS	MG	MG	MG	MG
									Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
									Sampling Date	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	16/02/2023	16/02/2023	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023	23/02/2023	23/02/2023	20/Feb/2023	20/Feb/2023
									Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
3&4-Methylphenol	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	3,800	0	<0.1	0.8	2		< 0.1	< 0.1	< 0.1	< 0.1	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	6700	0	<0.1	0.4	1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.4	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	15000		<0.1	0.1	1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	940000		<0.1	0.4	1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.4	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	85000		<0.1	5.2	3		< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.9	5.2	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg		0	<0.1	<0.1	0		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	900		<0.1	0.4	1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.4	< 0.1	< 0.1				< 0.1	< 0.1	< 0.1	< 0.1
VOCs																													
Vinyl Chloride	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,1-dichloroethane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
2,2-dichloropropane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Bromochloromethane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Chloroform	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,1-dichloropropene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Carbon tetrachloride	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Benzene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,2-dichloroethane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Trichloroethylene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,2-dichloropropane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Dibromomethane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Bromodichloromethane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Toluene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Tetrachloroethylene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,3-dichloropropane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Dibromochloromethane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,2-dibromoethane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Chlorobenzene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Ethylbenzene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
m+p-Xylene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
o-Xylene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Styrene	DETSC 3431*	0.01	mg/kg		0	<0.01	<0.01	0																					
Bromoform	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Isopropylbenzene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Bromobenzene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
n-propylbenzene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
2-chlorotoluene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
4-chlorotoluene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					
Tert-butylbenzene	DETSC 3431	0.01	mg/kg		0	<0.01	<0.01	0																					

RAMBOLL GENERIC ASSESSMENT CRITERIA (GAC) - Commercial-

Test	Method	LOD	Units	Lab No	2065564	2065565	2065566	2065567	2068906	2068907	2068908	2068909	2068910	2069738	2072155	2072156	2072157	2072158	2072159	2077874	2077875	2077876	2077877	2077878	2077879
				.Sample ID	BH100	BH100	BH100	BH100	BH101	BH101	BH101	BH101	BH101	BH101	BH102	BH102	BH102	BH102	BH102	IP100	IP100	IP100	IP101	IP101	IP101
				Depth	0.15	0.40	1.00	3.00	0.20	0.50	1.00	2.00	4.00	6.00	0.10	0.50	1.00	3.00	5.00	0.30	0.80	1.20	0.20	1.00	1.20
				Other ID	MG	MG	GFS	GFS	MG	MG	GFS	GFS	GFS	GFS	MG	MG	GFS	GFS	GFS	MG	MG	MG	MG	MG	MG
				Sample Type	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
				Sampling Date	28/09/2022	28/09/2022	28/09/2022	28/09/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Preparation																									
Asbestos Quantification	DETSC 1102	0.001	%																				< 0.001		
Abestos in Soil Screen					n/a	NAD	NAD	n/a	NAD	NAD	NAD	n/a	n/a	n/a	NAD	NAD	n/a	n/a	n/a	NAD	NAD	NAD	of chrysotile	NAD	NAD
Moisture Content	DETSC 1004	0.1	%		5.1	12	8.7	8.8	11	13	9.5	7.1	8.5	10	8.7	13	12	8.8	7.3	6.6	12	14	8.4	15	18
Metals																									
Antimony	DETSC 2301*	1	mg/kg		< 1.0	1.8	2.2	2.7	1.5	< 1.0	1.7	< 1.0	1.4	2.2	2.2	2.5	2.3	1.7	1.4	2.2	3.1	3.0	5.2	3.4	1.8
Arsenic	DETSC 2301#	0.2	mg/kg		2.6	13	14	8.7	6.3	6.3	12	3.2	7.6	10	8.6	15	11	8.6	12	11	20	7.8	11	21	7.4
Barium	DETSC 2301#	1.5	mg/kg		24	150	53	82	86	51	51	28	63	110	110	290	66	74	78	130	320	170	310	150	83
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg		< 0.2	< 0.2	< 0.2	< 0.2	0.3	0.5	0.4	0.2	0.3	< 0.2	0.4	0.5	0.3	0.2	0.3	0.4	0.4	0.3	0.3	0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg		0.5	0.3	0.3	< 0.1	0.2	< 0.1	0.3	< 0.1	0.3	0.2	0.4	0.5	0.3	0.3	0.1	0.5	0.7	0.3	0.7	0.8	0.4
Chromium	DETSC 2301#	0.15	mg/kg																						
Chromium III	DETSC 2301*	0.15	mg/kg		54	87	25	14	12	13	20	4.9	9.8	12	14	13	18	13	14	78	32	180	220	95	20
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg		11	24	25	14	31	15	25	5.5	15	15	31	73	23	20	17	32	79	20	50	33	18
Lead	DETSC 2301#	0.3	mg/kg		21	22	60	17	20	37	90	9.8	36	18	110	190	91	37	19	76	81	36	130	76	46
Mercury	DETSC 2325#	0.05	mg/kg		< 0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.07	0.16	0.05	< 0.05	< 0.05	0.06	0.13	< 0.05	0.07	0.12	< 0.05
Nickel	DETSC 2301#	1	mg/kg		4.8	14	25	18	11	12	24	6.1	13	16	18	29	20	20	16	18	40	21	29	22	14
Selenium	DETSC 2301#	0.5	mg/kg		0.9	1.1	< 0.5	< 0.5	< 0.5	< 0.5	1.4	0.7	0.9	1.1	0.8	0.5	0.5	< 0.5	< 0.5	< 0.5	0.6	0.6	0.6	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg		61	55	87	68	56	49	84	16	60	43	220	260	90	66	49	440	530	250	480	390	210
Vanadium	DETSC 2301#	1	mg/kg		18	41	29	27	18	23	24	5	12	21	20	36	27	16	14	36	48	56	64	35	28
Inorganics																									
pH	DETSC 2008#		pH		10.2	8.2	7.0	7.8	9.4	7.5	7.7	8.6	8.2	7.9	8.0	7.7	7.5	7.8	8.3	8.9	8.0	9.3	9.4	8.6	7.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg		0.2	< 0.1	< 0.1	< 0.1	0.2	0.3	0.2	0.1	0.1	< 0.1	0.2	0.8	0.1	< 0.1	< 0.1	0.2	0.5	0.2	0.8	0.3	0.4
Cyanide, Free	DETSC 2130#	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Total Organic Carbon	DETSC 2084#	0.5	%		5.8	1.4	0.6	< 0.5	< 0.5	0.7	< 0.5	< 0.5	< 0.5	< 0.5	2.9	12	1.0	< 0.5	< 0.5	4.5	4.5	2.0	6.8	3.4	1.4
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg		0.93	1.0	1.7	0.96	1.1	2.3	2.2	0.76	0.76	0.84	2.6	1.8	4.1	1.6	1.6	2.1	2.9	2.9	1.9	3.5	5.3
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l		17	30	35	22	84	26	12	11	23	19	21	26	15	12	16	87	39	55	35	70	14
Petroleum Hydrocarbons																									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.14	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	2.2	< 1.5	< 1.5	1.8	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	1.5	4.7	< 1.2	4.9	< 1.2	< 1.2	1.4	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	1.7	5.0	< 1.5	3.8	< 1.5	< 1.5	9.4	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	160	< 3.4	< 3.4	54	29	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg		< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	110	< 3.4	< 3.4	38	19	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	14	< 10	280	< 10	< 10	100	48	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	2.3	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.8	< 0.5	< 0.5	4.8	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	8.3	2.6	< 0.6	21	4.2	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	320	23	< 1.4	110	110	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg		< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	250	50	< 1.4	110	100	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	580	77	< 10	250	220	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	14	< 10	850	77	< 10	350	270	< 10
PAHs																									
Naphthalene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.07	0.28	< 0.03	< 0.03	< 0.03	0.22	0.33	< 0.03	0.30	0.21	< 0.03
Anthracene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.08	< 0.03	< 0.03	< 0.03	< 0.03	0.07	< 0.03	< 0.03	0.04	0.04
Fluoranthene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	0.04	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.17	0.90	0.05	< 0.03	< 0.03	0.36	0.56	0.04	0.50	0.43	0.03
Pyrene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	0.04	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.17	0.84	0.06	< 0.03	< 0.03	0.35	0.52	0.04	0.54	0.44	< 0.03
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.07	0.35	< 0.03	< 0.03	< 0.03	0.15	0.22	< 0.03	0.20	0.21	< 0.03
Chrysene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.11	0.43	0.04	< 0.03	< 0.03	0.22	0.27	< 0.03	0.29	0.24	< 0.03
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.13	0.50	0.06	< 0.03	< 0.03	0.21	0.27	< 0.03	0.31	0.24	0.04
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	0.21	< 0.03	< 0.03	< 0.03	0.11	0.12	< 0.03	0.14	0.10	< 0.03
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.07	0.31	0.03	< 0.03	< 0.03	0.15	0.24	< 0.03	0.23	0.18	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.04	0.13	< 0.03	< 0.03	< 0.03	0.07	0.06	< 0.03	0.08	0.07	< 0.03
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.04	0.16	< 0.03	< 0.03	< 0.03	0.10	0.08	< 0.03	0.11	0.11	< 0.03
PAH 16 Total	DETSC 3301	1.6	mg/kg		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.93	4.3	0.21	< 0.10	< 0.10	1.9	2.7	< 0.10	2.7	2.3	< 0.10
SVOCs																									
Phenol	DETSC 3433	0.1	mg/kg		-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg		-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg		-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg		-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg		-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg		-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

RAMBOLL GENERIC ASSESSMENT CRITERIA (GAC) - Commercial-																							
				Lab No	2065564	2065565	2065566	2065567	2068906	2068907	2068908	2068909	2068910	2069738	2072155	2072156	2072157	2072158	2072159	2077874	2077875	2077876	2077877	2077878	2077879
				.Sample ID	BH100	BH100	BH100	BH100	BH101	BH101	BH101	BH101	BH101	BH101	BH102	BH102	BH102	BH102	BH102	IP100	IP100	IP100	IP101	IP101	IP101
				Depth	0.15	0.40	1.00	3.00	0.20	0.50	1.00	2.00	4.00	6.00	0.10	0.50	1.00	3.00	5.00	0.30	0.80	1.20	0.20	1.00	1.20
				Other ID	MG	MG	GFS	GFS	MG	MG	GFS	GFS	GFS	GFS	MG	MG	GFS	GFS	GFS	MG	MG	MG	MG	MG	MG
				Sample Type	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
				Sampling Date	28/09/2022	28/09/2022	28/09/2022	28/09/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.8	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	-	< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
VOCs																									
Vinyl Chloride	DETSC 3431	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

RAMBOLL GENERIC ASSESSMENT CRITERIA (GAC) - Commercial-																							
				Lab No	2065564	2065565	2065566	2065567	2068906	2068907	2068908	2068909	2068910	2069738	2072155	2072156	2072157	2072158	2072159	2077874	2077875	2077876	2077877	2077878	2077879
				.Sample ID	BH100	BH100	BH100	BH100	BH101	BH101	BH101	BH101	BH101	BH101	BH102	BH102	BH102	BH102	BH102	IP100	IP100	IP100	IP101	IP101	IP101
				Depth	0.15	0.40	1.00	3.00	0.20	0.50	1.00	2.00	4.00	6.00	0.10	0.50	1.00	3.00	5.00	0.30	0.80	1.20	0.20	1.00	1.20
				Other ID	MG	MG	GFS	GFS	MG	MG	GFS	GFS	GFS	GFS	MG	MG	GFS	GFS	GFS	MG	MG	MG	MG	MG	MG
				Sample Type	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
				Sampling Date	28/09/2022	28/09/2022	28/09/2022	28/09/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
sec-butylbenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg		< 0.1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

RAMBOLL GENERIC ASSESSMENT CRITERIA (GAC) - Commercial- Wrexham AFC Leachate ANALYSIS

			Lab No						2128145	2128146	2128147	2128148	2128149	2128150	2128151	2128152	2128153	2128154	2132126	2132127	2132128	2132129	2132130	2132131	2132132	2132133	2129907	2129908	2065568	2065569	2068911	2068912	2068913	2068914	2069739	2072160	2072161	2077880	2077881	2077882	2077883	2077884	2077885
			.Sample ID						**TP100**	**TP100**	**TP101**	**TP101**	**TP102**	**TP102**	**TP103**	**TP103**	**TP104**	**TP104**	**BH106**	**BH106**	**BH106**	**BH106**	**BH106**	**BH104**	**BH105**	**BH105**	**BH104**	**BH104**	**BH100**	**BH100**	**BH101**	**BH101**	**BH101**	**BH101**	**BH101**	**BH102**	**BH102**	**IP100**	**IP100**	**IP100**	**IP101**	**IP101**	**IP101**
			Depth						**0.05**	**1.20**	**0.25**	**0.90**	**0.50**	**0.70**	**0.20**	**0.40**	**0.25**	**1.50**	**0.20**	**2.00**	**3.00**	**5.00**	**16.00**	**5.00**	**0.20**	**1.00**	**0.20**	**2.00**	**0.40**	**1.00**	**0.20**	**0.50**	**2.00**	**4.00**	**6.00**	**0.50**	**1.00**	**0.30**	**0.80**	**1.20**	**0.20**	**1.00**	**1.20**
			Other ID																										4	8													
			Sample Type						LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
			Sampling Date						15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	16/02/2023	16/02/2023	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023	23/02/2023	23/02/2023	20/Feb/2023	20/Feb/2023	28/09/2022	28/09/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	12/10/2022	12/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time						n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**																																								
Preparation				**Min**	**Max**	**Samples above LOD**	**EQS**	**DWS**																																			
BS EN 12457 10:1	DETSC 1009*								Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y					Y	Y	Y	Y	Y	Y	Y	Y	Y
Metals																																											
Antimony, Dissolved	DETSC 2306	0.17	ug/l	<0.17	4.9	29		5	0.21	< 0.17	0.6	0.29	0.58	0.82	0.87	1.5	0.87	0.36	0.51	0.22	< 0.17	0.41	0.42	0.39	0.46	0.38	4.9	3.4	< 0.17	< 0.17	0.46	< 0.17	< 0.17	0.17	0.2	0.8	0.27	< 0.17	1.4	2.3	1.1	1.2	1.2
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.18	4.6	35	50	10	0.66	0.25	0.79	0.31	1.5	1.2	1.3	1.6	0.96	0.74	1.2	0.68	0.33	0.26	0.18	0.21	1.3	1.1	3.7	1.2	2.7	0.63	4.6	0.84	0.34	0.52	0.68	2.5	0.78	0.9	1.1	3	1.6	1.7	1
Barium, Dissolved	DETSC 2306	0.26	ug/l	3.1	22	15																							12	5.6	5.7	3.8	3.1	3.7	12	6.4	3.3	3.3	8	22	22	9	5.4
Boron, Dissolved	DETSC 2306*	12	ug/l	<12	49	10	2000	1000	< 12	<12	< 12	< 12	< 12	49	18	31	< 12	22	< 12	< 12	< 12	< 12	< 12	< 12	< 12	< 12	< 12	27	< 12	< 12	14	19	17	17	< 12	< 12	< 12	< 12	< 12	16	< 12	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	<0.03	0.17	6		5	< 0.03	< 0.03	0.05	< 0.03	0.17	< 0.03	0.06	< 0.03	< 0.03	0.04	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	<1.0	6.4	25		50	5	6.3	6.4	5.5	5.5	5.7	4.1	5	3.4	2.8	2.7	0.57	3.1	0.8	0.69	0.63	1.4	2.9	2.7	2.4															
Chromium III, Dissolved	DETSC 2306*	1	ug/l	<1.0	6.4	14	4.7		< 1.0	6.3	6.4	5.5	5.4	5.7	4	5	3.4	2.8	2.7	< 1.0	3.1	< 1.0	< 1.0	< 1.0	1.4	2.9	< 1.0	2.4	1.3	< 1.0	2.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.8	< 1.0	1.9	2.4
Chromium, Hexavalent	DETSC 2203	7	ug/l	<7.0	27	17	3.4		15	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	27	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	0.18	8.1	35	1	2000	2.7	1	2.2	0.9	4.7	2	3.7	2.5	1.8	0.6	4	3.2	2.8	2.6	0.7	2.3	2	1.5	8.1	2.4	1	0.6	5.6	1.6	2.8	2.9	1.3	3.3	1	2.4	0.8	1	2.3	1.4	1
Lead, Dissolved	DETSC 2306	0.09	ug/l	<0.09	30	21	1.2	10	3.7	1.1	3.2	0.96	7	4.2	6	2.3	1.8	1.2	2.6	0.68	0.37	0.16	< 0.09	< 0.09	3.2	2.1	30	12	0.64	0.18	1.3	1.3	0.76	0.27	1	2.1	1.6	0.84	1.6	1.2	2.8	4.5	3.9
Mercury, Dissolved	DETSC 2306	0.01	ug/l	<0.01	0.15	8	0.07	1	0.02	< 0.01	< 0.01	< 0.01	0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.03	0.15	0.03	0.07	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	<0.5	2.6	21	4	20	1.8	2.6	1.5	2.1	2.2	2.5	1.7	2.2	1.4	1.3	< 0.5	< 0.5	1.3	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	<0.25	1.5	18		10	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.29	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.55	0.26	0.66	0.45	0.33	< 0.25	0.44	0.32	0.3	< 0.25	1.5	0.49	0.3	< 0.25	< 0.25	0.29	< 0.25	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	<1.3	32	24	10.9	5000	4.6	1.5	2.8	3	32	17	13	9.1	11	7.3	3.4	1.5	< 1.3	< 1.3	< 1.3	< 1.3	3.5	2	7.3	3.9	< 1.3	< 1.3	< 1.3	1.4	< 1.3	< 1.3	< 1.3	2.8	2.3	4.1	3.8	< 1.3	3.2	4.8	2.6
Vanadium					14		20																						6.5	0.9	14	2.2	< 0.6	< 0.6	0.8	1.1	1	1.9	0.7	0.7	2.1	0.9	0.6
Inorganics																																											
Conductivity	DETSC 2009	1	uS/cm						174	145	488	151	223	236	64.7	41.8	72.1	87.4	71.5	86.5	90.8	32.0	50.7	78.4	105	44.2	191	178	53.2	34.6	71.1	28.5	23.3	42.8	54.8	59.7	35.0	35.5	36.8	72.3	53.9	55.5	40.6
pH	DETSC 2008		pH						7.0	6.8	6.9	6.9	7.4	7.0	8.0	7.7	7.3	6.3	6.7	6.6	7.0	7.4	7.0	6.8	7.0	6.9	7.8	7.7	7.0	6.9	9.5	8.4	6.7	6.6	6.8	7.8	8.7	7.7	7.2	7.6	8.2	7.8	8.4
Dissolved Organic Carbon	DETSC 2085	2	mg/l						6.1	4.2	3.4	5.3	5.9	3.7	6.6	3.9	4.5	7.9	3.7	3.9	2.9	4.0	2.8	2.8	3.7	3.6	4.7	3.8	< 2.0	< 2.0	4.7	4.1	3.9	2.7	3.2	3.1	2.9	< 2.0	2.9	3.3	2.7	3.6	3.6
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l																										29.7	13.8	26.4	8.90	7.03	19.7	53.8	19.5	7.91	14.4	21.9	27.2	17.1	17.8	11.6
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l						0.47	0.13	0.084	0.079	0.077	0.19	0.15	0.089	0.086	0.082	0.23	0.055	0.030	0.022	0.030	0.033	0.088	0.089	0.078	0.035	0.042	0.015	0.040	0.018	< 0.015	< 0.015	< 0.015	0.038	0.022	< 0.015	< 0.015	0.049	0.043	0.026	0.11
Petroleum Hydrocarbons																																											
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	<0.1	35	2		15000	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	18	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	35	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	<0.1	<0.1	0		15000	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	<0.1	<0.1	0		300	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	<1.0	<0.1	0		300	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	<1.0	270	2		300	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	<1.0	<1.0	0			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	<1.0	14	3			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	<1.0	300	1			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	300	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	<1.0	2.4	1			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	<1.0	<1.0	0			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	<1.0	<1.0	0			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	<1.0	<1.0	0		300	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	<1.0	<1.0	0		90	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	<1.0	3.3	1		90	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	<1.0	19	1		90	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	<1.0	190	1		90	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	190	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	<1.0	28	1			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	<1.0	240	1			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	240	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	<1.0	510	2			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	510	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PAHs																																											
Naphthalene	DETSC 3304	0.05	ug/l	<0.05	0.17	11	2		< 0.05	< 0.05	< 0.05	< 0.05	0.07	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.10	0.07	0.13	0.15	0.12	0.07	0.11	< 0.05	< 0.05	< 0.05	< 0.05	0.12	0.17	< 0.05	< 0.05	0.11	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	<0.01	0.07	7			0.01	< 0.01	< 0.01	< 0.01	0.07	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	<0.01	0.04	13			< 0.01	0.04	0.02	< 0.01	0.02	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	0.01	< 0.01	< 0.01	0.02	0.04	0.01	< 0.01	< 0.01	0.02	0.02	0.03	< 0.01	0.01	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	<0.01	0.03	8			< 0.01	0.03	0.01	< 0.01	0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	0.03	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	<0.01	0.16	27			0.04	0.06	0.03	0.02	0.16	0.02	0.03	0.12	0.03	< 0.01	0.03	0.01	0.02	< 0.01	< 0.01	< 0.01	0.06	0.02	0.07	0.02	0.02	0.01	0.08	< 0.01	< 0.01	0.02	0.03	< 0.01	0.06	0.05	0.02	< 0.01	0.02	0.02	0.01
Anthracene	DETSC 3304	0.01	ug/l	<0.01	0.06	11			0.01	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.01	0.02	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	0.01	0.04	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.03	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	<0.01	0.47	28	0.0063		0.12	0.02	0.03	< 0.01	0.47	< 0.01	0.09	0.08	0.05	0.02	0.08	0.02	0.02	< 0.01	< 0.01	< 0.01	0.20	0.11	0.25	0.06	0.03	0.02	0.02	0.02	0.02	0.02	0.04	0.01	0.09	0.04	0.03	< 0.01	0.02	0.02	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	<0.01	0.42	27			0.13	0.01	0.02	< 0.01	0.42	< 0.01	0.09	0.07	0.05	0.14	0.07	0.02	0.02	< 0.01	< 0.01	< 0.01	0.20	0.11	0.29	0.07	0.02	0.01	0.03	0.02	0.03	0.03	0.04	0.01	0.11	0.03	0.03	< 0.01	0.02	0.02	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	<0.01	0.22	13			0.06	< 0.01	< 0.01	< 0.01	0.22	< 0.01	0.04	0.03	0.03	< 0.01	0.03	0.01	0.01	< 0.01	< 0.01	< 0.01	0.09	0.04	0.1	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	0.05	< 0.01	0.02	< 0.01	< 0.01	0.02	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	<0.01	0.28	17			0.07	< 0.01	< 0.01	< 0.01	0.28	< 0.01	0.05	0.04	0.02	< 0.01	0.04	0.02	0.01	< 0.01	< 0.01	< 0.01	0.11	0.05	0.14	0.04	< 0.01	< 0.01	< 0.01	0.01	0.01	< 0.01	0.02	< 0.01	0.07	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	<0.01	0.4	14			0.10	< 0.01	0.02	< 0.01	0.40	< 0.01	0.06	0.03	0.05	0.04	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.10	0.06	0.16	0.06	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.07	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	<0.01	0.17	10			0.03	< 0.01	< 0.01	< 0.01	0.17	< 0.01	0.02	< 0.01	0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05	0.03	0.08	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	<0.01	0.34	13	0.00017	0.01	0.08	< 0.01	< 0.01	< 0.01	0.34	< 0.01	0.05	0.02	0.04	0.05	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.10	0.06	0.14	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.04	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	<0.01	0.34	13			0.06	< 0.01	< 0.01	< 0.01	0.34	< 0.01	0.05	0.02	0.04	0.12	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.06	0.05	0.13	0.04	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	<0.01	0.08	2			< 0.01	< 0.01	< 0.01	< 0.01	0.08	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	<0.01	0.32	16			0.07	< 0.01	< 0.01	< 0.01	0.32	< 0.01	0.05	0.02	0.06	0.26	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05	0.05	0.09	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.07	0.02	0.02	< 0.01	0.01	0.02	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	<0.2	3.4	16			0.78	< 0.20	< 0.20	< 0.20	3.4	< 0.20	0.55	0.50	0.37	0.63	0.37	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	1.1	0.71	1.5	0.46	< 0.20	< 0.20	0.31	0.32	< 0.20	< 0.20	0.26	< 0.20	0.67	0.21	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20

🟨 Exceedance of DWS
🟧 Exceedance of EQS
🟦 Exceedacnes of both DWS and EQS

APPENDIX 4
LABORATORY CERTIFICATES

Certificate of Analysis

Certificate Number	22-19525	*Issued:*	11-Oct-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	22-19525
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP Stand Redevelopment
Description	4 Soil samples, 4 Leachate samples.
Date Received	30-Sep-22
Date Started	30-Sep-22
Date Completed	11-Oct-22
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

	Lab No	2065564	2065565	2065566	2065567
	.Sample ID	BH100	BH100	BH100	BH100
	Depth	0.15	0.40	1.00	3.00
	Other ID	2	4	8	15
	Sample Type	ES	ES	ES	ES
	Sampling Date	28/09/2022	28/09/2022	28/09/2022	28/09/2022
	Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Moisture Content	DETSC 1004	0.1	%	5.1	12	8.7	8.8
Metals					
Antimony	DETSC 2301*	1	mg/kg	< 1.0	1.8	2.2	2.7
Arsenic	DETSC 2301#	0.2	mg/kg	2.6	13	14	8.7
Barium	DETSC 2301#	1.5	mg/kg	24	150	53	82
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.5	0.3	0.3	< 0.1
Chromium III	DETSC 2301*	0.15	mg/kg	54	87	25	14
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	11	24	25	14
Lead	DETSC 2301#	0.3	mg/kg	21	22	60	17
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	4.8	14	25	18
Selenium	DETSC 2301#	0.5	mg/kg	0.9	1.1	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	18	41	29	27
Zinc	DETSC 2301#	1	mg/kg	61	55	87	68
Inorganics					
pH	DETSC 2008#		pH	10.2	8.2	7.0	7.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	5.8	1.4	0.6	< 0.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	0.93	1.0	1.7	0.96
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	17	30	35	22
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065564	2065565	2065566	2065567
			.Sample ID	BH100	BH100	BH100	BH100
			Depth	0.15	0.40	1.00	3.00
			Other ID	2	4	8	15
			Sample Type	ES	ES	ES	ES
			Sampling Date	28/09/2022	28/09/2022	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065565	2065566	2065567
			.Sample ID	BH100	BH100	BH100
			Depth	0.40	1.00	3.00
			Other ID	4	8	15
			Sample Type	ES	ES	ES
			Sampling Date	28/09/2022	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
VOCs						
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065565	2065566	2065567
			.Sample ID	BH100	BH100	BH100
			Depth	0.40	1.00	3.00
			Other ID	4	8	15
			Sample Type	ES	ES	ES
			Sampling Date	28/09/2022	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01
SVOCs						
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065565	2065566	2065567
			.Sample ID	BH100	BH100	BH100
			Depth	0.40	1.00	3.00
			Other ID	4	8	15
			Sample Type	ES	ES	ES
			Sampling Date	28/09/2022	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065568	2065569
			.Sample ID	BH100	BH100
			Depth	0.40	1.00
			Other ID	4	8
			Sample Type	ES	ES
			Sampling Date	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Antimony, Dissolved	DETSC 2306	0.17	ug/l	< 0.17	< 0.17
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	2.7	0.63
Barium, Dissolved	DETSC 2306	0.26	ug/l	12	5.6
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	1.3	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.0	0.6
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.64	0.18
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.07	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.33	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	6.5	0.9
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	< 1.3
Inorganics					
Conductivity	DETSC 2009	1	uS/cm	53.2	34.6
pH	DETSC 2008		pH	7.0	6.9
Dissolved Organic Carbon	DETSC 2085	2	mg/l	< 2.0	< 2.0
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	29.7	13.8
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.042	0.015
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2065568	2065569
			.Sample ID	BH100	BH100
			Depth	0.40	1.00
			Other ID	4	8
			Sample Type	ES	ES
			Sampling Date	28/09/2022	28/09/2022
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
PAHs					
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.02	0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.03	0.02
Pyrene	DETSC 3304	0.01	ug/l	0.02	0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	< 0.20

Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id BH100 4 0.40
Sample Numbers 2065565 2065570
Date Analysed 10/10/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	1.4	3	5	6
DETSC 2003# Loss On Ignition	%	4.5	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	5.7	0.057	0.5	2	25
DETSC 2306 Barium as Ba	6.5	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	1.9	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2	0.02	2	50	100
DETSC 2306 Mercury as Hg	0.1	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	2.4	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.42	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.32	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	670	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	860	8.6	10	150	500
DETSC 2055 Sulphate as SO4	2700	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	34000	340	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2900	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	6.8
DETSC 2009 Conductivity uS/cm	48.7
* Temperature*	18.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.097

Stage 1

Volume of Leachant L2*	0.954
Volume of Eluate VE1*	0.904

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id BH100 8 1.00
Sample Numbers 2065566 2065571
Date Analysed 10/10/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.6	3	5	6
DETSC 2003# Loss On Ignition	%	3.4	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.86	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	3.1	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	0.48	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.41	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	1100	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	110	1.1	10	150	500
DETSC 2055 Sulphate as SO4	3500	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	21000	210	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2100	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.0
DETSC 2009 Conductivity uS/cm	29.7
* Temperature*	18.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.100

Stage 1

Volume of Leachant L2*	0.994
Volume of Eluate VE1*	0.946

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 22-19525
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2065565	BH100 4 0.40	SOIL	NAD	none	Keith Wilson
2065566	BH100 8 1.00	SOIL	NAD	none	Keith Wilson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 22-19525
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2065564	BH100 0.15 SOIL	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065565	BH100 0.40 SOIL	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065566	BH100 1.00 SOIL	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065567	BH100 3.00 SOIL	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065568	BH100 0.40 LEACHATE	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065569	BH100 1.00 LEACHATE	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065570	BH100 0.40 LEACHATE	28/09/22	GJ 250ml, GJ 60ml, PT 1L		
2065571	BH100 1.00 LEACHATE	28/09/22	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	22-20189	*Issued:*	18-Oct-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference 22-20189

Client Reference PN224453

Order No ON34994

Contract Title Wrexham AFC - KOP Stand Redevelopment

Description 5 Soil samples, 6 Leachate samples.

Date Received 10-Oct-22

Date Started 10-Oct-22

Date Completed 18-Oct-22

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068906	2068907	2068908	2068909	2068910
			.Sample ID	BH101	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	1.00	2.00	4.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Preparation								
Moisture Content	DETSC 1004	0.1	%	11	13	9.5	7.1	8.5
Metals								
Antimony	DETSC 2301*	1	mg/kg	1.5	< 1.0	1.7	< 1.0	1.4
Arsenic	DETSC 2301#	0.2	mg/kg	6.3	6.3	12	3.2	7.6
Barium	DETSC 2301#	1.5	mg/kg	86	51	51	28	63
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.3	0.5	0.4	0.2	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	< 0.1	0.3	< 0.1	0.3
Chromium III	DETSC 2301*	0.15	mg/kg	12	13	20	4.9	9.8
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	31	15	25	5.5	15
Lead	DETSC 2301#	0.3	mg/kg	20	37	90	9.8	36
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	11	12	24	6.1	13
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	1.4	0.7	0.9
Vanadium	DETSC 2301#	0.8	mg/kg	18	23	24	5.0	12
Zinc	DETSC 2301#	1	mg/kg	56	49	84	16	60
Inorganics								
pH	DETSC 2008#		pH	9.4	7.5	7.7	8.6	8.2
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.3	0.2	0.1	0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5	0.7	< 0.5	< 0.5	< 0.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	1.1	2.3	2.2	0.76	0.76
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	84	26	12	11	23
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068906	2068907	2068908	2068909	2068910
			.Sample ID	BH101	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	1.00	2.00	4.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
PAHs								
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20189
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			Lab No	2068906	2068907	2068908	2068909	2068910
			.Sample ID	BH101	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	1.00	2.00	4.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
VOCs								
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068906	2068907	2068908	2068909	2068910
			.Sample ID	BH101	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	1.00	2.00	4.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs								
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068906	2068907	2068908	2068909	2068910
			.Sample ID	BH101	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	1.00	2.00	4.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068911	2068912	2068913	2068914
			.Sample ID	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	2.00	4.00
			Other ID				
			Sample Type	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Metals							
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.46	< 0.17	< 0.17	0.17
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	4.6	0.84	0.34	0.52
Barium, Dissolved	DETSC 2306	0.26	ug/l	5.7	3.8	3.1	3.7
Boron, Dissolved	DETSC 2306*	12	ug/l	14	19	17	17
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	2.8	< 1.0	< 1.0	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	5.6	1.6	2.8	2.9
Lead, Dissolved	DETSC 2306	0.09	ug/l	1.3	1.3	0.76	0.27
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.44	0.32	0.30	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	14	2.2	< 0.6	< 0.6
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	1.4	< 1.3	< 1.3
Inorganics							
Conductivity	DETSC 2009	1	uS/cm	71.1	28.5	23.3	42.8
pH	DETSC 2008		pH	9.5	8.4	6.7	6.6
Dissolved Organic Carbon	DETSC 2085	2	mg/l	4.7	4.1	3.9	2.7
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	26.4	8.90	7.03	19.7
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.040	0.018	< 0.015	< 0.015
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	1.9	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	1.9	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	1.9	< 1.0	< 1.0
PAHs							

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2068911	2068912	2068913	2068914
			.Sample ID	BH101	BH101	BH101	BH101
			Depth	0.20	0.50	2.00	4.00
			Other ID				
			Sample Type	ES	ES	ES	ES
			Sampling Date	07/10/2022	07/10/2022	07/10/2022	07/10/2022
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Naphthalene	DETSC 3304	0.05	ug/l	0.12	0.17	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	0.02	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.02	0.04	0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	0.02	0.03	0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.08	< 0.01	< 0.01	0.02
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.02	0.02	0.02	0.02
Pyrene	DETSC 3304	0.01	ug/l	0.03	0.02	0.03	0.03
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	0.01	0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.31	0.32	< 0.20	< 0.20

Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id BH101 0.50

Sample Numbers 2068907 2068915
Date Analysed 18/10/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.7	3	5	6
DETSC 2003# Loss On Ignition	%	2.6	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.45	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	4.1	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.74	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.1	0.031	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.6	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	1.9	0.019	4	50	200
DETSC 2055 Chloride as Cl	1100	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	1100	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	14000	140	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3400	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	6.6
DETSC 2009 Conductivity uS/cm	19.9
* Temperature*	15.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.096

Stage 1

Volume of Leachant L2*	0.948
Volume of Eluate VE1*	0.9

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id BH101 1.00

Sample Numbers 2068908 2068916
Date Analysed 18/10/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	< 0.5	3	5	6
DETSC 2003# Loss On Ignition	%	1.5	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.64	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	2.1	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.4	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2.9	0.029	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.35	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	1.3	0.013	4	50	200
DETSC 2055 Chloride as Cl	520	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	530	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	12000	120	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3200	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	6.5
DETSC 2009 Conductivity uS/cm	17.6
* Temperature*	15.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.100

Stage 1

Volume of Leachant L2*	0.985
Volume of Eluate VE1*	0.94

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 22-20189
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2068906	BH101 0.20	SOIL	NAD	none	Lee Kerridge
2068907	BH101 0.50	SOIL	NAD	none	Lee Kerridge
2068908	BH101 1.00	SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 22-20189
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2068906	BH101 0.20 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068907	BH101 0.50 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068908	BH101 1.00 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068909	BH101 2.00 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068910	BH101 4.00 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068911	BH101 0.20 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068912	BH101 0.50 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068913	BH101 2.00 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068914	BH101 4.00 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068915	BH101 0.50 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		
2068916	BH101 1.00 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	22-20338	*Issued:*	17-Oct-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference 22-20338

Client Reference PN224453

Order No ON34994

Contract Title Wrexham AFC - KOP Stand Redevelopment

Description 1 Soil sample, 1 Leachate sample.

Date Received 11-Oct-22

Date Started 11-Oct-22

Date Completed 17-Oct-22

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069738
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	10
Metals				
Antimony	DETSC 2301*	1	mg/kg	2.2
Arsenic	DETSC 2301#	0.2	mg/kg	10
Barium	DETSC 2301#	1.5	mg/kg	110
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2
Chromium III	DETSC 2301*	0.15	mg/kg	12
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	15
Lead	DETSC 2301#	0.3	mg/kg	18
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05
Nickel	DETSC 2301#	1	mg/kg	16
Selenium	DETSC 2301#	0.5	mg/kg	1.1
Vanadium	DETSC 2301#	0.8	mg/kg	21
Zinc	DETSC 2301#	1	mg/kg	43
Inorganics				
pH	DETSC 2008#		pH	7.9
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	0.84
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	19
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	0.14
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069738
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069738
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
VOCs				
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069738
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069738
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069739
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
BS EN 12457 10:1	DETSC 1009*			Y
Metals				
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.20
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.68
Barium, Dissolved	DETSC 2306	0.26	ug/l	12
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.05
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.3
Lead, Dissolved	DETSC 2306	0.09	ug/l	1.0
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.03
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	1.5
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	0.8
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3
Inorganics				
Conductivity	DETSC 2009	1	uS/cm	54.8
pH	DETSC 2008		pH	6.8
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.2
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	53.8
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	< 0.015
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20338
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2069739
.Sample ID	BH101
Depth	6.00
Other ID	
Sample Type	ES
Sampling Date	07/10/2022
Sampling Time	n/s

Test	Method	LOD	Units	
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0
PAHs				
Naphthalene	DETSC 3304	0.05	ug/l	0.11
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.03
Anthracene	DETSC 3304	0.01	ug/l	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.04
Pyrene	DETSC 3304	0.01	ug/l	0.04
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.01
Chrysene	DETSC 3304	0.01	ug/l	0.02
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.26

Key: * -not accredited. n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 22-20338
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2069738	BH101 6.00 SOIL	07/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2069739	BH101 6.00 LEACHATE	07/10/22	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	22-20772	*Issued:*	24-Oct-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	22-20772
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP Stand Redevelopment
Description	5 Soil samples, 3 Leachate samples.
Date Received	17-Oct-22
Date Started	17-Oct-22
Date Completed	24-Oct-22
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072155	2072156	2072157	2072158	2072159
			.Sample ID	BH102	BH102	BH102	BH102	BH102
			Depth	0.10	0.50	1.00	3.00	5.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Preparation								
Moisture Content	DETSC 1004	0.1	%	8.7	13	12	8.8	7.3
Metals								
Antimony	DETSC 2301*	1	mg/kg	2.2	2.5	2.3	1.7	1.4
Arsenic	DETSC 2301#	0.2	mg/kg	8.6	15	11	8.6	12
Barium	DETSC 2301#	1.5	mg/kg	110	290	66	74	78
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.4	0.5	0.3	0.2	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.4	0.5	0.3	0.3	0.1
Chromium III	DETSC 2301*	0.15	mg/kg	14	13	18	13	14
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	31	73	23	20	17
Lead	DETSC 2301#	0.3	mg/kg	110	190	91	37	19
Mercury	DETSC 2325#	0.05	mg/kg	0.07	0.16	0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	18	29	20	20	16
Selenium	DETSC 2301#	0.5	mg/kg	0.8	0.5	0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	20	36	27	16	14
Zinc	DETSC 2301#	1	mg/kg	220	260	90	66	49
Inorganics								
pH	DETSC 2008#		pH	8.0	7.7	7.5	7.8	8.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.8	0.1	< 0.1	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	2.9	12	1.0	< 0.5	< 0.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	2.6	1.8	4.1	1.6	1.6
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	21	26	15	12	16
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	2.2	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	1.5	4.7	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	1.7	5.0	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	14	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072155	2072156	2072157	2072158	2072159
			.Sample ID	BH102	BH102	BH102	BH102	BH102
			Depth	0.10	0.50	1.00	3.00	5.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	14	< 10
PAHs								
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.07	0.28	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	0.08	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.17	0.90	0.05	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	0.17	0.84	0.06	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.07	0.35	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	0.11	0.43	0.04	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.13	0.50	0.06	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.05	0.21	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.07	0.31	0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.04	0.13	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.04	0.16	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.93	4.3	0.21	< 0.10	< 0.10

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

				Lab No	2072155	2072156	2072157	2072158	2072159
				.Sample ID	BH102	BH102	BH102	BH102	BH102
				Depth	0.10	0.50	1.00	3.00	5.00
				Other ID					
				Sample Type	ES	ES	ES	ES	ES
				Sampling Date	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
				Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
VOCs									
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072155	2072156	2072157	2072158	2072159
			.Sample ID	BH102	BH102	BH102	BH102	BH102
			Depth	0.10	0.50	1.00	3.00	5.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs								
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	0.8	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072155	2072156	2072157	2072158	2072159
			.Sample ID	BH102	BH102	BH102	BH102	BH102
			Depth	0.10	0.50	1.00	3.00	5.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	12/10/2022	12/10/2022	12/10/2022	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072160	2072161
			.Sample ID	BH102	BH102
			Depth	0.50	1.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.80	0.27
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	2.5	0.78
Barium, Dissolved	DETSC 2306	0.26	ug/l	6.4	3.3
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	3.3	1.0
Lead, Dissolved	DETSC 2306	0.09	ug/l	2.1	1.6
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.49	0.30
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	1.1	1.0
Zinc, Dissolved	DETSC 2306	1.3	ug/l	2.8	2.3
Inorganics					
Conductivity	DETSC 2009	1	uS/cm	59.7	35.0
pH	DETSC 2008		pH	7.8	8.7
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.1	2.9
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	19.5	7.91
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.038	0.022
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2072160	2072161
			.Sample ID	BH102	BH102
			Depth	0.50	1.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	12/10/2022	12/10/2022
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
PAHs					
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.02	0.02
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	< 0.01	0.06
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	0.03
Fluoranthene	DETSC 3304	0.01	ug/l	0.01	0.09
Pyrene	DETSC 3304	0.01	ug/l	0.01	0.11
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	0.05
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	0.07
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.07
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.02
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.04
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.05
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	0.07
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	0.67

Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id BH102 0.50
Sample Numbers 2072156 2072162
Date Analysed 24/10/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	12.0	3	5	6
DETSC 2003# Loss On Ignition	%	7.7	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	2.5	0.025	0.5	2	25
DETSC 2306 Barium as Ba	6.4	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.52	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.8	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.8	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	3.2	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.69	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.31	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	4.4	0.044	4	50	200
DETSC 2055 Chloride as Cl	1100	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	240	2.4	10	150	500
DETSC 2055 Sulphate as SO4	3800	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	42000	420	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3400	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.0
DETSC 2009 Conductivity uS/cm	60.1
* Temperature*	18.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.096

Stage 1

Volume of Leachant L2*	0.946
Volume of Eluate VE1*	0.897

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 22-20772
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2072155	BH102 0.10	SOIL	NAD	none	Lee Kerridge
2072156	BH102 0.50	SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 22-20772
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2072155	BH102 0.10 SOIL	12/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2072156	BH102 0.50 SOIL	12/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2072157	BH102 1.00 SOIL	12/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2072158	BH102 3.00 SOIL	12/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2072159	BH102 5.00 SOIL	12/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days)	
2072160	BH102 0.50 LEACHATE	12/10/22	GJ 250ml, GJ 60ml, PT 1L		
2072161	BH102 1.00 LEACHATE	12/10/22	GJ 250ml, GJ 60ml, PT 1L		
2072162	BH102 0.50 LEACHATE	12/10/22	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	22-21858	*Issued:*	10-Nov-22

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	22-21858
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP Stand Redevelopment
Description	6 Soil samples, 8 Leachate samples.
Date Received	28-Oct-22
Date Started	28-Oct-22
Date Completed	10-Nov-22
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077874	2077875	2077876	2077877	2077878	2077879
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Asbestos Quantification	DETSC 1102	0.001	%				< 0.001		
Preparation									
Moisture Content	DETSC 1004	0.1	%	6.6	12	14	8.4	15	18
Metals									
Antimony	DETSC 2301*	1	mg/kg	2.2	3.1	3.0	5.2	3.4	1.8
Arsenic	DETSC 2301#	0.2	mg/kg	11	20	7.8	11	21	7.4
Barium	DETSC 2301#	1.5	mg/kg	130	320	170	310	150	83
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.4	0.4	0.3	0.3	0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.5	0.7	0.3	0.7	0.8	0.4
Chromium III	DETSC 2301*	0.15	mg/kg	78	32	180	220	95	20
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	32	79	20	50	33	18
Lead	DETSC 2301#	0.3	mg/kg	76	81	36	130	76	46
Mercury	DETSC 2325#	0.05	mg/kg	0.06	0.13	< 0.05	0.07	0.12	< 0.05
Nickel	DETSC 2301#	1	mg/kg	18	40	21	29	22	14
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.6	0.6	0.6	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	36	48	56	64	35	28
Zinc	DETSC 2301#	1	mg/kg	440	530	250	480	390	210
Inorganics									
pH	DETSC 2008#		pH	8.9	8.0	9.3	9.4	8.6	7.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.5	0.2	0.8	0.3	0.4
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Total Organic Carbon	DETSC 2084#	0.5	%	4.5	4.5	2.0	6.8	3.4	1.4
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	2.1	2.9	2.9	1.9	3.5	5.3
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	87	39	55	35	70	14
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	1.8	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	4.9	< 1.2	< 1.2	1.4	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	3.8	< 1.5	< 1.5	9.4	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	160	< 3.4	< 3.4	54	29	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	110	< 3.4	< 3.4	38	19	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	280	< 10	< 10	100	48	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	2.3	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	1.8	< 0.5	< 0.5	4.8	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	8.3	2.6	< 0.6	21	4.2	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	320	23	< 1.4	110	110	< 1.4

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077874	2077875	2077876	2077877	2077878	2077879
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	250	50	< 1.4	110	100	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	580	77	< 10	250	220	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	850	77	< 10	350	270	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.22	0.33	< 0.03	0.30	0.21	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	0.07	< 0.03	< 0.03	0.04	0.04
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.36	0.56	0.04	0.50	0.43	0.03
Pyrene	DETSC 3303#	0.03	mg/kg	0.35	0.52	0.04	0.54	0.44	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.15	0.22	< 0.03	0.20	0.21	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	0.22	0.27	< 0.03	0.29	0.24	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.21	0.27	< 0.03	0.31	0.24	0.04
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.11	0.12	< 0.03	0.14	0.10	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.15	0.24	< 0.03	0.23	0.18	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.07	0.06	< 0.03	0.08	0.07	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.10	0.08	< 0.03	0.11	0.11	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	1.9	2.7	< 0.10	2.7	2.3	< 0.10

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

				Lab No	2077874	2077875	2077876	2077877	2077878	2077879
				.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
				Depth	0.30	0.80	1.20	0.20	1.00	1.20
				Other ID						
				Sample Type	ES	ES	ES	ES	ES	ES
				Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
VOCs										
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077874	2077875	2077876	2077877	2077878	2077879
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs									
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Summary of Chemical Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077874	2077875	2077876	2077877	2077878	2077879
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077880	2077881	2077882	2077883	2077884	2077885
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y	Y	Y
Metals									
Antimony, Dissolved	DETSC 2306	0.17	ug/l	< 0.17	1.4	2.3	1.1	1.2	1.2
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.90	1.1	3.0	1.6	1.7	1.0
Barium, Dissolved	DETSC 2306	0.26	ug/l	3.3	8.0	22	22	9.0	5.4
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12	16	< 12	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	< 1.0	4.8	< 1.0	1.9	2.4
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.4	0.8	1.0	2.3	1.4	1.0
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.84	1.6	1.2	2.8	4.5	3.9
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	0.29	< 0.25	< 0.25	< 0.25
Vanadium, Dissolved	DETSC 2306	0.6	ug/l	1.9	0.7	0.7	2.1	0.9	0.6
Zinc, Dissolved	DETSC 2306	1.3	ug/l	4.1	3.8	< 1.3	3.2	4.8	2.6
Inorganics									
Conductivity	DETSC 2009	1	uS/cm	35.5	36.8	72.3	53.9	55.5	40.6
pH	DETSC 2008		pH	7.7	7.2	7.6	8.2	7.8	8.4
Dissolved Organic Carbon	DETSC 2085	2	mg/l	< 2.0	2.9	3.3	2.7	3.6	3.6
Total Hardness as CaCO3	DETSC 2303	0.1	mg/l	14.4	21.9	27.2	17.1	17.8	11.6
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	< 0.015	< 0.015	0.049	0.043	0.026	0.11
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	14	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

			Lab No	2077880	2077881	2077882	2077883	2077884	2077885
			.Sample ID	IP100	IP100	IP100	IP101	IP101	IP101
			Depth	0.30	0.80	1.20	0.20	1.00	1.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PAHs									
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.03	< 0.01	0.01	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.05	0.02	< 0.01	0.02	0.02	0.01
Anthracene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.04	0.03	< 0.01	0.02	0.02	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	0.03	0.03	< 0.01	0.02	0.02	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	0.02	< 0.01	< 0.01	0.02	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.02	0.02	< 0.01	0.01	0.02	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.21	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20

Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id IP100 0.80
Sample Numbers 2077875 2077886
Date Analysed 07/11/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	4.5	3	5	6
DETSC 2003# Loss On Ignition	%	5.0	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.5	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	7.5	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	1.3	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2.3	0.023	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	2.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.59	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.97	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.3	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	7.6	0.076	4	50	200
DETSC 2055 Chloride as Cl	1900	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	290	2.9	10	150	500
DETSC 2055 Sulphate as SO4	5100	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	29000	290	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	2100	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.3
DETSC 2009 Conductivity uS/cm	41.2
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.096

Stage 1

Volume of Leachant L2*	0.949
Volume of Eluate VE1*	0.901

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment
Sample Id IP101 1..00
Sample Numbers 2077878 2077887
Date Analysed 10/11/2022

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	1.4	3	5	6
DETSC 2003# Loss On Ignition	%	3.7	n/a	n/a	10
DETSC3321# BTEX	mg/kg		6	n/a	n/a
DETSC3401# PCB's (7 congeners)	mg/kg		1	n/a	n/a
DETSC3311# TPH (C10 - C40)	mg/kg		500	n/a	n/a
DETSC3301/DETSC3303 PAH's	mg/kg		100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1	0.01	0.5	2	25
DETSC 2306 Barium as Ba	6.6	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	1.3	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.2	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.76	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.78	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.95	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	5.4	0.054	4	50	200
DETSC 2055 Chloride as Cl	840	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	120	1.2	10	150	500
DETSC 2055 Sulphate as SO4	4100	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	25000	250	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.8
DETSC 2009 Conductivity uS/cm	36.3
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.094

Stage 1

Volume of Leachant L2*	0.924
Volume of Eluate VE1*	0.879

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2077874	IP100 0.30	SOIL	NAD	none	Michael Kay
2077875	IP100 0.80	SOIL	NAD	none	Michael Kay
2077876	IP100 1.20	SOIL	NAD	none	Michael Kay
2077877	IP101 0.20	SOIL	Chrysotile	bundle of chrysotile	Michael Kay
2077878	IP101 1.00	SOIL	NAD	none	Michael Kay
2077879	IP101 1.20	SOIL	NAD	none	Michael Kay

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 22-21858
Client Ref PN224453
Contract Title Wrexham AFC - KOP Stand Redevelopment

Lab No	2077877
.Sample ID	IP101
Depth	0.20
Other ID	
Sample Type	ES
Sampling Date	20/10/2022
Sampling Time	

Test	Method	Units	
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**< 0.001**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	<0.001
Quantification by PCOM (c)	DETSC 1102	Mass %	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na
Breakdown of Gravimetric Analysis (a)			
Mass of Sample		g	541.35
ACMs present*		type	
Mass of ACM in sample		g	
% ACM by mass		%	
% asbestos in ACM		%	
% asbestos in sample		%	
Breakdown of Detailed Gravimetric Analysis (b)			
% Amphibole bundles in sample		Mass %	na
% Chrysotile bundles in sample		Mass %	<0.001
Breakdown of PCOM Analysis (c)			
% Amphibole fibres in sample		Mass %	na
% Chrysotile fibres in sample		Mass %	na
Breakdown of Potentially Respirable Fibre Analysis (d)			
Amphibole fibres		Fibres/g	na
Chrysotile fibres		Fibres/g	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
denotes deviating sample

Information in Support of the Analytical Results

Our Ref 22-21858
Client Ref PN224453
Contract Wrexham AFC - KOP Stand Redevelopment

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2077874	IP100 0.30 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077875	IP100 0.80 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077876	IP100 1.20 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077877	IP101 0.20 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077878	IP101 1.00 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077879	IP101 1.20 SOIL	20/10/22	GJ 250ml, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days), VOC (7 days)	
2077880	IP100 0.30 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077881	IP100 0.80 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077882	IP100 1.20 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077883	IP101 0.20 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077884	IP101 1.00 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077885	IP101 1.20 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077886	IP100 0.80 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		
2077887	IP101 1.00 LEACHATE	20/10/22	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-04211	*Issued:*	01-Mar-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference 23-04211

Client Reference PN224455

Order No ON34994

Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Description 10 Soil samples, 20 Leachate samples.

Date Received 21-Feb-23

Date Started 21-Feb-23

Date Completed 01-Mar-23

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128135	2128136	2128137	2128138	2128139	2128140
			.Sample ID	TP100	TP100	TP101	TP101	TP102	TP102
			Depth	0.05	1.20	0.25	0.90	0.50	0.70
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
Moisture Content	DETSC 1004	0.1	%	9.3	7.9	8.0	8.2	13	20
Metals									
Antimony	DETSC 2301*	1	mg/kg	6.1	1.2	1.4	1.9	2.4	2.2
Arsenic	DETSC 2301#	0.2	mg/kg	8.3	12	5.7	12	12	15
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2	0.3	< 0.2	0.7	1.9
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.3	0.6	1.0	5.6	1.2
Chromium	DETSC 2301#	0.15	mg/kg	440	18	16	18	16	16
Chromium III	DETSC 2301*	0.15	mg/kg	440	18	16	18	16	16
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	30	26	22	25	60	51
Lead	DETSC 2301#	0.3	mg/kg	95	59	120	90	200	250
Mercury	DETSC 2325#	0.05	mg/kg	0.09	< 0.05	0.08	0.06	0.18	0.35
Nickel	DETSC 2301#	1	mg/kg	22	23	9.6	22	16	19
Selenium	DETSC 2301#	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	77	73	120	93	940	300
Inorganics									
pH	DETSC 2008#		pH	10.2	7.8	9.9	8.0	8.2	6.7
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.8	0.3
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
Total Organic Carbon	DETSC 2084#	0.5	%	2.9	0.5	3.3	0.8	9.8	6.0
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	4.8	3.3	1.8	4.2	3.2	14
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	52	11	1500	82	86	180
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	22	< 3.4	< 3.4	< 3.4	14	20
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	14	< 3.4	< 3.4	< 3.4	3.6	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	37	< 10	< 10	< 10	18	20
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	5.7	< 0.6	1.2	< 0.6	9.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	160	< 1.4	58	< 1.4	77	42
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	180	< 1.4	79	< 1.4	74	27
Aromatic C10-C44	DETSC 3072*	10	mg/kg	350	< 10	140	< 10	160	69

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128135	2128136	2128137	2128138	2128139	2128140
			.Sample ID	TP100	TP100	TP101	TP101	TP102	TP102
			Depth	0.05	1.20	0.25	0.90	0.50	0.70
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	390	< 10	140	< 10	180	89
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.2
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1	0.4	0.8
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3
Fluoranthene	DETSC 3301	0.1	mg/kg	0.2	< 0.1	0.4	< 0.1	1.0	2.0
Pyrene	DETSC 3301	0.1	mg/kg	0.5	< 0.1	0.4	< 0.1	1.0	2.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1	0.6	1.1
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1	0.6	1.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.7
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.4
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.6	1.3
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.5	0.8
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.7
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6	6.2	12
SVOCs									
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.3	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128135	2128136	2128137	2128138	2128139	2128140
			.Sample ID	TP100	TP100	TP101	TP101	TP102	TP102
			Depth	0.05	1.20	0.25	0.90	0.50	0.70
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128141	2128142	2128143	2128144
			.Sample ID	TP103	TP103	TP104	TP104
			Depth	0.20	0.40	0.25	1.50
			Other ID				
			Sample Type	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	16/02/2023	16/02/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
Moisture Content	DETSC 1004	0.1	%	7.7	16	11	11
Metals							
Antimony	DETSC 2301*	1	mg/kg	1.4	3.1	2.2	1.4
Arsenic	DETSC 2301#	0.2	mg/kg	7.4	16	10	13
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.8	1.8	0.3	0.7
Cadmium	DETSC 2301#	0.1	mg/kg	0.9	2.5	0.4	0.4
Chromium	DETSC 2301#	0.15	mg/kg	28	20	20	16
Chromium III	DETSC 2301*	0.15	mg/kg	28	20	20	16
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	28	57	32	26
Lead	DETSC 2301#	0.3	mg/kg	78	240	150	150
Mercury	DETSC 2325#	0.05	mg/kg	0.08	0.76	0.80	0.07
Nickel	DETSC 2301#	1	mg/kg	15	23	18	23
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	180	1500	410	290
Inorganics							
pH	DETSC 2008#		pH	10.9	7.1	9.5	7.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.1	0.9	0.3	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	2.7	4.7	4.6	2.0
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	3.1	15	4.5	5.2
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	190	61	410	110
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.02
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.05
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	5.3	6.1
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	3.0	8.6
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	3.7	22
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	61	< 3.4	88	1300
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	21	< 3.4	18	86
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	83	< 10	120	1400
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.02
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.16
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	1.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	10
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	9.3	< 0.6	1.0	50
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	190	< 1.4	97	820
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	170	< 1.4	81	120
Aromatic C10-C44	DETSC 3072*	10	mg/kg	370	< 10	180	1000

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128141	2128142	2128143	2128144
			.Sample ID	TP103	TP103	TP104	TP104
			Depth	0.20	0.40	0.25	1.50
			Other ID				
			Sample Type	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	16/02/2023	16/02/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	450	< 10	300	2400
PAHs							
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.5
Acenaphthylene	DETSC 3301	0.1	mg/kg	0.1	< 0.1	0.2	0.7
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.4	1.0
Phenanthrene	DETSC 3301	0.1	mg/kg	0.4	0.7	0.4	0.5
Anthracene	DETSC 3301	0.1	mg/kg	0.1	0.2	0.1	1.8
Fluoranthene	DETSC 3301	0.1	mg/kg	1.0	1.6	1.1	0.9
Pyrene	DETSC 3301	0.1	mg/kg	1.1	1.6	1.3	2.0
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.7	1.2	1.2	5.7
Chrysene	DETSC 3301	0.1	mg/kg	0.7	1.1	3.2	5.3
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.4	0.8	0.8	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.3	0.5	0.5	1.6
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	0.7	1.2	1.0	0.6
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	0.4	0.7	0.7	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	0.4	0.7	1.1	0.4
PAH 16 Total	DETSC 3301	1.6	mg/kg	6.3	10	12	21
SVOCs							
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128141	2128142	2128143	2128144
			.Sample ID	TP103	TP103	TP104	TP104
			Depth	0.20	0.40	0.25	1.50
			Other ID				
			Sample Type	SOIL	SOIL	SOIL	SOIL
			Sampling Date	15/02/2023	15/02/2023	16/02/2023	16/02/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	0.4	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	0.9	5.2
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

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Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No				2128145	2128146	2128147	2128148	2128149	2128150
.Sample ID				TP100	TP100	TP101	TP101	TP102	TP102
Depth				0.05	1.20	0.25	0.90	0.50	0.70
Other ID									
Sample Type				LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
Sampling Date				15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y	Y	Y
Metals									
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.21	< 0.17	0.60	0.29	0.58	0.82
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.66	0.25	0.79	0.31	1.5	1.2
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12	< 12	< 12	< 12	49
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	0.05	< 0.03	0.17	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	5.0	6.3	6.4	5.5	5.5	5.7
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	6.3	6.4	5.5	5.4	5.7
Chromium, Hexavalent	DETSC 2203	7	ug/l	15	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.7	1.0	2.2	0.9	4.7	2.0
Lead, Dissolved	DETSC 2306	0.09	ug/l	3.7	1.1	3.2	0.96	7.0	4.2
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	1.8	2.6	1.5	2.1	2.2	2.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	4.6	1.5	2.8	3.0	32	17
Inorganics									
Conductivity	DETSC 2009	1	uS/cm	174	145	488	151	223	236
pH	DETSC 2008		pH	7.0	6.8	6.9	6.9	7.4	7.0
Dissolved Organic Carbon	DETSC 2085	2	mg/l	6.1	4.2	3.4	5.3	5.9	3.7
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.47	0.13	0.084	0.079	0.077	0.19
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PAHs									

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128145	2128146	2128147	2128148	2128149	2128150
			.Sample ID	TP100	TP100	TP101	TP101	TP102	TP102
			Depth	0.05	1.20	0.25	0.90	0.50	0.70
			Other ID						
			Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023	15/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05	< 0.05	0.07	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.07	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	0.04	0.02	< 0.01	0.02	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	0.03	0.01	< 0.01	0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.04	0.06	0.03	0.02	0.16	0.02
Anthracene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01	0.06	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.12	0.02	0.03	< 0.01	0.47	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	0.13	0.01	0.02	< 0.01	0.42	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.06	< 0.01	< 0.01	< 0.01	0.22	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.07	< 0.01	< 0.01	< 0.01	0.28	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.10	< 0.01	0.02	< 0.01	0.40	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	0.17	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.08	< 0.01	< 0.01	< 0.01	0.34	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.06	< 0.01	< 0.01	< 0.01	0.34	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.08	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.07	< 0.01	< 0.01	< 0.01	0.32	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.78	< 0.20	< 0.20	< 0.20	3.4	< 0.20

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128151	2128152	2128153	2128154
			.Sample ID	TP103	TP103	TP104	TP104
			Depth	0.20	0.40	0.25	1.50
			Other ID				
			Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date	15/02/2023	15/02/2023	16/02/2023	16/02/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y
Metals							
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.87	1.5	0.87	0.36
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.3	1.6	0.96	0.74
Boron, Dissolved	DETSC 2306*	12	ug/l	18	31	< 12	22
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.06	< 0.03	< 0.03	0.04
Chromium, Dissolved	DETSC 2306	0.25	ug/l	4.1	5.0	3.4	2.8
Chromium III, Dissolved	DETSC 2306*	1	ug/l	4.0	5.0	3.4	2.8
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	3.7	2.5	1.8	0.6
Lead, Dissolved	DETSC 2306	0.09	ug/l	6.0	2.3	1.8	1.2
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	1.7	2.2	1.4	1.3
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	13	9.1	11	7.3
Inorganics							
Conductivity	DETSC 2009	1	uS/cm	64.7	41.8	72.1	87.4
pH	DETSC 2008		pH	8.0	7.7	7.3	6.3
Dissolved Organic Carbon	DETSC 2085	2	mg/l	6.6	3.9	4.5	7.9
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.15	0.089	0.086	0.082
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	270
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	300
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	2.4
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	3.3
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	19
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	190
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	28
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	240
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	510
PAHs							

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2128151	2128152	2128153	2128154
			.Sample ID	TP103	TP103	TP104	TP104
			Depth	0.20	0.40	0.25	1.50
			Other ID				
			Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date	15/02/2023	15/02/2023	16/02/2023	16/02/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	0.03	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	0.02	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.03	0.12	0.03	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	0.01	0.02	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.09	0.08	0.05	0.02
Pyrene	DETSC 3304	0.01	ug/l	0.09	0.07	0.05	0.14
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.04	0.03	0.03	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.05	0.04	0.02	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.06	0.03	0.05	0.04
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.02	< 0.01	0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.05	0.02	0.04	0.05
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.05	0.02	0.04	0.12
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.05	0.02	0.06	0.26
PAH Total	DETSC 3304	0.2	ug/l	0.55	0.50	0.37	0.63

Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP100 0.05
Sample Numbers 2128135 2128155
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.9	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	440.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.74	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	8.3	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	4.8	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3	0.03	2	50	100
DETSC 2306 Mercury as Hg	0.018	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.2	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.6	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.4	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.25	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	2.1	0.021	4	50	200
DETSC 2055 Chloride as Cl	870	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	310	3.1	10	150	500
DETSC 2055 Sulphate as SO4	3600	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	34000	340	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	4200	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.7
DETSC 2009 Conductivity uS/cm	47.9
* Temperature*	17.0
Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.100
Stage 1	
Volume of Leachant L2*	0.987
Volume of Eluate VE1*	0.94

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP100 1.20
Sample Numbers 2128136 2128156
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.5	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.35	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	0.85	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	4.5	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2.3	0.023	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.8	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.76	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	820	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	1500	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	5500	55	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3500	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.0
DETSC 2009 Conductivity uS/cm	7.8
* Temperature*	17.0
Mass of Sample Kg*	0.100
Mass of dry Sample Kg*	0.092
Stage 1	
Volume of Leachant L2*	0.913
Volume of Eluate VE1*	0.869

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP101 0.25
Sample Numbers 2128137 2128157
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	3.3	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	120.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.64	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	20	0.2	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	5.9	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2.9	0.029	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.7	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.3	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.73	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	960	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	210000	2100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	340000	3400	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3000	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.1
DETSC 2009 Conductivity uS/cm	482.0
* Temperature*	17.0

Mass of Sample Kg*	0.100
Mass of dry Sample Kg*	0.092

Stage 1

Volume of Leachant L2*	0.913
Volume of Eluate VE1*	0.865

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP101 0.90
Sample Numbers 2128138 2128158
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.8	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.21	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	2.8	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	4.4	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.3	0.033	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.8	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.33	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	1200	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	15000	150	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	30000	300	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3500	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.5
DETSC 2009 Conductivity uS/cm	43.2
* Temperature*	17.0

Mass of Sample Kg*	0.100
Mass of dry Sample Kg*	0.092

Stage 1

Volume of Leachant L2*	0.91
Volume of Eluate VE1*	0.865

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP102 0.50
Sample Numbers 2128139 2128159
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	9.8	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	140.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	6.2	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.6	0.016	0.5	2	25
DETSC 2306 Barium as Ba	12	0.12	20	100	300
DETSC 2306 Cadmium as Cd	0.11	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	2.9	0.029	2	50	100
DETSC 2306 Mercury as Hg	0.023	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	4.2	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.84	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	2.3	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.65	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	1.4	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	8.3	0.083	4	50	200
DETSC 2055 Chloride as Cl	1300	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	200	2	10	150	500
DETSC 2055 Sulphate as SO4	8800	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	51000	510	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5600	56	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.3
DETSC 2009 Conductivity uS/cm	72.2
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.095

Stage 1

Volume of Leachant L2*	0.937
Volume of Eluate VE1*	0.89

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP102 0.70
Sample Numbers 2128140 2128160
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	6.0	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	120.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	12.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.1	0.011	0.5	2	25
DETSC 2306 Barium as Ba	15	0.15	20	100	300
DETSC 2306 Cadmium as Cd	0.032	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3	0.03	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.8	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.28	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.59	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.57	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	7	0.07	4	50	200
DETSC 2055 Chloride as Cl	1100	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	140	1.4	10	150	500
DETSC 2055 Sulphate as SO4	31000	310	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	59000	590	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	4500	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.1
DETSC 2009 Conductivity uS/cm	84.8
* Temperature*	17.0
Mass of Sample Kg*	0.120
Mass of dry Sample Kg*	0.096
Stage 1	
Volume of Leachant L2*	0.931
Volume of Eluate VE1*	0.884

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP103 0.20
Sample Numbers 2128141 2128161
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.7	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	890.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	6.3	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.6	0.016	0.5	2	25
DETSC 2306 Barium as Ba	7.9	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	0.045	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.74	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.2	0.032	2	50	100
DETSC 2306 Mercury as Hg	0.018	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.2	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	5.6	0.06	0.5	10	50
DETSC 2306 Antimony as Sb	0.73	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.34	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	14	0.14	4	50	200
DETSC 2055 Chloride as Cl	1400	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	110	1.1	10	150	500
DETSC 2055 Sulphate as SO4	4900	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	45000	450	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	8800	88	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.3
DETSC 2009 Conductivity uS/cm	64.3
* Temperature*	17.0
Mass of Sample Kg*	0.100
Mass of dry Sample Kg*	0.092
Stage 1	
Volume of Leachant L2*	0.915
Volume of Eluate VE1*	0.87

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP103 0.40
Sample Numbers 2128142 2128162
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	4.7	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	10.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.9	0.019	0.5	2	25
DETSC 2306 Barium as Ba	4.1	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.4	0.034	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.1	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.73	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	7.9	0.079	4	50	200
DETSC 2055 Chloride as Cl	710	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	210	2.1	10	150	500
DETSC 2055 Sulphate as SO4	6000	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	22000	220	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5600	56	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.4
DETSC 2009 Conductivity uS/cm	31.1
* Temperature*	17.0
Mass of Sample Kg*	0.120
Mass of dry Sample Kg*	0.101
Stage 1	
Volume of Leachant L2*	0.995
Volume of Eluate VE1*	0.936

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP104 0.25
Sample Numbers 2128143 2128163
Date Analysed 01/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	4.6	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	1300.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	12.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1	0.01	0.5	2	25
DETSC 2306 Barium as Ba	6	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.55	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.7	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.1	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.6	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.44	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	6.7	0.067	4	50	200
DETSC 2055 Chloride as Cl	780	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	130	1.3	10	150	500
DETSC 2055 Sulphate as SO4	7100	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	33000	330	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5200	52	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.2
DETSC 2009 Conductivity uS/cm	47.1
* Temperature*	17.0
Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.098
Stage 1	
Volume of Leachant L2*	0.968
Volume of Eluate VE1*	0.92

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id TP104 1.50
Sample Numbers 2128144 2128164
Date Analysed 28/02/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.0	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	7000.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	21.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.84	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	24	0.24	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	0.61	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.2	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	1.3	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.91	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.3	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	5.4	0.054	4	50	200
DETSC 2055 Chloride as Cl	1000	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	150	1.5	10	150	500
DETSC 2055 Sulphate as SO4	24000	240	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	35000	350	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	8400	84	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.0
DETSC 2009 Conductivity uS/cm	49.5
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.098

Stage 1

Volume of Leachant L2*	0.964
Volume of Eluate VE1*	0.919

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Summary of Asbestos Analysis
Soil Samples

Our Ref 23-04211
Client Ref PN224455
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2128135	TP100 0.05	SOIL	NAD	none	Michael Kay
2128136	TP100 1.20	SOIL	NAD	none	Michael Kay
2128137	TP101 0.25	SOIL	NAD	none	Michael Kay
2128138	TP101 0.90	SOIL	NAD	none	Michael Kay
2128139	TP102 0.50	SOIL	NAD	none	Michael Kay
2128140	TP102 0.70	SOIL	NAD	none	Michael Kay
2128141	TP103 0.20	SOIL	NAD	none	Michael Kay
2128142	TP103 0.40	SOIL	NAD	none	Michael Kay
2128143	TP104 0.25	SOIL	NAD	none	Michael Kay
2128144	TP104 1.50	SOIL	NAD	none	Michael Kay

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-04211
Client Ref PN224455
Contract Wrexham AFC - KOP STAND REDEVELOPMENT

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2128135	TP100 0.05 SOIL	15/02/23	GJ 250ml x2, GJ 60ml	Ammonia (3 days)	
2128136	TP100 1.20 SOIL	15/02/23	GJ 250ml x2, GJ 60ml	Ammonia (3 days)	
2128137	TP101 0.25 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128138	TP101 0.90 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128139	TP102 0.50 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128140	TP102 0.70 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128141	TP103 0.20 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128142	TP103 0.40 SOIL	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128143	TP104 0.25 SOIL	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128144	TP104 1.50 SOIL	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2128145	TP100 0.05 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml		
2128146	TP100 1.20 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml		
2128147	TP101 0.25 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128148	TP101 0.90 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128149	TP102 0.50 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128150	TP102 0.70 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128151	TP103 0.20 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128152	TP103 0.40 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128153	TP104 0.25 LEACHATE	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128154	TP104 1.50 LEACHATE	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128155	TP100 0.05 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml		
2128156	TP100 1.20 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml		
2128157	TP101 0.25 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128158	TP101 0.90 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128159	TP102 0.50 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128160	TP102 0.70 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128161	TP103 0.20 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128162	TP103 0.40 LEACHATE	15/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128163	TP104 0.25 LEACHATE	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2128164	TP104 1.50 LEACHATE	16/02/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass J-Jar P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Information in Support of the Analytical Results

Our Ref 23-04211
Client Ref PN224455
Contract Wrexham AFC - KOP STAND REDEVELOPMENT

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-04867	*Issued:*	08-Mar-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-04867
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP STAND REDEVELOPMENT
Description	8 Soil samples, 13 Leachate samples.
Date Received	28-Feb-23
Date Started	28-Feb-23
Date Completed	08-Mar-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

				Lab No	2132118	2132119	2132120	2132121	2132122	2132123
				.Sample ID	BH106	BH106	BH106	BH106	BH106	BH104
				Depth	0.20	2.00	3.00	5.00	16.00	5.00
				Other ID						
				Sample Type	ES	ES	ES	ES	ES	ES
				Sampling Date	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Moisture Content	DETSC 1004	0.1	%	10	15	12	6.9	16	9.5
Metals										
Antimony	DETSC 2301*	1	mg/kg	2.1	2.1	1.4	1.1	< 1.0	1.5
Arsenic	DETSC 2301#	0.2	mg/kg	11	13	12	9.9	3.7	10
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.4	0.8	0.3	0.3	< 0.2	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.5	0.4	0.4	0.5	0.1	0.6
Chromium	DETSC 2301#	0.15	mg/kg	37	19	18	13	6.2	14
Chromium III	DETSC 2301*	0.15	mg/kg	37	19	18	13	6.2	14
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	39	34	25	23	10	34
Lead	DETSC 2301#	0.3	mg/kg	110	95	56	46	12	52
Mercury	DETSC 2325#	0.05	mg/kg	0.22	0.11	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	20	20	21	20	7.2	20
Selenium	DETSC 2301#	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Zinc	DETSC 2301#	1	mg/kg	200	140	84	95	23	99
Inorganics										
pH	DETSC 2008#		pH	9.4	8.3	8.1	8.5	8.8	8.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.3	< 0.1	< 0.1	< 0.1	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	5.2	4.4	2.0	0.5	< 0.5	0.8
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	4.7	5.0	3.4	2.4	2.3	2.4
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	200	120	85	52	55	84
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5			
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2			
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5			
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4			
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4			
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10			
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01			
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9			
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5			
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6			
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4			
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4			
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10			

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2132118	2132119	2132120	2132121	2132122	2132123
			.Sample ID	BH106	BH106	BH106	BH106	BH106	BH104
			Depth	0.20	2.00	3.00	5.00	16.00	5.00
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10			
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	0.1	< 0.1			
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Phenanthrene	DETSC 3301	0.1	mg/kg	0.4	0.2	< 0.1			
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Fluoranthene	DETSC 3301	0.1	mg/kg	0.8	0.4	0.2			
Pyrene	DETSC 3301	0.1	mg/kg	0.8	0.5	0.2			
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.6	0.4	< 0.1			
Chrysene	DETSC 3301	0.1	mg/kg	0.5	0.2	< 0.1			
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.3	0.2	< 0.1			
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.2	0.1	< 0.1			
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	0.5	0.3	< 0.1			
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
PAH 16 Total	DETSC 3301	1.6	mg/kg	4.3	2.6	< 1.6			

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

	Lab No	2132124	2132125
	.Sample ID	BH105	BH105
	Depth	0.20	1.00
	Other ID		
	Sample Type	ES	ES
	Sampling Date	23/02/2023	23/02/2023
	Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Preparation					
Moisture Content	DETSC 1004	0.1	%	13	10
Metals					
Antimony	DETSC 2301*	1	mg/kg	2.5	3.7
Arsenic	DETSC 2301#	0.2	mg/kg	12	12
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.8	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.6	0.5
Chromium	DETSC 2301#	0.15	mg/kg	46	220
Chromium III	DETSC 2301*	0.15	mg/kg	46	220
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	42	59
Lead	DETSC 2301#	0.3	mg/kg	590	120
Mercury	DETSC 2325#	0.05	mg/kg	0.16	0.13
Nickel	DETSC 2301#	1	mg/kg	17	22
Selenium	DETSC 2301#	0.5	mg/kg	0.8	1.1
Zinc	DETSC 2301#	1	mg/kg	150	130
Inorganics					
pH	DETSC 2008#		pH	8.0	8.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.3	0.2
Cyanide, Free	DETSC 2130#	0.1	mg/kg	0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	6.0	2.0
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	6.7	3.7
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	200	35
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

	Lab No	2132124	2132125
	.Sample ID	BH105	BH105
	Depth	0.20	1.00
	Other ID		
	Sample Type	ES	ES
	Sampling Date	23/02/2023	23/02/2023
	Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10
PAHs					
Naphthalene	DETSC 3301	0.1	mg/kg	0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	0.6	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	0.2	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	0.4	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	2.5	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	0.8	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	4.5	0.3
Pyrene	DETSC 3301	0.1	mg/kg	4.3	0.4
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	3.0	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	2.5	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	1.7	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	1.2	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	2.8	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	1.8	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	0.2	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	2.2	< 0.1
PAH 16 Total	DETSC 3301	1.6	mg/kg	29	< 1.6

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

	Lab No	2132118	2132119	2132120	2132124	2132125
	.Sample ID	BH106	BH106	BH106	BH105	BH105
	Depth	0.20	2.00	3.00	0.20	1.00
	Other ID					
	Sample Type	ES	ES	ES	ES	ES
	Sampling Date	21/02/2023	21/02/2023	21/02/2023	23/02/2023	23/02/2023
	Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
SVOCs						
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	0.4	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

				Lab No	2132118	2132119	2132120	2132124	2132125
				.Sample ID	BH106	BH106	BH106	BH105	BH105
				Depth	0.20	2.00	3.00	0.20	1.00
				Other ID					
				Sample Type	ES	ES	ES	ES	ES
				Sampling Date	21/02/2023	21/02/2023	21/02/2023	23/02/2023	23/02/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Carbazole	DETSC 3433*	0.1	mg/kg	0.4	< 0.1	< 0.1	< 0.1	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2132126	2132127	2132128	2132129	2132130	2132131
			.Sample ID	BH106	BH106	BH106	BH106	BH106	BH104
			Depth	0.20	2.00	3.00	5.00	16.00	5.00
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y	Y	Y
Metals									
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.51	0.22	< 0.17	0.41	0.42	0.39
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.2	0.68	0.33	0.26	0.18	0.21
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12	< 12	< 12	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	2.7	0.57	3.1	0.80	0.69	0.63
Chromium III, Dissolved	DETSC 2306*	1	ug/l	2.7	< 1.0	3.1	< 1.0	< 1.0	< 1.0
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	4.0	3.2	2.8	2.6	0.7	2.3
Lead, Dissolved	DETSC 2306	0.09	ug/l	2.6	0.68	0.37	0.16	< 0.09	< 0.09
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	1.3	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.29	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	3.4	1.5	< 1.3	< 1.3	< 1.3	< 1.3
Inorganics									
Conductivity	DETSC 2009	1	uS/cm	71.5	86.5	90.8	32.0	50.7	78.4
pH	DETSC 2008		pH	6.7	6.6	7.0	7.4	7.0	6.8
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.7	3.9	2.9	4.0	2.8	2.8
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.23	0.055	0.030	0.022	0.030	0.033
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	18	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PAHs									

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2132126	2132127	2132128	2132129	2132130	2132131
			.Sample ID	BH106	BH106	BH106	BH106	BH106	BH104
			Depth	0.20	2.00	3.00	5.00	16.00	5.00
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	21/02/2023	21/02/2023	21/02/2023	22/02/2023	23/02/2023	20/02/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	0.10	0.07	0.13	0.15	0.12
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.03	0.01	0.02	< 0.01	< 0.01	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.08	0.02	0.02	< 0.01	< 0.01	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	0.07	0.02	0.02	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.03	0.01	0.01	< 0.01	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.04	0.02	0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.37	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMEN

Lab No	2132132	2132133
.Sample ID	BH105	BH105
Depth	0.20	1.00
Other ID		
Sample Type	ES	ES
Sampling Date	23/02/2023	23/02/2023
Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Antimony, Dissolved	DETSC 2306	0.17	ug/l	0.46	0.38
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.3	1.1
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	1.4	2.9
Chromium III, Dissolved	DETSC 2306*	1	ug/l	1.4	2.9
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.0	1.5
Lead, Dissolved	DETSC 2306	0.09	ug/l	3.2	2.1
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	0.03
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.55	0.26
Zinc, Dissolved	DETSC 2306	1.3	ug/l	3.5	2.0
Inorganics					
Conductivity	DETSC 2009	1	uS/cm	105	44.2
pH	DETSC 2008		pH	7.0	6.9
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.7	3.6
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.088	0.089
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
PAHs					

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMEN

			Lab No	2132132	2132133
			.Sample ID	BH105	BH105
			Depth	0.20	1.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	23/02/2023	23/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Naphthalene	DETSC 3304	0.05	ug/l	0.07	0.11
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.06	0.02
Anthracene	DETSC 3304	0.01	ug/l	0.02	0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.20	0.11
Pyrene	DETSC 3304	0.01	ug/l	0.20	0.11
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.09	0.04
Chrysene	DETSC 3304	0.01	ug/l	0.11	0.05
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.10	0.06
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.05	0.03
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.10	0.06
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.06	0.05
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.05	0.05
PAH Total	DETSC 3304	0.2	ug/l	1.1	0.71

Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH106 0.20
Sample Numbers 2132118 2132134
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	5.2	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	4.3	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.6	0.016	0.5	2	25
DETSC 2306 Barium as Ba	10	0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	1.6	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.8	0.038	2	50	100
DETSC 2306 Mercury as Hg	0.024	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	5.9	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	2.4	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	1	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.43	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	4	0.04	4	50	200
DETSC 2055 Chloride as Cl	1800	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	280	2.8	10	150	500
DETSC 2055 Sulphate as SO4	31000	310	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	56000	560	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	6300	63	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.3
DETSC 2009 Conductivity uS/cm	79.9
* Temperature*	16.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.099

Stage 1

Volume of Leachant L2*	0.974
Volume of Eluate VE1*	0.922

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH106 2.00
Sample Numbers 2132119 2132135
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	4.4	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	120.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	2.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.51	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	8.2	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.4	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.8	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.97	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.41	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.31	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	3.4	0.034	4	50	200
DETSC 2055 Chloride as Cl	1700	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	130	1.3	10	150	500
DETSC 2055 Sulphate as SO4	19000	190	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	64000	640	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5800	58	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.0
DETSC 2009 Conductivity uS/cm	92.0
* Temperature*	16.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.094

Stage 1

Volume of Leachant L2*	0.925
Volume of Eluate VE1*	0.879

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH106 3.00
Sample Numbers 2132120 2132136
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.0	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.26	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	4.9	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	0.82	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.41	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	1.5	0.015	4	50	200
DETSC 2055 Chloride as Cl	1500	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	18000	180	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	47000	470	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	4600	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.8
DETSC 2009 Conductivity uS/cm	66.4
* Temperature*	16.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.097

Stage 1

Volume of Leachant L2*	0.956
Volume of Eluate VE1*	0.908

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V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH105 0.20
Sample Numbers 2132124 2132137
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	6.0	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	120.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	29.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.2	0.012	0.5	2	25
DETSC 2306 Barium as Ba	10	0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.7	0.037	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	< 1.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	3.7	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.38	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.29	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	4.8	0.048	4	50	200
DETSC 2055 Chloride as Cl	1400	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	120	1.2	10	150	500
DETSC 2055 Sulphate as SO4	19000	190	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	54000	540	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5000	50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.3
DETSC 2009 Conductivity uS/cm	76.6
* Temperature*	16.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.095

Stage 1

Volume of Leachant L2*	0.938
Volume of Eluate VE1*	0.89

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

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WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH105 1.00
Sample Numbers 2132125 2132138
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.0	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.83	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	4.9	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.3	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	0.026	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	2.9	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	2.2	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.29	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	2.5	0.025	4	50	200
DETSC 2055 Chloride as Cl	750	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	410	4.1	10	150	500
DETSC 2055 Sulphate as SO4	2300	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	32000	320	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	4900	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.2
DETSC 2009 Conductivity uS/cm	46.0
* Temperature*	16.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.099

Stage 1

Volume of Leachant L2*	0.974
Volume of Eluate VE1*	0.922

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Summary of Asbestos Analysis
Soil Samples

Our Ref 23-04867
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2132118	BH106 0.20	SOIL	NAD	none	Michael Kay
2132119	BH106 2.00	SOIL	NAD	none	Michael Kay
2132124	BH105 0.20	SOIL	NAD	none	Michael Kay
2132125	BH105 1.00	SOIL	NAD	none	Michael Kay

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-04867
Client Ref PN224453
Contract Wrexham AFC - KOP STAND REDEVELOPMENT

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2132118	BH106 0.20 SOIL	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132119	BH106 2.00 SOIL	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132120	BH106 3.00 SOIL	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132121	BH106 5.00 SOIL	22/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132122	BH106 16.00 SOIL	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132123	BH104 5.00 SOIL	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days), pH + Conductivity (7 days)	
2132124	BH105 0.20 SOIL	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132125	BH105 1.00 SOIL	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2132126	BH106 0.20 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132127	BH106 2.00 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132128	BH106 3.00 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132129	BH106 5.00 LEACHATE	22/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132130	BH106 16.00 LEACHATE	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132131	BH104 5.00 LEACHATE	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132132	BH105 0.20 LEACHATE	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132133	BH105 1.00 LEACHATE	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132134	BH106 0.20 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132135	BH106 2.00 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132136	BH106 3.00 LEACHATE	21/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132137	BH105 0.20 LEACHATE	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2132138	BH105 1.00 LEACHATE	23/02/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-04487	*Issued:*	08-Mar-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-04487
Client Reference	PN224453
Order No	ON34994
Contract Title	Wrexham AFC - KOP STAND REDEVELOPMENT
Description	2 Soil samples, 4 Leachate samples.
Date Received	23-Feb-23
Date Started	23-Feb-23
Date Completed	08-Mar-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2129907	2129908
			.Sample ID	BH104	BH104
			Depth	0.20	2.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	20/02/2023	20/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Moisture Content	DETSC 1004	0.1	%	15	14
Metals					
Antimony	DETSC 2301*	1	mg/kg	4.8	1.9
Arsenic	DETSC 2301#	0.2	mg/kg	13	12
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.4	1.1
Cadmium	DETSC 2301#	0.1	mg/kg	2.9	0.8
Chromium	DETSC 2301#	0.15	mg/kg	17	18
Chromium III	DETSC 2301*	0.15	mg/kg	17	18
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	93	44
Lead	DETSC 2301#	0.3	mg/kg	1300	150
Mercury	DETSC 2325#	0.05	mg/kg	1.1	0.15
Nickel	DETSC 2301#	1	mg/kg	20	21
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.5
Zinc	DETSC 2301#	1	mg/kg	520	150
Inorganics					
pH	DETSC 2008#		pH	9.0	8.0
Cyanide, Total	DETSC 2130#	0.1	mg/kg	4.1	11
Cyanide, Free	DETSC 2130#	0.1	mg/kg	0.3	0.9
Total Organic Carbon	DETSC 2084#	0.5	%	6.1	2.6
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	3.5	3.9
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	68	110
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic >EC10-EC12	DETSC 3521#	1.5	mg/kg	< 1.50	< 1.50
Aliphatic >EC12-EC16	DETSC 3521#	1.2	mg/kg	< 1.20	< 1.20
Aliphatic >EC16-EC21	DETSC 3521#	1.5	mg/kg	< 1.50	< 1.50
Aliphatic >EC21-EC35	DETSC 3521#	3.4	mg/kg	< 3.40	< 3.40
Aliphatic >EC35-EC40	DETSC 3521#	3.4	mg/kg	< 3.40	< 3.40
Aliphatic >EC40-EC44	DETSC 3521*	3.4	mg/kg	< 3.40	< 3.40
Aliphatic C5-C44	DETSC 3521*	10	mg/kg	< 10.00	< 10.00
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aromatic >EC10-EC12	DETSC 3521#	0.9	mg/kg	< 0.90	< 0.90
Aromatic >EC12-EC16	DETSC 3521#	0.5	mg/kg	< 0.50	< 0.50
Aromatic >EC16-EC21	DETSC 3521#	0.6	mg/kg	5.38	3.53
Aromatic >EC21-EC35	DETSC 3521#	1.4	mg/kg	8.55	5.23
Aromatic >EC35-EC40	DETSC 3521*	1.4	mg/kg	< 1.40	< 1.40

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2129907	2129908
			.Sample ID	BH104	BH104
			Depth	0.20	2.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	20/02/2023	20/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Aromatic >EC40-EC44	DETSC 3521*	1.4	mg/kg	< 1.40	< 1.40
Aromatic C5-C44	DETSC 3521*	10	mg/kg	13.93	< 10.00
TPH Ali/Aro C5-C44	DETSC 3521*	10	mg/kg	13.93	< 10.00
PAHs					
Naphthalene	DETSC 3301	0.1	mg/kg	0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	0.4	0.3
Anthracene	DETSC 3301	0.1	mg/kg	0.2	0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	1.7	0.8
Pyrene	DETSC 3301	0.1	mg/kg	1.9	0.9
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	1.0	0.5
Chrysene	DETSC 3301	0.1	mg/kg	1.2	0.5
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.7	0.4
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.5	0.2
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	1.4	0.7
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	1.1	0.7
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	0.4	0.3
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	0.8	0.3
PAH 16 Total	DETSC 3301	1.6	mg/kg	11	5.7
SVOCs					
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2129907	2129908
			.Sample ID	BH104	BH104
			Depth	0.20	2.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	20/02/2023	20/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2129909	2129910
			.Sample ID	BH104	BH104
			Depth	0.20	2.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	20/02/2023	20/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Antimony, Dissolved	DETSC 2306	0.17	ug/l	4.9	3.4
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	3.7	1.2
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	27
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.05	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	2.7	2.4
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	2.4
Chromium, Hexavalent	DETSC 2203	7	ug/l	27	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	8.1	2.4
Lead, Dissolved	DETSC 2306	0.09	ug/l	30	12
Mercury, Dissolved	DETSC 2306	0.01	ug/l	0.15	0.03
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.66	0.45
Zinc, Dissolved	DETSC 2306	1.3	ug/l	7.3	3.9
Inorganics					
Conductivity	DETSC 2009	1	uS/cm	191	178
pH	DETSC 2008		pH	7.8	7.7
Dissolved Organic Carbon	DETSC 2085	2	mg/l	4.7	3.8
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.078	0.035
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	35	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
PAHs					

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2129909	2129910
			.Sample ID	BH104	BH104
			Depth	0.20	2.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	20/02/2023	20/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.01	0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.07	0.02
Anthracene	DETSC 3304	0.01	ug/l	0.04	0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.25	0.06
Pyrene	DETSC 3304	0.01	ug/l	0.29	0.07
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.10	0.03
Chrysene	DETSC 3304	0.01	ug/l	0.14	0.04
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.16	0.06
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.08	0.02
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.14	0.05
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	0.13	0.04
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	0.02	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.09	0.03
PAH Total	DETSC 3304	0.2	ug/l	1.5	0.46

Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH104 0.20
Sample Numbers 2129907 2129911
Date Analysed 06/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	6.1	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	79.0	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	11.0	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.8	0.018	0.5	2	25
DETSC 2306 Barium as Ba	16	0.16	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	8.2	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	4.4	0.044	2	50	100
DETSC 2306 Mercury as Hg	0.076	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	11	0.11	0.5	10	30
DETSC 2306 Nickel as Ni	2.1	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	17	0.17	0.5	10	50
DETSC 2306 Antimony as Sb	1.6	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.47	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	3.8	0.038	4	50	200
DETSC 2055 Chloride as Cl	5200	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	130000	1300	10	150	500
DETSC 2055 Sulphate as SO4	13000	130	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	51000	510	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	5000	50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	9.0
DETSC 2009 Conductivity uS/cm	73.2
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.094

Stage 1

Volume of Leachant L2*	0.92
Volume of Eluate VE1*	0.876

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH104 2.00
Sample Numbers 2129908 2129912
Date Analysed 08/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	2.6	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	5.7	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.33	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	15	0.15	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	2	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	3.2	0.032	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.3	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.74	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.63	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	0.26	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	3.4	0.034	4	50	200
DETSC 2055 Chloride as Cl	11000	110	800	15,000	25,000
DETSC 2055* Fluoride as F	200	2	10	150	500
DETSC 2055 Sulphate as SO4	30000	300	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	85000	850	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3700	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	8.6
DETSC 2009 Conductivity uS/cm	121.0
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.095

Stage 1

Volume of Leachant L2*	0.936
Volume of Eluate VE1*	0.892

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-04487
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2129907	BH104 0.20	SOIL	NAD	none	Steven Lambert
2129908	BH104 2.00	SOIL	NAD	none	Steven Lambert

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-04487
Client Ref PN224453
Contract Wrexham AFC - KOP STAND REDEVELOPMENT

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2129907	BH104 0.20 SOIL	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2129908	BH104 2.00 SOIL	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2129909	BH104 0.20 LEACHATE	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2129910	BH104 2.00 LEACHATE	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2129911	BH104 0.20 LEACHATE	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2129912	BH104 2.00 LEACHATE	20/02/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-05136	*Issued:*	16-Mar-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference 23-05136

Client Reference PN224453

Order No ON34994

Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Description 2 Soil samples, 3 Leachate samples.

Date Received 02-Mar-23

Date Started 02-Mar-23

Date Completed 16-Mar-23

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2133731	2133732
			.Sample ID	BH105	BH105
			Depth	5.00	13.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	24/02/2023	24/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Moisture Content	DETSC 1004	0.1	%	6.1	16
Metals					
Antimony	DETSC 2301*	1	mg/kg	< 1.0	< 1.0
Arsenic	DETSC 2301#	0.2	mg/kg	4.9	2.8
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	7.6	5.2
Chromium III	DETSC 2301*	0.15	mg/kg	7.6	5.2
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	10	8.0
Lead	DETSC 2301#	0.3	mg/kg	17	8.5
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	11	7.5
Selenium	DETSC 2301#	0.5	mg/kg	0.7	< 0.5
Zinc	DETSC 2301#	1	mg/kg	32	18
Inorganics					
pH	DETSC 2008#		pH	8.4	8.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	< 0.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5	< 0.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	< 0.50	< 0.50
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	38	19
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2133731	2133732
			.Sample ID	BH105	BH105
			Depth	5.00	13.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	24/02/2023	24/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	
PAHs					
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	2133731
.Sample ID	BH105
Depth	5.00
Other ID	
Sample Type	ES
Sampling Date	24/02/2023
Sampling Time	n/s

Test	Method	LOD	Units	
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

Lab No	2133731
.Sample ID	BH105
Depth	5.00
Other ID	
Sample Type	ES
Sampling Date	24/02/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2133733	2133734
			.Sample ID	BH105	BH105
			Depth	5.00	13.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	24/02/2023	24/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Metals					
Antimony, Dissolved	DETSC 2306	0.17	ug/l	< 0.17	< 0.17
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.29	< 0.16
Boron, Dissolved	DETSC 2306*	12	ug/l	< 12	< 12
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.48	1.9
Chromium III, Dissolved	DETSC 2306*	1	ug/l	< 1.0	1.9
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.9	1.4
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.31	0.25
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	0.6
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	< 1.3	< 1.3
Inorganics					
Conductivity	DETSC 2009	1	uS/cm	47.0	50.6
pH	DETSC 2008		pH	9.8	9.1
Dissolved Organic Carbon	DETSC 2085	2	mg/l	3.1	3.2
Ammoniacal Nitrogen as N	DETSC 2207	0.015	mg/l	0.18	0.20
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
PAHs					

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Leachate Samples

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT

			Lab No	2133733	2133734
			.Sample ID	BH105	BH105
			Depth	5.00	13.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	24/02/2023	24/02/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Naphthalene	DETSC 3304	0.05	ug/l	0.09	0.10
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	0.06
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	0.04
Phenanthrene	DETSC 3304	0.01	ug/l	0.01	0.21
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	0.05
Fluoranthene	DETSC 3304	0.01	ug/l	0.01	0.24
Pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.20
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	< 0.01	0.07
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	0.12
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.14
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	0.04
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.09
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	0.08
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	0.02
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	< 0.01	0.08
PAH Total	DETSC 3304	0.2	ug/l	< 0.20	1.5

Key: * -not accredited. n/s -not supplied.

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 23-05136
Client Ref PN224453
Contract Title Wrexham AFC - KOP STAND REDEVELOPMENT
Sample Id BH105 5.00
Sample Numbers 2133731 2133735
Date Analysed 13/03/2023

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	< 0.5	3	5	6
DETSC2003# Loss On Ignition	%		n/a	n/a	10
DETSC 3321# BTEX	mg/kg	< 0.04	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC2008# pH	pH Units		n/a	>6	n/a
DETS073* Acid Neutralisation Capacity (pH4)	mol/kg		n/a	TBE	TBE
DETS073* Acid Neutralisation Capacity (pH7)	mol/kg		n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.19	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	7.3	< 0.1	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	2.5	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	1.8	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	2.6	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	0.89	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.6	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	< 0.17	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	1.5	0.015	4	50	200
DETSC 2055 Chloride as Cl	1000	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	200	2	10	150	500
DETSC 2055 Sulphate as SO4	2800	< 100	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	29000	290	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	3300	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.4
DETSC 2009 Conductivity uS/cm	41.1
* Temperature*	17.0

Mass of Sample Kg*	0.100
Mass of dry Sample Kg*	0.094

Stage 1

Volume of Leachant L2*	0.934
Volume of Eluate VE1*	0.884

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Information in Support of the Analytical Results

Our Ref 23-05136
Client Ref PN224453
Contract Wrexham AFC - KOP STAND REDEVELOPMENT

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2133731	BH105 5.00 SOIL	24/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2133732	BH105 13.00 SOIL	24/02/23	GJ 250ml x2, GJ 60ml, PT 1L	Ammonia (3 days)	
2133733	BH105 5.00 LEACHATE	24/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2133734	BH105 13.00 LEACHATE	24/02/23	GJ 250ml x2, GJ 60ml, PT 1L		
2133735	BH105 5.00 LEACHATE	24/02/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

APPENDIX 5
WASTE ASSESSMENT

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

a) understand the origin of the waste
b) select the correct List of Waste code(s)
c) confirm that the list of determinands, results and sampling plan are fit for purpose
d) select and justify the chosen metal species (Appendix B)
e) correctly apply moisture correction and other available corrections
f) add the meta data for their user-defined substances (Appendix A)
g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

W2WJJ-C0NQ9-EV84D

Job name

Wrexham Football Club Kop Stand

Description/Comments

The site is being redeveloped and this will aid the offsite disposal of material during the redevelopment. The majority will likely stay on site unless determined unacceptable as a risk to human health.
Waste is likely only be limited from arising from the CFA piles and excavation of foundations with other earths limited.

Project

1620012485

Site

Wrexham FC - Kop Stand

Classified by

Name:
Rob Hodgson
Date:
05 Apr 2023 08:45 GMT
Telephone:
029 2054 3550

Company:
Ramboll UK Ltd
8 Village Way
Tongwynlais
Cardiff
CF15 7NE

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification: -

Course	Date
Hazardous Waste Classification	-

Purpose of classification

7 - Disposal of Waste

Address of the waste

Racecourse Ground, Mold Rd, Wrexham **Post Code** LL11 2AH

SIC for the process giving rise to the waste

41201 Construction of commercial buildings

Description of industry/producer giving rise to the waste

Redevelopment of sports stadium

Description of the specific process, sub-process and/or activity that created the waste

Waste is likely only be limited from arising from the continuous flight auger piles and excavation of foundations.

Description of the waste

Made Ground tbc

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP100[5]	0.05	Non Hazardous		3
2	TP100[6]	1.2	Non Hazardous		6
3	TP101[5]	0.25	Non Hazardous		8
4	TP101[6]	0.9	Non Hazardous		11
5	TP102[5]	0.5	Non Hazardous		13
6	TP102[6]	0.7	Non Hazardous		16
7	TP103[5]	0.2	Non Hazardous		19
8	TP103[6]	0.4	Hazardous	HP 14	22
9	TP104[5]	0.25	Non Hazardous		25
10	TP104[6]	1.5	Hazardous	HP 7, HP 11	28
11	BH106[11]	0.2	Non Hazardous		31
12	BH106[12]	2	Non Hazardous		33
13	BH106[13]	3	Non Hazardous		35
14	BH106[14]	5	Non Hazardous		37
15	BH106[15]	16	Non Hazardous		39
16	BH104[7]	5	Non Hazardous		41
17	BH105[7]	0.2	Non Hazardous		43
18	BH105[8]	1	Non Hazardous		45
19	BH104[8]	0.2	Non Hazardous		47
20	BH104[9]	2	Non Hazardous		50
21	BH100[3]	0.15	Non Hazardous		52
22	BH100[4]	0.4	Non Hazardous		54
23	BH100[5]	1	Non Hazardous		57
24	BH100[6]	3	Non Hazardous		60
25	BH101	0.2	Non Hazardous		63
26	BH101[2]	0.5	Non Hazardous		66
27	BH101[3]	1	Non Hazardous		69
28	BH101[4]	2	Non Hazardous		72
29	BH101[5]	4	Non Hazardous		75
30	BH101[6]	6	Non Hazardous		78
31	BH102	0.1	Non Hazardous		81
32	BH102[2]	0.5	Non Hazardous		84
33	BH102[3]	1	Non Hazardous		87
34	BH102[4]	3	Non Hazardous		90
35	BH102[5]	5	Non Hazardous		93
36	IP100	0.3	Non Hazardous		96
37	IP100[2]	0.8	Non Hazardous		99
38	IP100[3]	1.2	Non Hazardous		102
39	IP101	0.2	Non Hazardous		105
40	IP101[2]	1	Non Hazardous		108
41	IP101[3]	1.2	Non Hazardous		111

Related documents

#	Name	Description
1	Ramboll Suite B, asbestos +barium	waste stream template used to create this Job

Report

Created by: Rob Hodgson

Created date: 05 Apr 2023 08:45 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	114
Appendix B: Rationale for selection of metal species	116
Appendix C: Version	116

Classification of sample: TP100[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP100[5]
Sample Depth:
0.05 m
Moisture content:
9.3%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.3% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		10.2	pH		10.2	pH	10.2 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.3	mg/kg	1.32	10.026	mg/kg	0.001 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<0.2	mg/kg	5.719	<1.144	mg/kg	<0.000114 %		<**LOD**
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.314	mg/kg	0.0000314 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		440	mg/kg	1.462	588.366	mg/kg	0.0588 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		30	mg/kg	1.126	30.903	mg/kg	0.00309 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	95	mg/kg		86.917	mg/kg	0.00869 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.09	mg/kg	1.353	0.111	mg/kg	0.0000111 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		22	mg/kg	1.273	25.615	mg/kg	0.00256 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1.1	mg/kg	1.405	1.414	mg/kg	0.000141 %	✓	
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		77	mg/kg	2.469	173.958	mg/kg	0.0174 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }									
		006-007-00-5									
14		TPH (C6 to C40) petroleum group				390 mg/kg		356.816 mg/kg	0.0357 %	✓	
				TPH							
15		confirm TPH has NOT arisen from diesel or petrol				☑					
16		naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3							
17		acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8							
18		acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9							
19		fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7							
20		phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8							
21		anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7							
22		fluoranthene				0.2 mg/kg		0.183 mg/kg	0.0000183 %	✓	
			205-912-4	206-44-0							
23		pyrene				0.5 mg/kg		0.457 mg/kg	0.0000457 %	✓	
			204-927-3	129-00-0							
24		benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3							
25		chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9							
26		benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2							
27		benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9							
28		benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8							
29		indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5							
30		dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3							
31		benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2							
32		asbestos				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5							
								Total:	0.128 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0357%)

Classification of sample: TP100[6]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP100[6]
Sample Depth:
1.2 m
Moisture content:
7.9%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.9% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.8	pH		7.8	pH	7.8 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	14.684	mg/kg	0.00147 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<0.2	mg/kg	5.719	<1.144	mg/kg	<0.000114 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.318	mg/kg	0.0000318 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		18	mg/kg	1.462	24.382	mg/kg	0.00244 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<LOD
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		26	mg/kg	1.126	27.13	mg/kg	0.00271 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	59	mg/kg		54.68	mg/kg	0.00547 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		23	mg/kg	1.273	27.127	mg/kg	0.00271 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<LOD
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		73	mg/kg	2.469	167.061	mg/kg	0.0167 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }											
		006-007-00-5											
14		TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
				TPH									
15		confirm TPH has NOT arisen from diesel or petrol				☑							
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
20		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-581-5	85-01-8									
21		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
22		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-912-4	206-44-0									
23		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-927-3	129-00-0									
24		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
32		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0331 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP101[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP101[5]
Sample Depth:
0.25 m
Moisture content:
8%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		9.9	pH		9.9	pH	9.9 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5.7	mg/kg	1.32	6.968	mg/kg	0.000697 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3	mg/kg	5.719	1.589	mg/kg	0.000159 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6	mg/kg	1.142	0.635	mg/kg	0.0000635 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		16	mg/kg	1.462	21.653	mg/kg	0.00217 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		22	mg/kg	1.126	22.935	mg/kg	0.00229 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	120	mg/kg		111.111	mg/kg	0.0111 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.08	mg/kg	1.353	0.1	mg/kg	0.00001 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		9.6	mg/kg	1.273	11.312	mg/kg	0.00113 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		120	mg/kg	2.469	274.366	mg/kg	0.0274 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }											
		006-007-00-5											
14	●	TPH (C6 to C40) petroleum group				140	mg/kg		129.63	mg/kg	0.013 %	✓	
				TPH									
15	●	confirm TPH has NOT arisen from diesel or petrol				☑							
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
17	●	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
18	●	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
19	●	fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
20	●	phenanthrene				0.2	mg/kg		0.185	mg/kg	0.0000185 %	✓	
			201-581-5	85-01-8									
21	●	anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
22	●	fluoranthene				0.4	mg/kg		0.37	mg/kg	0.000037 %	✓	
			205-912-4	206-44-0									
23	●	pyrene				0.4	mg/kg		0.37	mg/kg	0.000037 %	✓	
			204-927-3	129-00-0									
24		benzo[a]anthracene				0.1	mg/kg		0.0926	mg/kg	0.00000926 %	✓	
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				0.2	mg/kg		0.185	mg/kg	0.0000185 %	✓	
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
29	●	indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
31	●	benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
32		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0585 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.013%)

Classification of sample: TP101[6]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP101[6]
Sample Depth:
0.9 m
Moisture content:
8.2%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.2% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8	pH		8	pH	8pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	14.643	mg/kg	0.00146 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<0.2	mg/kg	5.719	<1.144	mg/kg	<0.000114 %		<**LOD**
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1	mg/kg	1.142	1.056	mg/kg	0.000106 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		18	mg/kg	1.462	24.314	mg/kg	0.00243 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		25	mg/kg	1.126	26.014	mg/kg	0.0026 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	90	mg/kg		83.179	mg/kg	0.00832 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.06	mg/kg	1.353	0.0751	mg/kg	0.00000751 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		22	mg/kg	1.273	25.875	mg/kg	0.00259 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		93	mg/kg	2.469	212.241	mg/kg	0.0212 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5									
14		TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
15		confirm TPH has NOT arisen from diesel or petrol					☑					
16		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17		acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18		acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19		fluorene		201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20		phenanthrene		201-581-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21		anthracene		204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22		fluoranthene		205-912-4	206-44-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23		pyrene		204-927-3	129-00-0		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
29		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
30		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
31		benzo[ghi]perylene		205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
32		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
									Total:	0.0403 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP102[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP102[5]
Sample Depth:
0.5 m
Moisture content:
13%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.2	pH		8.2	pH	8.2 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	14.021	mg/kg	0.0014 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.7	mg/kg	5.719	3.543	mg/kg	0.000354 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		5.6	mg/kg	1.142	5.661	mg/kg	0.000566 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		16	mg/kg	1.462	20.695	mg/kg	0.00207 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		60	mg/kg	1.126	59.782	mg/kg	0.00598 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	200	mg/kg		176.991	mg/kg	0.0177 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.18	mg/kg	1.353	0.216	mg/kg	0.0000216 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		16	mg/kg	1.273	18.019	mg/kg	0.0018 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		940	mg/kg	2.469	2054.105	mg/kg	0.205 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					0.8	mg/kg	1.884	1.334	mg/kg	0.000133 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5											
14	●	TPH (C6 to C40) petroleum group			TPH		180	mg/kg		159.292	mg/kg	0.0159 %	✓	
15	●	confirm TPH has NOT arisen from diesel or petrol					☑							
16		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
17	●	acenaphthylene		205-917-1	208-96-8		0.1	mg/kg		0.0885	mg/kg	0.00000885 %	✓	
18	●	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
19	●	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
20	●	phenanthrene		201-581-5	85-01-8		0.4	mg/kg		0.354	mg/kg	0.0000354 %	✓	
21	●	anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
22	●	fluoranthene		205-912-4	206-44-0		1	mg/kg		0.885	mg/kg	0.0000885 %	✓	
23	●	pyrene		204-927-3	129-00-0		1	mg/kg		0.885	mg/kg	0.0000885 %	✓	
24		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.6	mg/kg		0.531	mg/kg	0.0000531 %	✓	
25		chrysene	601-048-00-0	205-923-4	218-01-9		0.6	mg/kg		0.531	mg/kg	0.0000531 %	✓	
26		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.4	mg/kg		0.354	mg/kg	0.0000354 %	✓	
27		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.2	mg/kg		0.177	mg/kg	0.0000177 %	✓	
28		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.6	mg/kg		0.531	mg/kg	0.0000531 %	✓	
29	●	indeno[123-cd]pyrene		205-893-2	193-39-5		0.5	mg/kg		0.442	mg/kg	0.0000442 %	✓	
30		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.2	mg/kg		0.177	mg/kg	0.0000177 %	✓	
31	●	benzo[ghi]perylene		205-883-8	191-24-2		0.4	mg/kg		0.354	mg/kg	0.0000354 %	✓	
32		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
											Total:	0.252 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0159%)

Classification of sample: TP102[6]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP102[6]
Sample Depth:
0.7 m
Moisture content:
20%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 20% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		6.7	pH		6.7	pH	6.7 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		15	mg/kg	1.32	16.504	mg/kg	0.00165 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		1.9	mg/kg	5.719	9.055	mg/kg	0.000906 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1.2	mg/kg	1.142	1.142	mg/kg	0.000114 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		16	mg/kg	1.462	19.487	mg/kg	0.00195 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		51	mg/kg	1.126	47.85	mg/kg	0.00479 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	250	mg/kg		208.333	mg/kg	0.0208 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.35	mg/kg	1.353	0.395	mg/kg	0.0000395 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		19	mg/kg	1.273	20.149	mg/kg	0.00201 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		300	mg/kg	2.469	617.324	mg/kg	0.0617 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					0.3	mg/kg	1.884	0.471	mg/kg	0.0000471 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }											
		006-007-00-5											
14	●	TPH (C6 to C40) petroleum group				89	mg/kg		74.167	mg/kg	0.00742 %	✓	
				TPH									
15	●	confirm TPH has NOT arisen from diesel or petrol				☑							
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
17	●	acenaphthylene				0.2	mg/kg		0.167	mg/kg	0.0000167 %	✓	
			205-917-1	208-96-8									
18	●	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
19	●	fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
20	●	phenanthrene				0.8	mg/kg		0.667	mg/kg	0.0000667 %	✓	
			201-581-5	85-01-8									
21	●	anthracene				0.3	mg/kg		0.25	mg/kg	0.000025 %	✓	
			204-371-1	120-12-7									
22	●	fluoranthene				2	mg/kg		1.667	mg/kg	0.000167 %	✓	
			205-912-4	206-44-0									
23	●	pyrene				2.1	mg/kg		1.75	mg/kg	0.000175 %	✓	
			204-927-3	129-00-0									
24		benzo[a]anthracene				1.1	mg/kg		0.917	mg/kg	0.0000917 %	✓	
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				1.1	mg/kg		0.917	mg/kg	0.0000917 %	✓	
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				0.7	mg/kg		0.583	mg/kg	0.0000583 %	✓	
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				0.4	mg/kg		0.333	mg/kg	0.0000333 %	✓	
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				1.3	mg/kg		1.083	mg/kg	0.000108 %	✓	
		601-032-00-3	200-028-5	50-32-8									
29	●	indeno[123-cd]pyrene				0.8	mg/kg		0.667	mg/kg	0.0000667 %	✓	
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
31	●	benzo[ghi]perylene				0.7	mg/kg		0.583	mg/kg	0.0000583 %	✓	
			205-883-8	191-24-2									
32		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.103 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00742%)

Classification of sample: TP103[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP103[5]
Sample Depth:
0.2 m
Moisture content:
7.7%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.7% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		10.9	pH		10.9	pH	10.9 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.4	mg/kg	1.32	9.072	mg/kg	0.000907 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.8	mg/kg	5.719	4.248	mg/kg	0.000425 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.9	mg/kg	1.142	0.955	mg/kg	0.0000955 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		28	mg/kg	1.462	37.998	mg/kg	0.0038 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		28	mg/kg	1.126	29.271	mg/kg	0.00293 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	78	mg/kg		72.423	mg/kg	0.00724 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.08	mg/kg	1.353	0.101	mg/kg	0.0000101 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		15	mg/kg	1.273	17.724	mg/kg	0.00177 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		180	mg/kg	2.469	412.696	mg/kg	0.0413 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					0.1	mg/kg	1.884	0.175	mg/kg	0.0000175 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }											
		006-007-00-5											
14	●	TPH (C6 to C40) petroleum group				450	mg/kg		417.827	mg/kg	0.0418 %	✓	
				TPH									
15	●	confirm TPH has NOT arisen from diesel or petrol				☑							
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17	●	acenaphthylene				0.1	mg/kg		0.0929	mg/kg	0.00000929 %	✓	
			205-917-1	208-96-8									
18	●	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19	●	fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
20	●	phenanthrene				0.4	mg/kg		0.371	mg/kg	0.0000371 %	✓	
			201-581-5	85-01-8									
21	●	anthracene				0.1	mg/kg		0.0929	mg/kg	0.00000929 %	✓	
			204-371-1	120-12-7									
22	●	fluoranthene				1	mg/kg		0.929	mg/kg	0.0000929 %	✓	
			205-912-4	206-44-0									
23	●	pyrene				1.1	mg/kg		1.021	mg/kg	0.000102 %	✓	
			204-927-3	129-00-0									
24		benzo[a]anthracene				0.7	mg/kg		0.65	mg/kg	0.000065 %	✓	
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				0.7	mg/kg		0.65	mg/kg	0.000065 %	✓	
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				0.4	mg/kg		0.371	mg/kg	0.0000371 %	✓	
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				0.3	mg/kg		0.279	mg/kg	0.0000279 %	✓	
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				0.7	mg/kg		0.65	mg/kg	0.000065 %	✓	
		601-032-00-3	200-028-5	50-32-8									
29	●	indeno[123-cd]pyrene				0.4	mg/kg		0.371	mg/kg	0.0000371 %	✓	
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31	●	benzo[ghi]perylene				0.4	mg/kg		0.371	mg/kg	0.0000371 %	✓	
			205-883-8	191-24-2									
32		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.101 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0418%)

Classification of sample: TP103[6]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:
TP103[6]
Sample Depth:
0.4 m
Moisture content:
16%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinand:

zinc sulphate: (compound conc.: 0.319%)

Determinands

Moisture content: 16% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.1 pH		7.1 pH	7.1 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		16 mg/kg	1.32	18.211 mg/kg	0.00182 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		1.8 mg/kg	5.719	8.875 mg/kg	0.000887 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.5 mg/kg	1.142	2.462 mg/kg	0.000246 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		20 mg/kg	1.462	25.199 mg/kg	0.00252 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		57 mg/kg	1.126	55.324 mg/kg	0.00553 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	240 mg/kg		206.897 mg/kg	0.0207 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.76 mg/kg	1.353	0.887 mg/kg	0.0000887 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		23 mg/kg	1.273	25.232 mg/kg	0.00252 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
11		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
		034-002-00-8											
12		zinc { zinc sulphate }				1500	mg/kg	2.469	3193.056	mg/kg	0.319 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				0.9	mg/kg	1.884	1.462	mg/kg	0.000146 %	✓	
		006-007-00-5											
14		TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
				TPH									
15		confirm TPH has NOT arisen from diesel or petrol				☑							
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
17		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
18		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
19		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
20		phenanthrene				0.7	mg/kg		0.603	mg/kg	0.0000603 %	✓	
			201-581-5	85-01-8									
21		anthracene				0.2	mg/kg		0.172	mg/kg	0.0000172 %	✓	
			204-371-1	120-12-7									
22		fluoranthene				1.6	mg/kg		1.379	mg/kg	0.000138 %	✓	
			205-912-4	206-44-0									
23		pyrene				1.6	mg/kg		1.379	mg/kg	0.000138 %	✓	
			204-927-3	129-00-0									
24		benzo[a]anthracene				1.2	mg/kg		1.034	mg/kg	0.000103 %	✓	
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				1.1	mg/kg		0.948	mg/kg	0.0000948 %	✓	
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				0.8	mg/kg		0.69	mg/kg	0.000069 %	✓	
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				0.5	mg/kg		0.431	mg/kg	0.0000431 %	✓	
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				1.2	mg/kg		1.034	mg/kg	0.000103 %	✓	
		601-032-00-3	200-028-5	50-32-8									
29		indeno[123-cd]pyrene				0.7	mg/kg		0.603	mg/kg	0.0000603 %	✓	
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				0.1	mg/kg		0.0862	mg/kg	0.00000862 %	✓	
		601-041-00-2	200-181-8	53-70-3									
31		benzo[ghi]perylene				0.7	mg/kg		0.603	mg/kg	0.0000603 %	✓	
			205-883-8	191-24-2									
32		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.356 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP104[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
TP104[5]
Sample Depth:
0.25 m
Moisture content:
11%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		9.5	pH		9.5	pH	9.5 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10	mg/kg	1.32	11.895	mg/kg	0.00119 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3	mg/kg	5.719	1.546	mg/kg	0.000155 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4	mg/kg	1.142	0.412	mg/kg	0.0000412 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		20	mg/kg	1.462	26.334	mg/kg	0.00263 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		32	mg/kg	1.126	32.458	mg/kg	0.00325 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	150	mg/kg		135.135	mg/kg	0.0135 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.8	mg/kg	1.353	0.975	mg/kg	0.0000975 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		18	mg/kg	1.273	20.637	mg/kg	0.00206 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		410	mg/kg	2.469	912.082	mg/kg	0.0912 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					0.3	mg/kg	1.884	0.509	mg/kg	0.0000509 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }											
		006-007-00-5											
14	●	TPH (C6 to C40) petroleum group				300	mg/kg		270.27	mg/kg	0.027 %	✓	
				TPH									
15	●	confirm TPH has NOT arisen from diesel or petrol				☑							
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
17	●	acenaphthylene				0.2	mg/kg		0.18	mg/kg	0.000018 %	✓	
			205-917-1	208-96-8									
18	●	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
19	●	fluorene				0.4	mg/kg		0.36	mg/kg	0.000036 %	✓	
			201-695-5	86-73-7									
20	●	phenanthrene				0.4	mg/kg		0.36	mg/kg	0.000036 %	✓	
			201-581-5	85-01-8									
21	●	anthracene				0.1	mg/kg		0.0901	mg/kg	0.00000901 %	✓	
			204-371-1	120-12-7									
22	●	fluoranthene				1.1	mg/kg		0.991	mg/kg	0.0000991 %	✓	
			205-912-4	206-44-0									
23	●	pyrene				1.3	mg/kg		1.171	mg/kg	0.000117 %	✓	
			204-927-3	129-00-0									
24		benzo[a]anthracene				1.2	mg/kg		1.081	mg/kg	0.000108 %	✓	
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				3.2	mg/kg		2.883	mg/kg	0.000288 %	✓	
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				0.8	mg/kg		0.721	mg/kg	0.0000721 %	✓	
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				0.5	mg/kg		0.45	mg/kg	0.000045 %	✓	
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				1	mg/kg		0.901	mg/kg	0.0000901 %	✓	
		601-032-00-3	200-028-5	50-32-8									
29	●	indeno[123-cd]pyrene				0.7	mg/kg		0.631	mg/kg	0.0000631 %	✓	
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
31	●	benzo[ghi]perylene				1.1	mg/kg		0.991	mg/kg	0.0000991 %	✓	
			205-883-8	191-24-2									
32		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.143 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.027%)

Classification of sample: TP104[6]

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:
TP104[6]
Sample Depth:
1.5 m
Moisture content:
11%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.216%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.216%)

Determinands

Moisture content: 11% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.5	pH		7.5	pH	7.5 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13	mg/kg	1.32	15.463	mg/kg	0.00155 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.7	mg/kg	5.719	3.607	mg/kg	0.000361 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4	mg/kg	1.142	0.412	mg/kg	0.0000412 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		16	mg/kg	1.462	21.067	mg/kg	0.00211 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		26	mg/kg	1.126	26.372	mg/kg	0.00264 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
8		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	150	mg/kg		135.135	mg/kg	0.0135 %	✓	
9		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.07	mg/kg	1.353	0.0854	mg/kg	0.00000854 %	✓	
10		nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		23	mg/kg	1.273	26.369	mg/kg	0.00264 %	✓	
11		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<LOD
12		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		290	mg/kg	2.469	645.131	mg/kg	0.0645 %	✓	
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<LOD
14		TPH (C6 to C40) petroleum group			TPH		2400	mg/kg		2162.162	mg/kg	0.216 %	✓	
15		confirm TPH has NOT arisen from diesel or petrol					☑							
16		naphthalene	601-052-00-2	202-049-5	91-20-3		0.5	mg/kg		0.45	mg/kg	0.000045 %	✓	
17		acenaphthylene		205-917-1	208-96-8		0.7	mg/kg		0.631	mg/kg	0.0000631 %	✓	
18		acenaphthene		201-469-6	83-32-9		0.1	mg/kg		0.0901	mg/kg	0.00000901 %	✓	
19		fluorene		201-695-5	86-73-7		1	mg/kg		0.901	mg/kg	0.0000901 %	✓	
20		phenanthrene		201-581-5	85-01-8		0.5	mg/kg		0.45	mg/kg	0.000045 %	✓	
21		anthracene		204-371-1	120-12-7		1.8	mg/kg		1.622	mg/kg	0.000162 %	✓	
22		fluoranthene		205-912-4	206-44-0		0.9	mg/kg		0.811	mg/kg	0.0000811 %	✓	
23		pyrene		204-927-3	129-00-0		2	mg/kg		1.802	mg/kg	0.00018 %	✓	
24		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		5.7	mg/kg		5.135	mg/kg	0.000514 %	✓	
25		chrysene	601-048-00-0	205-923-4	218-01-9		5.3	mg/kg		4.775	mg/kg	0.000477 %	✓	
26		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.6	mg/kg		1.441	mg/kg	0.000144 %	✓	
28		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.6	mg/kg		0.541	mg/kg	0.0000541 %	✓	
29		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
30		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
31		benzo[ghi]perylene		205-883-8	191-24-2		0.4	mg/kg		0.36	mg/kg	0.000036 %	✓	
32		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
				77536-66-4 77536-68-6 77536-67-5 12001-29-5							
								Total:	0.306 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.216%)

Classification of sample: BH106[11]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH106[11]
Sample Depth:
0.2 m
Moisture content:
10%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		9.4	pH		9.4	pH	9.4 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11	mg/kg	1.32	13.203	mg/kg	0.00132 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.4	mg/kg	5.719	2.08	mg/kg	0.000208 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5	mg/kg	1.142	0.519	mg/kg	0.0000519 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		37	mg/kg	1.462	49.161	mg/kg	0.00492 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		39	mg/kg	1.126	39.918	mg/kg	0.00399 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	110	mg/kg		100	mg/kg	0.01 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.22	mg/kg	1.353	0.271	mg/kg	0.0000271 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		20	mg/kg	1.273	23.138	mg/kg	0.00231 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.7	mg/kg	1.405	0.894	mg/kg	0.0000894 %	✓	
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		200	mg/kg	2.469	448.963	mg/kg	0.0449 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					0.2	mg/kg	1.884	0.343	mg/kg	0.0000343 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5											
14		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
15		confirm TPH has NOT arisen from diesel or petrol					☑							
16		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
17		acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
18		acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
19		fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
20		phenanthrene		201-581-5	85-01-8		0.4	mg/kg		0.364	mg/kg	0.0000364 %	✓	
21		anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
22		fluoranthene		205-912-4	206-44-0		0.8	mg/kg		0.727	mg/kg	0.0000727 %	✓	
23		pyrene		204-927-3	129-00-0		0.8	mg/kg		0.727	mg/kg	0.0000727 %	✓	
24		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.6	mg/kg		0.545	mg/kg	0.0000545 %	✓	
25		chrysene	601-048-00-0	205-923-4	218-01-9		0.5	mg/kg		0.455	mg/kg	0.0000455 %	✓	
26		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.3	mg/kg		0.273	mg/kg	0.0000273 %	✓	
27		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.2	mg/kg		0.182	mg/kg	0.0000182 %	✓	
28		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.5	mg/kg		0.455	mg/kg	0.0000455 %	✓	
29		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
30		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
31		benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
32		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
											Total:	0.0695 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH106[12]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH106[12]
Sample Depth:
2 m
Moisture content:
15%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 15% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.3	pH		8.3	pH	8.3 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13	mg/kg	1.32	14.925	mg/kg	0.00149 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.8	mg/kg	5.719	3.979	mg/kg	0.000398 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4	mg/kg	1.142	0.397	mg/kg	0.0000397 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		19	mg/kg	1.462	24.147	mg/kg	0.00241 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		34	mg/kg	1.126	33.287	mg/kg	0.00333 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	95	mg/kg		82.609	mg/kg	0.00826 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.11	mg/kg	1.353	0.129	mg/kg	0.0000129 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		20	mg/kg	1.273	22.132	mg/kg	0.00221 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		140	mg/kg	2.469	300.61	mg/kg	0.0301 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					0.3	mg/kg	1.884	0.491	mg/kg	0.0000491 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }											
		006-007-00-5											
14	●	TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
				TPH									
15	●	confirm TPH has NOT arisen from diesel or petrol				☑							
16		naphthalene				0.1	mg/kg		0.087	mg/kg	0.0000087 %	✓	
		601-052-00-2	202-049-5	91-20-3									
17	●	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
18	●	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
19	●	fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
20	●	phenanthrene				0.2	mg/kg		0.174	mg/kg	0.0000174 %	✓	
			201-581-5	85-01-8									
21	●	anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
22	●	fluoranthene				0.4	mg/kg		0.348	mg/kg	0.0000348 %	✓	
			205-912-4	206-44-0									
23	●	pyrene				0.5	mg/kg		0.435	mg/kg	0.0000435 %	✓	
			204-927-3	129-00-0									
24		benzo[a]anthracene				0.4	mg/kg		0.348	mg/kg	0.0000348 %	✓	
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				0.2	mg/kg		0.174	mg/kg	0.0000174 %	✓	
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				0.2	mg/kg		0.174	mg/kg	0.0000174 %	✓	
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				0.1	mg/kg		0.087	mg/kg	0.0000087 %	✓	
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				0.3	mg/kg		0.261	mg/kg	0.0000261 %	✓	
		601-032-00-3	200-028-5	50-32-8									
29	●	indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
31	●	benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
32		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0498 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH106[13]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH106[13]
Sample Depth:
3 m
Moisture content:
12%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.1 pH		8.1 pH	8.1 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12 mg/kg	1.32	14.146 mg/kg	0.00141 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3 mg/kg	5.719	1.532 mg/kg	0.000153 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.408 mg/kg	0.0000408 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		18 mg/kg	1.462	23.489 mg/kg	0.00235 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		25 mg/kg	1.126	25.131 mg/kg	0.00251 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	56 mg/kg		50 mg/kg	0.005 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<**LOD**
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		21 mg/kg	1.273	23.861 mg/kg	0.00239 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5 mg/kg	1.405	<0.703 mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		84 mg/kg	2.469	185.197 mg/kg	0.0185 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5											
14	●	TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
15	●	confirm TPH has NOT arisen from diesel or petrol					☑							
16		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
17	●	acenaphthylene		205-917-1	208-96-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
18	●	acenaphthene		201-469-6	83-32-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
19	●	fluorene		201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
20	●	phenanthrene		201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
21	●	anthracene		204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
22	●	fluoranthene		205-912-4	206-44-0		0.2	mg/kg		0.179	mg/kg	0.0000179 %	✓	
23	●	pyrene		204-927-3	129-00-0		0.2	mg/kg		0.179	mg/kg	0.0000179 %	✓	
24		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
25		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
26		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
28		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
29	●	indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
30		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
31	●	benzo[ghi]perylene		205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
											Total:	0.0338 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH106[14]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH106[14]
Sample Depth:
5 m
Moisture content:
6.9%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 6.9% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.5	pH		8.5	pH	8.5 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.9	mg/kg	1.32	12.228	mg/kg	0.00122 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3	mg/kg	5.719	1.605	mg/kg	0.000161 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5	mg/kg	1.142	0.534	mg/kg	0.0000534 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		13	mg/kg	1.462	17.774	mg/kg	0.00178 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		23	mg/kg	1.126	24.224	mg/kg	0.00242 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	46	mg/kg		43.031	mg/kg	0.0043 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		20	mg/kg	1.273	23.809	mg/kg	0.00238 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		95	mg/kg	2.469	219.442	mg/kg	0.0219 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }									
		006-007-00-5									
14		confirm TPH has NOT arisen from diesel or petrol				☑					
								Total:	0.0346 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH106[15]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH106[15]
Sample Depth:
16 m
Moisture content:
16%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 16% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.8	pH		8.8	pH	8.8 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3.7	mg/kg	1.32	4.211	mg/kg	0.000421 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<0.2	mg/kg	5.719	<1.144	mg/kg	<0.000114 %		<**LOD**
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.1	mg/kg	1.142	0.0985	mg/kg	0.00000985 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		6.2	mg/kg	1.462	7.812	mg/kg	0.000781 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		10	mg/kg	1.126	9.706	mg/kg	0.000971 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	12	mg/kg		10.345	mg/kg	0.00103 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		7.2	mg/kg	1.273	7.899	mg/kg	0.00079 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		23	mg/kg	2.469	48.96	mg/kg	0.0049 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }									
		006-007-00-5									
14		confirm TPH has NOT arisen from diesel or petrol				☑					
								Total:	0.00931 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH104[7]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH104[7]
Sample Depth:
5 m
Moisture content:
9.5%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.5% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.3	pH		8.3	pH	8.3 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10	mg/kg	1.32	12.058	mg/kg	0.00121 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.4	mg/kg	5.719	2.089	mg/kg	0.000209 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6	mg/kg	1.142	0.626	mg/kg	0.0000626 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		14	mg/kg	1.462	18.687	mg/kg	0.00187 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		34	mg/kg	1.126	34.959	mg/kg	0.0035 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	52	mg/kg		47.489	mg/kg	0.00475 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		20	mg/kg	1.273	23.244	mg/kg	0.00232 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.5	mg/kg	1.405	0.642	mg/kg	0.0000642 %	✓	
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		99	mg/kg	2.469	223.251	mg/kg	0.0223 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }									
		006-007-00-5									
14		confirm TPH has NOT arisen from diesel or petrol				☑					
								Total:	0.0365 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH105[7]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH105[7]
Sample Depth:
0.2 m
Moisture content:
13%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8	pH		8	pH	8pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	14.021	mg/kg	0.0014 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.8	mg/kg	5.719	4.049	mg/kg	0.000405 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6	mg/kg	1.142	0.607	mg/kg	0.0000607 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		46	mg/kg	1.462	59.497	mg/kg	0.00595 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		42	mg/kg	1.126	41.847	mg/kg	0.00418 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	590	mg/kg		522.124	mg/kg	0.0522 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.16	mg/kg	1.353	0.192	mg/kg	0.0000192 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		17	mg/kg	1.273	19.145	mg/kg	0.00191 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.8	mg/kg	1.405	0.995	mg/kg	0.0000995 %	✓	
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		150	mg/kg	2.469	327.783	mg/kg	0.0328 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					0.3	mg/kg	1.884	0.5	mg/kg	0.00005 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }											
		006-007-00-5											
14	●	TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
				TPH									
15	●	confirm TPH has NOT arisen from diesel or petrol				☑							
16		naphthalene				0.1	mg/kg		0.0885	mg/kg	0.00000885 %	✓	
		601-052-00-2	202-049-5	91-20-3									
17	●	acenaphthylene				0.6	mg/kg		0.531	mg/kg	0.0000531 %	✓	
			205-917-1	208-96-8									
18	●	acenaphthene				0.2	mg/kg		0.177	mg/kg	0.0000177 %	✓	
			201-469-6	83-32-9									
19	●	fluorene				0.4	mg/kg		0.354	mg/kg	0.0000354 %	✓	
			201-695-5	86-73-7									
20	●	phenanthrene				2.5	mg/kg		2.212	mg/kg	0.000221 %	✓	
			201-581-5	85-01-8									
21	●	anthracene				0.8	mg/kg		0.708	mg/kg	0.0000708 %	✓	
			204-371-1	120-12-7									
22	●	fluoranthene				4.5	mg/kg		3.982	mg/kg	0.000398 %	✓	
			205-912-4	206-44-0									
23	●	pyrene				4.3	mg/kg		3.805	mg/kg	0.000381 %	✓	
			204-927-3	129-00-0									
24		benzo[a]anthracene				3	mg/kg		2.655	mg/kg	0.000265 %	✓	
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				2.5	mg/kg		2.212	mg/kg	0.000221 %	✓	
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				1.7	mg/kg		1.504	mg/kg	0.00015 %	✓	
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				1.2	mg/kg		1.062	mg/kg	0.000106 %	✓	
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				2.8	mg/kg		2.478	mg/kg	0.000248 %	✓	
		601-032-00-3	200-028-5	50-32-8									
29	●	indeno[123-cd]pyrene				1.8	mg/kg		1.593	mg/kg	0.000159 %	✓	
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				0.2	mg/kg		0.177	mg/kg	0.0000177 %	✓	
		601-041-00-2	200-181-8	53-70-3									
31	●	benzo[ghi]perylene				2.2	mg/kg		1.947	mg/kg	0.000195 %	✓	
			205-883-8	191-24-2									
32		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.103 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH105[8]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH105[8]
Sample Depth:
1 m
Moisture content:
10%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.4	pH		8.4	pH	8.4 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	14.404	mg/kg	0.00144 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3	mg/kg	5.719	1.56	mg/kg	0.000156 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5	mg/kg	1.142	0.519	mg/kg	0.0000519 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		220	mg/kg	1.462	292.311	mg/kg	0.0292 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		59	mg/kg	1.126	60.389	mg/kg	0.00604 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	120	mg/kg		109.091	mg/kg	0.0109 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.13	mg/kg	1.353	0.16	mg/kg	0.000016 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		22	mg/kg	1.273	25.452	mg/kg	0.00255 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1.1	mg/kg	1.405	1.405	mg/kg	0.000141 %	✓	
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		130	mg/kg	2.469	291.826	mg/kg	0.0292 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					0.2	mg/kg	1.884	0.343	mg/kg	0.0000343 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5									
14		TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
15		confirm TPH has NOT arisen from diesel or petrol					☑					
16		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
17		acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18		acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
19		fluorene		201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20		phenanthrene		201-581-5	85-01-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21		anthracene		204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22		fluoranthene		205-912-4	206-44-0		0.3 mg/kg		0.273 mg/kg	0.0000273 %	✓	
23		pyrene		204-927-3	129-00-0		0.4 mg/kg		0.364 mg/kg	0.0000364 %	✓	
24		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25		chrysene	601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
29		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
30		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
31		benzo[ghi]perylene		205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
32		asbestos	650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
									Total:	0.0811 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH104[8]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH104[8]
Sample Depth:
0.2 m
Moisture content:
15%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 15% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		9	pH		9	pH	9pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13	mg/kg	1.32	14.925	mg/kg	0.00149 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.4	mg/kg	5.719	1.989	mg/kg	0.000199 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		2.9	mg/kg	1.142	2.881	mg/kg	0.000288 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		17	mg/kg	1.462	21.606	mg/kg	0.00216 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		93	mg/kg	1.126	91.05	mg/kg	0.00911 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	1300	mg/kg		1130.435	mg/kg	0.113 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1.1	mg/kg	1.353	1.295	mg/kg	0.000129 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		20	mg/kg	1.273	22.132	mg/kg	0.00221 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		520	mg/kg	2.469	1116.551	mg/kg	0.112 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					4.1	mg/kg	1.884	6.717	mg/kg	0.000672 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }											
		006-007-00-5											
14	●	TPH (C6 to C40) petroleum group				13.93	mg/kg		12.113	mg/kg	0.00121 %	✓	
				TPH									
15	●	confirm TPH has NOT arisen from diesel or petrol				☑							
16		naphthalene				0.1	mg/kg		0.087	mg/kg	0.0000087 %	✓	
		601-052-00-2	202-049-5	91-20-3									
17	●	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
18	●	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
19	●	fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
20	●	phenanthrene				0.4	mg/kg		0.348	mg/kg	0.0000348 %	✓	
			201-581-5	85-01-8									
21	●	anthracene				0.2	mg/kg		0.174	mg/kg	0.0000174 %	✓	
			204-371-1	120-12-7									
22	●	fluoranthene				1.7	mg/kg		1.478	mg/kg	0.000148 %	✓	
			205-912-4	206-44-0									
23	●	pyrene				1.9	mg/kg		1.652	mg/kg	0.000165 %	✓	
			204-927-3	129-00-0									
24		benzo[a]anthracene				1	mg/kg		0.87	mg/kg	0.000087 %	✓	
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				1.2	mg/kg		1.043	mg/kg	0.000104 %	✓	
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				0.7	mg/kg		0.609	mg/kg	0.0000609 %	✓	
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				0.5	mg/kg		0.435	mg/kg	0.0000435 %	✓	
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				1.4	mg/kg		1.217	mg/kg	0.000122 %	✓	
		601-032-00-3	200-028-5	50-32-8									
29	●	indeno[123-cd]pyrene				1.1	mg/kg		0.957	mg/kg	0.0000957 %	✓	
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				0.4	mg/kg		0.348	mg/kg	0.0000348 %	✓	
		601-041-00-2	200-181-8	53-70-3									
31	●	benzo[ghi]perylene				0.8	mg/kg		0.696	mg/kg	0.0000696 %	✓	
			205-883-8	191-24-2									
32		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.243 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00121%)

Classification of sample: BH104[9]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH104[9]
Sample Depth:
2 m
Moisture content:
14%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8	pH		8	pH	8pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	13.898	mg/kg	0.00139 %	✓	
3	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		1.1	mg/kg	5.719	5.519	mg/kg	0.000552 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.8	mg/kg	1.142	0.802	mg/kg	0.0000802 %	✓	
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		18	mg/kg	1.462	23.077	mg/kg	0.00231 %	✓	
6	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
7	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		44	mg/kg	1.126	43.455	mg/kg	0.00435 %	✓	
8	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	150	mg/kg		131.579	mg/kg	0.0132 %	✓	
9	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.15	mg/kg	1.353	0.178	mg/kg	0.0000178 %	✓	
10	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		21	mg/kg	1.273	23.442	mg/kg	0.00234 %	✓	
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.5	mg/kg	1.405	0.616	mg/kg	0.0000616 %	✓	
12	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		150	mg/kg	2.469	324.907	mg/kg	0.0325 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides,					11	mg/kg	1.884	18.179	mg/kg	0.00182 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
		ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }											
		006-007-00-5											
14	●	TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
				TPH									
15	●	confirm TPH has NOT arisen from diesel or petrol				☑							
16		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
17	●	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
18	●	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
19	●	fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
20	●	phenanthrene				0.3	mg/kg		0.263	mg/kg	0.0000263 %	✓	
			201-581-5	85-01-8									
21	●	anthracene				0.1	mg/kg		0.0877	mg/kg	0.00000877 %	✓	
			204-371-1	120-12-7									
22	●	fluoranthene				0.8	mg/kg		0.702	mg/kg	0.0000702 %	✓	
			205-912-4	206-44-0									
23	●	pyrene				0.9	mg/kg		0.789	mg/kg	0.0000789 %	✓	
			204-927-3	129-00-0									
24		benzo[a]anthracene				0.5	mg/kg		0.439	mg/kg	0.0000439 %	✓	
		601-033-00-9	200-280-6	56-55-3									
25		chrysene				0.5	mg/kg		0.439	mg/kg	0.0000439 %	✓	
		601-048-00-0	205-923-4	218-01-9									
26		benzo[b]fluoranthene				0.4	mg/kg		0.351	mg/kg	0.0000351 %	✓	
		601-034-00-4	205-911-9	205-99-2									
27		benzo[k]fluoranthene				0.2	mg/kg		0.175	mg/kg	0.0000175 %	✓	
		601-036-00-5	205-916-6	207-08-9									
28		benzo[a]pyrene; benzo[def]chrysene				0.7	mg/kg		0.614	mg/kg	0.0000614 %	✓	
		601-032-00-3	200-028-5	50-32-8									
29	●	indeno[123-cd]pyrene				0.7	mg/kg		0.614	mg/kg	0.0000614 %	✓	
			205-893-2	193-39-5									
30		dibenz[a,h]anthracene				0.3	mg/kg		0.263	mg/kg	0.0000263 %	✓	
		601-041-00-2	200-181-8	53-70-3									
31	●	benzo[ghi]perylene				0.3	mg/kg		0.263	mg/kg	0.0000263 %	✓	
			205-883-8	191-24-2									
32		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0603 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH100[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH100[3]
Sample Depth:
0.15 m
Moisture content:
5.1%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 5.1% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		10.2 pH		10.2 pH	10.2 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		2.6 mg/kg	1.32	3.266 mg/kg	0.000327 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		24 mg/kg	1.117	25.496 mg/kg	0.00255 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<0.2 mg/kg	5.719	<1.144 mg/kg	<0.000114 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5 mg/kg	1.142	0.543 mg/kg	0.0000543 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		54 mg/kg	1.462	75.094 mg/kg	0.00751 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		11 mg/kg	1.126	11.784 mg/kg	0.00118 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	21 mg/kg		19.981 mg/kg	0.002 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		4.8 mg/kg	1.273	5.812 mg/kg	0.000581 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.9 mg/kg	1.405	1.203 mg/kg	0.00012 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		18	mg/kg	1.785	30.574	mg/kg	0.00306 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		61	mg/kg	2.469	143.318	mg/kg	0.0143 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2	mg/kg	1.884	0.359	mg/kg	0.0000359 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		**<LOD**
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
19		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
20		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
21		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
22		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
23		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
24		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
25		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
26		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
27		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
28		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
29		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
30		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
31		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
32		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
33		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
											Total:	0.0331 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH100[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH100[4]
Sample Depth:
0.4 m
Moisture content:
12%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.2	pH		8.2	pH	8.2 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13	mg/kg	1.32	15.325	mg/kg	0.00153 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		150	mg/kg	1.117	149.532	mg/kg	0.015 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<0.2	mg/kg	5.719	<1.144	mg/kg	<0.000114 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.306	mg/kg	0.0000306 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		87	mg/kg	1.462	113.532	mg/kg	0.0114 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		24	mg/kg	1.126	24.126	mg/kg	0.00241 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	22	mg/kg		19.643	mg/kg	0.00196 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.05	mg/kg	1.353	0.0604	mg/kg	0.00000604 %	✓	
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		14	mg/kg	1.273	15.907	mg/kg	0.00159 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1.1	mg/kg	1.405	1.38	mg/kg	0.000138 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		41	mg/kg	1.785	65.351	mg/kg	0.00654 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		55	mg/kg	2.469	121.26	mg/kg	0.0121 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
29		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.0541 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH100[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH100[5]
Sample Depth:
1 m
Moisture content:
8.7%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.7% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7	pH		7	pH	7pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		14	mg/kg	1.32	17.005	mg/kg	0.0017 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		53	mg/kg	1.117	54.439	mg/kg	0.00544 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<0.2	mg/kg	5.719	<1.144	mg/kg	<0.000114 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.315	mg/kg	0.0000315 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25	mg/kg	1.462	33.614	mg/kg	0.00336 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		25	mg/kg	1.126	25.894	mg/kg	0.00259 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	60	mg/kg		55.198	mg/kg	0.00552 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		25	mg/kg	1.273	29.268	mg/kg	0.00293 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		29	mg/kg	1.785	47.627	mg/kg	0.00476 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		87	mg/kg	2.469	197.635	mg/kg	0.0198 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
29		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.0476 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH100[6]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH100[6]
Sample Depth:
3 m
Moisture content:
8.8%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.8% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.8 pH		7.8 pH	7.8 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.7 mg/kg	1.32	10.558 mg/kg	0.00106 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		82 mg/kg	1.117	84.148 mg/kg	0.00841 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<0.2 mg/kg	5.719	<1.144 mg/kg	<0.000114 %		<LOD
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		14 mg/kg	1.462	18.807 mg/kg	0.00188 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		14 mg/kg	1.126	14.488 mg/kg	0.00145 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	17 mg/kg		15.625 mg/kg	0.00156 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		18 mg/kg	1.273	21.054 mg/kg	0.00211 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5 mg/kg	1.405	<0.703 mg/kg	<0.0000703 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		27	mg/kg	1.785	44.301	mg/kg	0.00443 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		68	mg/kg	2.469	154.331	mg/kg	0.0154 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
29		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0.0378 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH101

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH101
Sample Depth:
0.2 m
Moisture content:
11%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		9.4	pH		9.4	pH	9.4 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6.3	mg/kg	1.32	7.494	mg/kg	0.000749 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		86	mg/kg	1.117	86.504	mg/kg	0.00865 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3	mg/kg	5.719	1.546	mg/kg	0.000155 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2	mg/kg	1.142	0.206	mg/kg	0.0000206 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		12	mg/kg	1.462	15.801	mg/kg	0.00158 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		31	mg/kg	1.126	31.444	mg/kg	0.00314 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	20	mg/kg		18.018	mg/kg	0.0018 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		11	mg/kg	1.273	12.611	mg/kg	0.00126 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		18	mg/kg	1.785	28.949	mg/kg	0.00289 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		56	mg/kg	2.469	124.577	mg/kg	0.0125 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2	mg/kg	1.884	0.339	mg/kg	0.0000339 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
29		fluoranthene		205-912-4	206-44-0		0.04	mg/kg		0.036	mg/kg	0.0000036 %	✓	
30		pyrene		204-927-3	129-00-0		0.04	mg/kg		0.036	mg/kg	0.0000036 %	✓	
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.0341 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH101[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH101[2]
Sample Depth:
0.5 m
Moisture content:
13%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.5 pH		7.5 pH	7.5 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6.3 mg/kg	1.32	7.361 mg/kg	0.000736 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		51 mg/kg	1.117	50.391 mg/kg	0.00504 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.5 mg/kg	5.719	2.531 mg/kg	0.000253 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<**LOD**
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		13 mg/kg	1.462	16.814 mg/kg	0.00168 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15 mg/kg	1.126	14.945 mg/kg	0.00149 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	37 mg/kg		32.743 mg/kg	0.00327 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		12 mg/kg	1.273	13.514 mg/kg	0.00135 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5 mg/kg	1.405	<0.703 mg/kg	<0.0000703 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		23	mg/kg	1.785	36.336	mg/kg	0.00363 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		49	mg/kg	2.469	107.076	mg/kg	0.0107 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.3	mg/kg	1.884	0.5	mg/kg	0.00005 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
29		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.0296 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH101[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH101[3]
Sample Depth:
1 m
Moisture content:
9.5%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.5% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.7	pH		7.7	pH	7.7 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	14.469	mg/kg	0.00145 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		51	mg/kg	1.117	52.002	mg/kg	0.0052 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.4	mg/kg	5.719	2.089	mg/kg	0.000209 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.313	mg/kg	0.0000313 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		20	mg/kg	1.462	26.695	mg/kg	0.00267 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		25	mg/kg	1.126	25.705	mg/kg	0.00257 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	90	mg/kg		82.192	mg/kg	0.00822 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		24	mg/kg	1.273	27.892	mg/kg	0.00279 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1.4	mg/kg	1.405	1.796	mg/kg	0.00018 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		24	mg/kg	1.785	39.127	mg/kg	0.00391 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		84	mg/kg	2.469	189.425	mg/kg	0.0189 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2	mg/kg	1.884	0.344	mg/kg	0.0000344 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
29		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.0475 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH101[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH101[4]
Sample Depth:
2 m
Moisture content:
7.1%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.1% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.6 pH		8.6 pH	8.6 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3.2 mg/kg	1.32	3.945 mg/kg	0.000394 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		28 mg/kg	1.117	29.19 mg/kg	0.00292 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.2 mg/kg	5.719	1.068 mg/kg	0.000107 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<**LOD**
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		4.9 mg/kg	1.462	6.687 mg/kg	0.000669 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		5.5 mg/kg	1.126	5.782 mg/kg	0.000578 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	9.8 mg/kg		9.15 mg/kg	0.000915 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		6.1 mg/kg	1.273	7.248 mg/kg	0.000725 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.7 mg/kg	1.405	0.918 mg/kg	0.0000918 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		5	mg/kg	1.785	8.334	mg/kg	0.000833 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		16	mg/kg	2.469	36.89	mg/kg	0.00369 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.1	mg/kg	1.884	0.176	mg/kg	0.0000176 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
29		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0.0122 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH101[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH101[5]
Sample Depth:
4 m
Moisture content:
8.5%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.5% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.2	pH		8.2	pH	8.2 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.6	mg/kg	1.32	9.248	mg/kg	0.000925 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		63	mg/kg	1.117	64.829	mg/kg	0.00648 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3	mg/kg	5.719	1.581	mg/kg	0.000158 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.316	mg/kg	0.0000316 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		9.8	mg/kg	1.462	13.201	mg/kg	0.00132 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15	mg/kg	1.126	15.565	mg/kg	0.00156 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	36	mg/kg		33.18	mg/kg	0.00332 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		13	mg/kg	1.273	15.248	mg/kg	0.00152 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.9	mg/kg	1.405	1.165	mg/kg	0.000117 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		12	mg/kg	1.785	19.744	mg/kg	0.00197 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		60	mg/kg	2.469	136.551	mg/kg	0.0137 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.1	mg/kg	1.884	0.174	mg/kg	0.0000174 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
29		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0.0323 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH101[6]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH101[6]
Sample Depth:
6 m
Moisture content:
10%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 10% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.9	pH		7.9	pH	7.9 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10	mg/kg	1.32	12.003	mg/kg	0.0012 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		110	mg/kg	1.117	111.651	mg/kg	0.0112 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<0.2	mg/kg	5.719	<1.144	mg/kg	<0.000114 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2	mg/kg	1.142	0.208	mg/kg	0.0000208 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		12	mg/kg	1.462	15.944	mg/kg	0.00159 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15	mg/kg	1.126	15.353	mg/kg	0.00154 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	18	mg/kg		16.364	mg/kg	0.00164 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		16	mg/kg	1.273	18.51	mg/kg	0.00185 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				1.1	mg/kg	1.405	1.405	mg/kg	0.000141 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		21	mg/kg	1.785	34.081	mg/kg	0.00341 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		43	mg/kg	2.469	96.527	mg/kg	0.00965 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
29		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0.0336 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH102

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH102
Sample Depth:
0.1 m
Moisture content:
8.7%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.7% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8	pH		8	pH	8pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.6	mg/kg	1.32	10.446	mg/kg	0.00104 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		110	mg/kg	1.117	112.986	mg/kg	0.0113 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.4	mg/kg	5.719	2.105	mg/kg	0.00021 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4	mg/kg	1.142	0.42	mg/kg	0.000042 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		14	mg/kg	1.462	18.824	mg/kg	0.00188 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		31	mg/kg	1.126	32.109	mg/kg	0.00321 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	110	mg/kg		101.196	mg/kg	0.0101 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.07	mg/kg	1.353	0.0872	mg/kg	0.00000872 %	✓	
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		18	mg/kg	1.273	21.073	mg/kg	0.00211 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.8	mg/kg	1.405	1.034	mg/kg	0.000103 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		20	mg/kg	1.785	32.846	mg/kg	0.00328 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		220	mg/kg	2.469	499.766	mg/kg	0.05 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2	mg/kg	1.884	0.347	mg/kg	0.0000347 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		0.07	mg/kg		0.0644	mg/kg	0.00000644 %	✓	
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
29		fluoranthene		205-912-4	206-44-0		0.17	mg/kg		0.156	mg/kg	0.0000156 %	✓	
30		pyrene		204-927-3	129-00-0		0.17	mg/kg		0.156	mg/kg	0.0000156 %	✓	
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.07	mg/kg		0.0644	mg/kg	0.00000644 %	✓	
32		chrysene	601-048-00-0	205-923-4	218-01-9		0.11	mg/kg		0.101	mg/kg	0.0000101 %	✓	
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.13	mg/kg		0.12	mg/kg	0.000012 %	✓	
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.05	mg/kg		0.046	mg/kg	0.0000046 %	✓	
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.07	mg/kg		0.0644	mg/kg	0.00000644 %	✓	
36		indeno[123-cd]pyrene		205-893-2	193-39-5		0.04	mg/kg		0.0368	mg/kg	0.00000368 %	✓	
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		0.04	mg/kg		0.0368	mg/kg	0.00000368 %	✓	

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.0846 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH102[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH102[2]
Sample Depth:
0.5 m
Moisture content:
13%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.7	pH		7.7	pH	7.7 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		15	mg/kg	1.32	17.526	mg/kg	0.00175 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		290	mg/kg	1.117	286.537	mg/kg	0.0287 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.5	mg/kg	5.719	2.531	mg/kg	0.000253 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5	mg/kg	1.142	0.505	mg/kg	0.0000505 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		13	mg/kg	1.462	16.814	mg/kg	0.00168 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		73	mg/kg	1.126	72.734	mg/kg	0.00727 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	190	mg/kg		168.142	mg/kg	0.0168 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.16	mg/kg	1.353	0.192	mg/kg	0.0000192 %	✓	
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		29	mg/kg	1.273	32.659	mg/kg	0.00327 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.5	mg/kg	1.405	0.622	mg/kg	0.0000622 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		36	mg/kg	1.785	56.873	mg/kg	0.00569 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		260	mg/kg	2.469	568.157	mg/kg	0.0568 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.8	mg/kg	1.884	1.334	mg/kg	0.000133 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		0.05	mg/kg		0.0442	mg/kg	0.00000442 %	✓	
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		0.28	mg/kg		0.248	mg/kg	0.0000248 %	✓	
28		anthracene		204-371-1	120-12-7		0.08	mg/kg		0.0708	mg/kg	0.00000708 %	✓	
29		fluoranthene		205-912-4	206-44-0		0.9	mg/kg		0.796	mg/kg	0.0000796 %	✓	
30		pyrene		204-927-3	129-00-0		0.84	mg/kg		0.743	mg/kg	0.0000743 %	✓	
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.35	mg/kg		0.31	mg/kg	0.000031 %	✓	
32		chrysene	601-048-00-0	205-923-4	218-01-9		0.43	mg/kg		0.381	mg/kg	0.0000381 %	✓	
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.5	mg/kg		0.442	mg/kg	0.0000442 %	✓	
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.21	mg/kg		0.186	mg/kg	0.0000186 %	✓	
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.31	mg/kg		0.274	mg/kg	0.0000274 %	✓	
36		indeno[123-cd]pyrene		205-893-2	193-39-5		0.13	mg/kg		0.115	mg/kg	0.0000115 %	✓	
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.03	mg/kg		0.0265	mg/kg	0.00000265 %	✓	
38		benzo[ghi]perylene		205-883-8	191-24-2		0.16	mg/kg		0.142	mg/kg	0.0000142 %	✓	

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.124 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH102[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH102[3]
Sample Depth:
1 m
Moisture content:
12%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.5	pH		7.5	pH	7.5 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11	mg/kg	1.32	12.967	mg/kg	0.0013 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		66	mg/kg	1.117	65.794	mg/kg	0.00658 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3	mg/kg	5.719	1.532	mg/kg	0.000153 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.306	mg/kg	0.0000306 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		18	mg/kg	1.462	23.489	mg/kg	0.00235 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		**<LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		23	mg/kg	1.126	23.121	mg/kg	0.00231 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	91	mg/kg		81.25	mg/kg	0.00813 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.05	mg/kg	1.353	0.0604	mg/kg	0.00000604 %	✓	
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		20	mg/kg	1.273	22.725	mg/kg	0.00227 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.5	mg/kg	1.405	0.627	mg/kg	0.0000627 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		27	mg/kg	1.785	43.036	mg/kg	0.0043 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		90	mg/kg	2.469	198.426	mg/kg	0.0198 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.1	mg/kg	1.884	0.168	mg/kg	0.0000168 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
29		fluoranthene		205-912-4	206-44-0		0.05	mg/kg		0.0446	mg/kg	0.00000446 %	✓	
30		pyrene		204-927-3	129-00-0		0.06	mg/kg		0.0536	mg/kg	0.00000536 %	✓	
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
32		chrysene	601-048-00-0	205-923-4	218-01-9		0.04	mg/kg		0.0357	mg/kg	0.00000357 %	✓	
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.06	mg/kg		0.0536	mg/kg	0.00000536 %	✓	
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.03	mg/kg		0.0268	mg/kg	0.00000268 %	✓	
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0.0486 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH102[4]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH102[4]
Sample Depth:
3 m
Moisture content:
8.8%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.8% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.8	pH		7.8	pH	7.8 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.6	mg/kg	1.32	10.436	mg/kg	0.00104 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		74	mg/kg	1.117	75.939	mg/kg	0.00759 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.2	mg/kg	5.719	1.051	mg/kg	0.000105 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.315	mg/kg	0.0000315 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		13	mg/kg	1.462	17.463	mg/kg	0.00175 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<LOD
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		20	mg/kg	1.126	20.696	mg/kg	0.00207 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	37	mg/kg		34.007	mg/kg	0.0034 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		20	mg/kg	1.273	23.393	mg/kg	0.00234 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		16	mg/kg	1.785	26.253	mg/kg	0.00263 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		66	mg/kg	2.469	149.792	mg/kg	0.015 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		**<LOD**
16		TPH (C6 to C40) petroleum group			TPH		14	mg/kg		12.868	mg/kg	0.00129 %	✓	
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		**<LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		**<LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		**<LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		**<LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		**<LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
29		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0.0376 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00129%)

Classification of sample: BH102[5]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
BH102[5]
Sample Depth:
5 m
Moisture content:
7.3%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.3% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.3	pH		8.3	pH	8.3 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	14.766	mg/kg	0.00148 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		78	mg/kg	1.117	81.163	mg/kg	0.00812 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3	mg/kg	5.719	1.599	mg/kg	0.00016 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.1	mg/kg	1.142	0.106	mg/kg	0.0000106 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		14	mg/kg	1.462	19.07	mg/kg	0.00191 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		17	mg/kg	1.126	17.838	mg/kg	0.00178 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	19	mg/kg		17.707	mg/kg	0.00177 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		16	mg/kg	1.273	18.976	mg/kg	0.0019 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		14	mg/kg	1.785	23.292	mg/kg	0.00233 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		49	mg/kg	2.469	112.764	mg/kg	0.0113 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
29		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
								Total:	0.0321 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: IP100

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
IP100
Sample Depth:
0.3 m
Moisture content:
6.6%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 6.6% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.9 pH		8.9 pH	8.9 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11 mg/kg	1.32	13.624 mg/kg	0.00136 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		130 mg/kg	1.117	136.159 mg/kg	0.0136 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.4 mg/kg	5.719	2.146 mg/kg	0.000215 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5 mg/kg	1.142	0.536 mg/kg	0.0000536 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		78 mg/kg	1.462	106.943 mg/kg	0.0107 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		32 mg/kg	1.126	33.798 mg/kg	0.00338 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	76 mg/kg		71.295 mg/kg	0.00713 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.06 mg/kg	1.353	0.0762 mg/kg	0.00000762 %	✓	
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		18 mg/kg	1.273	21.488 mg/kg	0.00215 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5 mg/kg	1.405	<0.703 mg/kg	<0.0000703 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		36	mg/kg	1.785	60.288	mg/kg	0.00603 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		440	mg/kg	2.469	1019.222	mg/kg	0.102 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2	mg/kg	1.884	0.353	mg/kg	0.0000353 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		850	mg/kg		797.373	mg/kg	0.0797 %	✓	
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		0.22	mg/kg		0.206	mg/kg	0.0000206 %	✓	
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
29		fluoranthene		205-912-4	206-44-0		0.36	mg/kg		0.338	mg/kg	0.0000338 %	✓	
30		pyrene		204-927-3	129-00-0		0.35	mg/kg		0.328	mg/kg	0.0000328 %	✓	
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.15	mg/kg		0.141	mg/kg	0.0000141 %	✓	
32		chrysene	601-048-00-0	205-923-4	218-01-9		0.22	mg/kg		0.206	mg/kg	0.0000206 %	✓	
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.21	mg/kg		0.197	mg/kg	0.0000197 %	✓	
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.11	mg/kg		0.103	mg/kg	0.0000103 %	✓	
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.15	mg/kg		0.141	mg/kg	0.0000141 %	✓	
36		indeno[123-cd]pyrene		205-893-2	193-39-5		0.07	mg/kg		0.0657	mg/kg	0.00000657 %	✓	
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		0.1	mg/kg		0.0938	mg/kg	0.00000938 %	✓	

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.227 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0797%)

Classification of sample: IP100[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
IP100[2]
Sample Depth:
0.8 m
Moisture content:
12%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		8	pH		8	pH	8pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		20	mg/kg	1.32	23.577	mg/kg	0.00236 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		320	mg/kg	1.117	319.002	mg/kg	0.0319 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.4	mg/kg	5.719	2.043	mg/kg	0.000204 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.7	mg/kg	1.142	0.714	mg/kg	0.0000714 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		32	mg/kg	1.462	41.759	mg/kg	0.00418 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		79	mg/kg	1.126	79.415	mg/kg	0.00794 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	81	mg/kg		72.321	mg/kg	0.00723 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.13	mg/kg	1.353	0.157	mg/kg	0.0000157 %	✓	
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		40	mg/kg	1.273	45.45	mg/kg	0.00454 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.6	mg/kg	1.405	0.753	mg/kg	0.0000753 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		48	mg/kg	1.785	76.508	mg/kg	0.00765 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		530	mg/kg	2.469	1168.506	mg/kg	0.117 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.5	mg/kg	1.884	0.841	mg/kg	0.0000841 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		77	mg/kg		68.75	mg/kg	0.00688 %	✓	
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
27		phenanthrene		201-581-5	85-01-8		0.33	mg/kg		0.295	mg/kg	0.0000295 %	✓	
28		anthracene		204-371-1	120-12-7		0.07	mg/kg		0.0625	mg/kg	0.00000625 %	✓	
29		fluoranthene		205-912-4	206-44-0		0.56	mg/kg		0.5	mg/kg	0.00005 %	✓	
30		pyrene		204-927-3	129-00-0		0.52	mg/kg		0.464	mg/kg	0.0000464 %	✓	
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.22	mg/kg		0.196	mg/kg	0.0000196 %	✓	
32		chrysene	601-048-00-0	205-923-4	218-01-9		0.27	mg/kg		0.241	mg/kg	0.0000241 %	✓	
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.27	mg/kg		0.241	mg/kg	0.0000241 %	✓	
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.12	mg/kg		0.107	mg/kg	0.0000107 %	✓	
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.24	mg/kg		0.214	mg/kg	0.0000214 %	✓	
36		indeno[123-cd]pyrene		205-893-2	193-39-5		0.06	mg/kg		0.0536	mg/kg	0.00000536 %	✓	
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
38		benzo[ghi]perylene		205-883-8	191-24-2		0.08	mg/kg		0.0714	mg/kg	0.00000714 %	✓	

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.19 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00688%)

Classification of sample: IP100[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
IP100[3]
Sample Depth:
1.2 m
Moisture content:
14%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		9.3 pH		9.3 pH	9.3 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.8 mg/kg	1.32	9.034 mg/kg	0.000903 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		170 mg/kg	1.117	166.496 mg/kg	0.0166 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3 mg/kg	5.719	1.505 mg/kg	0.000151 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.301 mg/kg	0.0000301 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		180 mg/kg	1.462	230.772 mg/kg	0.0231 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		20 mg/kg	1.126	19.752 mg/kg	0.00198 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	36 mg/kg		31.579 mg/kg	0.00316 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		21 mg/kg	1.273	23.442 mg/kg	0.00234 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.6 mg/kg	1.405	0.739 mg/kg	0.0000739 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		56	mg/kg	1.785	87.693	mg/kg	0.00877 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		250	mg/kg	2.469	541.512	mg/kg	0.0542 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2	mg/kg	1.884	0.331	mg/kg	0.0000331 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
29		fluoranthene		205-912-4	206-44-0		0.04	mg/kg		0.0351	mg/kg	0.00000351 %	✓	
30		pyrene		204-927-3	129-00-0		0.04	mg/kg		0.0351	mg/kg	0.00000351 %	✓	
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.113 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: IP101

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
IP101
Sample Depth:
0.2 m
Moisture content:
8.4%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.4% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		9.4 pH		9.4 pH	9.4 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11 mg/kg	1.32	13.398 mg/kg	0.00134 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		310 mg/kg	1.117	319.296 mg/kg	0.0319 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.3 mg/kg	5.719	1.583 mg/kg	0.000158 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.7 mg/kg	1.142	0.738 mg/kg	0.0000738 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		220 mg/kg	1.462	296.626 mg/kg	0.0297 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		1.2 mg/kg	1.923	2.129 mg/kg	0.000213 %	✓	
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		50 mg/kg	1.126	51.932 mg/kg	0.00519 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	130 mg/kg		119.926 mg/kg	0.012 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.07 mg/kg	1.353	0.0874 mg/kg	0.00000874 %	✓	
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		29 mg/kg	1.273	34.045 mg/kg	0.0034 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.6 mg/kg	1.405	0.778 mg/kg	0.0000778 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		64	mg/kg	1.785	105.398	mg/kg	0.0105 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		480	mg/kg	2.469	1093.415	mg/kg	0.109 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.8	mg/kg	1.884	1.39	mg/kg	0.000139 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		350	mg/kg		322.878	mg/kg	0.0323 %	✓	
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		0.3	mg/kg		0.277	mg/kg	0.0000277 %	✓	
28		anthracene		204-371-1	120-12-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
29		fluoranthene		205-912-4	206-44-0		0.5	mg/kg		0.461	mg/kg	0.0000461 %	✓	
30		pyrene		204-927-3	129-00-0		0.54	mg/kg		0.498	mg/kg	0.0000498 %	✓	
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.2	mg/kg		0.185	mg/kg	0.0000185 %	✓	
32		chrysene	601-048-00-0	205-923-4	218-01-9		0.29	mg/kg		0.268	mg/kg	0.0000268 %	✓	
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.31	mg/kg		0.286	mg/kg	0.0000286 %	✓	
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.14	mg/kg		0.129	mg/kg	0.0000129 %	✓	
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.23	mg/kg		0.212	mg/kg	0.0000212 %	✓	
36		indeno[123-cd]pyrene		205-893-2	193-39-5		0.08	mg/kg		0.0738	mg/kg	0.00000738 %	✓	
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		0.11	mg/kg		0.101	mg/kg	0.0000101 %	✓	

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.237 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 2: Oxidizing "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials"
Force this Hazardous property to non hazardous because Hazard unlikely

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

chromium(VI) oxide: (compound conc.: 0.00021%)

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0323%)

Classification of sample: IP101[2]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
IP101[2]
Sample Depth:
1 m
Moisture content:
15%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 15% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	pH			PH		8.6 pH		8.6 pH	8.6 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		21 mg/kg	1.32	24.11 mg/kg	0.00241 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		150 mg/kg	1.117	145.631 mg/kg	0.0146 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		0.2 mg/kg	5.719	0.995 mg/kg	0.0000995 %	✓	
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.8 mg/kg	1.142	0.795 mg/kg	0.0000795 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		95 mg/kg	1.462	120.737 mg/kg	0.0121 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		33 mg/kg	1.126	32.308 mg/kg	0.00323 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	76 mg/kg		66.087 mg/kg	0.00661 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.12 mg/kg	1.353	0.141 mg/kg	0.0000141 %	✓	
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		22 mg/kg	1.273	24.345 mg/kg	0.00243 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5 mg/kg	1.405	<0.703 mg/kg	<0.0000703 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		35	mg/kg	1.785	54.332	mg/kg	0.00543 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		390	mg/kg	2.469	837.414	mg/kg	0.0837 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.3	mg/kg	1.884	0.491	mg/kg	0.0000491 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		270	mg/kg		234.783	mg/kg	0.0235 %	✓	
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		phenanthrene		201-581-5	85-01-8		0.21	mg/kg		0.183	mg/kg	0.0000183 %	✓	
28		anthracene		204-371-1	120-12-7		0.04	mg/kg		0.0348	mg/kg	0.00000348 %	✓	
29		fluoranthene		205-912-4	206-44-0		0.43	mg/kg		0.374	mg/kg	0.0000374 %	✓	
30		pyrene		204-927-3	129-00-0		0.44	mg/kg		0.383	mg/kg	0.0000383 %	✓	
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.21	mg/kg		0.183	mg/kg	0.0000183 %	✓	
32		chrysene	601-048-00-0	205-923-4	218-01-9		0.24	mg/kg		0.209	mg/kg	0.0000209 %	✓	
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.24	mg/kg		0.209	mg/kg	0.0000209 %	✓	
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.1	mg/kg		0.087	mg/kg	0.0000087 %	✓	
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.18	mg/kg		0.157	mg/kg	0.0000157 %	✓	
36		indeno[123-cd]pyrene		205-893-2	193-39-5		0.07	mg/kg		0.0609	mg/kg	0.00000609 %	✓	
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
38		benzo[ghi]perylene		205-883-8	191-24-2		0.11	mg/kg		0.0957	mg/kg	0.00000957 %	✓	

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.155 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because Hazard unlikely given composition and setting

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0235%)

Classification of sample: IP101[3]

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:
IP101[3]
Sample Depth:
1.2 m
Moisture content:
18%
(dry weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	pH			PH		7.3	pH		7.3	pH	7.3 pH		
2	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.4	mg/kg	1.32	8.28	mg/kg	0.000828 %	✓	
3	barium { barium oxide }		215-127-9	1304-28-5		83	mg/kg	1.117	78.534	mg/kg	0.00785 %	✓	
4	boron { boric acid; [1] boric acid [2] }	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]		<0.2	mg/kg	5.719	<1.144	mg/kg	<0.000114 %		<**LOD**
5	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4	mg/kg	1.142	0.387	mg/kg	0.0000387 %	✓	
6	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		20	mg/kg	1.462	24.772	mg/kg	0.00248 %	✓	
7	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<**LOD**
8	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		18	mg/kg	1.126	17.175	mg/kg	0.00172 %	✓	
9	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	46	mg/kg		38.983	mg/kg	0.0039 %	✓	
10	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
11	nickel { nickel(II) oxide (nickel monoxide) }	028-003-00-2	215-215-7 [1] 234-323-5 [2] - [3]	1313-99-1 [1] 11099-02-8 [2] 34492-97-2 [3]		14	mg/kg	1.273	15.099	mg/kg	0.00151 %	✓	
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	1.405	<0.703	mg/kg	<0.0000703 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
13		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		28	mg/kg	1.785	42.36	mg/kg	0.00424 %	✓	
14		zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		210	mg/kg	2.469	439.451	mg/kg	0.0439 %	✓	
15		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.4	mg/kg	1.884	0.639	mg/kg	0.0000639 %	✓	
16		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
17		confirm TPH has NOT arisen from diesel or petrol					☑							
18		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
20		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
22		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
23		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
24		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
25		acenaphthene		201-469-6	83-32-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
26		fluorene		201-695-5	86-73-7		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
27		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
28		anthracene		204-371-1	120-12-7		0.04	mg/kg		0.0339	mg/kg	0.00000339 %	✓	
29		fluoranthene		205-912-4	206-44-0		0.03	mg/kg		0.0254	mg/kg	0.00000254 %	✓	
30		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
31		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
32		chrysene	601-048-00-0	205-923-4	218-01-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
33		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.04	mg/kg		0.0339	mg/kg	0.00000339 %	✓	
34		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
35		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
36		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
37		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
38		benzo[ghi]perylene		205-883-8	191-24-2		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
39		asbestos 650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
								Total:	0.068 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

- **pH** (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

- **chromium(III) oxide (worst case)** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **lead compounds with the exception of those specified elsewhere in this Annex**

GB MCL index number: 082-001-00-6
Description/Comments: Least-worst case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers many simple lead compounds to be Carcinogenic category 2
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

- **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

- **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

- **confirm TPH has NOT arisen from diesel or petrol**

Description/Comments: Chapter 3, section 4b requires a positive confirmation for benzo[a]pyrene to be used as a marker in evaluating Carc. 1B; H350 (HP 7) and Muta. 1B; H340 (HP 11)
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

- **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

- **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

fluoranthene (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

pyrene (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

indeno[123-cd]pyrene (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

benzo[ghi]perylene (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

barium oxide (EC Number: 215-127-9, CAS Number: 1304-28-5)

Description/Comments: Data from ECHA's C&L Inventory Database, Sigma Aldrich SDS dated 6/2/20
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/88825
Data source date: 02 Apr 2020
Hazard Statements: Acute Tox. 3; H301 , Skin Corr. 1B; H314 , Eye Dam. 1; H318 , Acute Tox. 1; H332

divanadium pentaoxide; vanadium pentoxide (EC Number: 215-239-8, CAS Number: 1314-62-1)

GB MCL index number: 023-001-00-8
Description/Comments:
Additional Hazard Statement(s): Carc. 1B; H350 , Acute Tox. 3; H301 , Acute Tox. 2; H330
Reason for additional Hazards Statement(s):
20 Sep 2022 - Carc. 1B; H350 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be Carc. 1B; H350. The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.
28 Sep 2022 - Acute Tox. 3; H301 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be "Acute tox 3; H301". The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.
28 Sep 2022 - Acute Tox. 2; H330 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be "Acute tox 2; H330". The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.

ethylbenzene (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds.

boron {boric acid; [1] boric acid [2]}

Most common species found in the environment.

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history.

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass.

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight. Industrial sources include: production stainless steel, electroplating, wood preservation, anti-corrosion agents or coatings, pigments.

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected.

lead {lead compounds with the exception of those specified elsewhere in this Annex}

More likely species for this site

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight.

nickel {nickel(II) oxide (nickel monoxide)}

More likely species for this site

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case. Pigment cadmium sulphoselenide not likely to be present in this soil. No evidence for the other CLP entries: sodium selenite, nickel II selenite and nickel selenide, to be present in this soil.

zinc {zinc sulphate}

More likely species for this site

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide].

barium {barium oxide}

More likely species for this site

vanadium {divanadium pentaoxide; vanadium pentoxide}

Only vanadium species available.

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2023.73.5544.10256 (14 Mar 2023)
HazWasteOnline Database: 2023.73.5544.10256 (14 Mar 2023)

This classification utilises the following guidance and legislation:
WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
GB MCL List - version 1.1 of 09 June 2021