Intended for
Watford Borough Council

Date
15/04/2024

Project Number
1620015380

NORTH-EAST SITE AREA REMEDIATION VERIFICATION REPORT WATFORD BUSINESS PARK ZONE A

RAMBOLL

NORTH-EAST SITE AREA REMEDIATION
VERIFICATION REPORT
WATFORD BUSINESS PARK ZONE A

Project No.	**1620015380**
Issue No.	**01**
Date	**15/04/2024**
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Approved by	**Jesse Davies**

Version Control Log

Revision	Date	Made by	Checked by	Approved by	Description
01	15/04/2024	VG	JD	JD	First Issue

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EXECUTIVE SUMMARY

Ramboll UK Limited (“Ramboll”) was instructed by Watford Borough Council (“the “Client”) to produce a Verification Report of remediation activities, relating to the redevelopment of Zone A, Watford Business Park, Greenhill Crescent and Faraday Close, Watford WD1 8SA (the “site”).

The verification report was required in relation to the redevelopment of the site for continued commercial use under a planning consent granted by Watford Borough Council in April 2021.

This verification report documents the construction phase remediation activities at the site and relates to an area of chlorinated hydrocarbon (CHC) contamination in shallow superficial groundwater in the north-eastern corner of the site (‘NE site area’). This area has been treated / remediated and was subject to a programme of post remediation groundwater monitoring.

The verification report follows a raft of previous Ramboll and third-party site investigation, assessment, remediation strategy and verification reports that have been submitted to the planning authority in support of the discharge of planning conditions. Verification of remediation works undertaken across the remainder of the site was provided in a separate Pre-Construction Phase Remediation Verification Report (R1620015380-002_PCRVR, dated October 2023).

Remediation Objectives

The purpose of this report is to demonstrate that the second phase of planned remediation activities relating to the NE site area have been completed to the standard required to support the full discharge of planning condition 6 and to demonstrate that the site is suitable for its intended redeveloped flexible commercial / industrial use. Condition 6 was partially discharged based on the evidence presented in the pre-construction phase verification report for works undertaken across the remainder of the site, which comprised the remediation of discrete hotspots of soil contaminated with CHC and further CHC contamination in the superficial groundwater in the north of the site.

The Construction Remediation Strategy Addendum prepared by Ramboll for the north-east site area (R1620015308_RS_Addendum_001, dated June 2023) defined groundwater treatment (situ chemical reduction (ISCR)) and verification target criteria for groundwater. The Englobe Remediation Strategy and Implementation Plan (ref. R1848-21-5142, dated September 2022) identified the overall objectives.

Works Summary

The remedial works comprised the remediation of shallow groundwater contaminated with CHC compounds to reduce concentrations in groundwater of the superficial deposits and to mitigate the off-site migration of contaminants across the northern boundary by creating a permeable reactive barrier/reducing reactive zone. The remedial works were undertaken in July 2023.

Verification Works

Ramboll undertook spot visits to the site to fulfil a periodic watching brief during the remedial works undertaken by the remediation contractor, Englobe (formerly Celtic). The groundwater monitoring programme following the remediation works in the north of the site was undertaken by Ramboll over a six-month period. The results of this post remediation monitoring programme are discussed in this report.

Conclusions

On completion of the works Ramboll concludes the following:

- Ramboll considers the ISCR groundwater treatment to have been successfully completed in line with the specification for the proposed work.

- Ramboll's groundwater verification surveys have determined:
- Field observations indicate that mineralisation and precipitation of iron sulphides has occurred across the ISCR treatment area as a result of the ZVI component of the reagent.
- Analytical data for CHC including constituent trend analysis indicates significant mass reduction following implementation of the ISCR treatment, with specific emphasis on mass reduction of vinyl chloride which is typically considered to be the most recalcitrant CHC.
- Exceedances of RTC were limited in magnitude and extent to BH601 only for TCE and cis-1,2-DCE, and detected concentrations are several orders of magnitude lower than pre-treatment conditions indicating successful mass reduction.
- Analytical data for CHC indicates by the absence of widespread accumulation of breakdown products that the dominant mechanism for CHC mass removal is direct abiotic reduction as a result of the ISCR treatment, and secondary effects from the mineralisation of iron sulphides.
- Field redox measurements and analytical data for geochemical parameters and their correlations with CHC provide lines of evidence that the superficial groundwater formation exhibits strongly reducing conditions as a result of the ISCR treatment.
- CHC mass removal is anticipated to continue by either direct abiotic reduction or by biotic dehalogenation mechanisms, promoted by the reducing conditions created by the ISCR treatment.

Full discharge of condition 6 is now requested on the basis of the successful treatment of the contamination impacts across the site.

1. INTRODUCTION

1.1 Background

Ramboll UK Limited ("Ramboll") was instructed by Watford Borough Council ("the "Client") to produce a Verification Report of construction phase remediation activities in relation to the redevelopment of Watford Business Park Zone A located at Greenhill Crescent and Faraday Close, Watford, WD1 8SA (the "site"). A site location plan is provided as Figure 1, Appendix 1.

The remedial works were required in relation to the demolition and redevelopment of the site for commercial/industrial use, under planning consent granted by Watford Borough Council in April 2021 (ref: 20/01188/FULM). A proposed development plan is provided as Figure 2, Appendix 1.

Note, this report refers to both the "northern area" and the "north-east area". These are two distinctive areas and should not be confused. The northern area was the subject of a separate report produced when monitoring in the north-eastern area was on-going (as anticipated by the remediation programme).

1.2 Status of Environmental Assessment and Remediation

Details of previous intrusive works and groundwater monitoring undertaken at the site have been summarised in previous reports which are listed in chronological order in Appendix 2.

In relation to the more recent remediation phase of works, Ramboll's Construction Remediation Strategy Addendum – North-East Area (June 2023) sets out the areas of contamination (namely chlorinated hydrocarbons (CHC) in soil and groundwater in the NE area).

Treatment of CHC impacts to groundwater were completed in July 2023. The location of the remedial treatment area is presented on Figure 3, Appendix 1.

The 'NE site area' was until 2023 inaccessible and therefore not included within the original remedial treatment programme which took place in 2022. The active groundwater injection works in the NE Site Area has now been completed, and the post-treatment groundwater monitoring programme has now also been completed.

1.3 Planning Context

Conditional planning consent was granted by the Local Planning Authority (LPA) Watford Borough Council for the redevelopment of the site on 6th April 2021. Planning condition 6 contained within the consent (20/01188/FULM) specifically relating to remediation stated that:

6. "Prior to any part of the permitted development being occupied, a verification report demonstrating the 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."

1.4 Objective

The objective of this verification report is to provide evidence that supports partial discharge of condition 6 of planning consent 20/01188/FULM. Condition 6 of the planning consent explains that the validation report is expected to provide the results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. This verification report demonstrates that the requirements of the remediation strategy and thus, condition 6 of the planning consent, have been met, that the risk to controlled waters has been mitigated and that partial discharge of the consent is now warranted for the northern area of the site.

This follows partial discharge of condition 6 following completion of verification reporting of remediation works on the remainder of the site; full discharge is now requested based on the content of this report.

In summary, this verification report demonstrates that shallow groundwater contaminants in the NE area have been sufficiently treated by the applied remediation methodologies to the extent that risks from contaminants in soil and groundwater have been appropriately mitigated.

1.5 General Limitations and Reliance

This report has been prepared by Ramboll exclusively for the intended use by the Client in accordance with the agreement (appointment document dated 17th April 2023) between Ramboll and the Client 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.

In preparation of the report and performance of 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. Ramboll did not undertake full time supervision of the site redevelopment, and so has had to rely on the Client providing much of the general information on the works.

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.

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.

The works described were undertaken during a discrete period of time. The findings and conclusions presented in this report are accordingly factually limited by these circumstances. The previous 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.

Unless stated otherwise, the geological information provided is for general environmental interpretation and should not be used for other geotechnical and / or design purposes.

1.6 Report Layout

The report is structured in the following way:

Section 1: sets out the objectives of the remedial works;

Section 2: describes the background to the project;

Section 3: summarises the Remediation Strategy;

Section 4: describes the implementation of the remediation strategy;

Section 5: details the field data collected for groundwater as part of the verification of the remediation works;

Section 6: details the analytical data collected for groundwater as part of the verification of the remediation works; and

Section 7: details the conclusions of the remedial works and report.

2. PROJECT BACKGROUND

2.1 Site Description

The site is located in the south-western outskirts of Watford, at National Grid Reference 508950, 195380. The site is roughly triangular in shape and occupies an area of 1.78 hectares. The topographical elevation of the site gradually increases from north to south, from approximately 52.4 metres above Ordnance Datum (m aOD) at the northern boundary to approximately 56.0m aOD at the southern site boundary.

The site location and proposed development layout are shown in Figure 1 and 2 respectively provided in Appendix 1. The redevelopment layout is also provided in Appendix 1.

The site is located within a commercial/industrial area, with an unnamed stream located immediately north of the site, which flows downstream into the River Gade and subsequently past a Site of Special Scientific Interest (SSSI) and Local Nature Reserve (LNR) 510m west of the site.

2.2 Site Layout

Prior to demolition, the site comprised a total of nine (9) main buildings, which occupied approximately 40% of the total site area. Car parking and other areas of hardstanding made up approximately 55% of the site area. Approximately 5% of the site area was soft cover.

The buildings were most recently occupied by offices and light industrial units including vehicle maintenance and rental, battery manufacture and engineering services.

3. REMEDIATION STRATEGY

3.1 Objectives

The Remediation Strategy[1] was devised to ensure that no unacceptable risks to human health, the environment, property and/or controlled water remained after remediation. Conceptually, the remedial works were required to address chlorinated hydrocarbon contamination identified within the superficial groundwater in the northern area, together with identified areas of soil CHC impact in the northwest and west of the site.

3.2 Scope of Works

The proposed pre-construction remedial works comprised:

- Task 1: Remediation of CHC groundwater impacts in the NE area.
- Task 2: Verification groundwater and surface water monitoring associated with the NE area.

3.3 Remedial Criteria

The remedial criteria for soil excavations, soil re-use and site won crushed demolition material are set out in the Ramboll revised Construction Remediation Strategy Addendum but provided for ease in the discussion of the validation sampling in Section 6.

[1] Ramboll (August 2022) Watford Business Park Zone A- Revised Pre-Construction Remediation (ref. 1620012108) and Englobe (September 2022) Watford Business Park Remediation Strategy and Implementation Plan (Ref. R1848/22/5201)

4. IMPLEMENTATION OF REMEDIATION STRATEGY

4.1 Introduction

This section provides a summary of the remedial works activities undertaken by Englobe.

The location of the treatment area is presented in Figure 3, Appendix 1. Discussion of the validation sampling strategy and analytical results are provided later in Section 6 of this report.

Ramboll was present on a part-time watching brief basis for the groundwater reagent injection undertaken by Englobe to verify the work undertaken.

4.2 Task 1: Groundwater Remediation of CHC Impacts.

To achieve the remedial objectives, an In-Situ Chemical Reduction (ISCR) groundwater treatment system was implemented to address elevated CHC concentrations within the shallow groundwater at the northern site boundary and to create a permeable reactive barrier (PRB), effectively a reducing reactive zone, to treat residual CHC present within the shallow groundwater flowing off-site in a north-westerly direction.

To achieve this, a network of direct push injection points were mapped across the north-east boundary remedial area, at approximately 3m centres, targeting the superficial aquifer at depths of between 1.5m and 4.0m depth.

The groundwater treatment and injection system was operational in late July 2023 during which, 2,650kg of Evonik EHC ISCR reagent was applied to the superficial groundwater formation between 1.5m and 4.0m depth in line with the design specification. The slurry consisted of 25%-30% EHC® Reagent, controlled-release carbon, zero valent iron (ZVI) particles and nutrients.

This treatment technology is proven to successfully treat CHC via direct abiotic chemical reduction in the initial phase following treatment, with a longer-term enhancement of groundwater conditions suitable for the continued CHC mass removal by biotic mechanisms.

During the course of the injection works, real time groundwater and surface-water monitoring was undertaken to mitigate for the potential breakout of EHC reagent into a brook running along the northern site boundary and to monitor for daylighting of the reagent at other injection points. The monitoring included visual inspection but also assessment of water quality at upstream and downstream points along the brook. Readings for dissolved oxygen, redox potential and conductivity were obtained.

4.2.1 Unforeseen Contamination

No unexpected contamination was identified during the course of these specific works.

4.2.2 Surface Water / Groundwater Management

No groundwater or surface water was encountered during excavations that required removal or discharge.

4.3 Task 2: Verification Monitoring

Ramboll undertook a post remediation monitoring programme for seven months after the injection had been completed.

Results of verification monitoring and sampling are discussed now in detail in Sections 5 and 6.

5. GROUNDWATER VERIFICATION FIELD DATA

5.1 Introduction

Following completion of ISCR treatment work by EnGlobe, Ramboll has undertaken periodic groundwater monitoring and sampling surveys at the site, consistent with the requirements of the Remediation Strategy.

5.2 Monitoring Well Network

As a result of ongoing earthworks associated with the construction activities at the site, it has been necessary to decommission monitoring wells associated with the characterisation of soil and groundwater impacts in the NE area. New wells were installed to provide a transect across the NE area. Therefore, the pre-treatment and post-treatment monitoring well networks differ; however, Ramboll is confident that the available monitoring wells provide adequate characterisation of the NE area. In addition, selected wells associated with the "main" site ISCR treatment (BH504, BH505, BH506) have been included to provide on-going assessment of the efficacy of the ISCR treatment and assess down-gradient locations relative to the NE area.

Table 5.1 Pre-Treatment Monitoring Well Network

Location	Formation / Area	Status	Notes
BH301	Chalk / Main ISCR Zone	Retained	Reassurance monitoring to assess potential breakthrough to Chalk
BH302	Chalk / D/G of NE ISCR Zone	Retained	
BH401	Superficial / NE Area	Retained	N of NE ISCR Zone. Minor sporadic detections of TCE, *cis*-1,2-DCE, VC.
BH402	Superficial / NE Area	Decommissioned	Central NE ISCR Zone. NE CHC "Plume core"
BH403	Superficial / NE Area	Decommissioned	South of NE ISCR Zone. Cross-gradient of NE CHC plume
BH504	Superficial / Main Site Area	Retained	Main ISCR Zone
BH505	Superficial / Main Site Area	Retained	D/G of Main ISCR Zone
BH506	Superficial / Main Site Area	Retained	D/G of Main ISCR Zone, D/G of NE ISCR Zone
BH507	Superficial / NE Area	Decommissioned	SW of NE ISCR Zone. NE CHC "Plume core"
BH509	Superficial / NE Area	Decommissioned	Central NE ISCR Zone. NE CHC "Plume core"
BH510	Superficial / NE Area	Decommissioned	Within S boundary of NE ISCR Zone. Cross-gradient of NE CHC plume, representative of "plume fringe"
BH511	Superficial / NE Area	Decommissioned	Central NE ISCR Zone. NE CHC "Plume core"

All wells requiring removal have been decommissioned in accordance with the borehole management plan included in Ramboll's Construction Phase Remediation Strategy. Decommissioning records are included with EnGlobe's Works Completion Report presented as Appendix 6.

Table 5.2 Post-Treatment Monitoring Well Network

Location	Area	Notes
BH301	Chalk / Main ISCR Zone	Reassurance monitoring to assess potential breakthrough to Chalk
BH302	Chalk / D/G of NE ISCR Zone	
BH401	Superficial / NE Area	N of NE ISCR Zone. Minor sporadic detections of TCE, *cis*-1,2-DCE, VC.
BH504	Superficial / Main Site Area	Main ISCR Zone
BH505	Superficial / Main Site Area	D/G of Main ISCR Zone
BH506	Superficial / Main Site Area	D/G of Main ISCR Zone, D/G of NE ISCR Zone
BH601	Superficial / NE Area	Central D/G NE ISCR Zone. Analogous to BH509.
BH602	Superficial / NE Area	N D/G ISCR Zone. Analogous to BH511.
BH603	Superficial / NE Area	NW of NE ISCR Zone. Analogous to BH507.

5.3 Monitoring & Sampling Surveys

Four pre- ISCR treatment surveys were conducted in the NE area incorporating new monitoring wells installed in January 2023:

- 20th April 2023.
- 25th May 2023.
- 26th June 2023 (monitoring survey conducted for piling, no MNA suite data available).
- 24th July 2023.

Four post-ISCR treatment surveys were conducted in the NE area, incorporating news wells installed in July 2023:

- 29th August 2023.
- 17th October 2023.
- 4th December 2023.
- 13th February 2024.

5.4 Groundwater Field Observations

No evidence of LNAPL or DNAPL was encountered during monitoring surveys in any locations.

Evidence of impacts from hydrocarbons in the form of oily sheens and/or odours were noted in all pre-treatment monitoring surveys conducted in several locations:

- BH402.
- BH509.
- BH511.

Sulphurous odours were noted associated with several locations immediately post-treatment, with observations of grey or black staining of in-situ monitoring and sampling equipment in subsequent monitoring surveys:

- BH601.
- BH602.

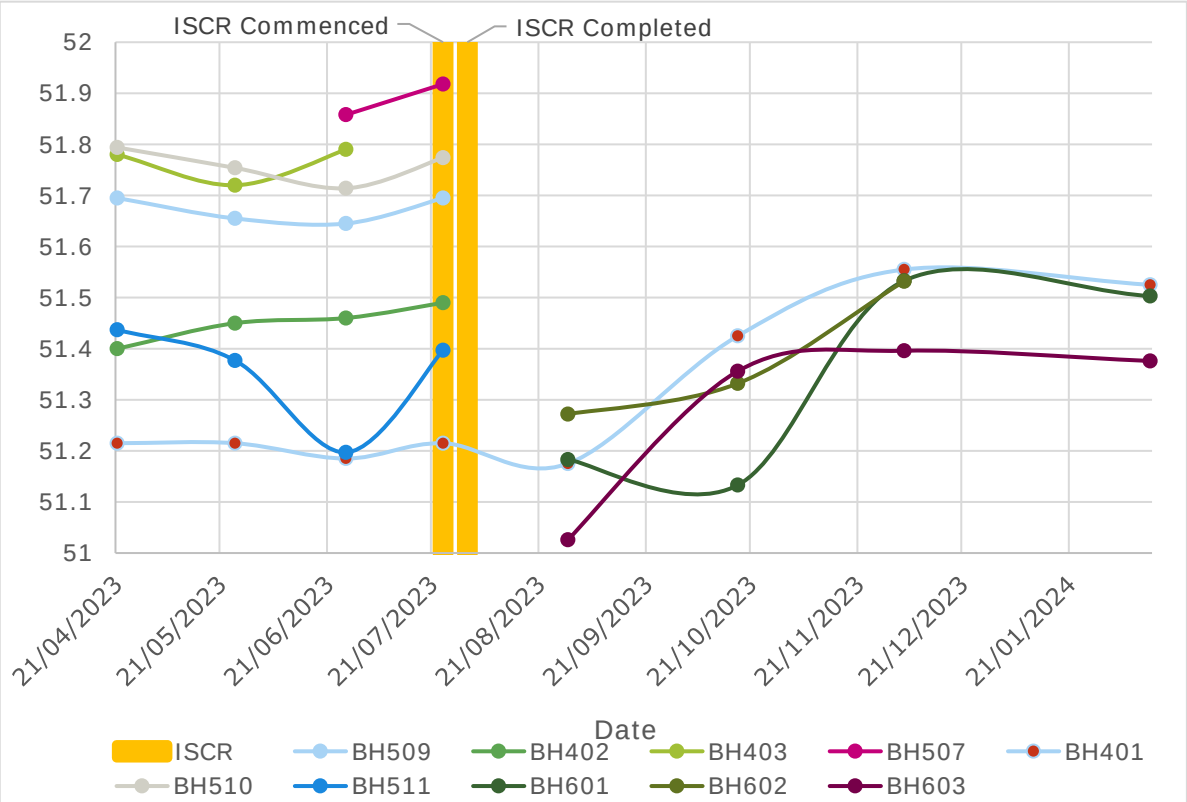
- BH603.

Ramboll understands that this staining is likely the result of formation of iron sulphides within the superficial groundwater formation. The formation of iron sulphides is a significant line of evidence supporting the successful application of the ISCR reagent and development of reducing conditions in these locations:

- Indirect evidence of sulphate reduction.
- ZVI oxidation (oxygen scavenging).
- Iron reduction associated with natural background Fe^{3+} in the formation.

5.5 Groundwater Elevations

Details of groundwater elevations are presented in Appendix 3, with a summary of elevation data presented in the chart below.



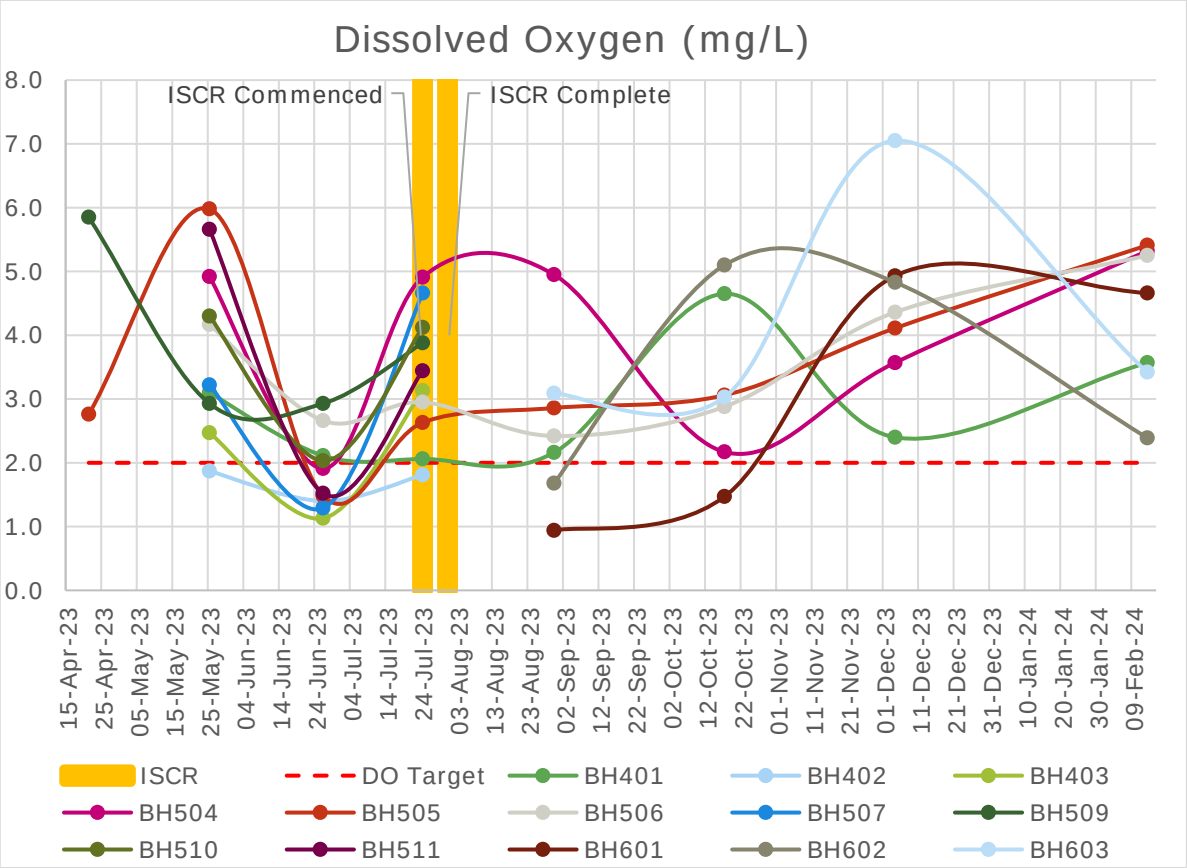
The groundwater elevations within the superficial formation are noted to have been broadly stable following the ISCR treatment in July 2023. Within the well retained pre-ISCR (BH401), a notable increase in groundwater elevation is recorded from October 2023. Groundwater elevations within the new wells transecting the NE area (i.e., BH601 to BH603) correspond well with the previous well network, with exception to the low groundwater elevation level recorded in August 2023 in BH603, which stabilised in the subsequent monitoring rounds to the average pre-treatment levels within the superficial wells.

The well network in the NE area is in close proximity to the off-site watercourse, and the groundwater within the site area is considered to be representative of the hyporheic zone, whereby the groundwater elevations are likely to be influenced by surface water flows/elevations in addition to direct recharge via infiltration during the redevelopment works on site.

Overall, a slight increase in groundwater elevation is noted within all wells throughout the post-treatment monitoring period, likely associated with inclement autumnal and winter weather conditions and localised off-site surface watercourse influence, however, they do not differ greatly from pre-treatment elevation levels.

5.6 Groundwater Physico-Chemical Parameters

5.6.1 Dissolved Oxygen (DO)



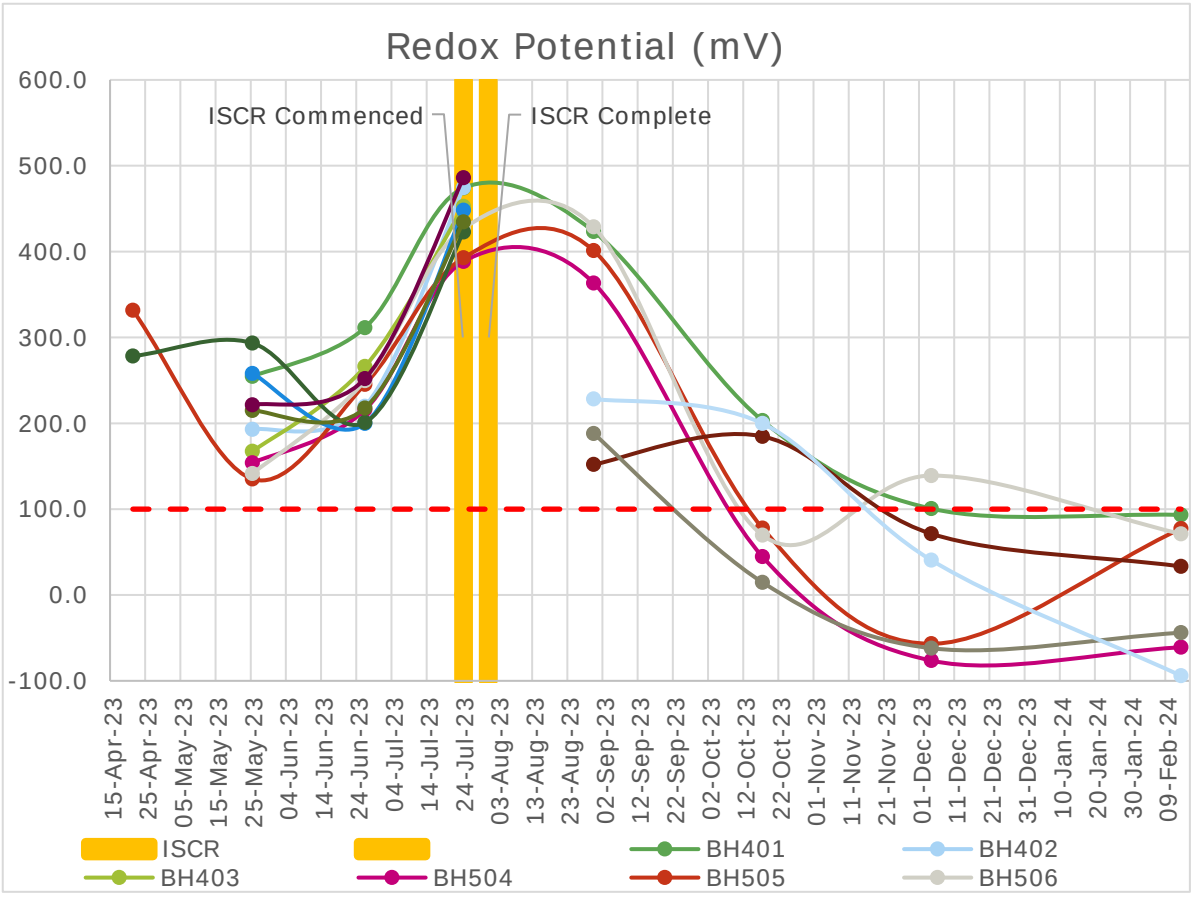
Dissolved oxygen concentrations of below 2mg/l are desirable to demonstrate anaerobic conditions are present. Over the longer-term post ISCR treatment, a reduction in dissolved oxygen would be expected as a result of the oxygen scavenging effect of the ZVI component of the ISCR reagent.

During the groundwater monitoring programme, the DO concentrations slightly increased following the completion of the ISCR treatment within the retained wells BH401, BH504 and BH505; and a slight decrease in DO concentration was noted within the retained well BH506.

Anaerobic zone concentrations were recorded within two new wells (BH601 and BH602) post-ISCR treatment, but generally aerobic conditions were recorded throughout the post-treatment monitoring with highly variable concentrations recorded within all present wells. Elevated DO concentrations likely reflect seasonal variation due to the increased infiltration and rainfall events in the autumn and winter period.

It should be noted however, that the disturbed nature of the samples recovered using hydrasleeves on-site may have introduced error in the DO data recorded, and therefore this data should be treated with caution. In addition, the proximity of the treatment area to the off-site surface watercourse and likely presence of associated groundwater hyporheic zone is likely to lead to increased oxygenation of the groundwater body through mixing effects from the surface watercourse.

5.6.2 Oxidation / Reduction Potential (Redox)



Redox potentials of below +100mV are desirable to demonstrate that reducing conditions are present. Over the longer-term post ISCR treatment, a reduction in redox potential would be expected as a result of the ZVI component of the ISCR reagent.

The redox potential trend has shown to consistently decrease following the ISCR treatment across the well network, with most notable reduction in redox observed within wells BH504 to BH506 and BH401.

There is an evident reducing environment recorded within the wells with the redox potential ranging between 93.3 mV (BH401) and -94.1 mV (BH603) during the latest monitoring round, in February 2024 and consistently much lower than pre-treatment redox conditions across the well network.

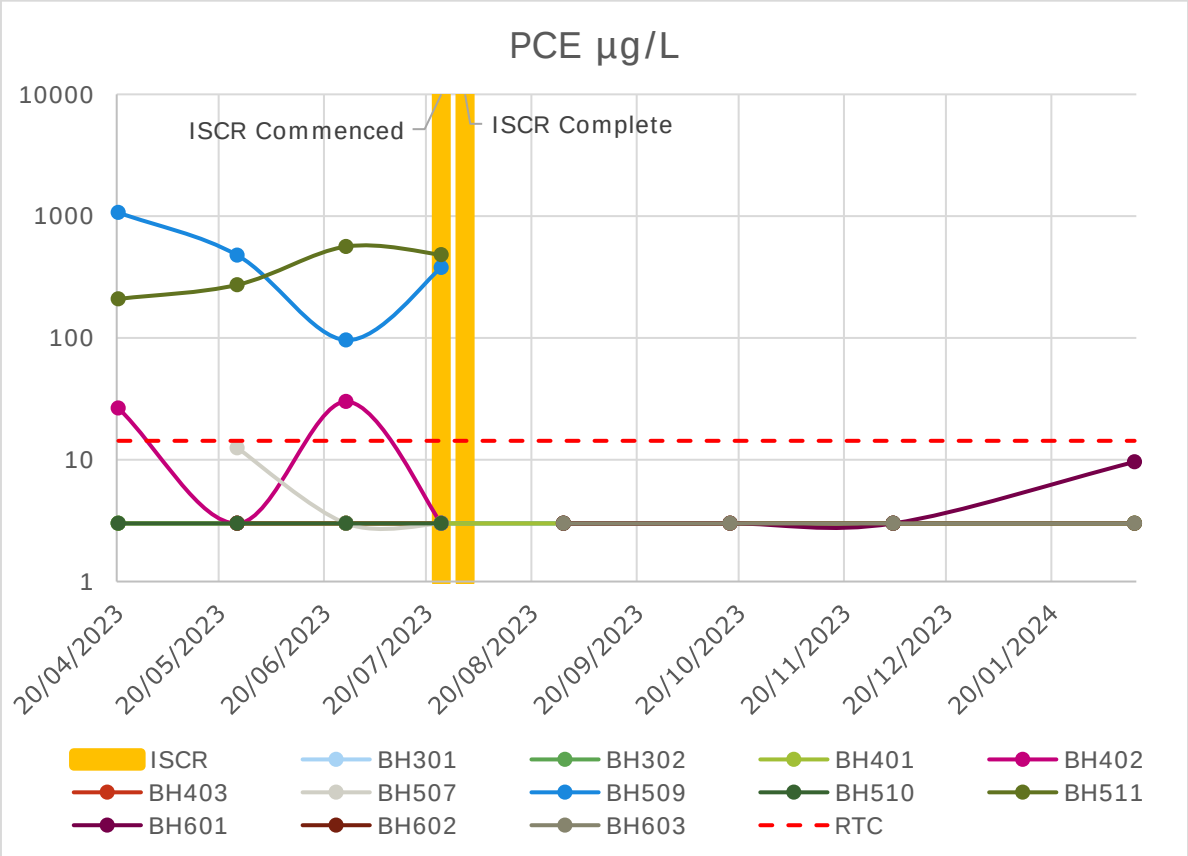
6. GROUNDWATER VERIFICATION ANALYTICAL DATA

6.1 Chlorinated Hydrocarbons (CHC)

Detected CHC concentrations above laboratory method reporting limit (MRL) are discussed below in relation to baseline condition and remedial target criteria (RTC).

The Mann Kendall Trend Test (M-K Test) was used to understand trends at each location for the available datasets. This is a non-parametric statistical test which is used to analyse data collected over time for consistently increasing or decreasing trends in values.

6.1.1 Tetrachloroethene (PCE)



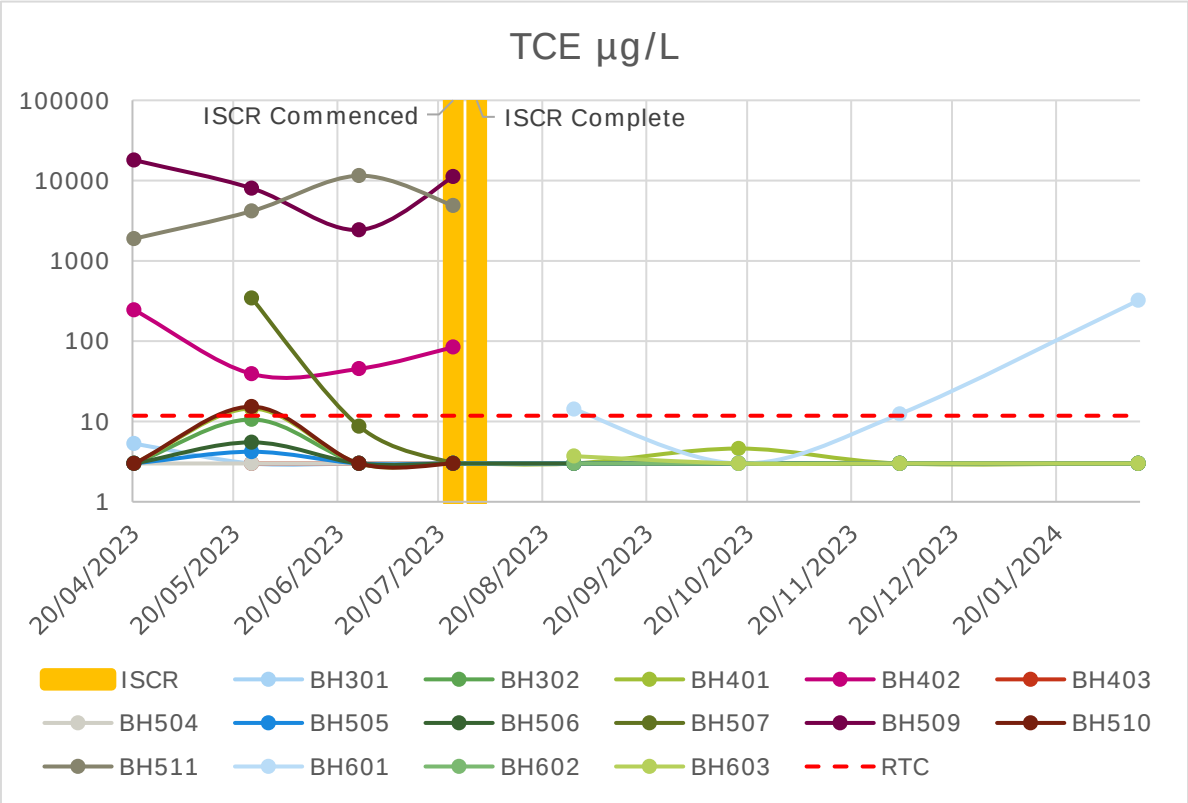
The recorded PCE concentrations following the ISCR treatment show that PCE is below the detection limit in all wells post-treatment. An exception to this is a detected PCE concentration of 9.6µg/l (in February 2024) recorded within the new well BH601. It is noted however, that this concentration is below the remedial target criteria of 14.3µg/l.

The M-K test indicates the following trends for PCE following the ISCR treatment within the well network:

- BH301 and BH302; Stable trend (37.9% confidence factor).
- BH401, BH504, BH505, BH506 and BH603; Stable trend (45.2% confidence factor).
- BH601; No trend (72.9% confidence factor).
- BH602; Stable trend (37.5% confidence factor).

The fact that PCE was detected above MRL in only one location on one occasion post-ISCR treatment (below RTC in BH401), and the absence of evidence of increasing trends indicates that contaminant mass removal has been successful. PCE concentrations have been reduced by a factor of 100 to 1000 from pre-treatment conditions.

6.1.2 Trichloroethene (TCE)



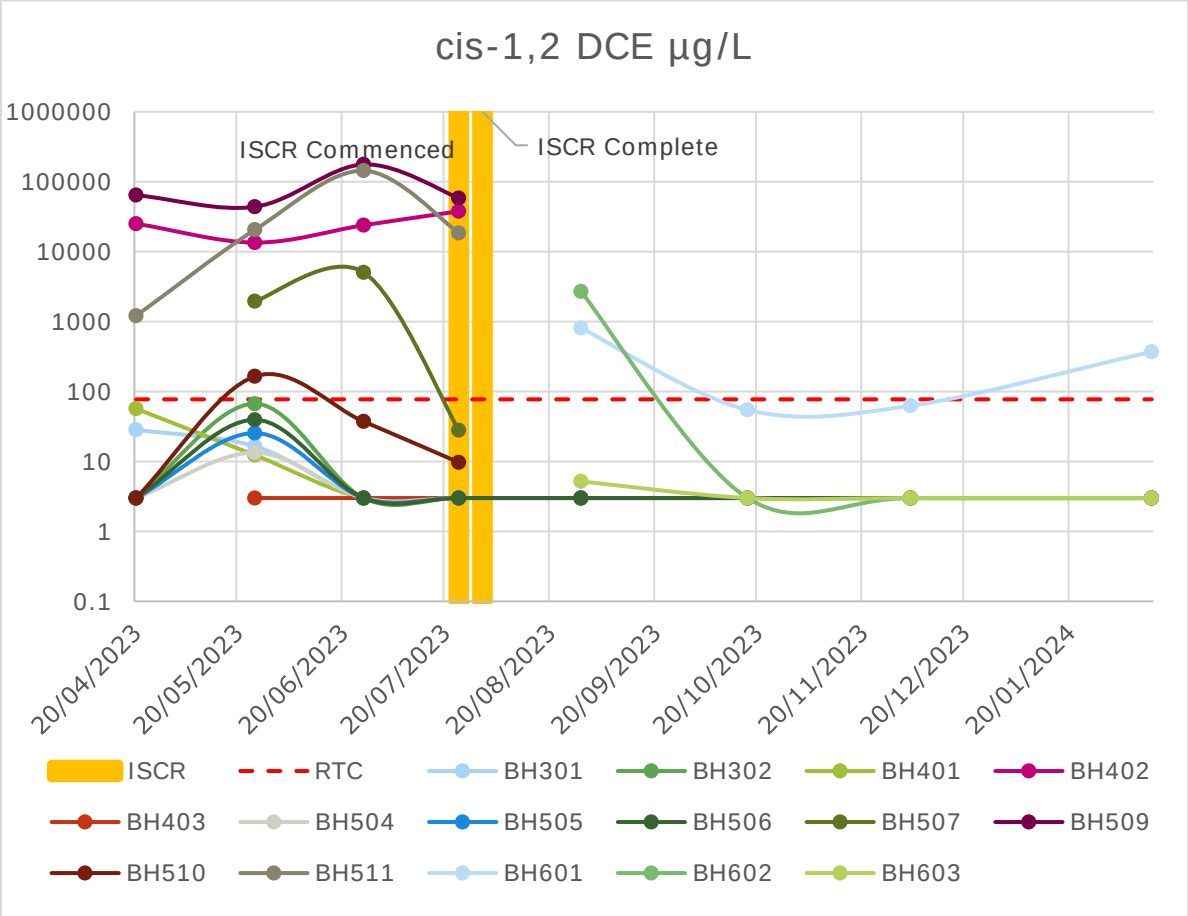
The TCE data indicates that post-treatment, the TCE levels have generally been recorded below the MDL in majority of the wells. Where TCE has been detected above MDL (as in the case of BH401 and BH603), the concentrations have remained below RTC and dropped below the MDL in subsequent groundwater monitoring rounds. Exception to this is well BH601, whereby the post-treatment TCE concentrations were at marginally elevated (i.e., within one order of magnitude above the RTC) in August and December 2023; and at a significantly elevated (i.e., an order of magnitude above the RTC) concentration in the last monitoring round (February 2024). This latter concentration is still well below the maximum recorded concentrations recorded during the pre-treatment period (namely in wells BH509 and BH511).

The M-K test indicates the following trends for TCE following the ISCR treatment within the well network:

- BH401; Stable trend (59.4% confidence factor).
- BH504; Stable trend (45.2% confidence factor)
- BH505 and BH506; Stable trend (68.3% confidence factor)
- BH601; No trend (62.5% confidence factor).
- BH602; Stable trend (37.5% confidence factor).
- BH603; Stable trend (72.9% confidence factor).

The absence of increasing trends and reduction of concentration to below RTC, with exception of well BH601, indicate that contaminant mass removal has been largely successful. TCE concentrations have been reduced by a factor of 100 to 1000 from pre-treatment conditions.

6.1.3 *cis*-1,2-Dichloroethene (cDCE)



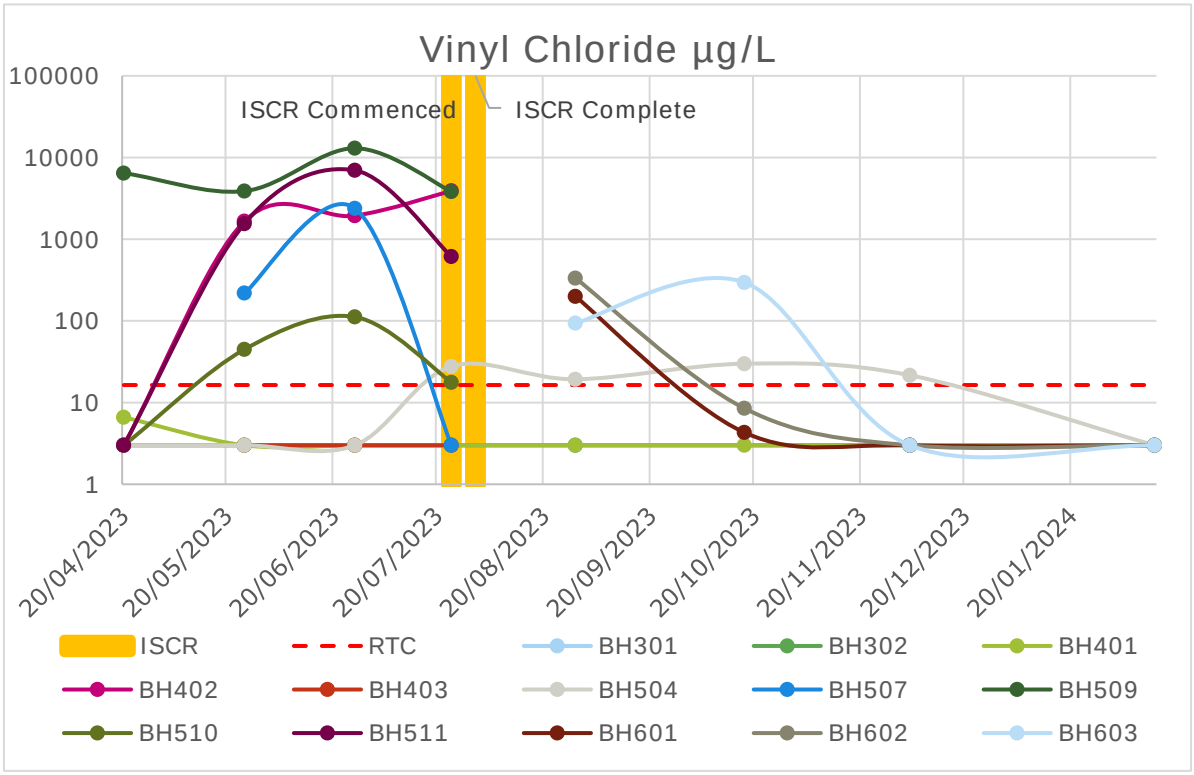
The cDCE concentrations post-treatment show a similar trend to TCE. With exception of BH601 and BH602, all detected concentrations of cDCE have been below the RTC (77.4µg/L), and below the MDL in majority of the wells across the NE area. Significantly elevated cDCE concentrations were noted in BH601 in August 2023, which dropped in order of magnitude in the October and December monitoring rounds and rebounded during February 2024 monitoring round. Significantly elevated cDCE concentration was also recorded within BH602 in August 2023, but has consistently recorded concentrations below MDL in the latter three rounds of monitoring.

The M-K test indicates the following trends for cDCE following the ISCR treatment within the well network:

- BH401; Prob. Decreasing trend (92.9% confidence factor).
- BH301; Prob. Decreasing trend (93.2% confidence factor).
- BH302; No trend (66.7% confidence factor).
- BH504; Stable trend (68.3% confidence factor).
- BH505 and BH506; No trend (68.3% confidence factor).
- BH601; No trend (37.5% confidence factor).
- BH602; No trend (72.98% confidence factor).
- BH603; Stable trend (72.9% confidence factor).

The absence of increasing trends and reduction of concentration to below RTC (with exception of well BH601) indicate that contaminant mass removal has been largely successful. cDCE concentrations have been reduced by a factor of 1000 to 10,000 from pre-treatment conditions.

6.1.4 Vinyl chloride (VC)



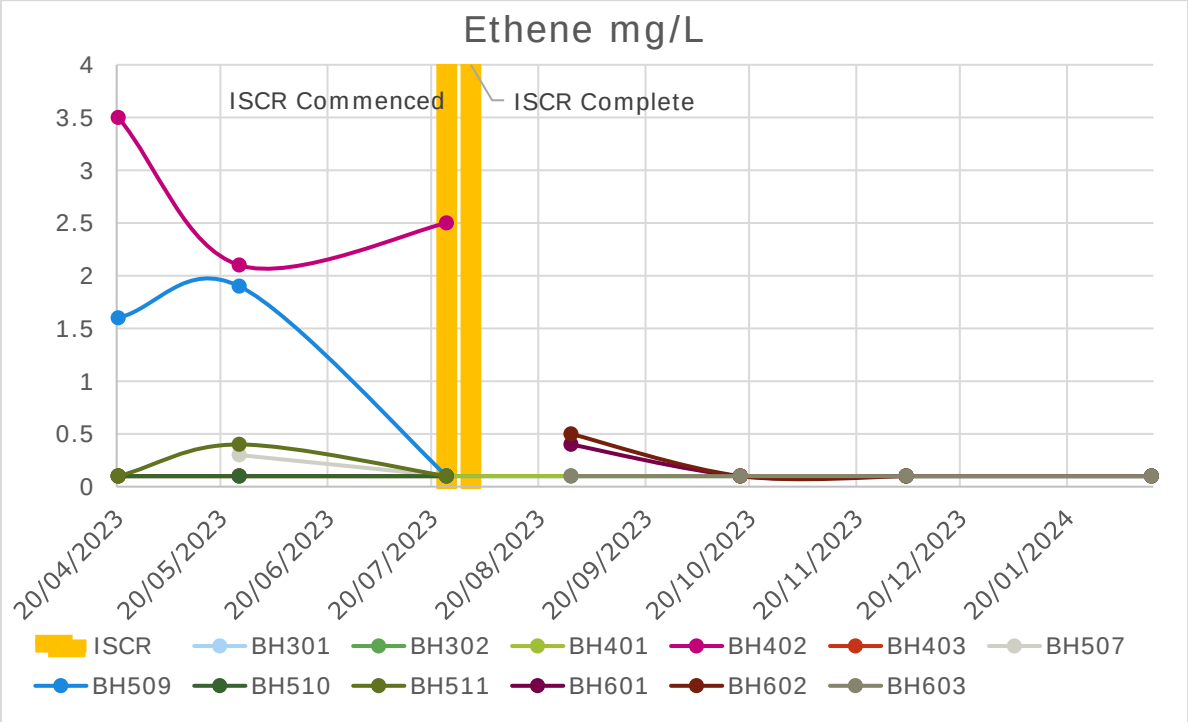
The VC data shows significantly reduced chlorinated hydrocarbon concentrations following the ISCR treatment, with the concentrations recorded below the MDL across all monitored wells by February 2024. The most significant post-treatment concentrations were recorded within wells BH601 to BH603 in August and October 2023 (with majority of those concentrations above the RTC), however, the concentrations dropped in the latter two rounds to <MDL. BH504 illustrated overall consistent VC concentrations post-treatment, which were slightly above the RTC, however also decreased to <MDL by February 2024.

The M-K test indicates the following trends for VC following the ISCR treatment within the well network:

- BH301 and BH302; Stable trend (37.9% confidence factor).
- BH401; Stable trend (76.4% confidence factor).
- BH504; No trend (80.1% confidence factor).
- BH505 and BH506; Stable trend (45.2% confidence factor).
- BH601 and BH602; No trend (89.6%).
- BH603; No trend (72.9%).

The presence of decreasing trends and reduction of concentrations toe below RTC indicate that contaminant mass removal has been successful, and that direct chemical reduction (rather than microbially mediated reductive dechlorination) is the dominant mechanism for removal of CHCs. VC concentrations have been reduced by up to a factor of 10,000 from pre-treatment conditions.

6.1.5 Ethene



Ethene is the terminal degradation product of microbially mediated reductive dechlorination. Ethene has largely been below MRL for the post-ISCR treatment survey samples, with the exception of the first survey post-treatment. The presence of ethene pre-treatment indicates that natural conditions on-site are conducive to microbially mediated reductive dechlorination; the absence of ethene post-treatment alongside evidence of CHC mass removal indicates that the dominant mechanism for degradation post-treatment is direct chemical reduction, effectively by-passing reductive dechlorination.

The direct chemical reduction is a more energetically efficient degradation mechanism and will also promote reducing conditions such that microbially mediated reductive dechlorination is likely to rebound following depletion of electron donors supplemented by the ISCR.

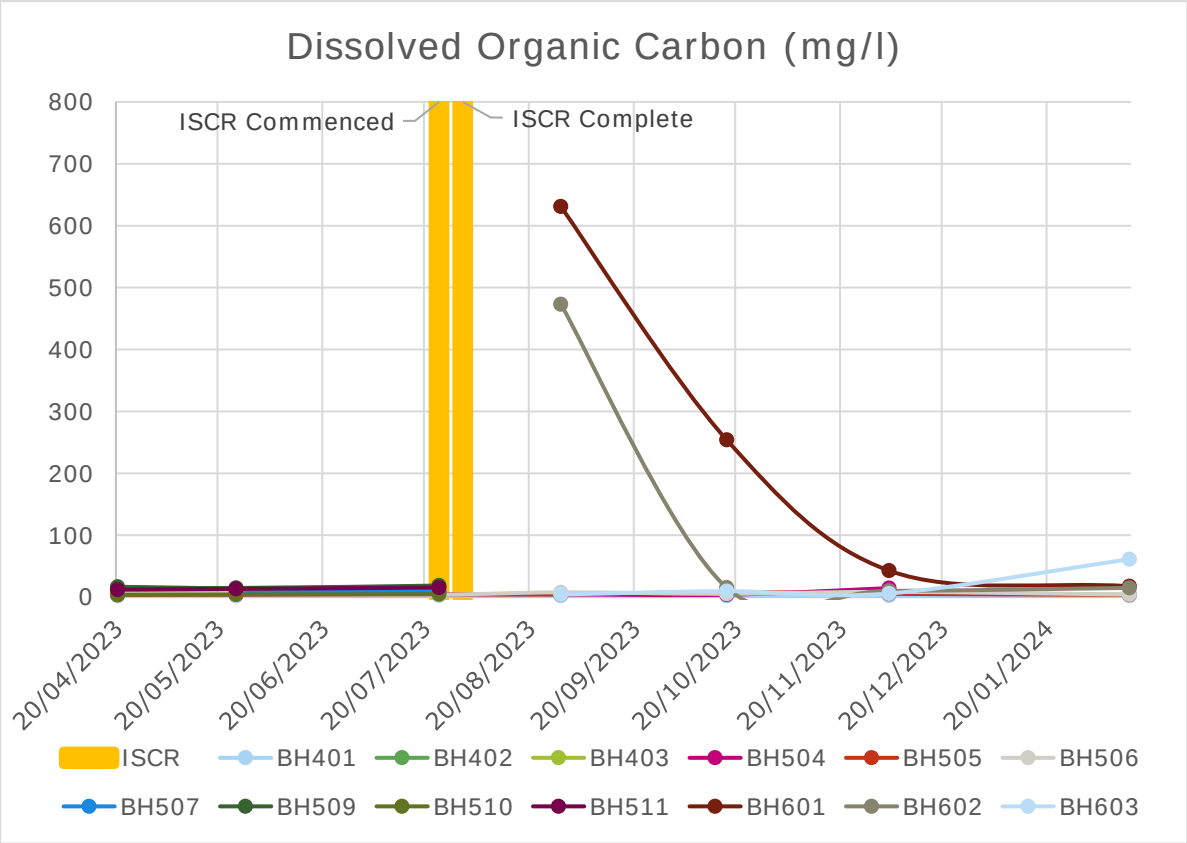
6.1.6 CHC in Groundwater ISCR Verification Summary

With the exception of RTC exceedances in isolated locations (TCE, cDCE in BH601) CHC concentrations in groundwater have been successfully reduced below RTC. In particular, the substantial decrease in VC concentrations (to below MRL by the final sampling survey in February 2024) demonstrates the success of the ISCR treatment, VC being a more recalcitrant to degradation than the other CHC.

The absence of increasing trends, and the presence of decreasing trends for selected contaminants in selected locations indicates that mass reduction has been successfully achieved.

6.2 Geochemical Indicators

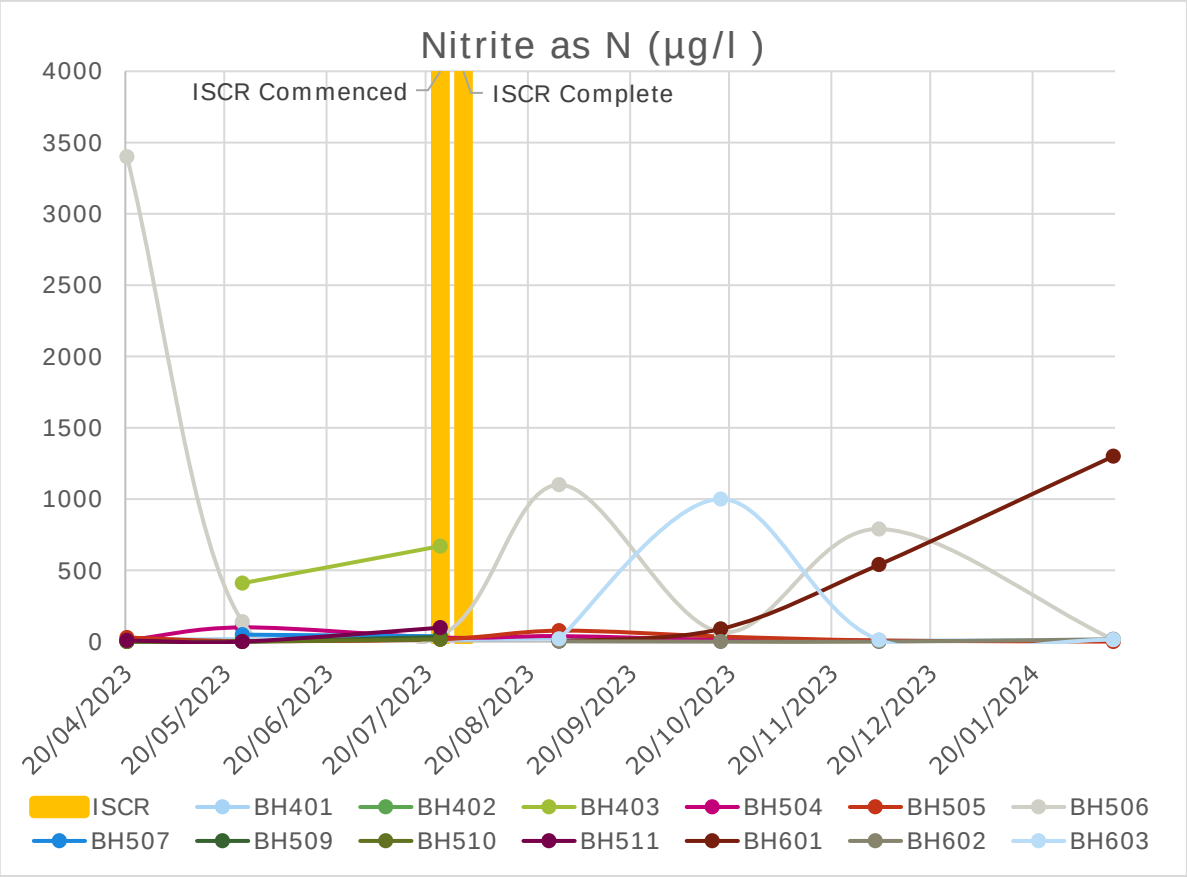
6.2.1 Dissolved Organic Carbon (DOC)



The presence of DOC is a potentially significant finding as the ISCR product applied at the site included colloidal activated carbon. The application of activated carbon is intended to enhance the carbon content of the aquifer formation and therefore enhance sorption of polar organic contaminants (thus removing them from the dissolved phase); however, some of the activated carbon may dissolve into solution itself, thereby increasing the DOC.

This effect appears to be confirmed for 2 locations immediately post-treatment (BH601 and BH602) with a later lag and smaller effect in BH603. This provides a line of evidence for the successful application of the ISCR reagent.

6.2.2 Nitrite (NO_2^-)

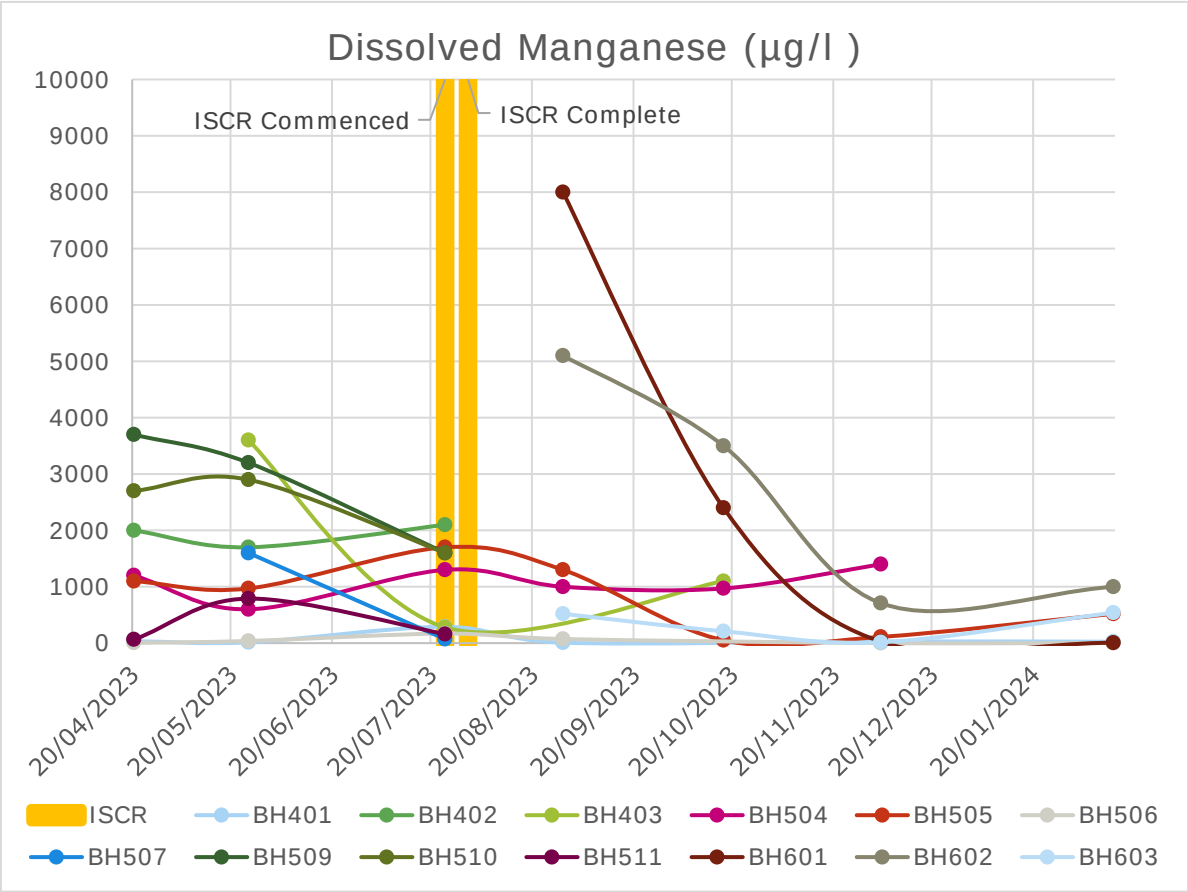


Nitrite enrichment is a key line of evidence for the activity of nitrate reducing bacteria and therefore the presence of nitrite is a line of evidence for the presence of reducing conditions. Nitrite depletion may be indicative of depletion of the oxidised nitrogen compounds (i.e. removal of the nitrogen “source” by biotic activity) or dominance of other reduction processes e.g. iron or sulphate reduction and methanogenesis.

Although not consistent across the dataset, the data collected demonstrates the variable activity of nitrate reducing bacteria within the majority of the superficial groundwater formation on-site, which is indicative of groundwater conditions favourable to the biotic degradation pathways for CHC. Note also that ammoniacal nitrogen has been detected in groundwater on-site, which is potentially present as a result of dissimilatory nitrate reduction.

This data provides another line of evidence that strongly reducing conditions are present in the superficial groundwater formation post-treatment (consistent with the field redox measurements).

6.2.3 Manganese (Mn2+)

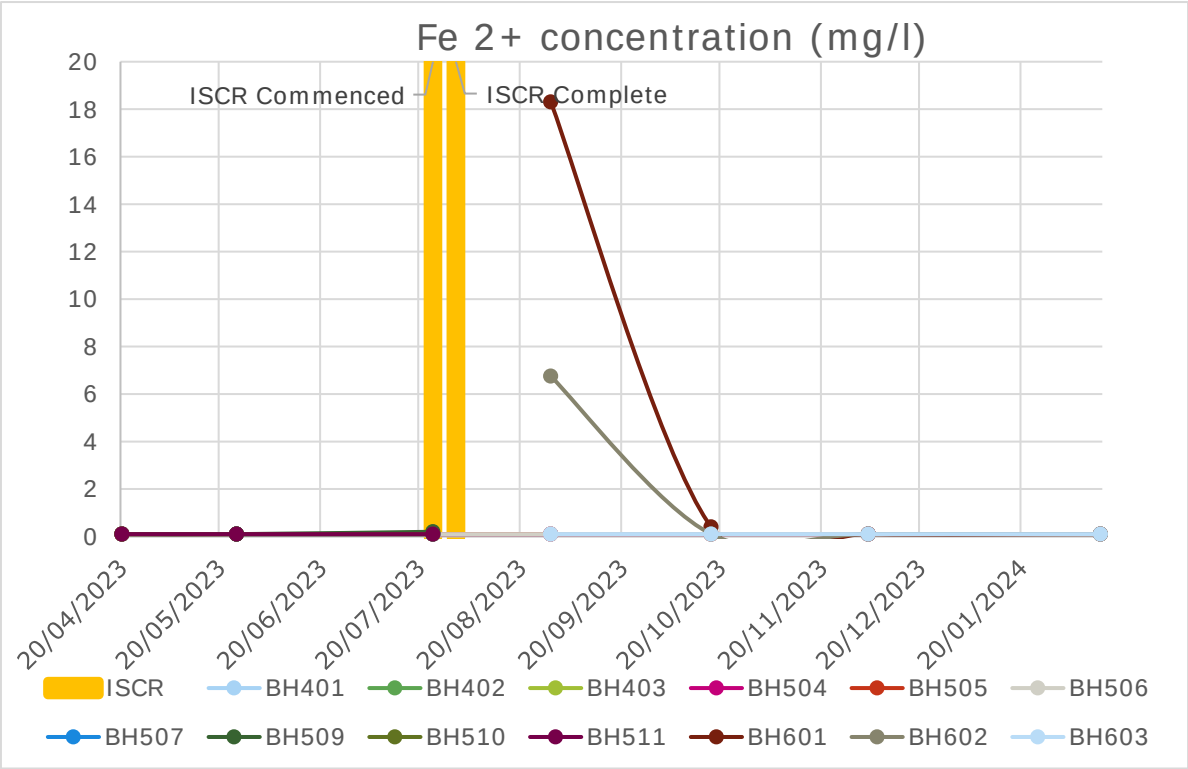


The presence of dissolved manganese (only reduced Mn2+ is soluble) is a strong indicator of manganese reducing conditions; ISCR treatment is anticipated to lead to increasing dissolved manganese concentrations.

Mn2+ was detected pre- during- and post-ISCR treatment as presented graphically above on a logarithmic scale for legibility. Strong evidence of enhancement of Mn2+ concentrations is observed in a limited number of sample locations immediately post-ISCR treatment (BH601, BH602).

The data collected, although displaying a high degree of variability demonstrates that over the verification monitoring period manganese reduction has been active in all locations within the superficial groundwater formation on-site. This is indicative of the presence of reducing groundwater conditions (contradicting the field redox measurements), which are favourable to the biotic degradation pathways for CHC, and which demonstrates that the ISCR treatment has contributed to the maintenance of reducing conditions.

6.2.4 Ferrous Iron (Fe^{2+})



Fe^{2+} is expected to be produced from the ISCR reagent as a result of the oxygen scavenging by and resultant oxidisation of the zero valent iron (ZVI) component.

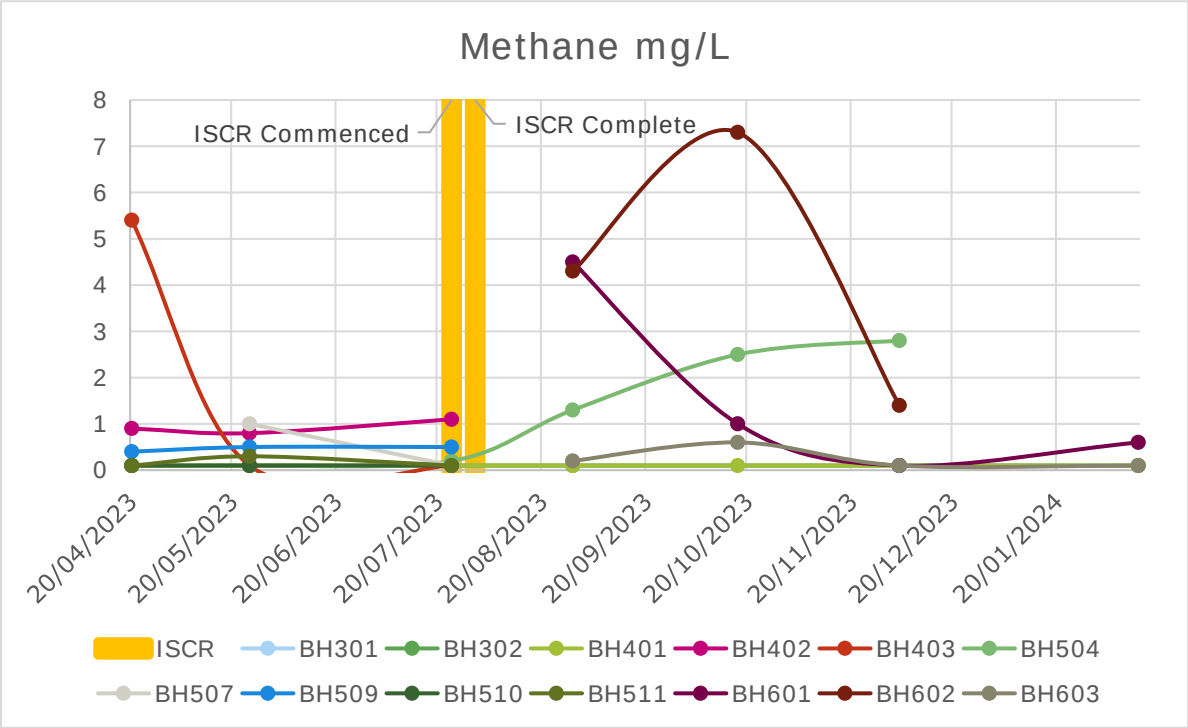
Fe^{2+} was detected above MRL (0.2mg/L) in only 2 sample locations in the months immediately following ISCR treatment (BH601, BH602). Where detections above MRL were recorded these tended to be of short temporal duration, with detected concentrations returning to below MRL; this is to be expected as following the introduction of ZVI the generation by oxygen scavenging and subsequent mineralisation of Fe^{2+} (in particular as sulphides) onto the groundwater formation is a key part of the EHC ISCR treatment, as these iron sulphide minerals promote further direct abiotic chemical reduction of CHC.

The data collected demonstrates the successful implementation of the ISCR treatment, including geochemical evidence for direct abiotic chemical reduction of CHC and the promotion of aquifer and groundwater conditions favourable to the future biotic and abiotic degradation pathways for CHC.

6.2.5 Sulphide (S^{2-})

Sulphide is the product of the reduction of sulphate, and although sulphide has not been detected in the dissolved phase in samples from the site, this is likely due to the propensity of sulphide to mineralise (i.e. transition to the solid mineral phase), particularly forming metal-sulphide minerals. During groundwater monitoring surveys visual observations were made of the mineralisation of iron sulphides on monitoring well sampling equipment; this is a strong indicator that sulphate reduction has been active at the site and demonstrates successful application of the ISCR reagent.

6.2.6 Methanogenesis



The presence of methane concentrations provides a strong line of evidence that reducing conditions are present, as methanogenesis occurs only in the most strongly reducing environments.

Methane has been detected on at least one occasion in all wells in the NE area, at varying concentrations, with the highest concentrations associated with BH601 and BH602. This is a strong line of evidence for the presence of groundwater conditions conducive to the biotic degradation pathways for CHC and demonstrates the success of the application of the ISCR reagent to the groundwater formation.

6.2.7 Geochemical Indicator Summary

The geochemical data presented above represents multiple lines of evidence for reducing conditions in the superficial groundwater formation on site, which combined with other analytical data indicates:

- ISCR reagent has been successfully applied to the superficial groundwater formation in the target area; evidence of reducing conditions across the ISCR treatment area.
- Direct abiotic chemical reduction of CHC is likely to be occurring via primary ZVI application and secondary iron sulphide mineralisation, as evidenced by the absence of accumulation of breakdown “daughter products”.
- Reducing conditions generated by the ISCR treatment are likely to promote biotic reductive dehalogenation pathways in future following the depletion of source materials conducive to abiotic reductive mechanisms.

6.3 Correlations

The results of the correlation analysis between CHC, breakdown products and the various geochemical parameters for each monitoring round are summarised below, with full details presented in Appendix 4.

Overall a limited number of statistically significant correlations have been identified for individual CHC, as discussed below.

6.3.1 PCE

- PCE was not detected in any of the post-treatment sampling survey datasets; therefore correlations for this period are not available.
- Positive correlations with trichloroethene, *trans*-1,2-DCE, *cis*-1,2-DCE, and vinyl chloride for the pre-treatment sampling surveys (May and July 2023). Correlations between CHC indicate either a mixed source plume or more plausibly an active reductive dechlorination mechanism pre-treatment.
- Negative non-linear correlation with sum of nitrate and nitrite for May 2023 only.
- Positive linear correlation with ammoniacal nitrogen (as N) for May 2023 only.
- Positive non-linear correlations with iron species for July 2023 only.
- Positive non-linear correlation with ethene for May 2023 only.
- Positive linear correlations with pH and hardness for May 2023 only, indicating potential impact of fermentation/mineralisation (generating carbonic acid) on groundwater geochemical conditions.

6.3.2 TCE

- Positive correlations with trichloroethene, *trans*-1,2-DCE, and vinyl chloride for pre-treatment sampling surveys only (May and July 2023 only). Correlations between CHC indicate either a mixed source plume or more plausibly an active reductive dechlorination mechanism pre-treatment.
- Positive correlations with *cis*-1,2-DCE for all sampling surveys (May 2023 to February 2024).
- Variable correlations with nitrogen compounds pre-treatment surveys (May and July 2023), subsequently strong positive linear correlations with nitrogen compounds for the final sampling survey (February 2023).
- Strong negative non-linear correlation with manganese for one post-treatment survey only (October 2023), suggesting transient development of manganese reducing conditions.
- Strong non-linear positive correlations with methane in pre-treatment survey (July 2023) and the final survey (February 2024) only, suggesting that methanogenesis having been active pre-treatment was stimulated at later stages post-treatment (having been displaced by direct chemical reduction at earlier post-treatment surveys).
- Positive non-linear correlations with ethene and ethane for one pre-treatment survey (May 2023) only, confirming the pre-treatment activity of microbially mediated reductive dechlorination pathways.
- Inconsistent correlations with pH and hardness, indicating potential impact of fermentation/mineralisation (generating carbonic acid) on groundwater geochemical conditions.

6.3.3 *cis*-1,2-DCE

- Strong positive generally linear correlations with other CHC's present >MRL for the pre-treatment (May and July 2023) and first post-treatment survey (August 2023). Strong positive correlation with TCE only for the remaining post-treatment surveys (October 2023 to February 2024).
- Inconsistent weak correlations with nitrogen compounds for pre-treatment and initial post-treatment surveys. Strong positive linear correlations with nitrogen compounds for the final

post-treatment survey (February 2024), indicating that nitrogen reducing conditions have been produced by the later stages of treatment.

- Pre-treatment weak to moderate correlations with ferric iron, strong positive non-linear correlation with ferrous iron for the surveys immediately pre- and post-treatment may indicate the effects of introduction of ZVI as part of the treatment.
- Moderate negative non-linear correlations with sulphate in the initial post-treatment surveys (August and October 2023) are indicative of the promotion of sulphate reducing conditions by the treatment.
- Strong non-linear positive correlations with methane in pre-treatment survey (July 2023), in the initial post-treatment survey (August 2023) and the final survey (February 2024), suggesting that methanogenesis having been active pre-treatment was stimulated post-treatment (having been displaced by direct chemical reduction at earlier post-treatment surveys).
- Positive correlations with ethene and ethane for one pre-treatment survey (non-linear, May 2023) and one post-treatment survey (linear, August 2023) only, confirming the pre-treatment activity of microbially mediated reductive dechlorination pathways and initial promotion of conditions conducing to these pathways immediately post-treatment (prior to domination of abiotic direct chemical reduction mechanisms).

6.3.4 Vinyl Chloride

- Strong positive generally linear correlations with other CHC's present >MRL for the pre-treatment (May and July 2023) and first post-treatment survey (August 2023). Strong positive correlation with *cis*-DCE only for the initial post-treatment survey only (October 2023).
- Negative non-linear correlation with nitrogen compounds pre-treatment (May 2023) and initial post-treatment survey (August 2023) likely indicative of a depletion of nitrogen compounds by microbial activity pre-treatment. Positive linear correlation with nitrogen compounds post-treatment (October 2023) indicates that where nitrogen reducing bacterial activity is lower vinyl chloride is lower, suggesting a linkage between nitrogen reducing bacterial activity and vinyl chloride degradation (nitrogen compounds being a nutrient component of the ISCR reagent).
- Positive correlations with reduced manganese and iron species pre- and post-treatment (July and August 2023) indicate that ISCR reagent initially promoted naturally occurring microbially mediated manganese and iron reducing activity before these processes were replaced by abiotic chemical reduction mechanisms associated with the ISCR.
- Negative non-linear correlations with sulphate in one pre-treatment (May 2023) and the initial post-treatment survey (August 2023) are indicative of the promotion of sulphate reducing conditions by the treatment.
- Strong linear positive correlations with methane in pre-treatment survey (July 2023), in the initial post-treatment survey (August 2023) and the final survey for which VC data is available (December 2023), suggesting that methanogenesis having been active pre-treatment was stimulated post-treatment (having been displaced by direct chemical reduction at earlier post-treatment surveys).
- Positive correlations with ethene and ethane for both pre-treatment surveys (non-linear, May, linear July 2023) and one post-treatment survey (linear, August 2023), confirming the pre-treatment activity of microbially mediated reductive dechlorination pathways and initial promotion of conditions conducing to these pathways immediately post-treatment (prior to domination of abiotic direct chemical reduction mechanisms).

- Inconsistent correlations with pH and hardness, indicating potential impact of fermentation/mineralisation (generating carbonic acid) on groundwater geochemical conditions.

6.3.5 Correlations Summary

Statistically significant correlations between CHC and other analytical determinands provide tertiary lines of evidence to support the hypothesis that reductive microbial mechanisms were active at the site prior to treatment. Correlations identified indicate that the initial effects of the ISCR treatment promoted the naturally occurring degradation mechanisms, whereas later post-treatment correlations were absent for key geochemical determinands, indicating that abiotic direct chemical reduction was likely responsible for CHC mass reduction over this period of monitoring.

The final dataset indicates some evidence for the reactivation of biotic pathways (e.g., methanogenesis), in addition to prior evidence that abiotic pathways are likely to be active at the site following ISCR treatment.

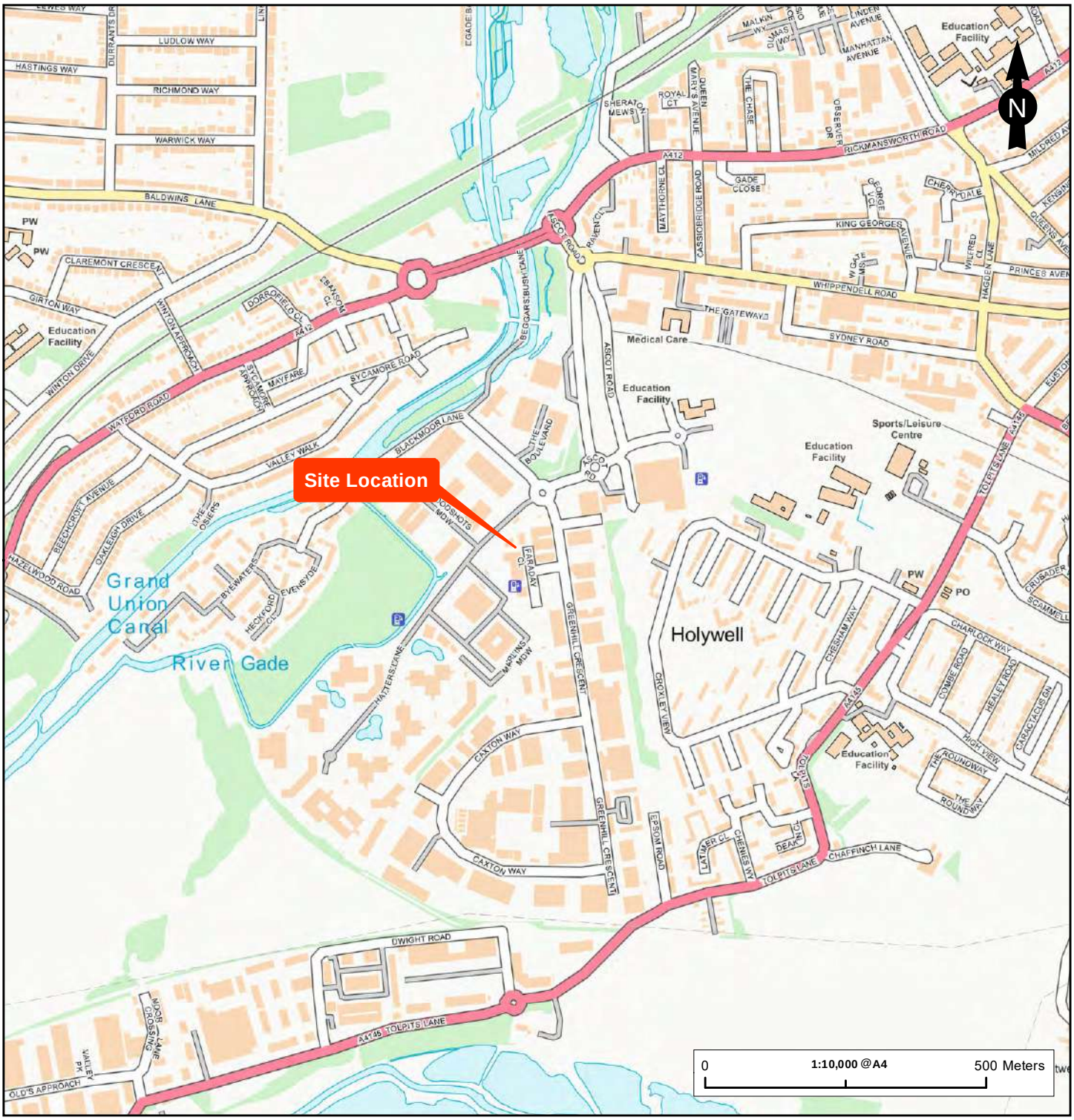
7. CONCLUSIONS

On completion of the works Ramboll concludes the following:

- Ramboll considers the ISCR groundwater treatment to have been successfully completed in line with the specification for the proposed work.
- Ramboll's groundwater verification surveys have determined:
  - Field observations indicate that mineralisation and precipitation of iron sulphides has occurred across the ISCR treatment area as a result of the ZVI component of the reagent.
  - Analytical data for CHC including constituent trend analysis indicates significant mass reduction following implementation of the ISCR treatment, with specific emphasis on mass reduction of vinyl chloride which is typically considered to be the most recalcitrant CHC.
  - Exceedances of RTC were limited in magnitude and extent to BH601 only for TCE and *cis*-1,2-DCE, and detected concentrations are several orders of magnitude lower than pre-treatment conditions indicating successful mass reduction.
  - Analytical data for CHC indicates by the absence of widespread accumulation of breakdown products that the dominant mechanism for CHC mass removal is direct abiotic reduction as a result of the ISCR treatment, and secondary effects from the mineralisation of iron sulphides.
  - Field redox measurements and analytical data for geochemical parameters and their correlations with CHC provide lines of evidence that the superficial groundwater formation exhibits strongly reducing conditions as a result of the ISCR treatment.
  - CHC mass removal is anticipated to continue by either direct abiotic reduction or by biotic dehalogenation mechanisms, promoted by the reducing conditions created by the ISCR treatment.

Full discharge of condition 6 is now requested on the basis of the successful treatment of the contamination impacts across the site.

APPENDIX 1
FIGURES



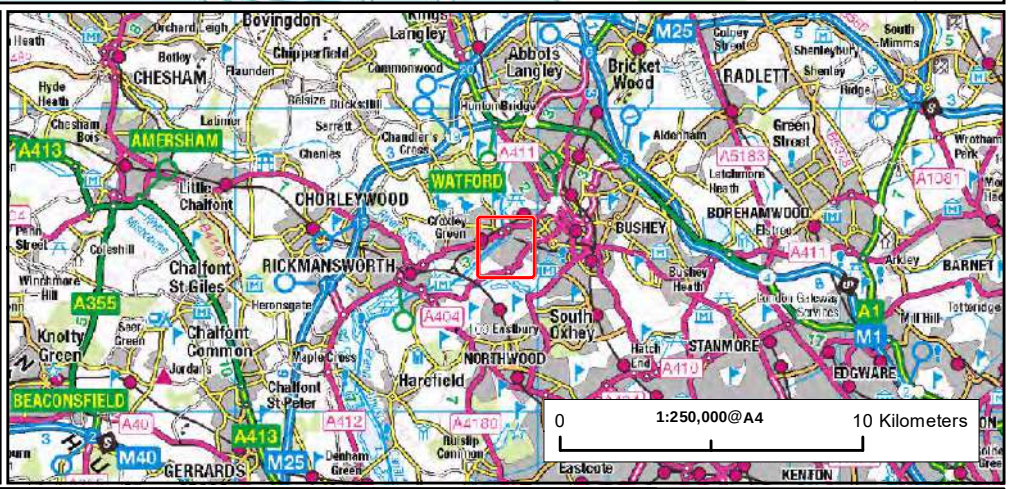


Figure Title: Figure 1: Site Location	Project Name: Watford Business Park Zone A, Watford, WD18 8SA	Date: September 2020	
		Scale: As shown	
Project Number: 1620015380	Client: Watford Borough Council	Issue: 1	Prepared By: BVK

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

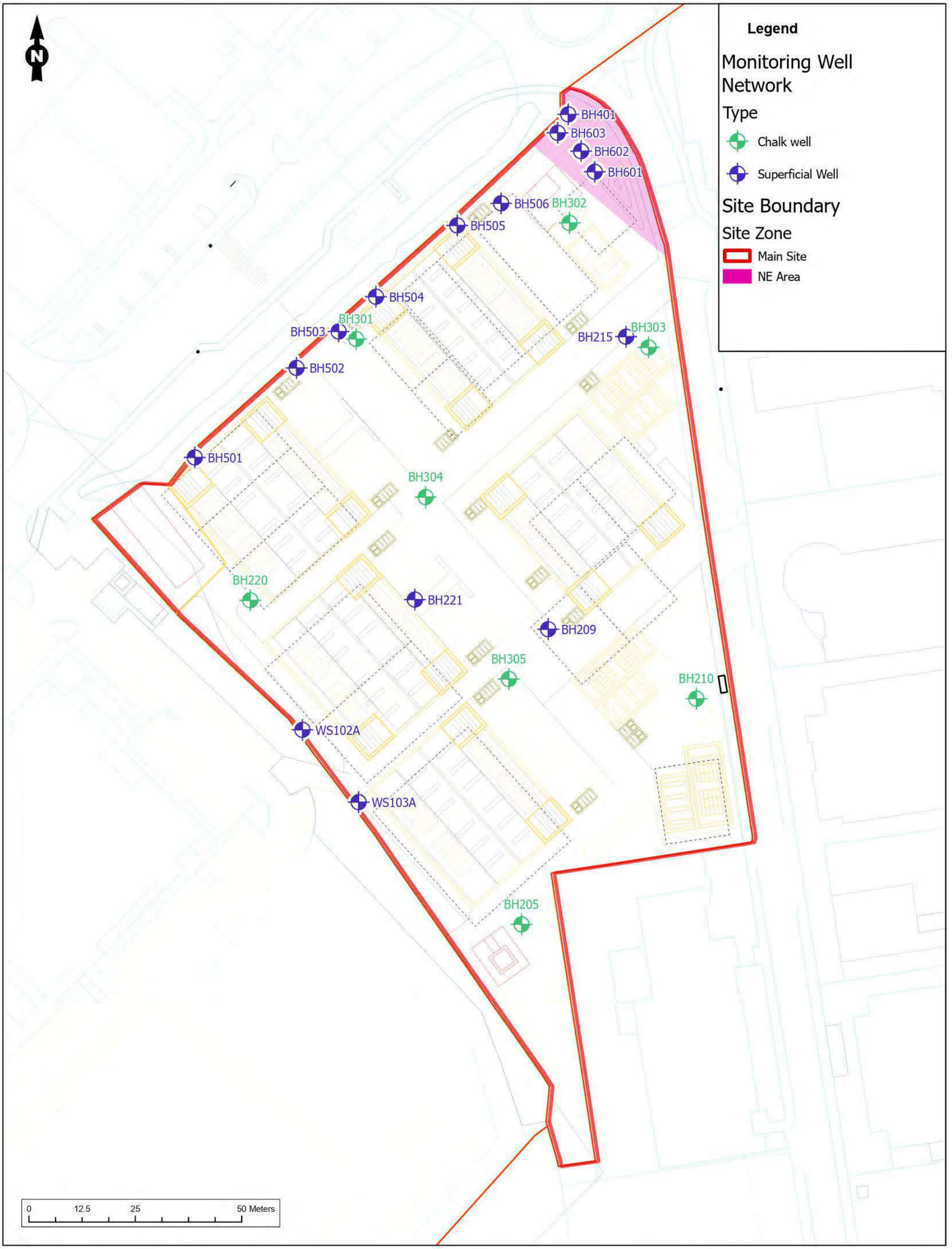


Figure Title: 2023 Monitoring Well Network	Project Number: 1620015380	Figure No.: A	Client: **Watford Borough Council**
Project Name: Watford Business Park Zone A	Date: 13/06/2023	Prepared By: JD	RAMBOLL
	Scale: 1:800 @A3	Issue: 6	

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

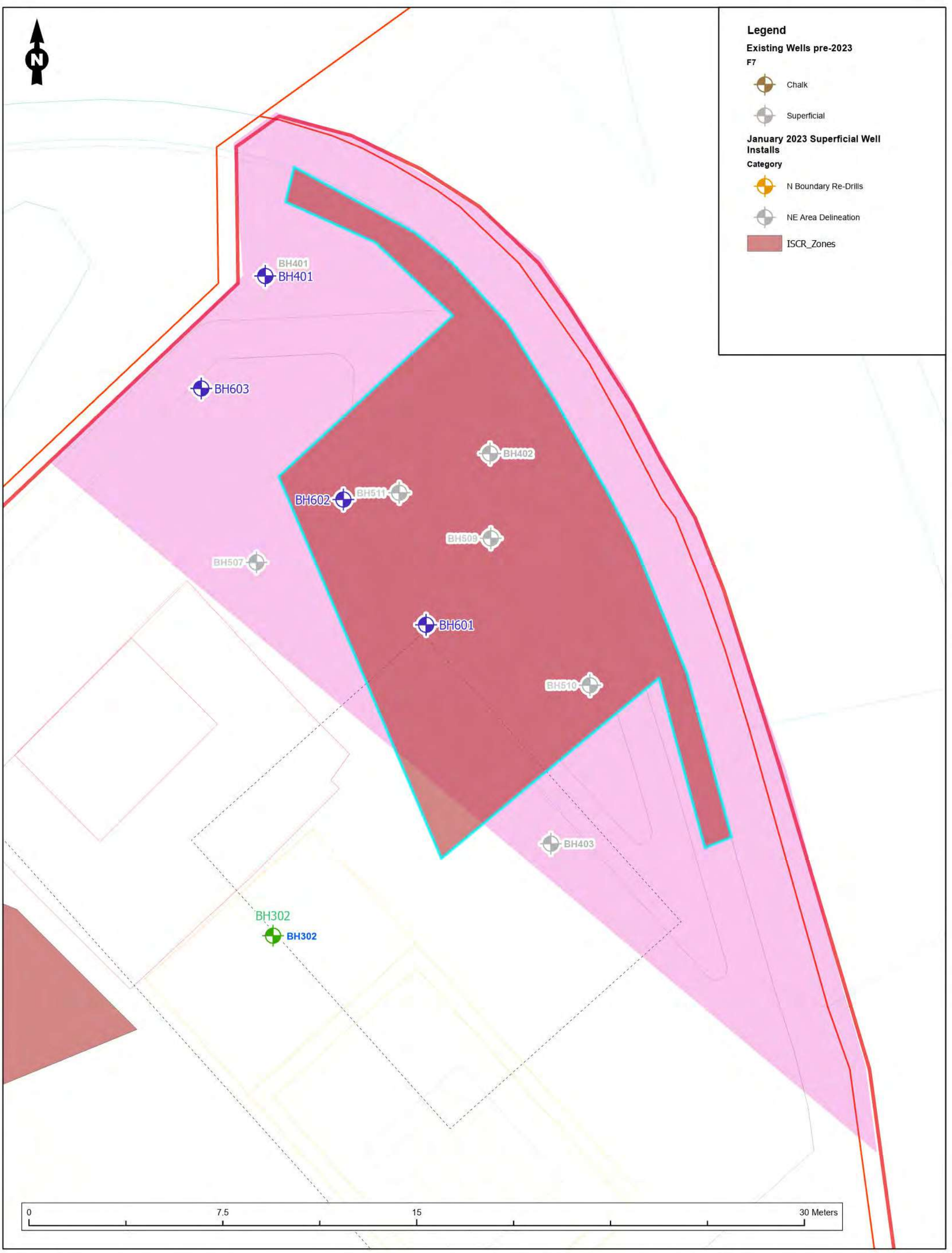


Figure Title: 2023 Monitoring Well Network	Project Number: 1620015380	Figure No.: A	Client: **Watford Borough Council**
Project Name: Watford Business Park Zone A	Date: 13/06/2023	Prepared By: JD	RAMBOLL
	Scale: 1:132 @A3	Issue: 6	

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

APPENDIX 2
PREVIOUS RAMBOLL AND THIRD PARTY REPORT REFERENCE LIST

List of Ramboll UK Limited (and its predecessors ENVIRON UK Ltd & Ramboll Environ UK Ltd) and Other Third Party Reports

- Environ UK Ltd (4th June 2015) Phase I Environmental Assessment of Zone A (ref: RUK16-21395_2).
- Ramboll Environ UK Ltd (31st July 2015) Phase II Environmental Assessment of 4 Faraday Close only (ref:RUK16-21826_1).
- Ramboll Environ UK Ltd (2nd October 2015) Phase II Environmental Assessment of 1 Faraday Close only (ref:RUK16-21836_1).
- Ramboll Environ UK Ltd (30th June 2016) Phase II Environmental Assessment of Zone A (plus Unit B1) (ref: RUK16-22824_PII_1).
- Ramboll Environ UK Ltd (5th January 2017) Groundwater Assessment of Zone A (plus Unit B1) (ref: RUK16-22824_UK02_1).
- Geotechnical & Environmental Associates Ltd (GEA) (September 2020) Ground Investigation Report on Faraday Close, Watford Business Park, Watford, WD18 8RF (ref: J20125)
- Ramboll Environ UK Ltd (2nd October 2020) Phase I Environmental Site Assessment (ref: R1620010631_PhI_1).
- Ramboll Environ UK Ltd (9th December 2020) Detailed Quantitative Risk Assessment of Zone A (ref: R1620007300_4).
- Ramboll UK Ltd (25th October 2021) Pre-Construction Remediation Strategy (ref: R1620010631_RS_4).
- Ramboll UK Ltd (18th March 2022) Foundation Works Risk Assessment (ref: R1620010631_FWRA_3).
- Ramboll UK Ltd (30th April 2021) Watford Business Park Zone A: Discovery Strategy Delineation Investigation & Conceptual Model Update (ref: L1620012108_DS_1).
- Ramboll UK Ltd (24th June 2022) Watford Business Park Zone A: Trial Pit Investigation Factual Report (ref: 1620012108_TPF_1).
- Ramboll UK Ltd (5th October 2022) Conceptual Site Model Update (ref: R1620012108-003_CSM_Issue 5).
- Ramboll UK Ltd (18th August 2022) Revised Detailed Quantitative Risk Assessment (DQRA) of Zone A (ref. R1620012108-004 Issue 3).
- Ramboll UK Ltd (18th August 2022) Revised Pre-Construction Remediation Strategy (ref. R1620012108-006 Issue 2).
- Englobe (September 2022) Watford Business Park Remediation Strategy and Implementation Plan (Ref. R1848/22/5201).
- Englobe (September 2022) Faraday Close Watford Business Park Verification Report (ref. R1848-21-5142 FINAL).
- Ramboll UK Ltd (21st September 2022) NE Area Investigation Factual Report (ref: 1620012108-009_NEGI_2).
- Ramboll (18th November 2022) Watford Business Park Zone A Construction Phase Remediation Strategy (ref. 1620012108-006_CPRS_1).
- Ramboll UK Ltd (11th November 2022) Foundation Works Risk Assessment (Ref. 1620012108-008_FWRA Issue 4).
- Ramboll UK Ltd (November 2022) Watford Business Park Zone A Post-Treatment Interim Groundwater Verification Report (ref. 1620012108-002_1).

- Ramboll UK Ltd (31st May 2023) NE Area Investigation Interpretive Report (ref: 1620015380_NEIR_2).
- Ramboll UK Ltd (13th June 2023) Construction Remediation Strategy Addendum – North-East Area (Ref: R1620015308_RS_Addendum_001).
- Englobe (August 2023) Watford Business Park Works Completion Report (Ref: R1848/23/5343)
- Ramboll UK Ltd (6th October 2023) Pre-Construction Phase Remediation Verification Report (Ref: R1620015380-002_PCRVR_1).

APPENDIX 3
FIELD MONITORING DATA

Table A3.1 Groundwater Elevations (mAOD)

MWID#	21/04/2023	25/05/2023	26/06/2023	24/07/2023	29/08/2023	17/10/2023	04/12/2023	13/02/2024
BH401	51.215	51.215	51.185	51.215	51.175	51.425	51.555	51.525
BH402	51.4	51.45	51.46	51.49	D/C	D/C	D/C	D/C
BH403	UTL	51.78	51.72	51.79	D/C	D/C	D/C	D/C
BH507	UTL	UTL	51.858	51.918	D/C	D/C	D/C	D/C
BH509	51.695	51.655	51.645	51.695	D/C	D/C	D/C	D/C
BH510	51.794	51.754	51.714	51.774	D/C	D/C	D/C	D/C
BH511	51.437	51.377	51.197	51.397	D/C	D/C	D/C	D/C
BH601	-	-	-	-	51.183	51.133	51.533	51.503
BH602	-	-	-	-	51.272	51.332	51.532	N/A
BH603	-	-	-	-	51.026	51.356	51.396	51.376

Notes:
UTL: Unable to Locate
UTGA: Unable to Gain Access
D/C: Decommissioned

Table A3.2 Groundwater Dissolved Oxygen (mg/L)

MWID#	21/04/2023	25/05/2023	26/06/2023	24/07/2023	29/08/2023	17/10/2023	04/12/2023	13/02/2024
BH401	N/S	3.1	2.11	2.06	2.16	4.65	2.4	3.57
BH402	N/S	1.87	1.4	1.81	D/C	D/C	D/C	D/C
BH403	N/S	2.47	1.13	3.13	D/C	D/C	D/C	D/C
BH507	N/S	3.22	1.29	4.66	D/C	D/C	D/C	D/C
BH509	5.85	2.93	2.93	3.88	D/C	D/C	D/C	D/C
BH510	N/S	4.3	2.03	4.12	D/C	D/C	D/C	D/C
BH511	N/S	5.66	1.52	3.44	D/C	D/C	D/C	D/C
BH601	-	-	-	-	0.94	1.47	4.93	4.66
BH602	-	-	-	-	1.68	5.1	4.83	2.39
BH603	-	-	-	-	3.09	3.03	7.05	3.42

Notes:
N/S: Not Sampled
UTL: Unable to Locate
UTGA: Unable to Gain Access
D/C: Decommissioned

Table A3.3 Groundwater Redox Potential (mV)

MWID#	21/04/2023	25/05/2023	26/06/2023	24/07/2023	29/08/2023	17/10/2023	04/12/2023	13/02/2024
BH401	N/S	254.7	311.4	474.1	423.4	203.1	100.6	93.3
BH402	N/S	192.9	219.8	474.5	D/C	D/C	D/C	D/C
BH403	N/S	167.3	266.1	452.6	D/C	D/C	D/C	D/C
BH507	N/S	258	199.9	448.1	D/C	D/C	D/C	D/C
BH509	278.3	293.4	201	422.9	D/C	D/C	D/C	D/C
BH510	N/S	214.9	217.8	434.6	D/C	D/C	D/C	D/C
BH511	N/S	221.4	252.1	486	D/C	D/C	D/C	D/C
BH601	-	-	-	-	152	184.8	71.3	33.3
BH602	-	-	-	-	188.1	14.7	-62	-43.9
BH603	-	-	-	-	228.3	199.8	40.5	-94.1

Notes:
N/S: Not Sampled
UTL: Unable to Locate
UTGA: Unable to Gain Access
D/C: Decommissioned

APPENDIX 4
GROUNDWATER ANALYTICAL DATA INTERPRETATIONS

CORRELATIONS

PCE Correlations	25/05/2023	24/07/2023	30/08/2023 – PCE ND	17/10/2023 – PCE ND	04/12/2023 – PCE ND	13/02/2024 – PCE ND
Vinyl Chloride	0.90645821	**0.66132931**				
trans-1,2-dichloroethene	0.94493672	**0.64855822**				
cis-1,2-dichloroethene	0.9543834	**0.73795801**				
Trichloroethene	0.99887153	**0.93418345**				
DO	**0.19921198**	**0.20604516**				
ORP	0.01103414	**0.15063941**				
Nitrate as N	**-0.2759857**	**0.38893232**				
Nitrite as N	**-0.4680035**	**0.16873038**				
Nitrate+Nitrite	**-0.4700417**	**0.177894**				
Ammoniacal Nitrogen as N	0.69359704	0.25556877				
Manganese (dissolved)	**0.1933246**	-0.0879651				
Fe3+	**-0.2031332**	**0.64855822**				
Fe2+	ND	**0.64855822**				
Sulphate as SO4	**-0.3783324**	-0.1038247				
Sulphide	ND	ND				
Methane	**0.19142745**	**0.33922534**				
Ethane	**0.32550791**	**-0.1666185**				
Ethene	**0.67530151**	**-0.1666185**				
pH	**-0.4986505**	**-0.4924157**				
Dissolved Organic Carbon (DOC)	0.78100868	0.86789483				
Hardness - total	0.58720549	0.4788405				

Notes:

ND: Not Detected

Correlations undertaken with and without log transformation of data with strongest correlation (positive or negative) reported for each comparison. Emboldened data represent correlations following log-transformation of data.

Coloured cells indicate where a statistically significant correlation was obtained (P<0.1). Statistical significance indicated as:

P < 0.1	P < 0.05	P < 0.01	P < 0.001

TCE Correlations	25/05/2023	24/07/2023	30/08/2023	17/10/2023	04/12/2023	13/02/2024
Vinyl Chloride	0.91370932	**0.85947823**	**0.19867137**	-0.1429501	**-0.1652189**	ND
trans-1,2-dichloroethene	0.95786345	0.91039726	ND	ND	ND	ND
cis-1,2-dichloroethene	0.95844682	**0.91677485**	**0.56397066**	0.81897632	0.9929183	1
Tetrachloroethene	0.99887153	**0.93418345**	ND	ND	ND	ND
DO	0.19113815	0.17572863	**-0.2991679**	**0.24702681**	-0.119117	**0.17295602**
ORP	0.01886287	0.17572863	**-0.227986**	**0.04914112**	**0.38174168**	**0.21415114**
Nitrate as N	**-0.2336237**	**0.25291929**	-0.2239181	**-0.2200363**	-0.1509267	**0.24819121**
Nitrite as N	**-0.5931468**	-0.1093212	**-0.2465958**	-0.1882816	**0.10185975**	0.99972698
Nitrate+Nitrite	**-0.5904439**	**0.10984292**	**-0.25**	-0.19	**0.11**	0.99945914
Ammoniacal Nitrogen as N	0.71521145	0.59585449	**0.3755633**	-0.0818522	**0.45737557**	**0.30938914**
Manganese (dissolved)	0.09518635	0.14638693	**0.22913154**	**-0.9357317**	-0.1860001	ND
Fe3+	**-0.3802219**	0.91039726	**0.49139766**	**-0.1632831**	**-0.1652189**	**-0.3301806**
Fe2+	ND	0.91039726	**0.29097222**	**-0.1632831**	1.3436E-17	1.8102E-17
Sulphate as SO4	**-0.5773491**	**-0.1078928**	0.65221972	**-0.7884161**	-0.1225081	0.55357838
Sulphide	ND	ND	**-1.493E-16**	0	-1.06E-16	-0.2419787
Methane	-0.1459905	**0.61908049**	0.08386889	**-0.4291893**	**-0.3192747**	1
Ethane	**0.50980247**	**0.18759529**	**0.12071979**	**-0.1632831**	**-0.1652189**	ND
Ethene	**0.77580212**	**0.18759529**	**0.22492541**	0	1.3436E-17	ND
pH	-0.4761685	**-0.6415496**	**-0.3485484**	**-0.4800038**	**0.2129757**	**0.46352758**
Dissolved Organic Carbon (DOC)	0.77734813	0.88293857	0.19435106	**-0.2923275**	0.25437651	0.71372103
Hardness - total	0.58889668	**0.46872752**	**0.6226298**	**-0.757422**	**-0.263425**	**-0.6485713**

Notes:

ND: Not Detected

Correlations undertaken with and without log transformation of data with strongest correlation (positive or negative) reported for each comparison. Emboldened data represent correlations following log-transformation of data.

Coloured cells indicate where a statistically significant correlation was obtained (P<0.1). Statistical significance indicated as:

P < 0.1	P < 0.05	P < 0.01	P < 0.001

***cis*-DCE Correlations**	**25/05/2023**	**24/07/2023**	**30/08/2023**	**17/10/2023**	**04/12/2023**	**13/02/2024**
Vinyl Chloride	0.99096086	**0.95485847**	0.93471378	-0.1320899	**-0.1654727**	ND
trans-1,2-dichloroethene	0.96165243	0.79563238	ND	ND	ND	ND
Trichloroethene	0.95844682	**0.91677485**	**0.56397066**	0.81897632	**0.99992644**	1
Tetrachloroethene	0.9543834	**0.73795801**	ND	ND	ND	ND
DO	0.17418324	-0.136647	**-0.653146**	**-0.4046306**	-0.1561817	0.13959913
ORP	0.00724763	-0.136647	**-0.5723015**	-0.1312189	**0.38243421**	0.13030349
Nitrate as N	**-0.2587789**	-0.1273935	-0.2413705	**-0.6799644**	-0.1336653	**0.16812498**
Nitrite as N	**-0.6731355**	-0.1728237	**-0.7134088**	**0.16004325**	**0.10839591**	0.99972698
Nitrate+Nitrite	**-0.6665361**	**0.00533824**	**-0.72**	**0.14**	**0.12**	0.99945914
Ammoniacal Nitrogen as N	0.76356246	0.78884774	**0.72931801**	**0.40546535**	**0.45922291**	0.27564066
Manganese (dissolved)	0.09413619	0.4662178	0.64293357	**-0.3549832**	-0.1621291	ND
Fe3+	**-0.4918017**	**0.79563238**	**0.65815057**	**-0.1648014**	**-0.1654727**	**-0.2356347**
Fe2+	ND	**0.79563238**	**0.84787467**	**0.54800539**	-1.5E-17	-4.723E-17
Sulphate as SO4	**-0.7127768**	**-0.2162288**	**-0.6753083**	**-0.7538649**	-0.1502338	0.55357838
Sulphide	ND	ND	**-5.455E-17**	-1.216E-16	-6.07E-17	-0.2419787
Methane	-0.1592893	**0.75994469**	0.80471819	-0.1809846	**-0.3197649**	1
Ethane	**0.62546605**	**0.50364815**	0.99899897	**-0.1648014**	**-0.1654727**	ND
Ethene	**0.86582442**	**0.50364815**	0.91749983	2.8018E-17	-1.5E-17	ND
pH	-0.5567792	**-0.6780885**	**-0.7582661**	**-0.429702**	**0.21901024**	**0.49229465**
Dissolved Organic Carbon (DOC)	0.7392058	**0.74033208**	**0.80184777**	**0.5322243**	**0.15238181**	0.71372103
Hardness - total	0.56925653	0.34290389	**0.9510285**	-	**-0.270067**	**-0.6602574**

Notes:

ND: Not Detected

Correlations undertaken with and without log transformation of data with strongest correlation (positive or negative) reported for each comparison. Emboldened data represent correlations following log-transformation of data.

Coloured cells indicate where a statistically significant correlation was obtained (P<0.1). Statistical significance indicated as:

P < 0.1	P < 0.05	P < 0.01	P < 0.001

VC Correlations	25/05/2023	24/07/2023	30/08/2023	17/10/2023	04/12/2023	13/02/2024 – VC ND
trans-1,2-dichloroethene	0.94714263	0.65327416	ND	ND	ND	
cis-1,2-dichloroethene	0.99096086	**0.95485847**	0.93471378	-0.1320899	**-0.1654727**	
Trichloroethene	0.91370932	**0.85947823**	**0.19867137**	-0.1429501	**-0.1652189**	
Tetrachloroethene	0.90645821	**0.66132931**	ND	ND	ND	
DO	**0.26672512**	-0.2621445	-0.5777993	**-0.2344336**	-0.0531784	
ORP	0.00478618	-0.2621445	-0.5777993	0.47153221	**-0.5084642**	
Nitrate as N	**-0.3273032**	-0.1998964	-0.2069938	0.23146862	**-0.399114**	
Nitrite as N	**-0.6881208**	-0.1820046	**-0.7596226**	0.95979627	-0.1793378	
Nitrate+Nitrite	**-0.6803036**	-0.1827124	**-0.76**	0.96	-0.18	
Ammoniacal Nitrogen as N	0.78271016	0.80143314	0.81410447	0.24455989	0.43859918	
Manganese (dissolved)	**0.31823086**	**0.58101065**	0.76103976	-0.2120568	**0.32447986**	
Fe3+	**-0.3007002**	0.65327416	**0.60814462**	-0.1157995	0.37029623	
Fe2+	ND	0.65327416	**0.75696952**	-0.1320899	-1.473E-17	
Sulphate as SO4	**-0.4995977**	**-0.3214913**	**-0.8532301**	-0.1492829	-0.2086355	
Sulphide	ND	ND	**-4.672E-17**	-9.208E-17	-3.19E-16	
Methane	**0.25805202**	0.90110904	0.88485413	**0.54175064**	0.86631516	
Ethane	**0.67091972**	0.67075593	0.93675254	-0.1157995	-0.1111111	
Ethene	**0.92937857**	0.67075593	0.95695256	ND	-1.473E-17	
pH	**-0.6440427**	**-0.7251274**	**-0.7921175**	**-0.1587436**	**-0.2585736**	
Dissolved Organic Carbon (DOC)	0.6976554	**0.62029354**	0.87052325	**0.1234553**	**0.28100518**	
Hardness - total	0.54830872	**0.43530779**	0.76592664	-0.1825036	0.33396735	

Notes:
ND: Not Detected
Correlations undertaken with and without log transformation of data with strongest correlation (positive or negative) reported for each comparison. Emboldened data represent correlations following log-transformation of data.
Coloured cells indicate where a statistically significant correlation was obtained (P<0.1). Statistical significance indicated as:

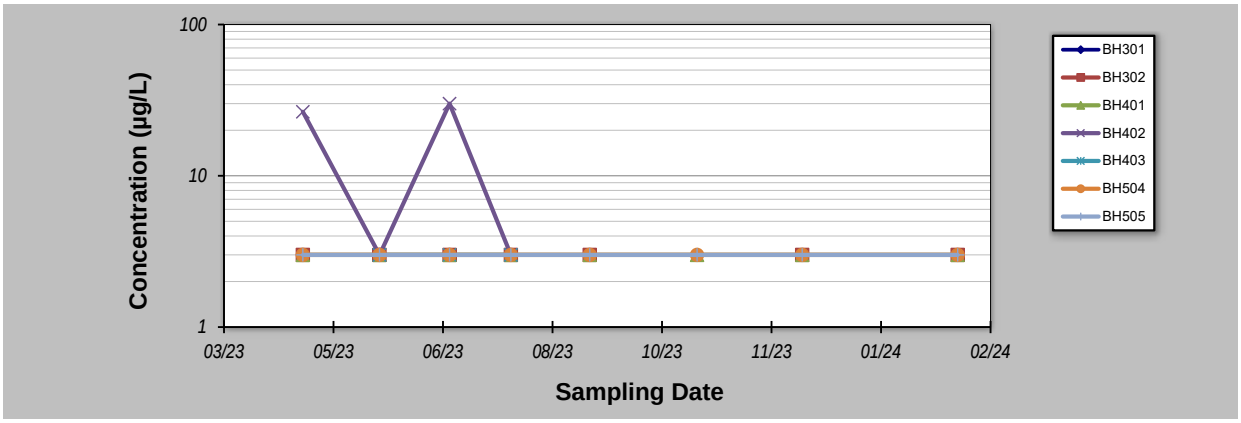
P < 0.1	P < 0.05	P < 0.01	P < 0.001

CONSTITUENT TREND ANALYSIS

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	03-Apr-24	Job ID:	1620015380
Facility Name:	Watford Business Park Zone A - NE Area	Constituent:	PCE
Conducted By:	Viktoriya Grygoryshchak	Concentration Units:	µg/L

Sampling Point ID:	BH301	BH302	BH401	BH402	BH403	BH504	BH505
Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
1	20-Apr-23	3	3	3	26.5		3	3
2	25-May-23	3	3	3	3	3	3	3
3	26-Jun-23	3	3	3	30	3	3	3
4	24-Jul-23	3	3	3	3	3	3	3
5	29-Aug-23	3	3	3			3	3
6	17-Oct-23			3			3	3
7	4-Dec-23	3	3	3			3	3
8	13-Feb-24	3	3	3			3	3
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.00	0.00	0.00	0.94	0.00	0.00	0.00
Mann-Kendall Statistic (S):		0	0	0	-1	0	0	0
Confidence Factor:		37.9%	37.9%	45.2%	50.0%		45.2%	45.2%
Concentration Trend:		Stable	Stable	Stable	Stable		Stable	Stable



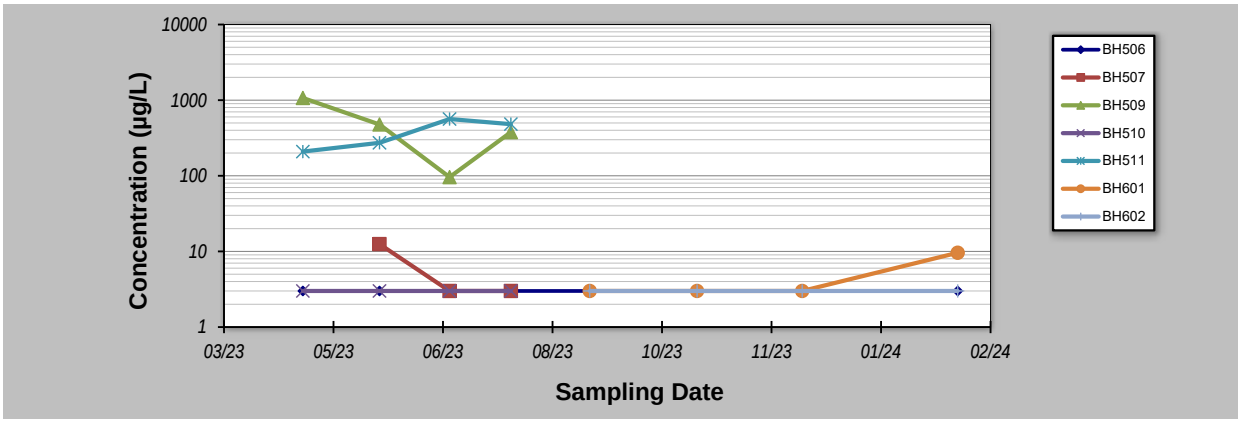
Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	03-Apr-24	Job ID:	1620015380
Facility Name:	Watford Business Park Zone A - NE Area	Constituent:	PCE
Conducted By:	Viktoriya Grygoryshchak	Concentration Units:	µg/L

Sampling Point ID:	BH506	BH507	BH509	BH510	BH511	BH601	BH602
Sampling Event	Sampling Date	PCE CONCENTRATION (µg/L)						
1	20-Apr-23	3		1070	3	209		
2	25-May-23	3	12.5	477	3	273		
3	26-Jun-23	3	3	96	3	563		
4	24-Jul-23	3	3	378	3	482		
5	29-Aug-23	3					3	3
6	17-Oct-23	3					3	3
7	4-Dec-23	3					3	3
8	13-Feb-24	3					9.6	3
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.00	0.89	0.81	0.00	0.44	0.71	0.00
Mann-Kendall Statistic (S):		0	-2	-4	0	4	3	0
Confidence Factor:		45.2%		83.3%	37.5%	83.3%	72.9%	37.5%
Concentration Trend:		Stable		Stable	Stable	No Trend	No Trend	Stable



Notes:

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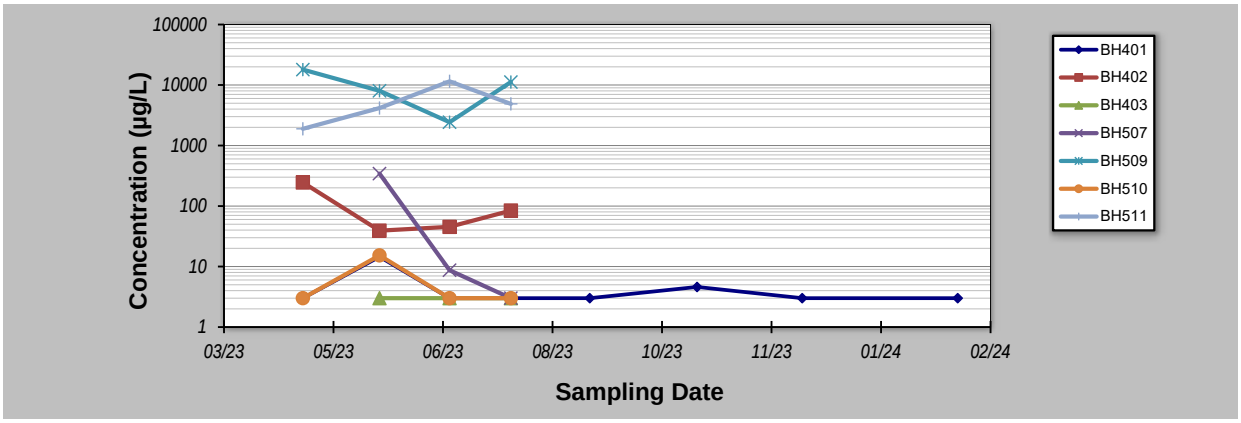
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	25-Mar-24	Job ID:	1620015380
Facility Name:	Watford Business Park Zone A	Constituent:	TCE
Conducted By:	Jesse Davies	Concentration Units:	µg/L

Sampling Point ID:	BH401	BH402	BH403	BH507	BH509	BH510	BH511
Sampling Event	Sampling Date	TCE CONCENTRATION (µg/L)						
1	20-Apr-23	3	245			18000	3	1890
2	25-May-23	14.5	39.2	3	344	8030	15.3	4170
3	26-Jun-23	3	45.3	3	8.7	2430	3	11500
4	24-Jul-23	3	84.2	3	3	11200	3	4880
5	29-Aug-23	3						
6	17-Oct-23	4.6						
7	4-Dec-23	3						
8	13-Feb-24	3						
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.87	0.93	0.00	1.65	0.66	1.01	0.74
Mann-Kendall Statistic (S):		-3	0	0	-3	-2	-1	4
Confidence Factor:		59.4%	37.5%			62.5%	50.0%	83.3%
Concentration Trend:		Stable	Stable			Stable	No Trend	No Trend



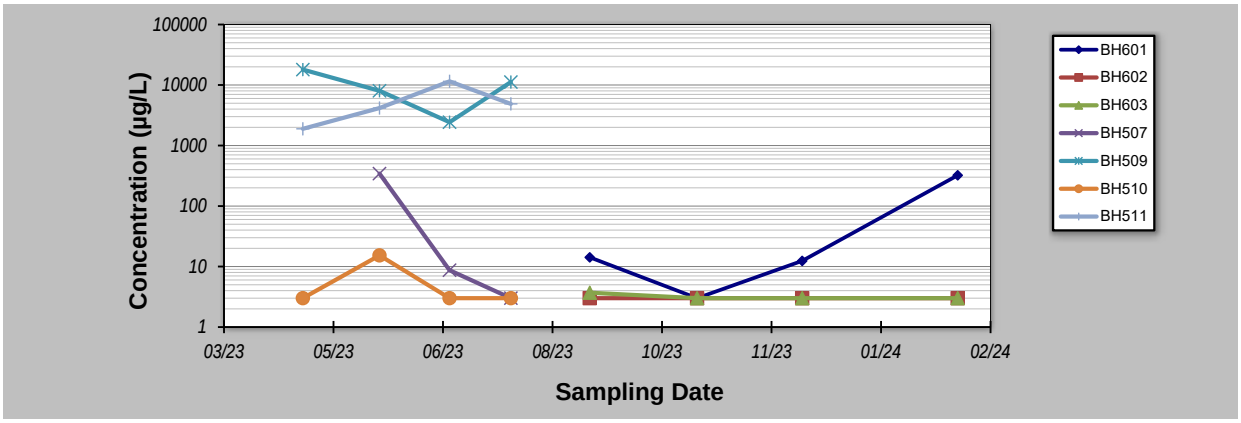
Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: **25-Mar-24**
Facility Name: **Watford Business Park Zone A**
Conducted By: **Jesse Davies**
Job ID: **1620015380**
Constituent: **TCE**
Concentration Units: **µg/L**

Sampling Point ID:	BH601	BH602	BH603	BH507	BH509	BH510	BH511
Sampling Event	Sampling Date	TCE CONCENTRATION (µg/L)						
1	20-Apr-23					18000	3	1890
2	25-May-23				344	8030	15.3	4170
3	26-Jun-23				8.7	2430	3	11500
4	24-Jul-23				3	11200	3	4880
5	29-Aug-23	14.2	3	3.7				
6	17-Oct-23	3	3	3				
7	4-Dec-23	12.4	3	3				
8	13-Feb-24	322	3	3				
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.78	0.00	0.11	1.65	0.66	1.01	0.74
Mann-Kendall Statistic (S):		2	0	-3	-3	-2	-1	4
Confidence Factor:		62.5%	37.5%	72.9%		62.5%	50.0%	83.3%
Concentration Trend:		No Trend	Stable	Stable		Stable	No Trend	No Trend



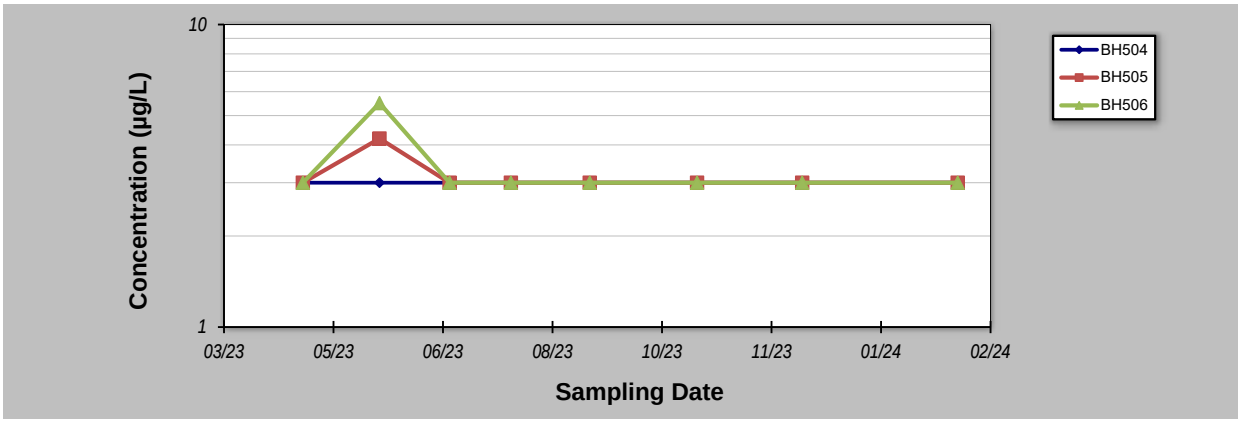
Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	25-Mar-24	Job ID:	1620015380
Facility Name:	Watford Business Park Zone A	Constituent:	TCE
Conducted By:	Jesse Davies	Concentration Units:	µg/L

Sampling Point ID:	BH504	BH505	BH506				
Sampling Event	Sampling Date	TCE CONCENTRATION (µg/L)						
1	20-Apr-23	3	3	3				
2	25-May-23	3	4.2	5.5				
3	26-Jun-23	3	3	3				
4	24-Jul-23	3	3	3				
5	29-Aug-23	3	3	3				
6	17-Oct-23	3	3	3				
7	4-Dec-23	3	3	3				
8	13-Feb-24	3	3	3				
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.00	0.13	0.27				
Mann-Kendall Statistic (S):		0	-5	-5				
Confidence Factor:		45.2%	68.3%	68.3%				
Concentration Trend:		Stable	Stable	Stable				



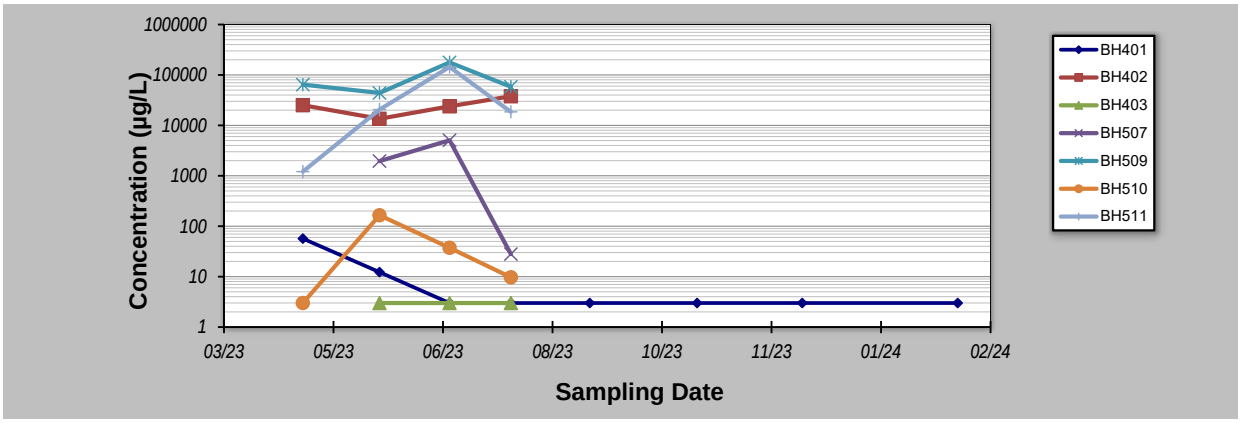
Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: **25-Mar-24**
Facility Name: **Watford Business Park Zone A**
Conducted By: **Jesse Davies**
Job ID: **1620015380**
Constituent: **cis-DCE**
Concentration Units: **µg/L**

Sampling Point ID:	BH401	BH402	BH403	BH507	BH509	BH510	BH511
Sampling Event	Sampling Date	CIS-DCE CONCENTRATION (µg/L)						
1	20-Apr-23	56.9	25100			64300	3	1210
2	25-May-23	12.3	13500	3	1960	43900	165	20600
3	26-Jun-23	3	23900	3	5060	177000	37.3	144000
4	24-Jul-23	3	37800	3	28	58400	9.7	18500
5	29-Aug-23	3						
6	17-Oct-23	3						
7	4-Dec-23	3						
8	13-Feb-24	3						
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.73	0.40	0.00	1.08	0.71	1.41	1.43
Mann-Kendall Statistic (S):		-13	2	0	-1	0	0	2
Confidence Factor:		92.9%	62.5%			37.5%	37.5%	62.5%
Concentration Trend:		Prob. Decreasing	No Trend			Stable	No Trend	No Trend



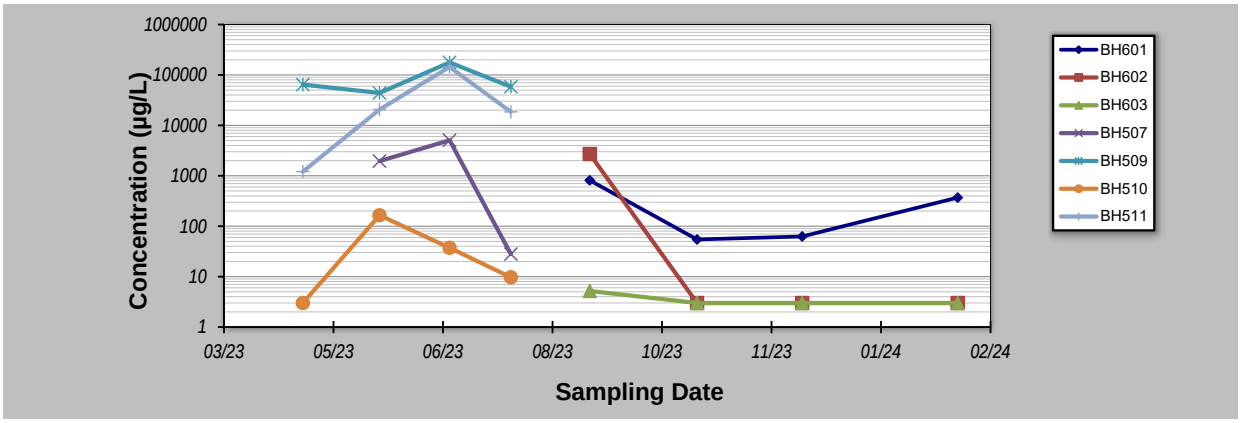
Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	25-Mar-24	Job ID:	1620015380
Facility Name:	Watford Business Park Zone A	Constituent:	cis-DCE
Conducted By:	Jesse Davies	Concentration Units:	µg/L

Sampling Point ID:	BH601	BH602	BH603	BH507	BH509	BH510	BH511
Sampling Event	Sampling Date	CIS-DCE CONCENTRATION (µg/L)						
1	20-Apr-23					64300	3	1210
2	25-May-23				1960	43900	165	20600
3	26-Jun-23				5060	177000	37.3	144000
4	24-Jul-23				28	58400	9.7	18500
5	29-Aug-23	812	2700	5.2				
6	17-Oct-23	54.7	3	3				
7	4-Dec-23	62.6	3	3				
8	13-Feb-24	370	3	3				
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.10	1.99	0.31	1.08	0.71	1.41	1.43
Mann-Kendall Statistic (S):		0	-3	-3	-1	0	0	2
Confidence Factor:		37.5%	72.9%	72.9%		37.5%	37.5%	62.5%
Concentration Trend:		No Trend	No Trend	Stable		Stable	No Trend	No Trend



Notes:

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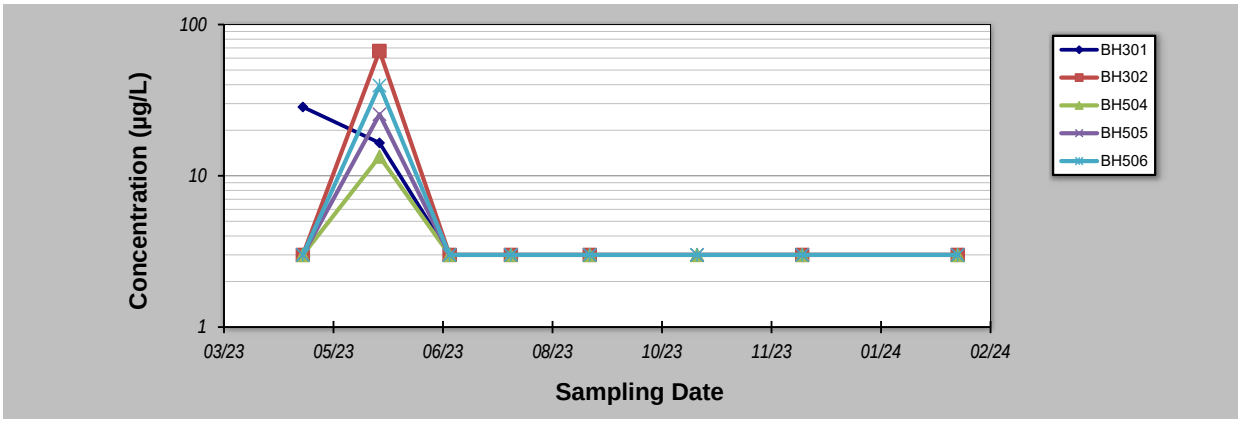
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	25-Mar-24	Job ID:	1620015380
Facility Name:	Watford Business Park Zone A	Constituent:	cis-DCE
Conducted By:	Jesse Davies	Concentration Units:	µg/L

Sampling Point ID:	BH301	BH302	BH504	BH505	BH506		
Sampling Event	Sampling Date	CIS-DCE CONCENTRATION (µg/L)						
1	20-Apr-23	28.5	3	3	3	3		
2	25-May-23	16.5	66.9	13.4	25.5	39.5		
3	26-Jun-23	3	3	3	3	3		
4	24-Jul-23	3	3	3	3	3		
5	29-Aug-23	3	3	3	3	3		
6	17-Oct-23			3	3	3		
7	4-Dec-23	3	3	3	3	3		
8	13-Feb-24	3	3	3	3	3		
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.18	1.99	0.86	1.37	1.71		
Mann-Kendall Statistic (S):		-11	-4	-5	-5	-5		
Confidence Factor:		93.2%	66.7%	68.3%	68.3%	68.3%		
Concentration Trend:		Prob. Decreasing	No Trend	Stable	No Trend	No Trend		



Notes:

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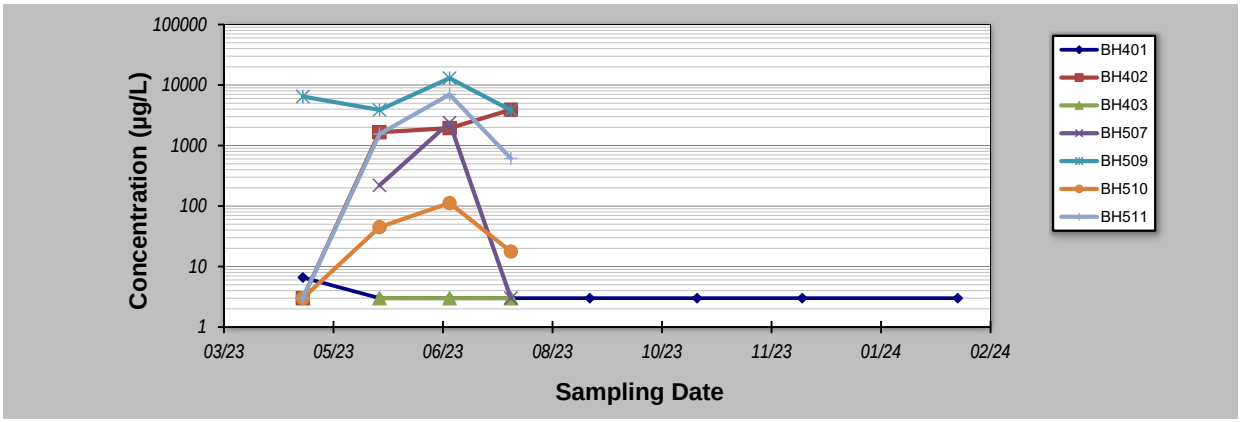
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	25-Mar-24	Job ID:	1620015380
Facility Name:	Watford Business Park Zone A	Constituent:	cis-DCE
Conducted By:	Jesse Davies	Concentration Units:	µg/L

Sampling Point ID:	BH401	BH402	BH403	BH507	BH509	BH510	BH511
Sampling Event	Sampling Date	CIS-DCE CONCENTRATION (µg/L)						
1	20-Apr-23	6.6	3			6450	3	3
2	25-May-23	3	1660	3	219	3880	44.8	1550
3	26-Jun-23	3	1940	3	2390	13000	112	6970
4	24-Jul-23	3	3910	3	3	3830	17.7	612
5	29-Aug-23	3						
6	17-Oct-23	3						
7	4-Dec-23	3						
8	13-Feb-24	3						
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.37	0.85	0.00	1.52	0.64	1.09	1.40
Mann-Kendall Statistic (S):		-7	6	0	-1	-2	2	2
Confidence Factor:		76.4%	95.8%			62.5%	62.5%	62.5%
Concentration Trend:		Stable	Increasing			Stable	No Trend	No Trend



Notes:

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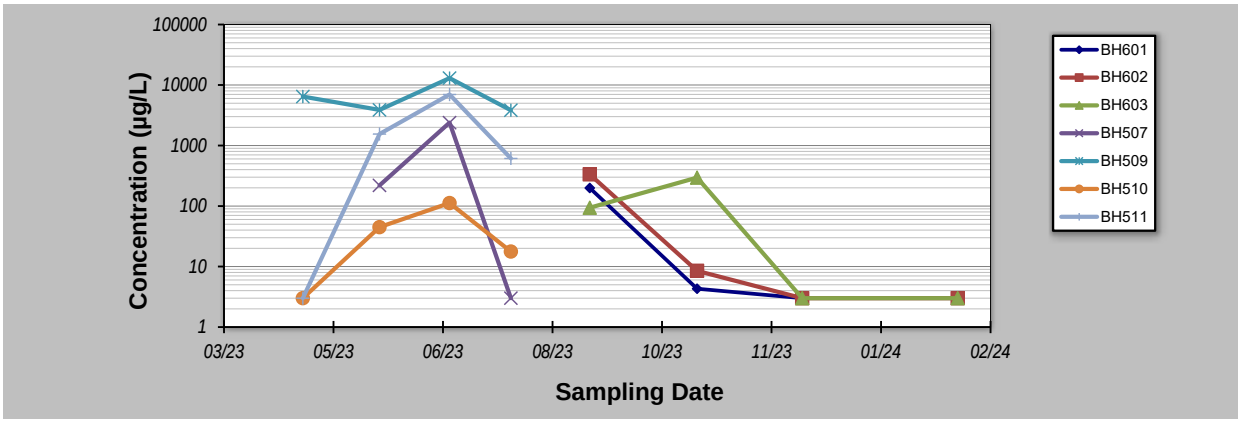
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	25-Mar-24	Job ID:	1620015380
Facility Name:	Watford Business Park Zone A	Constituent:	cis-DCE
Conducted By:	Jesse Davies	Concentration Units:	µg/L

Sampling Point ID:	BH601	BH602	BH603	BH507	BH509	BH510	BH511
Sampling Event	Sampling Date	CIS-DCE CONCENTRATION (µg/L)						
1	20-Apr-23					6450	3	3
2	25-May-23				219	3880	44.8	1550
3	26-Jun-23				2390	13000	112	6970
4	24-Jul-23				3	3830	17.7	612
5	29-Aug-23	199	334	93.9				
6	17-Oct-23	4.3	8.5	295				
7	4-Dec-23	3	3	3				
8	13-Feb-24	3	3	3				
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.87	1.89	1.39	1.52	0.64	1.09	1.40
Mann-Kendall Statistic (S):		-5	-5	-3	-1	-2	2	2
Confidence Factor:		89.6%	89.6%	72.9%		62.5%	62.5%	62.5%
Concentration Trend:		No Trend	No Trend	No Trend		Stable	No Trend	No Trend



Notes:

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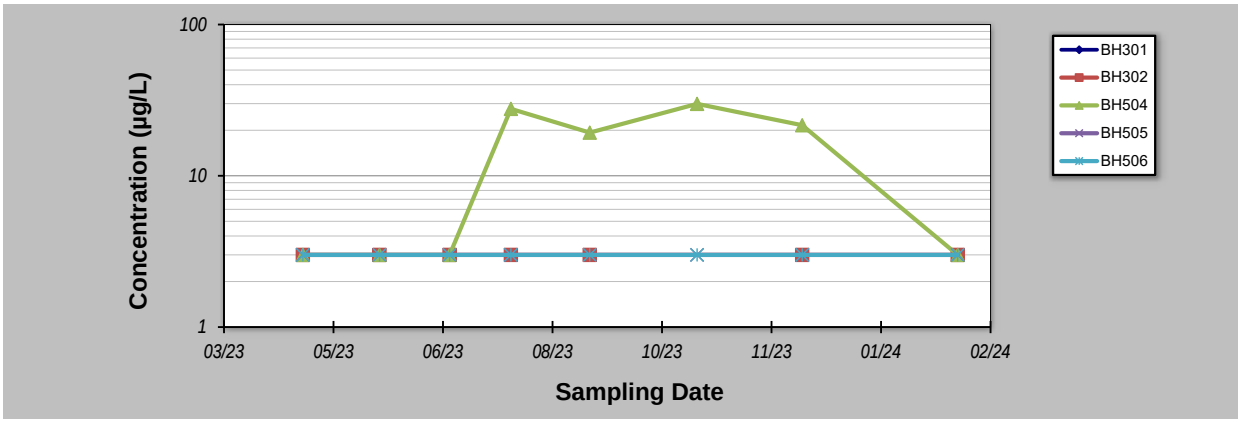
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	25-Mar-24	Job ID:	1620015380
Facility Name:	Watford Business Park Zone A	Constituent:	cis-DCE
Conducted By:	Jesse Davies	Concentration Units:	µg/L

Sampling Point ID:	BH301	BH302	BH504	BH505	BH506		
Sampling Event	Sampling Date	CIS-DCE CONCENTRATION (µg/L)						
1	20-Apr-23	3	3	3	3	3		
2	25-May-23	3	3	3	3	3		
3	26-Jun-23	3	3	3	3	3		
4	24-Jul-23	3	3	27.7	3	3		
5	29-Aug-23	3	3	19.3	3	3		
6	17-Oct-23			29.9	3	3		
7	4-Dec-23	3	3	21.6	3	3		
8	13-Feb-24	3	3	3	3	3		
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.00	0.00	0.87	0.00	0.00		
Mann-Kendall Statistic (S):		0	0	8	0	0		
Confidence Factor:		37.9%	37.9%	80.1%	45.2%	45.2%		
Concentration Trend:		Stable	Stable	No Trend	Stable	Stable		



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APPENDIX 5
GROUNDWATER ANALYTICAL DATA CERTIFICATES (TO BE PROVIDED ELECTRONICALLY)

Emma Manicaro
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i2 Analytical Ltd.
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Watford,
Herts,
WD18 8YS

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

Analytical Report Number : 23-29488

Project / Site name:	WPB Zone A	**Samples received on:**	20/04/2023
Your job number:	1620012108	**Samples instructed on/ Analysis started on:**	20/04/2023
Your order number:	1620043566	**Analysis completed by:**	28/04/2023
Report Issue Number:	1	**Report issued on:**	28/04/2023
Samples Analysed:	14 water samples		

Signed:

Anna Goc
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

Analytical Report Number: 23-29488
Project / Site name: WPB Zone A

Your Order No: 1620043566

Lab Sample Number				2654326	2654327	2654328	2654329	2654330
Sample Reference				BH501_200423	BH502_200423	BH503_200423	BH504_200423	BH506_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L005B)	pH Units	N/A	ISO 17025	7.1	7.5	7.4	7.4	9.6
Total Cyanide	µg/l	10	ISO 17025	< 10	16	< 10	< 10	27
Sulphate as SO4	mg/l	0.045	ISO 17025	373	428	90	88.8	154
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	4500	1600	4300	4700	1900
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	5700	2100	5500	6000	2500
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	12.8	10.3	2.74	4.41	6.22
Nitrate as N	mg/l	0.01	ISO 17025	0.16	0.18	0.15	0.31	3.1
Nitrite as N	µg/l	1	ISO 17025	2.1	48	4.6	9.5	3400
Hardness - Total	mgCaCO3/l	1	ISO 17025	647	548	411	484	211
Redox Potential	mV	-800	NONE	65.7	84.8	89.3	70.3	166.9
Dissolved Oxygen	mg/l	1	NONE	8.9	8.6	9.7	8.3	8.2
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								265
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-29488
Project / Site name: WPB Zone A

Your Order No: 1620043566

Lab Sample Number				2654326	2654327	2654328	2654329	2654330
Sample Reference				BH501_200423	BH502_200423	BH503_200423	BH504_200423	BH506_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	160	130	200	210	90
Calcium (dissolved)	mg/l	0.012	ISO 17025	240	210	150	180	83
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	U/S#
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	U/S#
Iron (dissolved)	mg/l	0.004	ISO 17025	0.13	0.019	0.016	0.12	0.022
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	10	4	6.1	6.6	0.93
Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.92	3.23	1.09	2.32	6.93
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.04	0.04	0.06	0.04	0.11
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.7	0.4	< 0.2	0.2	3.8
Copper (dissolved)	µg/l	0.5	ISO 17025	0.6	3.4	3.1	1.9	14
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.2	< 0.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	6500	1200	920	1200	4.9
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	6.2	8.3	17	14	7.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.2	1.7	0.9	0.7	2
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.6	0.9	0.3	19
Zinc (dissolved)	µg/l	0.5	ISO 17025	4.8	11	7	7.6	1.9
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	457	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	490	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	490	< 10	< 10
VOCs								

Analytical Report Number: 23-29488
Project / Site name: WPB Zone A

Your Order No: 1620043566

Lab Sample Number				2654326	2654327	2654328	2654329	2654330
Sample Reference				BH501_200423	BH502_200423	BH503_200423	BH504_200423	BH506_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	457	< 3.0	< 3.0
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tribromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

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Project / Site name: WPB Zone A

Your Order No: 1620043566

Lab Sample Number				2654326	2654327	2654328	2654329	2654330
Sample Reference				BH501_200423	BH502_200423	BH503_200423	BH504_200423	BH506_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Gases								
Methane	mg/L	0.1	NONE	5.4	< 0.1	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-29488
Project / Site name: WPB Zone A

Your Order No: 1620043566

Lab Sample Number				2654331	2654332	2654333	2654334	2654335
Sample Reference				BH401_200423	BH510_200423	BH511_200423	BH402_200423	SWDG_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L005B)	pH Units	N/A	ISO 17025	7.2	7.2	7.2	6.8	7.6
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	11	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	98.7	139	49.1	70.7	50.7
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	-
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	1400	5600	700	8300	120
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	1800	7200	900	11000	-
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	1.89	3.86	12.1	6.93	1.19
Nitrate as N	mg/l	0.01	ISO 17025	2.75	0.16	0.63	0.37	-
Nitrite as N	µg/l	1	ISO 17025	12	< 1.0	8.1	1.9	-
Hardness - Total	mgCaCO3/l	1	ISO 17025	474	511	429	553	410
Redox Potential	mV	-800	NONE	75.2	124.5	127.8	122.1	132.8
Dissolved Oxygen	mg/l	1	NONE	8.4	9.2	9.4	7.5	8.5
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-29488
Project / Site name: WPB Zone A

Your Order No: 1620043566

Lab Sample Number				2654331	2654332	2654333	2654334	2654335
Sample Reference				BH401_200423	BH510_200423	BH511_200423	BH402_200423	SWDG_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	130	230	220	280	78
Calcium (dissolved)	mg/l	0.012	ISO 17025	180	190	160	210	160
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	12
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	8.2	< 5.0	7.8
Iron (dissolved)	mg/l	0.004	ISO 17025	0.006	0.006	0.011	0.16	-
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	-
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	-
Magnesium (dissolved)	mg/l	0.005	ISO 17025	5.7	6.1	5.6	6.6	4.1
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.77	1.65	1.37	2.28	0.8
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.13	0.06	0.25	0.25	0.08
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.4	0.3	8.2	0.8	19
Copper (dissolved)	µg/l	0.5	ISO 17025	1.9	1.3	13	7.9	3.3
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	35	2700	64	2000	-
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	56	22	5	11	5
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	0.6	1.2	0.9	1.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.5	0.3	1.2	< 0.2	1.4
Zinc (dissolved)	µg/l	0.5	ISO 17025	14	14	8.7	10	18
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	3810	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	102	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	79	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	17	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	84	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	260	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	1200	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	79	1600	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	4300	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	120	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	84	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	4500	< 10	< 10
VOCs								

Analytical Report Number: 23-29488
Project / Site name: WPB Zone A

Your Order No: 1620043566

Lab Sample Number				2654331	2654332	2654333	2654334	2654335
Sample Reference				BH401_200423	BH510_200423	BH511_200423	BH402_200423	SWDG_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	6.6	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	60.2	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	56.9	< 3.0	1210	25100	19.7
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	99.5	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	3810	< 3.0	< 3.0
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	1890	245	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	102	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	209	26.5	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tribromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

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Lab Sample Number				2654331	2654332	2654333	2654334	2654335
Sample Reference				BH401_200423	BH510_200423	BH511_200423	BH402_200423	SWDG_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Gases								
Methane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	0.9	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	0.3	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	3.5	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

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Your Order No: 1620043566

Lab Sample Number				2654336	2654337	2654338	2654339
Sample Reference				SWMG_200423	SWUG_200423	TRIPBLANK_200423	BH302_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
General Inorganics							
pH (L005B)	pH Units	N/A	ISO 17025	7.4	7.3	6.8	7.3
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	50.3	49.3	0.404	62.7
Sulphide	µg/l	5	NONE	-	-	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	140	170	19	3200
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	-	-	24	4100
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	1.39	0.96	0.32	1.11
Nitrate as N	mg/l	0.01	ISO 17025	-	-	0.17	3.03
Nitrite as N	µg/l	1	ISO 17025	-	-	< 1.0	47
Hardness - Total	mgCaCO3/l	1	ISO 17025	402	405	< 1.0	391
Redox Potential	mV	-800	NONE	135	105.6	194.2	175.1
Dissolved Oxygen	mg/l	1	NONE	9.6	6	9.6	9.3
Total Phenols							
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
Speciated PAHs							
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH							
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16

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Lab Sample Number				2654336	2654337	2654338	2654339
Sample Reference				SWMG_200423	SWUG_200423	TRIPBLANK_200423	BH302_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Boron (dissolved)	µg/l	10	ISO 17025	72	95	< 10	200
Calcium (dissolved)	mg/l	0.012	ISO 17025	150	150	0.23	150
Chromium (hexavalent)	µg/l	5	ISO 17025	15	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	-	-	< 0.004	0.007
Fe2+	mg/l	0.2	NONE	-	-	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	-	-	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	4.1	4.5	0.028	5.5
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.78	0.62	< 0.15	2.56
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.13	0.06	0.02	0.03
Chromium (dissolved)	µg/l	0.2	ISO 17025	15	0.4	< 0.2	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	3.9	1	1.1	1.3
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	-	-	0.84	33
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.7	3.8	< 0.5	6.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.3	0.6	< 0.6	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.3	0.9	< 0.2	1.3
Zinc (dissolved)	µg/l	0.5	ISO 17025	14	22	4.2	11
Monoaromatics & Oxygenates							
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
VOCs							

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Lab Sample Number				2654336	2654337	2654338	2654339
Sample Reference				SWMG_200423	SWUG_200423	TRIPBLANK_200423	BH302_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Tribromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-29488
Project / Site name: WPB Zone A

Your Order No: 1620043566

Lab Sample Number				2654336	2654337	2654338	2654339
Sample Reference				SWMG_200423	SWUG_200423	TRIPBLANK_200423	BH302_200423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/04/2023	20/04/2023	20/04/2023	20/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Gases							
Methane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number : 23-29488
Project / Site name: WPB Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Dissolved Oxygen in water	Determination of dissolved oxygen.	In-house method	L086-PL	W	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Redox Potential of waters	Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.	In house method.	L084-PL	W	NONE
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025

Analytical Report Number : 23-29488
Project / Site name: WPB Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Gases C1-C4	Determination of volatile hydrocarbons by Refinery Gas Analyzer	In-house methods	L110B	W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

#U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.

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Analytical Report Number : 23-29783

Replaces Analytical Report Number: 23-29783, issue no. 1
Client references/information amended.
Sample ID amended for all samples as per client's request

Project / Site name:	WBP Zone A	**Samples received on:**	21/04/2023
Your job number:	1620012108	**Samples instructed on/ Analysis started on:**	21/04/2023
Your order number:	1620043566	**Analysis completed by:**	03/05/2023
Report Issue Number:	2	**Report issued on:**	03/05/2023
Samples Analysed:	13 water samples		

Signed:

Dominika Warjan
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 23-29783
Project / Site name: WBP Zone A

Your Order No: 1620043566

Lab Sample Number				2656059	2656060	2656061	2656062	2656063
Sample Reference				BH220_210423	BH304_210423	BH303_210423	BH215_210423	BH509_210423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L005B)	pH Units	N/A	ISO 17025	7.2	7.2	7.2	7.8	7.1
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	57	12
Sulphate as SO4	mg/l	0.045	ISO 17025	116	116	95.9	363	117
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	6400	8300	7000	17	16000
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	8300	11000	9000	22	21000
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	2.6	2.57	2.05	5.64	16.7
Nitrate as N	mg/l	0.01	ISO 17025	0.51	0.06	1.04	6.2	0.15
Nitrite as N	µg/l	1	ISO 17025	< 1.0	14	< 1.0	< 1.0	< 1.0
Hardness - Total	mgCaCO3/l	1	ISO 17025	434	441	415	490	822
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	210	240	210	120	330
Calcium (dissolved)	mg/l	0.012	ISO 17025	160	160	160	190	310
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	U/S#	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	U/S#	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.006	0.014	0.008	0.015	0.033
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	7	7	6.4	4.2	12
Mercury (dissolved)	µg/l	0.5	ISO 17025	-	-	-	-	-

Analytical Report Number: 23-29783
Project / Site name: WBP Zone A

Your Order No: 1620043566

Lab Sample Number				2656059	2656060	2656061	2656062	2656063
Sample Reference				BH220_210423	BH304_210423	BH303_210423	BH215_210423	BH509_210423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.54	3.87	1.29	3.53	4.9
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.3	0.03	0.1	0.15	0.63
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.6	26	0.5
Copper (dissolved)	µg/l	0.5	ISO 17025	2.6	1.9	3.6	9.1	3.3
Lead (dissolved)	µg/l	0.2	ISO 17025	3	< 0.2	0.8	1.5	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	560	400	55	9.8	3700
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	14	12	9.9	6.2	14
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.6	< 0.6	< 0.6	2.3	1.8
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.7	< 0.2	0.4	2.8	0.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	15	8.4	8.3	2.9	14
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	110
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	110
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	6450
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0$	< 3.0$	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	24.3	< 3.0	< 3.0	< 3.0	64300
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-29783
Project / Site name: WBP Zone A

Your Order No: 1620043566

Lab Sample Number				2656059	2656060	2656061	2656062	2656063
Sample Reference				BH220_210423	BH304_210423	BH303_210423	BH215_210423	BH509_210423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	219
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	25.3	45.2	< 3.0	< 3.0	18000
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	1070
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0$	< 3.0$	< 3.0
Tribromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-29783
Project / Site name: WBP Zone A

Your Order No: 1620043566

Lab Sample Number				2656059	2656060	2656061	2656062	2656063
Sample Reference				BH220_210423	BH304_210423	BH303_210423	BH215_210423	BH509_210423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Gases								
Methane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	0.4
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	1.6
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	0.2
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-29783
Project / Site name: WBP Zone A

Your Order No: 1620043566

Lab Sample Number				2656064	2656065	2656066	2656067	2656068
Sample Reference				BH205_210423	BH209_210423	BH301_210423	BH505_210423	BH305_210423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L005B)	pH Units	N/A	ISO 17025	7.2	9.6	7.3	7.2	7.9
Total Cyanide	µg/l	10	ISO 17025	< 10	16	< 10	< 10	58
Sulphate as SO4	mg/l	0.045	ISO 17025	135	236	51.9	108	250
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	6700	51	1200	2100	< 15
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	8600	66	1500	2700	< 15
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	2.55	6.98	1.36	3.8	4.46
Nitrate as N	mg/l	0.01	ISO 17025	0.47	2.42	7.27	0.14	2.67
Nitrite as N	µg/l	1	ISO 17025	2.3	17	15	29	< 1.0
Hardness - Total	mgCaCO3/l	1	ISO 17025	431	217	380	490	347
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	63	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	180	110	120	160	76
Calcium (dissolved)	mg/l	0.012	ISO 17025	160	84	140	190	130
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	U/S#	< 5.0	< 5.0	U/S#
Chromium (III)	µg/l	5	NONE	< 5.0	U/S#	< 5.0	< 5.0	U/S#
Iron (dissolved)	mg/l	0.004	ISO 17025	0.004	0.008	< 0.004	0.008	0.013
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	6.7	1.6	4.8	5.9	3.3
Mercury (dissolved)	µg/l	0.5	ISO 17025	-	-	-	-	-

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Project / Site name: WBP Zone A

Your Order No: 1620043566

Lab Sample Number				2656064	2656065	2656066	2656067	2656068
Sample Reference				BH205_210423	BH209_210423	BH301_210423	BH505_210423	BH305_210423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.27	4.69	0.88	0.92	3.08
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.04	0.03	0.06	0.03	0.05
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	30	0.4	< 0.2	27
Copper (dissolved)	µg/l	0.5	ISO 17025	1.7	6.1	2.2	1.1	3.6
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.2	< 0.2	0.6
Manganese (dissolved)	µg/l	0.05	ISO 17025	300	0.53	6.3	1100	7.6
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	17	0.7	5.5	10	1.8
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.7	2.1	< 0.6	0.9	2
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.3	15	0.4	< 0.2	2.8
Zinc (dissolved)	µg/l	0.5	ISO 17025	5.5	1.3	8.6	21	2.1
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0$	< 3.0$	< 3.0	< 3.0$	< 3.0$
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	30.1	21.6	28.5	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

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Project / Site name: WBP Zone A

Your Order No: 1620043566

Lab Sample Number				2656064	2656065	2656066	2656067	2656068
Sample Reference				BH205_210423	BH209_210423	BH301_210423	BH505_210423	BH305_210423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	7.8	4.5	5.3	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0$	< 3.0$	< 3.0	< 3.0$	< 3.0$
Tribromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

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Lab Sample Number				2656064	2656065	2656066	2656067	2656068
Sample Reference				BH205_210423	BH209_210423	BH301_210423	BH505_210423	BH305_210423
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Gases								
Methane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

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Project / Site name: WBP Zone A

Your Order No: 1620043566

Lab Sample Number				2656069	2656070	2656071
Sample Reference				BH210_210423	WS103A_210423	WS102A_210423
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
General Inorganics						
pH (L005B)	pH Units	N/A	ISO 17025	7.2	7	7.2
Total Cyanide	µg/l	10	ISO 17025	< 10	11	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	89.2	331	83.2
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	10000	85	15
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	13000	110	20
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	3.34	7.33	2.94
Nitrate as N	mg/l	0.01	ISO 17025	0.58	0.06	0.01
Nitrite as N	µg/l	1	ISO 17025	5.2	19	< 1.0
Hardness - Total	mgCaCO3/l	1	ISO 17025	405	807	400
Total Phenols						
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10
Speciated PAHs						
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Total PAH						
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids						
Boron (dissolved)	µg/l	10	ISO 17025	330	300	180
Calcium (dissolved)	mg/l	0.012	ISO 17025	150	300	150
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.029	0.008	0.005
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	7.3	11	4.8
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	-	-

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Lab Sample Number				2656069	2656070	2656071
Sample Reference				BH210_210423	WS103A_210423	WS102A_210423
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Arsenic (dissolved)	µg/l	0.15	ISO 17025	8.03	1.26	0.45
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.07	0.05
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.3	0.4
Copper (dissolved)	µg/l	0.5	ISO 17025	2.4	4.1	2.9
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.2	0.3
Manganese (dissolved)	µg/l	0.05	ISO 17025	25	56	290
Mercury (dissolved)	µg/l	0.05	ISO 17025	-	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	16	11	19
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.7	6.7	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.7	0.5	0.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	4.9	24	7.6
Monoaromatics & Oxygenates						
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons						
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
VOCs						
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0$	< 3.0$	< 3.0$
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	48.1
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0

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Project / Site name: WBP Zone A

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Lab Sample Number				2656069	2656070	2656071
Sample Reference				BH210_210423	WS103A_210423	WS102A_210423
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Trichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	7.8
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0$	< 3.0$	< 3.0$
Tribromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0

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Lab Sample Number				2656069	2656070	2656071
Sample Reference				BH210_210423	WS103A_210423	WS102A_210423
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				21/04/2023	21/04/2023	21/04/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Gases						
Methane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1

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

Analytical Report Number : 23-29783
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025

Analytical Report Number : 23-29783
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Gases C1-C4	Determination of volatile hydrocarbons by Refinery Gas Analyzer	In-house methods	L110B	W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

#U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.
$Data reported unaccredited due to quality control parameter failure associated with this result; other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and therefore may be compromised.

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Analytical Report Number : 23-36044

Replaces Analytical Report Number: 23-36044, issue no. 1
Report format change.
Caveat symbol changed as per client's request

Project / Site name:	WPB Zone A	**Samples received on:**	26/05/2023
Your job number:		**Samples instructed on / Analysis started on:**	26/05/2023
Your order number:	PO1620055160	**Analysis completed by:**	06/06/2023
Report Issue Number:	2	**Report issued on:**	07/06/2023
Samples Analysed:	23 water samples		

Signed:

Dominika Warjan
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692530	2692531	2692532	2692533	2692534
Sample Reference				BH401_250523	BH402_250523	BH403_250523	BH507_250523	BH509_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L005B)	pH Units	N/A	ISO 17025	7.1	6.8	6.9	7	6.7
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	105	89.2	244	127	120
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	1400	7300	9500	5900	17000
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	1900	9400	12000	7600	21000
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	1.9	5.82	4.73	9.37	14.8
Nitrate as N	mg/l	0.01	ISO 17025	3.21	0.16	0.1	0.18	0.06
Nitrite as N	µg/l	1	ISO 17025	18	< 1.0	410	49	< 1.0
Hardness - Total	mgCaCO3/l	1	ISO 17025	428	507	546	470	819
Redox Potential	mV	-800	NONE	246	98.6	118	117.8	136.3
Dissolved Oxygen	mg/l	1	NONE	7.6	4.8	6.5	6.6	7.1
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	17
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692530	2692531	2692532	2692533	2692534
Sample Reference				BH401_250523	BH402_250523	BH403_250523	BH507_250523	BH509_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	130	200	290	190	300
Calcium (dissolved)	mg/l	0.012	ISO 17025	160	190	210	180	310
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.082	0.05	0.013	0.075	0.085
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	5.6	6	7.4	6.2	11
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.44	2.43	1.11	0.94	5.55
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.08	0.27	0.22	0.02	0.1
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.5	0.2	0.2	0.3
Copper (dissolved)	µg/l	0.5	ISO 17025	1.1	0.9	2.3	2.2	1.8
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.3	< 0.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	14	1700	3600	1600	3200
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	33	5.3	4	2.8	10
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	< 0.6	< 0.6	0.9	1.3
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.3	1.1	0.6	0.2	< 0.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	6.4	2.4	4.1	1.5	10
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0	< 1.0#	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0	< 1.0#	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0	< 1.0#	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692530	2692531	2692532	2692533	2692534
Sample Reference				BH401_250523	BH402_250523	BH403_250523	BH507_250523	BH509_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0^	1660	< 3.0^	219	3880
Trichlorofluoromethane	µg/l	3	NONE	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0^	14	< 3.0^	< 3.0	16.4
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	12.3^	13500	< 3.0^	1960	43900
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Trichloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0^	21.5	< 3.0^	7.1	188
Benzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	14.5^	39.2	< 3.0^	344	8030
Dibromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0##	< 3.0^	< 3.0##	< 3.0##
Toluene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	12.5	477
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Tribromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692530	2692531	2692532	2692533	2692534
Sample Reference				BH401_250523	BH402_250523	BH403_250523	BH507_250523	BH509_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0	< 3.0
Gases								
Methane	mg/L	0.1	NONE	< 0.1	0.8	< 0.1	1	0.5
Ethane	mg/L	0.1	NONE	< 0.1	0.3	< 0.1	0.4	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	2.1	< 0.1	0.3	1.9
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692535	2692536	2692537	2692538	2692539
Sample Reference				BH510_250523	BH511_250523	BH302_250523	BH506_250523	BH505_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L005B)	pH Units	N/A	ISO 17025	7.1	6.9	7.3	7.9	7.3
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	14	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	136	69.1	70.3	156	118
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	6500	4000	4300	1600	2800
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	8300	5100	5500	2100	3600
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	4.31	13.3	1.89	4.94	4.22
Nitrate as N	mg/l	0.01	ISO 17025	0.03	0.06	3.53	2.68	0.05
Nitrite as N	µg/l	1	ISO 17025	< 1.0	< 1.0	440	140	4.1
Hardness - Total	mgCaCO3/l	1	ISO 17025	470	619	429	246	540
Redox Potential	mV	-800	NONE	36.5	80.9	117.6	110.8	128.3
Dissolved Oxygen	mg/l	1	NONE	7	4.6	6.5	6.6	3.3
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692535	2692536	2692537	2692538	2692539
Sample Reference				BH510_250523	BH511_250523	BH302_250523	BH506_250523	BH505_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	250	240	200	110	170
Calcium (dissolved)	mg/l	0.012	ISO 17025	180	230	160	95	210
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.14	0.015	0.069	0.018	0.14
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	5.9	8.2	5.6	2.2	6.1
Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.45	2.23	2.13	5.86	1.01
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.35	0.03	0.03	0.08
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.8	< 0.2	1.2	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	0.5	6	1.7	5	2.5
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	2900	790	11	38	970
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	29	7.5	5.8	8.8	11
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	0.7	2.5	1.5	1.1
Vanadium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.2	0.8	7.3	0.3
Zinc (dissolved)	µg/l	0.5	ISO 17025	6.4	12	6.7	5	5.9
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0^	< 3.0^	< 3.0^
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0^	< 3.0^	< 3.0^
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0^	< 3.0^	< 3.0^
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0^	< 3.0^	< 3.0^
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0^	< 3.0^	< 3.0^
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0^	< 3.0^	< 3.0^
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0	< 1.0#	< 1.0#	< 1.0#
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0	< 1.0#	< 1.0#	< 1.0#
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0	< 1.0#	< 1.0#	< 1.0#
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692535	2692536	2692537	2692538	2692539
Sample Reference				BH510_250523	BH511_250523	BH302_250523	BH506_250523	BH505_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Chloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Bromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Vinyl Chloride	µg/l	3	NONE	44.8^	1550	< 3.0^	< 3.0^	< 3.0^
Trichlorofluoromethane	µg/l	3	NONE	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0^	11	< 3.0^	< 3.0^	< 3.0^
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	165^	20600	66.9^	39.5^	25.5^
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Trichloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0^	44.6	< 3.0^	< 3.0^	< 3.0^
Benzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Trichloroethene	µg/l	3	ISO 17025	15.3^	4170	10.6^	5.5^	4.2^
Dibromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0##	< 3.0^	< 3.0^	< 3.0^
Toluene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0^	273	< 3.0^	< 3.0^	< 3.0^
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Chlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Ethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
p & m-Xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Styrene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Tribromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
o-Xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Bromobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692535	2692536	2692537	2692538	2692539
Sample Reference				BH510_250523	BH511_250523	BH302_250523	BH506_250523	BH505_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0	< 3.0^	< 3.0^	< 3.0^

Gases

Methane	mg/L	0.1	NONE	< 0.1	0.3	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	0.2	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	0.4	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692540	2692541	2692542	2692543	2692544
Sample Reference				BH504_250523	BH205_250523	BH301_250523	BH220_250523	BH501_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L005B)	pH Units	N/A	ISO 17025	7.3	7.3	7.3	7.4	7.1
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	101	98.1	60.3	115	413
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	5200	7200	890	4100	3800
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	6700	9200	1100	5300	4800
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	4.61	3.31	1.43	3.33	10.2
Nitrate as N	mg/l	0.01	ISO 17025	0.33	3.73	7.27	2.35	0.19
Nitrite as N	µg/l	1	ISO 17025	100	1400	210	4.2	17
Hardness - Total	mgCaCO3/l	1	ISO 17025	479	465	379	437	737
Redox Potential	mV	-800	NONE	130.5	130.8	128.6	134	146.3
Dissolved Oxygen	mg/l	1	NONE	5.9	5.1	3.8	6.9	6.4
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692540	2692541	2692542	2692543	2692544
Sample Reference				BH504_250523	BH205_250523	BH301_250523	BH220_250523	BH501_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	210	270	110	210	150
Calcium (dissolved)	mg/l	0.012	ISO 17025	180	180	140	160	280
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.022	< 0.004	0.042	0.27	0.26
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	0.27	0.22
Magnesium (dissolved)	mg/l	0.005	ISO 17025	6.6	6.1	4.6	6.1	11
Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.13	2.04	0.93	1.55	1.13
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.24	0.02	0.1	0.19	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.2	< 0.2	0.3	0.4	0.5
Copper (dissolved)	µg/l	0.5	ISO 17025	3.3	2.5	2.8	4.3	1.4
Lead (dissolved)	µg/l	0.2	ISO 17025	0.9	< 0.2	0.7	2.6	0.7
Manganese (dissolved)	µg/l	0.05	ISO 17025	600	16	3	280	7000
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	10	5.6	7.7	13	7.1
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.1	< 0.6	< 0.6	0.6	0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	3.2	0.4	0.7	2.2	0.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	12	12	7.6	18	11
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Toluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Ethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
p & m-xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
o-xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0#	< 1.0#	< 1.0#	< 1.0#
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0#	< 1.0#	< 1.0#	< 1.0#
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0#	< 1.0#	< 1.0#	< 1.0#
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Your Order No: PO1620055160

Lab Sample Number				2692540	2692541	2692542	2692543	2692544
Sample Reference				BH504_250523	BH205_250523	BH301_250523	BH220_250523	BH501_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Chloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Bromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Vinyl Chloride	µg/l	3	NONE	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Trichlorofluoromethane	µg/l	3	NONE	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	13.4^	10.8^	16.5^	147^	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Trichloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Benzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Trichloroethene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	155^	< 3.0^
Dibromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Toluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Chlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Ethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
p & m-Xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Styrene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Tribromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
o-Xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Bromobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692540	2692541	2692542	2692543	2692544
Sample Reference				BH504_250523	BH205_250523	BH301_250523	BH220_250523	BH501_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^

Gases

Methane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	6.4
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692545	2692546	2692547	2692548	2692549
Sample Reference				BH502_250523	BH503_250523	WS102A_250523	WS103A_250523	SWDG_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L005B)	pH Units	N/A	ISO 17025	7	7.4	7.4	7.1	7.3
Total Cyanide	µg/l	10	ISO 17025	12	< 10	12	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	253	106	89	157	51.3
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	-
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	3600	4200	150	110	42
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	4600	5400	190	150	-
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	8.94	2.99	3.24	5.63	3.14
Nitrate as N	mg/l	0.01	ISO 17025	0.07	0.05	0.1	0.43	-
Nitrite as N	µg/l	1	ISO 17025	8	6.3	4.5	15	-
Hardness - Total	mgCaCO3/l	1	ISO 17025	697	430	384	566	397
Redox Potential	mV	-800	NONE	-62.8	198.8	242.4	239.9	214.1
Dissolved Oxygen	mg/l	1	NONE	1.6	1.5	6.8	6.6	4.9
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692545	2692546	2692547	2692548	2692549
Sample Reference				BH502_250523	BH503_250523	WS102A_250523	WS103A_250523	SWDG_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	150	230	200	230	70
Calcium (dissolved)	mg/l	0.012	ISO 17025	270	160	150	210	150
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	13
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.48	< 0.004	0.007	0.012	-
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	-
Fe3+	mg/l	0.2	NONE	0.47	< 0.20	< 0.20	< 0.20	-
Magnesium (dissolved)	mg/l	0.005	ISO 17025	6.3	6.2	5	7.4	4
Arsenic (dissolved)	µg/l	0.15	ISO 17025	5.3	0.86	0.55	0.61	0.49
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.02	0.02	< 0.02	0.06	0.05
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	< 0.2	0.2	< 0.2	12
Copper (dissolved)	µg/l	0.5	ISO 17025	3	2	1.9	3	3.1
Lead (dissolved)	µg/l	0.2	ISO 17025	0.4	< 0.2	< 0.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	2300	300	6.3	69	-
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	7.7	11	17	19	3.7
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.8	< 0.6	< 0.6	2.3	0.9
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.2	0.5	0.9	0.6	0.8
Zinc (dissolved)	µg/l	0.5	ISO 17025	4.4	2.2	1	19	18
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Toluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Ethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
p & m-xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
o-xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^	< 3.0^	< 3.0^
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0#	< 1.0^	< 1.0^	< 1.0^
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0#	< 1.0^	< 1.0^	< 1.0^
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0#	< 1.0#	< 1.0^	< 1.0^	< 1.0^
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692545	2692546	2692547	2692548	2692549
Sample Reference				BH502_250523	BH503_250523	WS102A_250523	WS103A_250523	SWDG_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Chloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Bromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Vinyl Chloride	µg/l	3	NONE	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Trichlorofluoromethane	µg/l	3	NONE	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0^	267^	84.9#	< 3.0#	< 3.0#
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Trichloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Benzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Trichloroethene	µg/l	3	ISO 17025	< 3.0^	21.1^	12.3#	< 3.0#	< 3.0#
Dibromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Toluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Chlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Ethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
p & m-Xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Styrene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Tribromomethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
o-Xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Bromobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692545	2692546	2692547	2692548	2692549
Sample Reference				BH502_250523	BH503_250523	WS102A_250523	WS103A_250523	SWDG_250523
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0#	< 3.0#	< 3.0#

Gases

Methane	mg/L	0.1	NONE	7.4	< 0.1	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692550	2692551	2692552
Sample Reference				SWMG_250523	SWUG_250523	DUP_250523
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
General Inorganics						
pH (L005B)	pH Units	N/A	ISO 17025	7.3	7.2	6.8
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	55.3	54.9	86.9
Sulphide	µg/l	5	NONE	-	-	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	62	210	7100
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	-	-	9100
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	1.95	1.62	5.45
Nitrate as N	mg/l	0.01	ISO 17025	-	-	0.08
Nitrite as N	µg/l	1	ISO 17025	-	-	< 1.0
Hardness - Total	mgCaCO3/l	1	ISO 17025	415	404	527
Redox Potential	mV	-800	NONE	210.5	172.2	189.7
Dissolved Oxygen	mg/l	1	NONE	6.6	< 1.0	6.9
Total Phenols						
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10
Speciated PAHs						
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Total PAH						
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692550	2692551	2692552
Sample Reference				SWMG_250523	SWUG_250523	DUP_250523
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Heavy Metals / Metalloids						
Boron (dissolved)	µg/l	10	ISO 17025	70	83	190
Calcium (dissolved)	mg/l	0.012	ISO 17025	160	150	200
Chromium (hexavalent)	µg/l	5	ISO 17025	9.6	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	-	-	0.022
Fe2+	mg/l	0.2	NONE	-	-	< 0.20
Fe3+	mg/l	0.2	NONE	-	-	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	4	4.6	6.1
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.53	0.67	1.21
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.08	0.21
Chromium (dissolved)	µg/l	0.2	ISO 17025	8.8	0.7	0.4
Copper (dissolved)	µg/l	0.5	ISO 17025	1.6	1.2	1.3
Lead (dissolved)	µg/l	0.2	ISO 17025	0.3	0.6	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	-	-	2200
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	3	3.7	9.4
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.6	< 0.6	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.3	1.1	< 0.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	13	21	14
Monoaromatics & Oxygenates						
Benzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^
Toluene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^
Ethylbenzene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^
p & m-xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^
o-xylene	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0^	< 3.0^	< 3.0^
Petroleum Hydrocarbons						
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0^	< 1.0^	< 1.0^
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0^	< 1.0^	< 1.0^
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0^	< 1.0^	< 1.0^
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692550	2692551	2692552
Sample Reference				SWMG_250523	SWUG_250523	DUP_250523
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
VOCs						
Chloromethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Chloroethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Bromomethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Vinyl Chloride	µg/l	3	NONE	< 3.0#	< 3.0#	2720^
Trichlorofluoromethane	µg/l	3	NONE	< 3.0#	< 3.0#	< 3.0^
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	41.2^
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	$23800^
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Trichloromethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	13.2^
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Trans-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	57.7^
Benzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Tetrachloromethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Trichloroethene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	162^
Dibromomethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Toluene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	13.6^
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Chlorobenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Ethylbenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
p & m-Xylene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Styrene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Tribromomethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
o-Xylene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Bromobenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^

Analytical Report Number: 23-36044
Project / Site name: WPB Zone A

Your Order No: PO1620055160

Lab Sample Number				2692550	2692551	2692552
Sample Reference				SWMG_250523	SWUG_250523	DUP_250523
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				25/05/2023	25/05/2023	25/05/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Butylbenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0#	< 3.0#	< 3.0^

Gases

Methane	mg/L	0.1	NONE	< 0.1	< 0.1	0.9
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	0.3
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1

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

Analytical Report Number : 23-36044
Project / Site name: WPB Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Dissolved Oxygen in water	Determination of dissolved oxygen.	In-house method	L086-PL	W	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Redox Potential of waters	Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.	In house method.	L084-PL	W	NONE
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025

Analytical Report Number : 23-36044
Project / Site name: WPB Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025

Analytical Report Number : 23-36044
Project / Site name: WPB Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Gases C1-C4	Determination of volatile hydrocarbons by Refinery Gas Analyzer	In-house methods	L110B	W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

#Data reported unaccredited due to quality control parameter failure associated with this result; other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and therefore may be compromised.
^Data reported unaccredited due to quality control parameter failure associated with this result; The result should be considered as being deviating and may be compromised.
$ - Result over calibration range, concentration determined by extrapolated calibration. The result should be interpreted with caution.
##Quality control parameter has a high recovery (outside of limit); however the associated result is below the reporting limit, other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.

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Analytical Report Number : 23-46645

Replaces Analytical Report Number: 23-46645, issue no. 1
Client references/information amended.
All Sample ID's amended as per client request

Project / Site name:	WBP Zone A	**Samples received on:**	24/07/2023
Your job number:	1620015380	**Samples instructed on / Analysis started on:**	24/07/2023
Your order number:	1620055160	**Analysis completed by:**	31/07/2023
Report Issue Number:	2	**Report issued on:**	03/08/2023
Samples Analysed:	12 water samples		

Signed: JSzwagrak

Joanna Szwagrzak
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757620	2757621	2757622	2757623	2757624
Sample Reference				BH401_240723	BH402_240723	BH403_240723	BH507_240723	BH509_240723
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023	24/07/2023	24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.1	6.8	8.2	7.8	6.8
Total Cyanide	µg/l	10	ISO 17025	24	< 10	21	13	38
Sulphate as SO4	mg/l	0.045	ISO 17025	105	83.4	621	148	146
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	690	7300	1600	640	11000
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	890	9300	2000	820	14000
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	2.8	7.19	10.3	8.17	18.7
Nitrate as N	mg/l	0.01	ISO 17025	3.22	0.34	16.7	2.55	2.02
Nitrite as N	µg/l	1	ISO 17025	16	27	670	38	34
Hardness - Total	mgCaCO3/l	1	ISO 17025	433	453	645	258	534
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	0.25	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	0.16	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	0.51	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	0.47	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	0.2	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	0.18	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	1.77	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757620	2757621	2757622	2757623	2757624
Sample Reference				BH401_240723	BH402_240723	BH403_240723	BH507_240723	BH509_240723
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023	24/07/2023	24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	120	270	220	150	330
Calcium (dissolved)	mg/l	0.012	ISO 17025	160	170	240	99	200
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	U/S*	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	U/S*	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.2	0.058	0.032	0.15	0.55
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	0.2
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	0.35
Magnesium (dissolved)	mg/l	0.005	ISO 17025	5.3	6	9	2.6	7.2
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.57	2.32	2.02	1.99	3.69
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.05	0.43	0.08	0.05	0.09
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.6	4	2.1	0.8
Copper (dissolved)	µg/l	0.5	ISO 17025	6.9	7.2	16	12	3.9
Lead (dissolved)	µg/l	0.2	ISO 17025	0.2	0.2	< 0.2	0.4	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	290	2100	280	71	1600
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	26	12	4.5	2.4	7.4
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	0.7	4.9	2.4	1.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.7	0.4	2.5	3.1	0.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	8.4	11	1.1	2.3	8.9
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10## $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	40	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	220	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	600	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	3500	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	4300	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	30	< 10	< 10	30
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	65	< 10	< 10	32
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	95	< 10	< 10	62

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Lab Sample Number				2757620	2757621	2757622	2757623	2757624
Sample Reference				BH401_240723	BH402_240723	BH403_240723	BH507_240723	BH509_240723
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023	24/07/2023	24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	3910	< 3.0	< 3.0	3830
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene##	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane ^	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	117
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	37800	< 3.0	28	58400
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride##	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	84.2	< 3.0	< 3.0	11200
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	378
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757620	2757621	2757622	2757623	2757624
Sample Reference				BH401_240723	BH402_240723	BH403_240723	BH507_240723	BH509_240723
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023	24/07/2023	24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757620	2757621	2757622	2757623	2757624
Sample Reference				BH401_240723	BH402_240723	BH403_240723	BH507_240723	BH509_240723
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023	24/07/2023	24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Gases								
Methane	mg/L	0.1	NONE	< 0.1	1.1	< 0.1	< 0.1	0.5
Ethane	mg/L	0.1	NONE	< 0.1	0.3	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	2.5	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757625	2757626	2757627	2757628	2757629
Sample Reference				BH510_240723	BH511_240723	BH302_240723	BH506_240723	BH505_240723
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023	24/07/2023	24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.3	7	7.3	8	7.1
Total Cyanide	µg/l	10	ISO 17025	24	42	< 10	25	24
Sulphate as SO4	mg/l	0.045	ISO 17025	119	130	57	136	111
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	5800	1100	4900	1400	3300
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	7400	1400	6300	1800	4200
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	4.87	15.3	1.8	4.2	4.64
Nitrate as N	mg/l	0.01	ISO 17025	0.4	7.37	3.67	0.76	0.23
Nitrite as N	µg/l	1	ISO 17025	16	98	12	43	17
Hardness - Total	mgCaCO3/l	1	ISO 17025	433	576	363	268	434
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757625	2757626	2757627	2757628	2757629
Sample Reference				BH510_240723	BH511_240723	BH302_240723	BH506_240723	BH505_240723
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023	24/07/2023	24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	250	330	190	120	180
Calcium (dissolved)	mg/l	0.012	ISO 17025	160	220	140	100	160
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.076	0.11	0.004	0.021	0.088
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	5.5	7.7	5.2	3.1	5.4
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.98	1.24	2.41	4.44	2.61
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.16	0.33	< 0.02	0.03	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.4	1.7	< 0.2	0.3	0.3
Copper (dissolved)	µg/l	0.5	ISO 17025	1.9	21	3.4	2.9	8.9
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.2	< 0.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	1600	160	25	170	1700
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	11	3.8	6	11	9.7
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	4.1	< 0.6	0.8	1.2
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.5	1.4	0.6	4.3	0.3
Zinc (dissolved)	µg/l	0.5	ISO 17025	10	17	7.9	5	3.7
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10## $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	12	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	60	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	160	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	890	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	1100	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757625	2757626	2757627	2757628	2757629
Sample Reference				BH510_240723	BH511_240723	BH302_240723	BH506_240723	BH505_240723
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023	24/07/2023	24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	17.7	612	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene##	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane ^	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	9.7	18500	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride##	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	4880	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	482	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757625	2757626	2757627	2757628	2757629
Sample Reference				BH510_240723	BH511_240723	BH302_240723	BH506_240723	BH505_240723
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023	24/07/2023	24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757625	2757626	2757627	2757628	2757629
Sample Reference				BH510_240723	BH511_240723	BH302_240723	BH506_240723	BH505_240723
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023	24/07/2023	24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Gases								
Methane	mg/L	0.1	NONE	< 0.1	0.1	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

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Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757630	2757631
Sample Reference				BH504_240723	HB402_240723
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
General Inorganics					
pH (L099)	pH Units	N/A	ISO 17025	7.5	6.8
Total Cyanide	µg/l	10	ISO 17025	15	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	89.7	80.6
Sulphide	µg/l	5	NONE	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	4800	7400
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	6100	9600
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	4.78	7.02
Nitrate as N	mg/l	0.01	ISO 17025	0.39	0.41
Nitrite as N	µg/l	1	ISO 17025	29	28
Hardness - Total	mgCaCO3/l	1	ISO 17025	431	493
Total Phenols					
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10
Speciated PAHs					
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	0.29
Pyrene	µg/l	0.01	ISO 17025	< 0.01	0.24
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Total PAH					
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	0.53

UKAS TESTING
4041

Analytical Environmental Science

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757630	2757631
Sample Reference				BH504_240723	HB402_240723
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Heavy Metals / Metalloids					
Boron (dissolved)	µg/l	10	ISO 17025	220	300
Calcium (dissolved)	mg/l	0.012	ISO 17025	160	190
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.017	0.083
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	6.3	6.2
Arsenic (dissolved)	µg/l	0.15	ISO 17025	3.76	3.61
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.47
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.7
Copper (dissolved)	µg/l	0.5	ISO 17025	6.5	7.5
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	1300	2000
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	9.1	13
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.7	0.7
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.4	0.9
Zinc (dissolved)	µg/l	0.5	ISO 17025	8.4	4.9
Monoaromatics & Oxygenates					
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0
Petroleum Hydrocarbons					
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10## $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	22
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	120
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	330
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	2000
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	2400
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	23
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	40
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	70
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	130

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757630	2757631
Sample Reference				BH504_240723	HB402_240723
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
VOCs					
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	27.7	10900
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0
1,1-Dichloroethene##	µg/l	3	ISO 17025	< 3.0	63.3
1,1,2-Trichloro-1,2,2-trifluoroethane ^	µg/l	3	NONE	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	85.5
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Carbontetrachloride##	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	163
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	6.4
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
Styrene#	µg/l	3	NONE	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0
4-Chlorotoluene#	µg/l	3	NONE	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2,4-Trimethylbenzene#	µg/l	3	NONE	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Hexachlorobutadiene#	µg/l	3	NONE	< 3.0	< 3.0

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757630	2757631
Sample Reference				BH504_240723	HB402_240723
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0

Analytical Report Number: 23-46645
Project / Site name: WBP Zone A

Your Order No: 1620055160

Lab Sample Number				2757630	2757631
Sample Reference				BH504_240723	HB402_240723
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				24/07/2023	24/07/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Gases					
Methane	mg/L	0.1	NONE	0.2	0.8
Ethane	mg/L	0.1	NONE	< 0.1	0.2
Ethene	mg/L	0.1	NONE	< 0.1	1.9
Propane	mg/L	0.1	NONE	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1

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

Analytical Report Number : 23-46645
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025

Analytical Report Number : 23-46645
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Gases C1-C4	Determination of volatile hydrocarbons by Refinery Gas Analyzer	In-house methods	L110B	W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

- Data reported unaccredited due to quality control parameter failure associated with this result; other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.
- Quality control parameter has a high recovery (outside of limit); however the associated result is below the reporting limit, other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.
^ - Data reported unaccredited due to quality control parameter failure associated with this result; The result should be considered as being deviating and may be compromised.
*Analysis could not be completed due to sample matrix.

UKAS TESTING
4041

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Analytical Report Number : 23-53482

Project / Site name:	WBP Zone A	**Samples received on:**	30/08/2023
Your job number:	1620055160	**Samples instructed on / Analysis started on:**	30/08/2023
Your order number:	PO1620055160	**Analysis completed by:**	05/09/2023
Report Issue Number:	1	**Report issued on:**	05/09/2023
Samples Analysed:	10 water samples		

Signed:

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

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

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

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

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

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

Analytical Report Number: 23-53482
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2794498	2794499	2794500	2794501	2794502
Sample Reference				BH401_290823	BH501_290823	BH502_290823	BH503_290823	BH504_290823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.4	7.4	7.2	7.4	7.2
Total Cyanide	µg/l	10	ISO 17025	< 10	470	31	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	108	306	276	688	90.8
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	110	21	58	66	64
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	340	740	2200	3800	5200
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	410	900	2700	4600	6300
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	2.09	5.19	11.2	2.5	4.49
Nitrate as N	mg/l	0.01	ISO 17025	3.29	0.58	0.06	0.23	0.1
Nitrite as N	µg/l	1	ISO 17025	22	67	33	52	39
Hardness - Total	mgCaCO3/l	1	ISO 17025	469	473	421	895	412
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	18	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	0.3	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	0.14	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	1.73	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	1.67	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	1.19	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	1.13	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	1.8	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	0.66	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	1.46	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	0.83	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	0.2	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	0.99	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	12.1	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	130	120	130	180	230
Calcium (dissolved)	mg/l	0.012	ISO 17025	180	180	160	350	160
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.008	0.22	0.024	0.18	0.024
Fe2+	mg/l	0.2	NONE	< 0.20	0.2	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	5.4	6.4	5.8	4	5.9
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.6	0.94	3.34	0.84	3.11
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Analytical Report Number: 23-53482
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2794498	2794499	2794500	2794501	2794502
Sample Reference				BH401_290823	BH501_290823	BH502_290823	BH503_290823	BH504_290823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.09	0.06	0.02	< 0.02	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.6	0.4	0.5	< 0.2	0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	3.1	6.1	1.1	1.6	0.5
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.4	< 0.2	< 0.2	0.3
Manganese (dissolved)	µg/l	0.05	ISO 17025	7.8	2600	1600	610	1000
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	50	2.8	5.7	11	8.2
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	0.8	1.5	< 0.6	1.1
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.8	0.3	0.5	0.9	0.8
Zinc (dissolved)	µg/l	0.5	ISO 17025	8.6	17	3.9	6.1	3.3
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	19.3
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane ##	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-53482
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2794498	2794499	2794500	2794501	2794502
Sample Reference				BH401_290823	BH501_290823	BH502_290823	BH503_290823	BH504_290823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	125	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	26.9	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	6.1
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	< 0.1	< 0.1	1.2	< 0.1	1.3
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Project / Site name: WBP Zone A

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Lab Sample Number				2794498	2794499	2794500	2794501	2794502
Sample Reference				BH401_290823	BH501_290823	BH502_290823	BH503_290823	BH504_290823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

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Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2794503	2794504	2794505	2794506	2794507
Sample Reference				BH505_290823	BH506_290823	BH301_290823	BH302_290823	Trip Blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.3	8	7.5	7.4	7.2
Total Cyanide	µg/l	10	ISO 17025	62	26	< 10	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	115	241	49.5	57.8	0.528
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	61	110	43	56	0.24
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	3300	2300	1000	5000	< 15
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	4000	2800	1200	6000	< 15
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	4.44	7.76	0.95	1.19	0.39
Nitrate as N	mg/l	0.01	ISO 17025	0.29	0.96	7.62	4.18	0.02
Nitrite as N	µg/l	1	ISO 17025	77	1100	27	< 1.0	< 1.0
Hardness - Total	mgCaCO3/l	1	ISO 17025	440	322	392	372	1.9
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	180	110	110	180	< 10
Calcium (dissolved)	mg/l	0.012	ISO 17025	170	130	150	140	0.71
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.036	0.074	0.007	0.01	< 0.004
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	5.2	2.1	4.5	5.3	0.021
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.57	5.54	0.7	2.87	< 0.15
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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Your Order No: PO1620055160

Lab Sample Number				2794503	2794504	2794505	2794506	2794507
Sample Reference				BH505_290823	BH506_290823	BH301_290823	BH302_290823	Trip Blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.04	< 0.02	0.06	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.5	0.4	0.6	1.5	0.7
Copper (dissolved)	µg/l	0.5	ISO 17025	0.7	5.2	3.1	6.8	2.2
Lead (dissolved)	µg/l	0.2	ISO 17025	0.5	< 0.2	< 0.2	3.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	1300	73	4.8	110	1.3
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	11	10	5.2	7	< 0.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.7	2.3	0.8	0.9	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.8	6.9	0.3	1.7	< 0.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	2.6	6.1	4.5	14	10
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane ##	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-53482
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2794503	2794504	2794505	2794506	2794507
Sample Reference				BH505_290823	BH506_290823	BH301_290823	BH302_290823	Trip Blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Analytical Report Number: 23-53482
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2794503	2794504	2794505	2794506	2794507
Sample Reference				BH505_290823	BH506_290823	BH301_290823	BH302_290823	Trip Blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number : 23-53482
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025

Analytical Report Number : 23-53482
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Gases C1-C4	Determination of volatile hydrocarbons dissolved in water by HS-GC-FID	In-house methods	L110B	W	NONE
Chloride in water	Determination of Chloride (diissolved) colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

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

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Analytical Report Number : 23-53708

Project / Site name:	WBP Zone A	**Samples received on:**	30/08/2023
Your job number:	1620015380	**Samples instructed on / Analysis started on:**	30/08/2023
Your order number:	PO1620055160	**Analysis completed by:**	06/09/2023
Report Issue Number:	1	**Report issued on:**	06/09/2023
Samples Analysed:	17 water samples		

Signed:

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795804	2795805	2795806	2795807	2795808
Sample Reference				BH601_300823	BH602_300823	BH603_300823	HB602_300823	BH205_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	6.2	6.6	7.2	6.6	7.2
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	16.3	3.53	91.4	3.79	128
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	120	150	110	150	68
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	16000	12000	1300	12000	5300
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	19000	15000	1600	14000	6400
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	631	473	4.2	471	3.41
Nitrate as N	mg/l	0.01	ISO 17025	0.33	0.21	1.41	0.24	0.69
Nitrite as N	µg/l	1	ISO 17025	3.4	2.2	19	4.8	31
Hardness - Total	mgCaCO3/l	1	ISO 17025	937	1060	442	1010	415
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	110	77	< 10	66	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795804	2795805	2795806	2795807	2795808
Sample Reference				BH601_300823	BH602_300823	BH603_300823	HB602_300823	BH205_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	220	290	150	290	180
Calcium (dissolved)	mg/l	0.012	ISO 17025	350	400	170	380	150
Chromium (hexavalent)	µg/l	5	ISO 17025	U/S*	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	U/S*	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	110	7.2	0.022	7.8	0.041
Fe2+	mg/l	0.2	NONE	18.3	6.75	< 0.20	7.5	< 0.20
Fe3+	mg/l	0.2	NONE	95	0.44	< 0.20	0.33	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	13	12	5.8	12	6.7
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.65	5.36	0.5	4.73	1.95
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.5	1	0.2	1	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	0.5	1.6	3.1	3.6	2.5
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.3	< 0.2	0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	8000	5100	520	4700	320
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	13	2.5	42	2.6	11
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	0.8	< 0.6	0.8	0.7
Vanadium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.7	0.3	0.4	< 0.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	7.1	5.4	8.9	4.7	7.9
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0##	< 1.0##	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0##	< 1.0##	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0##	< 1.0	< 1.0##
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795804	2795805	2795806	2795807	2795808
Sample Reference				BH601_300823	BH602_300823	BH603_300823	HB602_300823	BH205_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	199	334	93.9	148	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0	< 3.0##	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	812	2700	5.2	1370	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	14.2	< 3.0	3.7	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795804	2795805	2795806	2795807	2795808
Sample Reference				BH601_300823	BH602_300823	BH603_300823	HB602_300823	BH205_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	4.5	4.3	0.2	4.4	< 0.1
Ethane	mg/L	0.1	NONE	0.3	0.9	< 0.1	0.9	< 0.1
Ethene	mg/L	0.1	NONE	0.4	0.5	< 0.1	0.5	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795809	2795810	2795811	2795812	2795813
Sample Reference				WS103A_300823	WS102A_300823	BH220_300823	HB303_300823	BH215_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.4	7.4	7.4	7.6	7.6
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	40
Sulphate as SO4	mg/l	0.045	ISO 17025	107	74.2	76.9	49.5	620
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	60	49	55	30	65
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	12000	1200	3700	25	19
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	15000	1400	4500	30	23
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	12.5	3.51	3.26	1.87	6.24
Nitrate as N	mg/l	0.01	ISO 17025	0.05	0.07	2.41	7.44	8.75
Nitrite as N	µg/l	1	ISO 17025	10	15	1.5	< 1.0	9.3
Hardness - Total	mgCaCO3/l	1	ISO 17025	561	303	370	358	807
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795809	2795810	2795811	2795812	2795813
Sample Reference				WS103A_300823	WS102A_300823	BH220_300823	HB303_300823	BH215_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	250	210	170	53	200
Calcium (dissolved)	mg/l	0.012	ISO 17025	210	110	140	140	310
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	50
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.072	0.005	< 0.004	0.006	0.042
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	8.2	5	6	3	6.5
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.87	0.77	1.23	3.41	2
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.05	< 0.02	0.08	0.04	0.07
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.4	< 0.2	0.4	4	45
Copper (dissolved)	µg/l	0.5	ISO 17025	1.4	1.6	5.7	7.4	9.2
Lead (dissolved)	µg/l	0.2	ISO 17025	3.1	< 0.2	5.6	4	1.1
Manganese (dissolved)	µg/l	0.05	ISO 17025	1400	650	130	5.9	2
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	17	23	13	3.5	3
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.5	< 0.6	0.7	1.9	3.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	2.1	0.8	0.7	2.2	2.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	12	2	11	4.8	3.1
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0##	< 1.0##	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0##	< 1.0##	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0##	< 1.0##	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795809	2795810	2795811	2795812	2795813
Sample Reference				WS103A_300823	WS102A_300823	BH220_300823	HB303_300823	BH215_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	97	40.2	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	7.2	104	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795809	2795810	2795811	2795812	2795813
Sample Reference				WS103A_300823	WS102A_300823	BH220_300823	HB303_300823	BH215_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	0.5	0.2	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795814	2795815	2795816	2795817	2795818
Sample Reference				BH210_300823	BH209_300823	BH304_300823	SWMG_300823	SWUG_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.2	8.3	7.9	7.6	7.8
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	26	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	71.9	199	170	48.8	44.4
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	-	-
Chloride	mg/l	0.15	ISO 17025	93	44	96	-	-
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	12000	36	32	81	33
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	15000	44	39	-	-
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	3.41	7.84	4.77	1.68	1.24
Nitrate as N	mg/l	0.01	ISO 17025	0.07	1.4	3.13	-	-
Nitrite as N	µg/l	1	ISO 17025	18	170	110	-	-
Hardness - Total	mgCaCO3/l	1	ISO 17025	398	221	306	313	304
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	11	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795814	2795815	2795816	2795817	2795818
Sample Reference				BH210_300823	BH209_300823	BH304_300823	SWMG_300823	SWUG_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	350	69	86	66	56
Calcium (dissolved)	mg/l	0.012	ISO 17025	150	86	120	120	120
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	8.1	< 5.0	U/S*	U/S*
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	U/S*	U/S*
Iron (dissolved)	mg/l	0.004	ISO 17025	0.058	< 0.004	0.011	-	-
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	-	-
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	-	-
Magnesium (dissolved)	mg/l	0.005	ISO 17025	7.1	1.3	2.7	3.8	3.6
Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.85	2.97	1.28	0.38	0.39
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.03	0.13	0.04	0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	6.8	1.3	11	16
Copper (dissolved)	µg/l	0.5	ISO 17025	4.4	8.8	5	1.4	2.2
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	3.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	52	11	140	-	-
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	7.3	1.2	5.1	2.3	2.3
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.9	1.7	1	0.9	1
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.3	4.8	0.6	0.9	0.9
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.3	2	4.8	14	9.2
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0##	< 1.0##	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0##	< 1.0##	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0	< 1.0##	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795814	2795815	2795816	2795817	2795818
Sample Reference				BH210_300823	BH209_300823	BH304_300823	SWMG_300823	SWUG_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0##	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	41.4	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	5
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795814	2795815	2795816	2795817	2795818
Sample Reference				BH210_300823	BH209_300823	BH304_300823	SWMG_300823	SWUG_300823
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-

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

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795819	2795820
Sample Reference				SWDG_300823	SWUG2_300823
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
General Inorganics					
pH (L099)	pH Units	N/A	ISO 17025	7.8	7.6
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	47.9	43.1
Sulphide	µg/l	5	NONE	-	-
Chloride	mg/l	0.15	ISO 17025	-	-
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	78	32
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	-	-
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	1.6	1.22
Nitrate as N	mg/l	0.01	ISO 17025	-	-
Nitrite as N	µg/l	1	ISO 17025	-	-
Hardness - Total	mgCaCO3/l	1	ISO 17025	283	344
Total Phenols					
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10
Speciated PAHs					
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Total PAH					
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795819	2795820
Sample Reference				SWDG_300823	SWUG2_300823
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Heavy Metals / Metalloids					
Boron (dissolved)	µg/l	10	ISO 17025	63	52
Calcium (dissolved)	mg/l	0.012	ISO 17025	110	130
Chromium (hexavalent)	µg/l	5	ISO 17025	16	25
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	-	-
Fe2+	mg/l	0.2	NONE	-	-
Fe3+	mg/l	0.2	NONE	-	-
Magnesium (dissolved)	mg/l	0.005	ISO 17025	3.8	3.5
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.38	0.34
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	14	22
Copper (dissolved)	µg/l	0.5	ISO 17025	2.5	2.9
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	-	-
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	2.7	2.3
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.9	1.1
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.6	0.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	8.2	7.4
Monoaromatics & Oxygenates					
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0
Petroleum Hydrocarbons					
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0##	< 1.0##
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795819	2795820
Sample Reference				SWDG_300823	SWUG2_300823
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
VOCs					
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	5.3
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0

Analytical Report Number: 23-53708
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2795819	2795820
Sample Reference				SWDG_300823	SWUG2_300823
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				30/08/2023	30/08/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	-	-
Ethane	mg/L	0.1	NONE	-	-
Ethene	mg/L	0.1	NONE	-	-
Propane	mg/L	0.1	NONE	-	-
Propene	mg/L	0.1	NONE	-	-
Propyne	mg/L	0.1	NONE	-	-
N-Butane	mg/L	0.1	NONE	-	-
Acetylene	mg/L	0.1	NONE	-	-

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

Analytical Report Number : 23-53708
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025

Analytical Report Number : 23-53708
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Gases C1-C4	Determination of volatile hydrocarbons dissolved in water by HS-GC-FID	In-house methods	L110B	W	NONE
Chloride in water	Determination of Chloride (diissolved) colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

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

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Analytical Report Number : 23-63091-3

Replaces Analytical Report Number: 23-63091, issue no. 3
Client references/information amended.
Deviation b Removed From All Samples By Laboratory

Project / Site name:	WBP Zone A	**Samples received on:**	17/10/2023
Your job number:	1620015380	**Samples instructed on/ Analysis started on:**	17/10/2023
Your order number:	PO1620055160	**Analysis completed by:**	07/11/2023
Report Issue Number:	3	**Report issued on:**	08/11/2023
Samples Analysed:	13 water samples		

Signed:

Joanna Szwagrzak
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848230	2848231	2848232	2848233	2848234
Sample Reference				BH303_171023	HB303_171023	BH506_171023	BH505_171023	BH504_171023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.7	7.6	8.5	8.2	7.4
Total Cyanide	µg/l	10	ISO 17025	16	18	23	< 10	< 10
Sulphate as SO4	µg/l	45	ISO 17025	252000	234000	182000	128000	104000
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	45	45	89	50	66
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	< 15	< 15	790	1700	5600
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	< 15	< 15	960	2000	6800
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	3.16	5.68	5.33	8.23	3.92
Nitrate as N	mg/l	0.01	ISO 17025	8.18	7.78	2.19	0.26	0.12
Nitrite as N	µg/l	1	ISO 17025	17	22	68	36	13
Total Dissolved Solids (Gravimetric) (L004B)	mg/l	4	ISO 17025	570	630	560	490	690
Hardness - Total	mgCaCO3/l	1	ISO 17025	454	411	254	364	413
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	73	73	99	140	250
Calcium (dissolved)	mg/l	0.012	ISO 17025	180	160	100	140	150
Chromium (hexavalent)	µg/l	5	ISO 17025	11	13	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.009	0.007	0.026	0.017	0.024
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	3.1	3.2	1.3	4	7.5

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848230	2848231	2848232	2848233	2848234
Sample Reference				BH303_171023	HB303_171023	BH506_171023	BH505_171023	BH504_171023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.49	1.47	6.51	1.68	2.77
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.1	0.09	< 0.02	< 0.02	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	14	15	0.9	< 0.2	0.4
Copper (dissolved)	µg/l	0.5	ISO 17025	13	9.9	4.9	4.3	0.8
Lead (dissolved)	µg/l	0.2	ISO 17025	0.4	0.4	< 0.2	< 0.2	0.6
Manganese (dissolved)	µg/l	0.05	ISO 17025	3.2	2.8	50	970	1100
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	3.7	3.2	9.4	7.2	7.9
Selenium (dissolved)	µg/l	0.6	ISO 17025	2.7	2.9	1.9	0.9	0.9
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.8	1.8	7.9	< 0.2	2.8
Zinc (dissolved)	µg/l	0.5	ISO 17025	10	5.8	1.7	2.4	5
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C10 - C12 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aliphatic >C12 - C16 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aliphatic >C16 - C21 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aliphatic >C21 - C35 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10##	< 10##	< 10##	< 10##	< 10
Aliphatic >C10 - C35 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C10 - C12 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aromatic >C12 - C16 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aromatic >C16 - C21 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aromatic >C21 - C35 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aromatic >C10 - C35 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	29.9
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0##	< 3.0##
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848230	2848231	2848232	2848233	2848234
Sample Reference				BH303_171023	HB303_171023	BH506_171023	BH505_171023	BH504_171023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0##	< 3.0##
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0##	< 3.0##
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform##	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848230	2848231	2848232	2848233	2848234
Sample Reference				BH303_171023	HB303_171023	BH506_171023	BH505_171023	BH504_171023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Gases								
Methane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	2.5
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848235	2848236	2848237	2848238	2848239
Sample Reference				BH503_171023	BH502_171023	BH501_171023	BH401_171023	BH603_171023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.3	7.6	7.6	7.2	7.8
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Sulphate as SO4	µg/l	45	ISO 17025	I/S	141000	25000	102000	101000
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	66	25	5.4	110	97
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	3200	680	490	1100	780
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	3900	830	600	1300	950
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	6.85	4.73	4.94	1.84	9.62
Nitrate as N	mg/l	0.01	ISO 17025	I/S	0.94	0.27	2.19	1.51
Nitrite as N	µg/l	1	ISO 17025	50	250	18	12	1000
Total Dissolved Solids (Gravimetric) (L004B)	mg/l	4	ISO 17025	I/S	I/S	I/S	I/S	670
Hardness - Total	mgCaCO3/l	1	ISO 17025	I/S	235	101	499	277
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	0.16	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	0.12	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	0.17	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	1.32	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	0.37	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	4.05	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	3.95	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	2.25	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	2.27	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	3.57	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	1.27	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	2.52	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	1.4	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	1.66	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	25.1	< 0.16	< 0.16
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	I/S	69	27	140	110
Calcium (dissolved)	mg/l	0.012	ISO 17025	I/S	91	39	190	110
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	I/S	< 5.0	< 5.0	I/S	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	I/S	0.017	0.11	0.14	0.082
Fe2+	mg/l	0.2	NONE	I/S	I/S	I/S	I/S	< 0.20
Fe3+	mg/l	0.2	NONE	I/S	I/S	I/S	I/S	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	I/S	1.7	0.95	6	3.4

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848235	2848236	2848237	2848238	2848239
Sample Reference				BH503_171023	BH502_171023	BH501_171023	BH401_171023	BH603_171023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Arsenic (dissolved)	µg/l	0.15	ISO 17025	I/S	1.02	0.89	I/S	2.67
Beryllium (dissolved)	µg/l	0.1	ISO 17025	I/S	< 0.1	< 0.1	I/S	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	I/S	0.04	< 0.02	I/S	0.04
Chromium (dissolved)	µg/l	0.2	ISO 17025	I/S	0.4	0.2	I/S	4.4
Copper (dissolved)	µg/l	0.5	ISO 17025	I/S	4.1	2.6	I/S	13
Lead (dissolved)	µg/l	0.2	ISO 17025	I/S	1	2	I/S	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	I/S	420	130	I/S	210
Mercury (dissolved)	µg/l	0.05	ISO 17025	I/S	< 0.05	< 0.05	I/S	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	I/S	4.2	2.5	I/S	7
Selenium (dissolved)	µg/l	0.6	ISO 17025	I/S	1.4	< 0.6	I/S	2.8
Vanadium (dissolved)	µg/l	0.2	ISO 17025	I/S	1.2	1.4	I/S	5
Zinc (dissolved)	µg/l	0.5	ISO 17025	I/S	16	19	I/S	2.6
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C10 - C12 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	55	< 10	< 10
Aliphatic >C12 - C16 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	170	< 10	< 10
Aliphatic >C16 - C21 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	210	< 10	< 10
Aliphatic >C21 - C35 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10##	< 10##	1400	< 10##	< 10##
Aliphatic >C10 - C35 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	1800	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C10 - C12 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	150	< 10	< 10
Aromatic >C12 - C16 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	380	< 10	< 10
Aromatic >C16 - C21 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	630	< 10	< 10
Aromatic >C21 - C35 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	3900	< 10	< 10
Aromatic >C10 - C35 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	5100	< 10	< 10
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	9.8	< 3.0	< 3.0	< 3.0	295
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	4.8	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##	< 3.0##
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848235	2848236	2848237	2848238	2848239
Sample Reference				BH503_171023	BH502_171023	BH501_171023	BH401_171023	BH603_171023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	168	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	7.6	< 3.0	< 3.0	4.6	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##	< 3.0##
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##	< 3.0##
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform##	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848235	2848236	2848237	2848238	2848239
Sample Reference				BH503_171023	BH502_171023	BH501_171023	BH401_171023	BH603_171023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Gases								
Methane	mg/L	0.1	NONE	< 0.1	< 0.1	0.2	< 0.1	0.6
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848240	2848241	2848242
Sample Reference				BH602_171023	BH601_171023	Trip Blank_171023
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
General Inorganics						
pH (L099)	pH Units	N/A	ISO 17025	7.5	7.3	7.1
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10
Sulphate as SO4	µg/l	45	ISO 17025	346000	107000	149
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	140	74	< 0.15
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	9900	5900	72
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	12000	7100	87
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	15.3	254	0.19
Nitrate as N	mg/l	0.01	ISO 17025	0.41	0.12	0.01
Nitrite as N	µg/l	1	ISO 17025	< 1.0	89	< 1.0
Total Dissolved Solids (Gravimetric) (L004B)	mg/l	4	ISO 17025	1200	1000	270
Hardness - Total	mgCaCO3/l	1	ISO 17025	761	583	< 1.0
Total Phenols						
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	52	< 10
Speciated PAHs						
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Total PAH						
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids						
Boron (dissolved)	µg/l	10	ISO 17025	270	180	150
Calcium (dissolved)	mg/l	0.012	ISO 17025	290	220	0.13
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.43	0.44	< 0.004
Fe2+	mg/l	0.2	NONE	< 0.20	0.4	< 0.20
Fe3+	mg/l	0.2	NONE	0.38	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	11	9.3	0.016

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848240	2848241	2848242
Sample Reference				BH602_171023	BH601_171023	Trip Blank_171023
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Arsenic (dissolved)	µg/l	0.15	ISO 17025	3.44	1.57	< 0.15
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.03	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.8	0.2	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	3.5	3.7	4
Lead (dissolved)	µg/l	0.2	ISO 17025	0.5	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	3500	2400	0.78
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	2.9	8.3	0.6
Selenium (dissolved)	µg/l	0.6	ISO 17025	1	1.6	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.4	< 0.2	< 0.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	8	2.7	5.5

Monoaromatics & Oxygenates

Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0

Aliphatic >C10 - C12 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10
Aliphatic >C12 - C16 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10
Aliphatic >C16 - C21 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10
Aliphatic >C21 - C35 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10##
Aliphatic >C10 - C35 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10

TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0

Aromatic >C10 - C12 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10
Aromatic >C12 - C16 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10
Aromatic >C16 - C21 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10
Aromatic >C21 - C35 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10
Aromatic >C10 - C35 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10

VOCs

Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	8.5	4.3	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848240	2848241	2848242
Sample Reference				BH602_171023	BH601_171023	Trip Blank_171023
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	54.7	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Bromoform##	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-63091
Project / Site name: WBP Zone A

Your Order No: PO1620055160

Lab Sample Number				2848240	2848241	2848242
Sample Reference				BH602_171023	BH601_171023	Trip Blank_171023
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	17/10/2023
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Gases						
Methane	mg/L	0.1	NONE	7.3	1	< 0.1
Ethane	mg/L	0.1	NONE	0.5	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1

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

Analytical Report Number : 23-63091
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
TPH C10-C35 by GCxGC-FID	Determination of total petroleum hydrocarbons in water by GC x GC FID with carbon banding aliphatic and aromatic C10-C35. Accredited Matrices SW,GW,PW.	In-house method	L101B-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260. Refer to CoA for analyte specific accreditation	L073B-PL	W	ISO 17025
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025

Analytical Report Number : 23-63091
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Gases C1-C4	Determination of volatile hydrocarbons dissolved in water by HS-GC-FID	In-house methods	L110B	W	NONE

Analytical Report Number : 23-63091
Project / Site name: WBP Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total dissolved solids in water (Gravimetric)	Determination of total dissolved solids in water by gravimetry.	In house method based on BSEN 15216:2007	L004-PL	W	ISO 17025
Chloride in water	Determination of Chloride (diissolved) colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

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

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Analytical Report Number : 23-63156

Project / Site name:	Watford Business Park (WBP) Zone A	**Samples received on:**	18/10/2023
Your job number:	1620015380	**Samples instructed on / Analysis started on:**	18/10/2023
Your order number:	PO1620055160	**Analysis completed by:**	24/10/2023
Report Issue Number:	1	**Report issued on:**	25/10/2023
Samples Analysed:	7 water samples		

Signed:

Joanna Wawrzeczko
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 23-63156
Project / Site name: Watford Business Park (WBP) Zone A

Your Order No: PO1620055160

Lab Sample Number				2848658	2848659	2848660	2848661	2848662
Sample Reference				BH210_17102023	BH205_17102023	BH220_17102023	SWDG_17102023	SWMG_17102023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	18/10/2023	18/10/2023	18/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.1	7.2	8.3	7.6	7.5
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	80.2	149	86.9	48.9	49
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	-	-
Chloride	mg/l	0.15	ISO 17025	94	65	41	-	-
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	12000	4400	2700	96	100
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	14000	5400	3300	-	-
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	4.85	2.15	2.5	1.67	1.3
Nitrate as N	mg/l	0.01	ISO 17025	0.14	1.12	2.24	-	-
Nitrite as N	µg/l	1	ISO 17025	27	9.4	70	-	-
Total Dissolved Solids (Gravimetric) (L004B)	mg/l	4	ISO 17025	670	660	380	-	-
Hardness - Total	mgCaCO3/l	1	ISO 17025	431	491	349	390	381
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

UKAS TESTING
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Analytical i2 Environmental Science

Analytical Report Number: 23-63156
Project / Site name: Watford Business Park (WBP) Zone A

Your Order No: PO1620055160

Lab Sample Number				2848658	2848659	2848660	2848661	2848662
Sample Reference				BH210_17102023	BH205_17102023	BH220_17102023	SWDG_17102023	SWMG_17102023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	18/10/2023	18/10/2023	18/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	360	170	140	70	68
Calcium (dissolved)	mg/l	0.012	ISO 17025	160	190	130	150	150
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	9.7	11
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	0.005	0.014	-	-
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	-	-
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	-	-
Magnesium (dissolved)	mg/l	0.005	ISO 17025	7.2	6.8	5.3	3.9	4
Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.26	1.63	1.79	0.5	0.42
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	0.02	0.03	0.04	0.04
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.8	0.7	13	13
Copper (dissolved)	µg/l	0.5	ISO 17025	3.2	3.6	4.7	4.6	2.1
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.7	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	88	170	13	-	-
Mercury (dissolved)	µg/l	0.05	ISO 17025	0.09	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	9.1	14	7.4	3	2.8
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.1	0.7	0.9	0.8	0.8
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.4	0.4	1.1	0.7	0.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	6.2	8.1	2.3	12	9.7
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C10 - C12 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aliphatic >C12 - C16 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aliphatic >C16 - C21 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aliphatic >C21 - C35 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aliphatic >C10 - C35 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C10 - C12 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aromatic >C12 - C16 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aromatic >C16 - C21 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aromatic >C21 - C35 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Aromatic >C10 - C35 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 23-63156

Project / Site name: Watford Business Park (WBP) Zone A

Your Order No: PO1620055160

Lab Sample Number				2848658	2848659	2848660	2848661	2848662
Sample Reference				BH210_17102023	BH205_17102023	BH220_17102023	SWDG_17102023	SWMG_17102023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	18/10/2023	18/10/2023	18/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##	< 3.0##
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	71.1	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	182	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##	< 3.0##
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##	< 3.0##
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##	< 3.0##
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	5.4
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##	< 3.0##
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##	< 3.0##
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-63156
Project / Site name: Watford Business Park (WBP) Zone A

Your Order No: PO1620055160

Lab Sample Number				2848658	2848659	2848660	2848661	2848662
Sample Reference				BH210_17102023	BH205_17102023	BH220_17102023	SWDG_17102023	SWMG_17102023
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				17/10/2023	17/10/2023	18/10/2023	18/10/2023	18/10/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Gases								
Methane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	-	-

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

Analytical Report Number: 23-63156
Project / Site name: Watford Business Park (WBP) Zone A

Your Order No: PO1620055160

Lab Sample Number				2848663	2848664
Sample Reference				SWUG_17102023	SWUG2_17102023
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				18/10/2023	18/10/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
General Inorganics					
pH (L099)	pH Units	N/A	ISO 17025	7.2	7.6
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	53.8	44.4
Sulphide	µg/l	5	NONE	-	-
Chloride	mg/l	0.15	ISO 17025	-	-
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	130	32
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	-	-
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	1	7.5
Nitrate as N	mg/l	0.01	ISO 17025	-	-
Nitrite as N	µg/l	1	ISO 17025	-	-
Total Dissolved Solids (Gravimetric) (L004B)	mg/l	4	ISO 17025	-	-
Hardness - Total	mgCaCO3/l	1	ISO 17025	407	389
Total Phenols					
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10
Speciated PAHs					
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	0.31	< 0.01
Pyrene	µg/l	0.01	ISO 17025	0.28	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Total PAH					
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	0.59	< 0.16

Analytical Report Number: 23-63156
Project / Site name: Watford Business Park (WBP) Zone A

Your Order No: PO1620055160

Lab Sample Number				2848663	2848664
Sample Reference				SWUG_17102023	SWUG2_17102023
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				18/10/2023	18/10/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Heavy Metals / Metalloids					
Boron (dissolved)	µg/l	10	ISO 17025	93	58
Calcium (dissolved)	mg/l	0.012	ISO 17025	150	150
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	9.2
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	-	-
Fe2+	mg/l	0.2	NONE	-	-
Fe3+	mg/l	0.2	NONE	-	-
Magnesium (dissolved)	mg/l	0.005	ISO 17025	4.8	3.5
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.59	0.38
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.8	14
Copper (dissolved)	µg/l	0.5	ISO 17025	1.4	2.4
Lead (dissolved)	µg/l	0.2	ISO 17025	0.3	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	-	-
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	2.9	2.2
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.8	0.8
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.6	0.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	16	12
Monoaromatics & Oxygenates					
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0
Petroleum Hydrocarbons					
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	NONE	< 1.0	< 1.0
Aliphatic >C10 - C12 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10
Aliphatic >C12 - C16 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10
Aliphatic >C16 - C21 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10
Aliphatic >C21 - C35 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10
Aliphatic >C10 - C35 $_{EH\_2D\_AL\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0
Aromatic >C10 - C12 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10
Aromatic >C12 - C16 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10
Aromatic >C16 - C21 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10
Aromatic >C21 - C35 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10
Aromatic >C10 - C35 $_{EH\_2D\_AR\_\#1\_\#2}$	µg/l	10	ISO 17025	< 10	< 10

Analytical Report Number: 23-63156
Project / Site name: Watford Business Park (WBP) Zone A

Your Order No: PO1620055160

Lab Sample Number				2848663	2848664
Sample Reference				SWUG_17102023	SWUG2_17102023
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				18/10/2023	18/10/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
VOCs					
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0##	< 3.0##
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	4.9	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0##	< 3.0##
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0

Analytical Report Number: 23-63156
Project / Site name: Watford Business Park (WBP) Zone A

Your Order No: PO1620055160

Lab Sample Number				2848663	2848664
Sample Reference				SWUG_17102023	SWUG2_17102023
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				18/10/2023	18/10/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	-	-
Ethane	mg/L	0.1	NONE	-	-
Ethene	mg/L	0.1	NONE	-	-
Propane	mg/L	0.1	NONE	-	-
Propene	mg/L	0.1	NONE	-	-
Propyne	mg/L	0.1	NONE	-	-
N-Butane	mg/L	0.1	NONE	-	-
Acetylene	mg/L	0.1	NONE	-	-

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

Analytical Report Number : 23-63156
Project / Site name: Watford Business Park (WBP) Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
TPH C10-C35 by GCxGC-FID	Determination of total petroleum hydrocarbons in water by GC x GC FID with carbon banding aliphatic and aromatic C10-C35. Accredited Matrices SW,GW,PW.	In-house method	L101B-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260. Refer to CoA for analyte specific accreditation	L073B-PL	W	ISO 17025

Analytical Report Number : 23-63156
Project / Site name: Watford Business Park (WBP) Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Gases C1-C4	Determination of volatile hydrocarbons dissolved in water by HS-GC-FID	In-house methods	L110B	W	NONE
Total dissolved solids in water (Gravimetric)	Determination of total dissolved solids in water by gravimetry.	In house method based on BSEN 15216:2007	L004-PL	W	ISO 17025
Chloride in water	Determination of Chloride (diissolved) colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Analytical Report Number : 23-63156
Project / Site name: Watford Business Park (WBP) Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

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

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Analytical Report Number : 23-72812

Project / Site name:	WBP ZONE A	**Samples received on:**	04/12/2023
Your job number:	1620015380	**Samples instructed on / Analysis started on:**	04/12/2023
Your order number:	PO 1620055160	**Analysis completed by:**	11/12/2023
Report Issue Number:	1	**Report issued on:**	11/12/2023
Samples Analysed:	15 water samples		

Signed:

Dominika Liana
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899165	2899166	2899167	2899168	2899169
Sample Reference				BH205_041223	BH210_041223	BH304_041223	BH220_041223	HB220_041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.3	7.4	7.8	9.7	7.4
Total Cyanide	µg/l	10	ISO 17025	-	-	-	-	-
Sulphate as SO4	mg/l	0.045	ISO 17025	-	-	-	-	-
Sulphide	µg/l	5	NONE	-	-	-	-	-
Chloride	mg/l	0.15	ISO 17025	-	-	-	-	-
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	-	-	-	-	-
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	13000	5700	21	890	8000
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	-	-	-	-	-
Nitrate as N	mg/l	0.01	ISO 17025	-	-	-	-	-
Nitrite as N	µg/l	1	ISO 17025	-	-	-	-	-
Hardness - Total	mgCaCO3/l	1	ISO 17025	-	-	-	-	-
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	-	-	-	-	-
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	-	-	-	-	-
Acenaphthylene	µg/l	0.01	ISO 17025	-	-	-	-	-
Acenaphthene	µg/l	0.01	ISO 17025	-	-	-	-	-
Fluorene	µg/l	0.01	ISO 17025	-	-	-	-	-
Phenanthrene	µg/l	0.01	ISO 17025	-	-	-	-	-
Anthracene	µg/l	0.01	ISO 17025	-	-	-	-	-
Fluoranthene	µg/l	0.01	ISO 17025	-	-	-	-	-
Pyrene	µg/l	0.01	ISO 17025	-	-	-	-	-
Benzo(a)anthracene	µg/l	0.01	ISO 17025	-	-	-	-	-
Chrysene	µg/l	0.01	ISO 17025	-	-	-	-	-
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	-	-	-	-	-
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	-	-	-	-	-
Benzo(a)pyrene	µg/l	0.01	ISO 17025	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	-	-	-	-	-
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	-	-	-	-	-
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	-	-	-	-	-
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	-	-	-	-	-

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899165	2899166	2899167	2899168	2899169
Sample Reference				BH205_041223	BH210_041223	BH304_041223	BH220_041223	HB220_041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	-	-	-	-	-
Calcium (dissolved)	mg/l	0.012	ISO 17025	-	-	-	-	-
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	7.9	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	-	-	-	-	-
Fe2+	mg/l	0.2	NONE	-	-	-	-	-
Fe3+	mg/l	0.2	NONE	-	-	-	-	-
Magnesium (dissolved)	mg/l	0.005	ISO 17025	-	-	-	-	-
Arsenic (dissolved)	µg/l	0.15	ISO 17025	-	-	-	-	-
Beryllium (dissolved)	µg/l	0.1	ISO 17025	-	-	-	-	-
Cadmium (dissolved)	µg/l	0.02	ISO 17025	-	-	-	-	-
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.5	2.1	7.6	0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	-	-	-	-	-
Lead (dissolved)	µg/l	0.2	ISO 17025	-	-	-	-	-
Manganese (dissolved)	µg/l	0.05	ISO 17025	-	-	-	-	-
Mercury (dissolved)	µg/l	0.05	ISO 17025	-	-	-	-	-
Nickel (dissolved)	µg/l	0.5	ISO 17025	-	-	-	-	-
Selenium (dissolved)	µg/l	0.6	ISO 17025	-	-	-	-	-
Vanadium (dissolved)	µg/l	0.2	ISO 17025	-	-	-	-	-
Zinc (dissolved)	µg/l	0.5	ISO 17025	-	-	-	-	-
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	-	-	-	-	-
Toluene	µg/l	3	ISO 17025	-	-	-	-	-
Ethylbenzene	µg/l	3	ISO 17025	-	-	-	-	-
p & m-xylene	µg/l	3	ISO 17025	-	-	-	-	-
o-xylene	µg/l	3	ISO 17025	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)#	µg/l	3	NONE	-	-	-	-	-
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	-	-	-	-	-
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	-	-	-	-	-
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	-	-	-	-	-
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	-	-	-	-	-
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	-	-	-	-	-
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	-	-	-	-	-

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899165	2899166	2899167	2899168	2899169
Sample Reference				BH205_041223	BH210_041223	BH304_041223	BH220_041223	HB220_041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	3.3	34.8	35.5
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	57.7	51.9	54.4
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899165	2899166	2899167	2899168	2899169
Sample Reference				BH205_041223	BH210_041223	BH304_041223	BH220_041223	HB220_041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	-	-	-	-	-
Ethane	mg/L	0.1	NONE	-	-	-	-	-
Ethene	mg/L	0.1	NONE	-	-	-	-	-
Propane	mg/L	0.1	NONE	-	-	-	-	-
Propene	mg/L	0.1	NONE	-	-	-	-	-
Propyne	mg/L	0.1	NONE	-	-	-	-	-
N-Butane	mg/L	0.1	NONE	-	-	-	-	-
Acetylene	mg/L	0.1	NONE	-	-	-	-	-

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

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899170	2899171	2899172	2899173	2899174
Sample Reference				BH301_041223	BH302_041223	BH303_041223	BH501_041223	BH502_041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.4	7.3	7.6	7.2	7.5
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	-	< 10	19
Sulphate as SO4	mg/l	0.045	ISO 17025	46.2	53.7	-	202	206
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	-	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	42	60	-	15	38
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	1200	5200	-	320	920
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	1400	6300	< 15	390	1100
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	1.5	10.4	-	5.38	9.45
Nitrate as N	mg/l	0.01	ISO 17025	7.94	3.57	-	0.36	0.58
Nitrite as N	µg/l	1	ISO 17025	45	7.6	-	37	94
Hardness - Total	mgCaCO3/l	1	ISO 17025	345	342	-	386	301
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	-	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	-	< 0.16	< 0.16

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899170	2899171	2899172	2899173	2899174
Sample Reference				BH301_041223	BH302_041223	BH303_041223	BH501_041223	BH502_041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	110	190	-	84	90
Calcium (dissolved)	mg/l	0.012	ISO 17025	130	130	-	150	120
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	6.4	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	< 0.004	0.026	-	0.64	0.019
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	-	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	-	0.64	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	4.5	5.2	-	4.7	2.5
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.81	1.19	-	1.08	1.47
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	-	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	-	0.02	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.9	0.6	7.2	0.3	0.4
Copper (dissolved)	µg/l	0.5	ISO 17025	2.1	0.7	-	0.5	1.9
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	-	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	5.7	12	-	2800	980
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	-	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.9	7	-	4.3	4.2
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.6	< 0.6	-	< 0.6	0.9
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.4	0.4	-	0.7	1.1
Zinc (dissolved)	µg/l	0.5	ISO 17025	4.7	4.7	-	5.9	0.8
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	-	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	-	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	-	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	-	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	-	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)#	µg/l	3	NONE	< 3.0	< 3.0	-	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	-	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	-	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	-	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	-	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	-	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	-	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	-	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	-	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	-	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	-	< 10	< 10

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899170	2899171	2899172	2899173	2899174
Sample Reference				BH301_041223	BH302_041223	BH303_041223	BH501_041223	BH502_041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899170	2899171	2899172	2899173	2899174
Sample Reference				BH301_041223	BH302_041223	BH303_041223	BH501_041223	BH502_041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	0.8
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1

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

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899175	2899176	2899177	2899178	2899179
Sample Reference				BH503_041223	BH504_041223	BH505_041223	BH506_041223	Trip blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.5	7.2	7.5	11	5.8
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	42	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	76.1	79.3	126	202	< 0.045
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	62	65	56	54	< 0.15
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	3100	5700	270	320	35
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	3800	6900	320	390	43
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	2.87	14.6	5.23	8.53	1.1
Nitrate as N	mg/l	0.01	ISO 17025	1.08	0.17	2.13	6.28	0.15
Nitrite as N	µg/l	1	ISO 17025	3.4	7.4	8.4	790	< 1.0
Hardness - Total	mgCaCO3/l	1	ISO 17025	346	424	389	244	< 1.0
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899175	2899176	2899177	2899178	2899179
Sample Reference				BH503_041223	BH504_041223	BH505_041223	BH506_041223	Trip blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Boron (dissolved)	µg/l	10	ISO 17025	180	210	150	79	39
Calcium (dissolved)	mg/l	0.012	ISO 17025	130	160	150	97	0.097
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	U/S**	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	U/S**	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.007	0.015	0.067	0.022	0.006
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	5.7	6.5	4.6	0.31	0.011
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.56	4.16	1.21	6.68	< 0.15
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02	< 0.02	< 0.02	0.03	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	1.1	0.3	0.8	5.4	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	2	< 0.5	3.2	9.2	2.5
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.3	< 0.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	480	1400	110	0.69	0.39
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	12	9.9	9.9	3.6	< 0.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	0.8	1	2.3	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.3	1.5	0.3	15	< 0.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	5.7	0.5	4.1	12	2
Monoaromatics & Oxygenates								
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899175	2899176	2899177	2899178	2899179
Sample Reference				BH503_041223	BH504_041223	BH505_041223	BH506_041223	Trip blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	21.6	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)#	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	154	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	21.9	< 3.0	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	7.6	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-72812
Project / Site name: WBP ZONE A

Your Order No: PO 1620055160

Lab Sample Number				2899175	2899176	2899177	2899178	2899179
Sample Reference				BH503_041223	BH504_041223	BH505_041223	BH506_041223	Trip blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	< 0.1	2.8	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number : 23-72812
Project / Site name: WBP ZONE A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260. Refer to CoA for analyte specific accreditation	L073B-PL	W	ISO 17025
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025

Analytical Report Number : 23-72812
Project / Site name: WBP ZONE A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Gases C1-C4	Determination of volatile hydrocarbons dissolved in water by HS-GC-FID	In-house methods	L110B	W	NONE
Chloride in water	Determination of Chloride (diissolved) colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

** - Unsuitable for analysis due to high colour intensity
# - Data reported unaccredited due to quality control parameter failure associated with this result; other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised

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Analytical Report Number : 23-72952

Project / Site name:	Watford business Park Zone A	**Samples received on:**	05/12/2023
Your job number:	1620015380	**Samples instructed on/ Analysis started on:**	05/12/2023
Your order number:	PO 1620055160	**Analysis completed by:**	14/12/2023
Report Issue Number:	1	**Report issued on:**	14/12/2023
Samples Analysed:	8 water samples		

Signed:

Joanna Wawrzeczko
Senior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

Analytical Report Number: 23-72952
Project / Site name: Watford business Park Zone A

Your Order No: PO 1620055160

Lab Sample Number				2899979	2899980	2899981	2899982
Sample Reference				BH401-041223	BH601-041223	BH602-041223	BH603-041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/12/2023	05/12/2023	05/12/2023	05/12/2023
Time Taken				0900	0900	0900	0900
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
General Inorganics							
pH (L099)	pH Units	N/A	ISO 17025	7.3	10.1	7.6	8.4
Total Cyanide	µg/l	10	ISO 17025	< 10	17	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	94.6	154	39.6	21.3
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Chloride	mg/l	0.15	ISO 17025	98	89	82	24
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	1200	5700	6600	87
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	1500	7000	8000	110
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	2.39	42.8	10.2	5.91
Nitrate as N	mg/l	0.01	ISO 17025	2.86	0.42	0.15	0.31
Nitrite as N	µg/l	1	ISO 17025	6.3	540	< 1.0	12
Hardness - Total	mgCaCO3/l	1	ISO 17025	450	84.6	290	74
Total Phenols							
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
Speciated PAHs							
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH							
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 23-72952
Project / Site name: Watford business Park Zone A

Your Order No: PO 1620055160

Lab Sample Number				2899979	2899980	2899981	2899982
Sample Reference				BH401-041223	BH601-041223	BH602-041223	BH603-041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/12/2023	05/12/2023	05/12/2023	05/12/2023
Time Taken				0900	0900	0900	0900
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Boron (dissolved)	µg/l	10	ISO 17025	130	47	110	29
Calcium (dissolved)	mg/l	0.012	ISO 17025	170	33	110	28
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.042	0.13	0.23	0.04
Fe2+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20
Fe3+	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20
Magnesium (dissolved)	mg/l	0.005	ISO 17025	5.8	0.57	4.3	0.96
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.5	7.22	3.78	1.91
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.11	< 0.02	< 0.02	0.03
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.6	0.9	0.9
Copper (dissolved)	µg/l	0.5	ISO 17025	1.1	8.2	< 0.5	2.8
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.3	0.3	0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	30	24	710	15
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	60	16	1.5	1.9
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	2.5	0.7	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.3	14	2.7	5
Zinc (dissolved)	µg/l	0.5	ISO 17025	9.4	1.2	< 0.5	1.9
Monoaromatics & Oxygenates							
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10

Analytical Report Number: 23-72952
Project / Site name: Watford business Park Zone A

Your Order No: PO 1620055160

Lab Sample Number				2899979	2899980	2899981	2899982
Sample Reference				BH401-041223	BH601-041223	BH602-041223	BH603-041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/12/2023	05/12/2023	05/12/2023	05/12/2023
Time Taken				0900	0900	0900	0900
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs							
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0##	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	62.6	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	12.4	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0	< 3.0##	< 3.0##
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0##	< 3.0	< 3.0##	< 3.0##
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0

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Project / Site name: Watford business Park Zone A

Your Order No: PO 1620055160

Lab Sample Number				2899979	2899980	2899981	2899982
Sample Reference				BH401-041223	BH601-041223	BH602-041223	BH603-041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/12/2023	05/12/2023	05/12/2023	05/12/2023
Time Taken				0900	0900	0900	0900
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	< 0.1	< 0.1	1.4	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	0.2	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 23-72952
Project / Site name: Watford business Park Zone A

Your Order No: PO 1620055160

Lab Sample Number				2899983	2899984	2899985	2899986
Sample Reference				SWDG-041223	SWMG-041223	SWUG-041223	SWUG2-041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/12/2023	05/12/2023	05/12/2023	05/12/2023
Time Taken				0900	0900	1700	1700
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
General Inorganics							
pH (L099)	pH Units	N/A	ISO 17025	7.6	7.5	7.5	7.4
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	46.1	47	46.2	39.6
Sulphide	µg/l	5	NONE	< 5.0	-	-	-
Chloride	mg/l	0.15	ISO 17025	67	-	-	-
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	110	140	150	87
Ammoniacal Nitrogen as NH3	µg/l	15	ISO 17025	130	-	-	-
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	2.64	9.31	2.27	10.5
Nitrate as N	mg/l	0.01	ISO 17025	5.54	-	-	-
Nitrite as N	µg/l	1	ISO 17025	37	-	-	-
Hardness - Total	mgCaCO3/l	1	ISO 17025	325	333	333	353
Total Phenols							
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
Speciated PAHs							
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH							
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16

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Lab Sample Number				2899983	2899984	2899985	2899986
Sample Reference				SWDG-041223	SWMG-041223	SWUG-041223	SWUG2-041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/12/2023	05/12/2023	05/12/2023	05/12/2023
Time Taken				0900	0900	1700	1700
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Boron (dissolved)	µg/l	10	ISO 17025	60	59	56	69
Calcium (dissolved)	mg/l	0.012	ISO 17025	120	130	130	130
Chromium (hexavalent)	µg/l	5	ISO 17025	9.5	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	7.6	11	< 5.0
Iron (dissolved)	mg/l	0.004	ISO 17025	0.01	-	-	-
Fe2+	mg/l	0.2	NONE	< 0.20	-	-	-
Fe3+	mg/l	0.2	NONE	< 0.20	-	-	-
Magnesium (dissolved)	mg/l	0.005	ISO 17025	3.4	3.4	3.3	4.1
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.81	0.51	0.61	0.52
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.06	< 0.02	< 0.02	0.03
Chromium (dissolved)	µg/l	0.2	ISO 17025	14	7.6	11	4.4
Copper (dissolved)	µg/l	0.5	ISO 17025	3.5	2.4	2.2	4.1
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	50	-	-	-
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.2	3.2	3.7	2.6
Selenium (dissolved)	µg/l	0.6	ISO 17025	1	1	0.9	0.9
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.7	1.6	1.8	1.3
Zinc (dissolved)	µg/l	0.5	ISO 17025	38	18	17	20
Monoaromatics & Oxygenates							
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0##	< 3.0##	< 3.0##
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 $_{HS\_1D\_AL}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 $_{EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) $_{HS+EH\_1D\_AL\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 $_{HS\_1D\_AR}$	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 $_{EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) $_{HS+EH\_1D\_AR\_MS}$	µg/l	10	NONE	< 10	< 10	< 10	< 10

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Project / Site name: Watford business Park Zone A

Your Order No: PO 1620055160

Lab Sample Number				2899983	2899984	2899985	2899986
Sample Reference				SWDG-041223	SWMG-041223	SWUG-041223	SWUG2-041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/12/2023	05/12/2023	05/12/2023	05/12/2023
Time Taken				0900	0900	1700	1700
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs							
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0##	< 3.0##	< 3.0##
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0##	< 3.0##	< 3.0##
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0##	< 3.0##	< 3.0##
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0##	< 3.0##	< 3.0##	< 3.0##
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p & m-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
o-Xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 23-72952
Project / Site name: Watford business Park Zone A

Your Order No: PO 1620055160

Lab Sample Number				2899983	2899984	2899985	2899986
Sample Reference				SWDG-041223	SWMG-041223	SWUG-041223	SWUG2-041223
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/12/2023	05/12/2023	05/12/2023	05/12/2023
Time Taken				0900	0900	1700	1700
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0

Gases

Methane	mg/L	0.1	NONE	-	-	-	-
Ethane	mg/L	0.1	NONE	-	-	-	-
Ethene	mg/L	0.1	NONE	-	-	-	-
Propane	mg/L	0.1	NONE	-	-	-	-
Propene	mg/L	0.1	NONE	-	-	-	-
Propyne	mg/L	0.1	NONE	-	-	-	-
N-Butane	mg/L	0.1	NONE	-	-	-	-
Acetylene	mg/L	0.1	NONE	-	-	-	-

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

Analytical Report Number : 23-72952
Project / Site name: Watford business Park Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079-PL	W	NONE
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260. Refer to CoA for analyte specific accreditation	L073B-PL	W	ISO 17025
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025

Analytical Report Number : 23-72952
Project / Site name: Watford business Park Zone A

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Gases C1-C4	Determination of volatile hydrocarbons dissolved in water by HS-GC-FID	In-house methods	L110B	W	NONE
Chloride in water	Determination of Chloride (diissolved) colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

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

UKAS TESTING
4041

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Analytical Report Number : 24-003016

Replaces Analytical Report Number: 24-003016, issue no. 1
Additional analysis undertaken.
Additional analysis ** undertaken due to it being missed by laboratory

Project / Site name:	Wabford Business Park	**Samples received on:**	13/02/2024
Your job number:	1620015380	**Samples instructed on / Analysis started on:**	13/02/2024
Your order number:	1620055160	**Analysis completed by:**	13/03/2024
Report Issue Number:	2	**Report issued on:**	13/03/2024
Samples Analysed:	14 water samples		

Signed:

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

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

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

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

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

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

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				116997	116998	116999	117000	117001
Sample Reference				BH401	BH601	BH602	BH603	BH302
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.2	9.3	7.1	7.8	7.2
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	106	214	218	33.4	60.5
Sulphide	µg/l	5	NONE	< 5.0	5.8	180	150	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	1500	5300	8000	1500	5500
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	2000	6900	10000	1900	7000
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	2.28	17.6	14.9	61.1	2.1
Nitrate as N	mg/l	0.01	ISO 17025	2.61	2.67	< 0.01	0.14	2.52
Nitrite as N	µg/l	1	ISO 17025	15	1300	16	14	2.6
Alkalinity as CaCO3	mgCaCO3/l	3	ISO 17025	320	67	350	380	400
Hardness - Total	mgCaCO3/l	1	ISO 17025	479	134	440	260	376
Total Phenols **								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	0.48	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	0.48	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	0.33	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	0.3	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	0.48	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	0.15	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	0.38	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	0.24	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	0.24	< 0.01	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	3.08	< 0.16	< 0.16	< 0.16	< 0.16

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				116997	116998	116999	117000	117001
Sample Reference				BH401	BH601	BH602	BH603	BH302
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.49	10.2	2.99	3.13	1.26
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.11	0.05	0.03	0.05	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	1.6	0.7	1.7	0.3
Copper (dissolved)	µg/l	0.5	ISO 17025	1.8	18	2.8	1.6	2.7
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.4	0.2	3.4	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	25	6.2	1000	540	17
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	34	10	3.5	15	7.2
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	1.6	1.7	0.7	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.5	17	1.9	5.3	0.4
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.8	2.5	7.2	31	9.3
Boron (dissolved)	µg/l	10	ISO 17025	130	45	120	75	190
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	µg/l	4	ISO 17025	< 4.0	41	850	5300	110
Iron (Fe2+) (dissolved)	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Iron (Fe3+) (dissolved)	mg/l	0.2	NONE	< 0.20	< 0.20	0.77	5.28	< 0.20
Petroleum Hydrocarbons								
TPH - Aliphatic >C5 - C6 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C6 - C8 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C8 - C10 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C10 - C12 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
TPH - Aliphatic >C12 - C16 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	< 10	< 10	22	< 10
TPH - Aliphatic >C16 - C21 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	< 10	< 10	20	< 10
TPH - Aliphatic >C21 - C35 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	< 10	< 10	110	< 10
Total TPH Aliphatic >C10 - C35 EH_2D_AL_#1_#2	µg/l	10	NONE	< 10	< 10	< 10	150	< 10
TPH - Aromatic >EC5 - EC7 HS_1D_AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC7 - EC8 HS_1D_AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC8 - EC10 HS_1D_AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC10 - EC12 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
TPH - Aromatic >EC12 - EC16 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
TPH - Aromatic >EC16 - EC21 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
TPH - Aromatic >EC21 - EC35 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Total TPH Aromatic >EC10 - EC35 EH_2D_AR_#1_#2	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				116997	116998	116999	117000	117001
Sample Reference				BH401	BH601	BH602	BH603	BH302
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	18.6	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	370	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	322	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	9.6	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				116997	116998	116999	117000	117001
Sample Reference				BH401	BH601	BH602	BH603	BH302
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Gases **

Methane	mg/L	0.1	NONE	< 0.1	0.6	-	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	-	< 0.1	< 0.1

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

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				117002	117003	117004	117005	117006
Sample Reference				BH301	BH504	BH505	BH506	SWUG
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH (L099)	pH Units	N/A	ISO 17025	7.2	7.4	7.3	10.3	7.2
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	16	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	52.8	102	131	120	53.5
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	630	6300	82	20	< 15
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	810	8100	110	26	< 15
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	1.93	4.66	3.78	4.16	1.53
Nitrate as N	mg/l	0.01	ISO 17025	5.43	0.05	0.2	3.12	6.76
Nitrite as N	µg/l	1	ISO 17025	75	6.2	< 1.0	14	11
Alkalinity as CaCO3	mgCaCO3/l	3	ISO 17025	320	440	330	30	280
Hardness - Total	mgCaCO3/l	1	ISO 17025	372	491	459	154	377
Total Phenols **								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	I/S	< 0.01	< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	I/S	< 0.16	< 0.16	< 0.16

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				117002	117003	117004	117005	117006
Sample Reference				BH301	BH504	BH505	BH506	SWUG
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.73	4.93	0.68	5.53	0.6
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.02	< 0.02	0.05	0.04	0.04
Chromium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.3	8.6	3.4
Copper (dissolved)	µg/l	0.5	ISO 17025	2	1.6	2.9	9.2	4.4
Lead (dissolved)	µg/l	0.2	ISO 17025	0.3	0.2	< 0.2	0.5	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	21	1100	520	1.2	8.7
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	8	8.1	9.4	1.7	3
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	0.7	1.2	1.8	0.9
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.2	0.5	< 0.2	21	0.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	6.1	11	8.1	2.7	14
Boron (dissolved)	µg/l	10	ISO 17025	120	260	150	58	86
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	6.1	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	µg/l	4	ISO 17025	14	1200	< 4.0	6	< 4.0
Iron (Fe2+) (dissolved)	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Iron (Fe3+) (dissolved)	mg/l	0.2	NONE	< 0.20	1.22	< 0.20	< 0.20	< 0.20
Petroleum Hydrocarbons								
TPH - Aliphatic >C5 - C6 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C6 - C8 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C8 - C10 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C10 - C12 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	I/S	< 10	< 10	< 10
TPH - Aliphatic >C12 - C16 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	I/S	< 10	< 10	< 10
TPH - Aliphatic >C16 - C21 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	I/S	< 10	< 10	< 10
TPH - Aliphatic >C21 - C35 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	I/S	< 10	< 10	< 10
Total TPH Aliphatic >C10 - C35 EH_2D_AL_#1_#2	µg/l	10	NONE	< 10	I/S	< 10	< 10	< 10
TPH - Aromatic >EC5 - EC7 HS_1D_AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC7 - EC8 HS_1D_AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC8 - EC10 HS_1D_AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC10 - EC12 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	I/S	< 10	< 10	< 10
TPH - Aromatic >EC12 - EC16 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	I/S	< 10	< 10	< 10
TPH - Aromatic >EC16 - EC21 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	I/S	< 10	< 10	< 10
TPH - Aromatic >EC21 - EC35 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	I/S	< 10	< 10	< 10
Total TPH Aromatic >EC10 - EC35 EH_2D_AR_#1_#2	µg/l	10	NONE	< 10	I/S	< 10	< 10	< 10

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				117002	117003	117004	117005	117006
Sample Reference				BH301	BH504	BH505	BH506	SWUG
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				117002	117003	117004	117005	117006
Sample Reference				BH301	BH504	BH505	BH506	SWUG
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Gases **

Methane	mg/L	0.1	NONE	< 0.1	-	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	-	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	-	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	-	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	-	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	-	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	-	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	-	< 0.1	< 0.1	< 0.1

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

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				117007	117008	117009	117010
Sample Reference				SWMG	SWUG2	BH602D	Trip Blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
General Inorganics							
pH (L099)	pH Units	N/A	ISO 17025	7.3	7.5	7.3	5.5
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	21	< 10
Sulphate as SO4	mg/l	0.045	ISO 17025	46.2	58.8	231	0.129
Sulphide	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	370	120	9100	< 15
Ammoniacal Nitrogen as NH4	µg/l	15	ISO 17025	470	150	12000	< 15
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	3.51	3.12	15.8	0.68
Nitrate as N	mg/l	0.01	ISO 17025	4.45	3.93	0.01	< 0.01
Nitrite as N	µg/l	1	ISO 17025	38	21	29	< 1.0
Alkalinity as CaCO3	mgCaCO3/l	3	ISO 17025	270	270	340	< 3
Hardness - Total	mgCaCO3/l	1	ISO 17025	318	378	489	< 1.0
Total Phenols **							
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10
Speciated PAHs							
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Dibenzo(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	I/S	< 0.01
Total PAH							
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	I/S	< 0.16

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				117007	117008	117009	117010
Sample Reference				SWMG	SWUG2	BH602D	Trip Blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.57	0.6	4.58	< 0.15
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.07	0.06	< 0.02	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	10	11	0.6	< 0.2
Copper (dissolved)	µg/l	0.5	ISO 17025	5.4	5.6	0.8	4.2
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	29	40	1400	0.58
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	2.9	2.4	2.6	< 0.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	0.8	1	1.6	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.1	1.1	0.6	< 0.2
Zinc (dissolved)	µg/l	0.5	ISO 17025	26	27	4.3	7.6
Boron (dissolved)	µg/l	10	ISO 17025	65	83	140	< 10
Chromium (hexavalent)	µg/l	5	ISO 17025	9	8.2	< 5.0	< 5.0
Chromium (III)	µg/l	5	NONE	< 5.0	< 5.0	< 5.0	< 5.0
Iron (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	3400	< 4.0
Iron (Fe2+) (dissolved)	mg/l	0.2	NONE	< 0.20	< 0.20	< 0.20	< 0.20
Iron (Fe3+) (dissolved)	mg/l	0.2	NONE	< 0.20	< 0.20	3.44	< 0.20
Petroleum Hydrocarbons							
TPH - Aliphatic >C5 - C6 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C6 - C8 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C8 - C10 HS_1D_AL	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C10 - C12 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	< 10	I/S	< 10
TPH - Aliphatic >C12 - C16 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	< 10	I/S	< 10
TPH - Aliphatic >C16 - C21 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	< 10	I/S	< 10
TPH - Aliphatic >C21 - C35 EH_2D_AL_#1_#2	µg/l	10	ISO 17025	< 10	< 10	I/S	< 10
Total TPH Aliphatic >C10 - C35 EH_2D_AL_#1_#2	µg/l	10	NONE	< 10	< 10	I/S	< 10
TPH - Aromatic >EC5 - EC7 HS_1D_AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC7 - EC8 HS_1D_AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC8 - EC10 HS_1D_AR	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC10 - EC12 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	< 10	I/S	< 10
TPH - Aromatic >EC12 - EC16 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	< 10	I/S	< 10
TPH - Aromatic >EC16 - EC21 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	< 10	I/S	< 10
TPH - Aromatic >EC21 - EC35 EH_2D_AR_#1_#2	µg/l	10	ISO 17025	< 10	< 10	I/S	< 10
Total TPH Aromatic >EC10 - EC35 EH_2D_AR_#1_#2	µg/l	10	NONE	< 10	< 10	I/S	< 10

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				117007	117008	117009	117010
Sample Reference				SWMG	SWUG2	BH602D	Trip Blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs							
Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0

Analytical Report Number: 24-003016
Project / Site name: Wabford Business Park

Your Order No: 1620055160

Lab Sample Number				117007	117008	117009	117010
Sample Reference				SWMG	SWUG2	BH602D	Trip Blank
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				13/02/2024	13/02/2024	13/02/2024	13/02/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0

Gases **

Methane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Ethane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Ethene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Propane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Propene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Propyne	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
N-Butane	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Acetylene	mg/L	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1

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

Analytical Report Number : 24-003016
Project / Site name: Wabford Business Park

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW	In-house method based on USEPA Method 6020 & 200.8 for the determination of trace elements in water by ICP-MS	L012B	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode	In-house method	L029	W	NONE
Dissolved Organic Carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR Analyser	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices: SW, GW, PW, PrW (Al, Cu, Fe,Zn)	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045B	W	ISO 17025
BTEX and/or Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA 8260	L073B	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08	L078	W	ISO 17025
Iron (II) and Iron (III) in water	Determination of Iron II and Iron III in water by coloration with phenanthroline and calculation	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L079	W	NONE
Chromium III in water	In-house method by calculation from total Cr and Cr VI	In-house method by calculation	L080	W	NONE
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW	L080	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080	W	ISO 17025
Alkalinity in water (by discreet analyser)	Determination of Alkalinity by discrete analyser (colorimetry). Accredited matrices: SW, PW, GW	In-house method based on MEWAM & USEPA Method 310.2	L082B	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	ISO 17025
Total petroleum hydrocarbons by GC-MS HS in water	Determination of total petroleum hydrocarbons in water by GC-MS HS	In-house method	L088	W	ISO 17025

Analytical Report Number : 24-003016
Project / Site name: Wabford Business Park

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
pH at 20°C in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method	L099	W	ISO 17025
Total petroleum hydrocarbons with carbon banding by GCxGC-FID	Determination of total petroleum hydrocarbons in water by GC x GC FID with carbon banding aliphatic and aromatic C10-C35. Accredited Matrices SW,GW,PW	In-house method	L101B	W	ISO 17025
Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds (including PAH) in leachate by extraction in dichloromethane followed by GC-MS	In-house method based on USEPA 8270	L102B	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	ISO 17025
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
Gases C1-C4 dissolved in water	Determination of volatile hydrocarbons dissolved in water by HS-GC-FID	In-house method	L110B		NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Sample Deviation Report

Analytical Report Number : 24-003016

Project / Site name: Wabford Business Park

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH301	N/A	W	117002	b	Gases C1-C4 dissolved in water	L110B	b
BH302	N/A	W	117001	b	Gases C1-C4 dissolved in water	L110B	b
BH401	N/A	W	116997	b	Gases C1-C4 dissolved in water	L110B	b
BH504	N/A	W	117003	b	Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in water	L102B	b
BH504	N/A	W	117003	b	Total petroleum hydrocarbons with carbon banding by GCxGC-FID	L101B	b
BH505	N/A	W	117004	b	Gases C1-C4 dissolved in water	L110B	b
BH506	N/A	W	117005	b	Gases C1-C4 dissolved in water	L110B	b
BH601	N/A	W	116998	b	Gases C1-C4 dissolved in water	L110B	b
BH602D	N/A	W	117009	b	Gases C1-C4 dissolved in water	L110B	b
BH602D	N/A	W	117009	b	Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in water	L102B	b
BH602D	N/A	W	117009	b	Total petroleum hydrocarbons with carbon banding by GCxGC-FID	L101B	b
BH603	N/A	W	117000	b	Gases C1-C4 dissolved in water	L110B	b
SWMG	N/A	W	117007	b	Gases C1-C4 dissolved in water	L110B	b
SWUG	N/A	W	117006	b	Gases C1-C4 dissolved in water	L110B	b
SWUG2	N/A	W	117008	b	Gases C1-C4 dissolved in water	L110B	b
Trip Blank	N/A	W	117010	b	Gases C1-C4 dissolved in water	L110B	b

APPENDIX 6
ENGLOBE COMPLETION REPORT AUGUST 2023

Watford Business Park

Works Completion Report

Watford Borough Council
R1848/23/5343

August 2023

ENGLOBE

Watford Borough Council

R1848/23/5343

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If tests have been performed, the results of these tests are valid only for the sample described in this report.

Subcontractors of Englobe who may have performed laboratory work are duly evaluated according to the purchasing procedure of our quality system. For further information or details, please contact your project manager.”

Table of Contents

1 Project Overview

Englobe was commissioned by Faircloth Construction on behalf of Watford Borough Council to undertake soil and groundwater remediation at redevelopment site (Watford Business Park), Watford, WD18 8SA.

Works were undertaken on site by Englobe and a specialist subcontractor in July 2023, which comprised the installation of new monitoring wells, decommissioning of existing boreholes and In Situ Chemical Reduction (ISCR) injection treatment of CHC impacted soils and groundwater. These works were localised to the northeast corner of the site and the extent of the working area is shown on drawing D1848_5343_001 within appendix A.

Works were undertaken in this area of site in conjunction with Englobe Remediation Implementation Plan R1848/23/5323 June 2023 with Ramboll providing guidance and specification for the new borehole installations. These remediation works in the northeast corner were undertaken under an environmental permit deployment (formally MTL) obtained prior to the works by Englobe, reference AP3195FG/W0086.

The remedial objective for site is to ensure there are no unacceptable risks to human health, the environment, property and / or controlled water after remediation, which will be achieved by;

- Preventing contamination of the unnamed watercourse off-site to the north by on-site soil (cis-1,2-Dichloroethene and vinyl chloride) and groundwater impacts (trichloroethene, cis-1,2-Dichloroethene and vinyl chloride);

- Preventing breakthrough of CHC (trichloroethene, cis-1,2-Dichloroethene and vinyl chloride) from unsaturated zone soils and superficial groundwater on-site to the deeper White Chalk Aquifer; and

- Preventing migration of CHC (trichloroethene, cis-1,2-Dichloroethene and vinyl chloride) causing unacceptable vapour risks to on-site building developments.

1.1 Limitations

This report is not a Remediation Verification Report. This report details works and activities undertaken onsite by Englobe during the project and provides information to assist with the production of the site Remediation Verification Report to be produced by Ramboll.

This report is confidential to the client and Englobe accepts no responsibility to third parties to whom the report, or any part thereof, is made known. Any such party using any information contained within the report does so at their own risk.

The report is only valid when it is used in its entirety. Some of the information used to develop the verification report has been obtained from third-party sources, as detailed within the report, which Englobe believes to be reliable. Nevertheless, Englobe cannot and does not guarantee the authenticity or reliability of any third-party information it has relied upon.

The remediation works encounter a limited proportion of the site's ground conditions. It is therefore possible that differing conditions and hazards may be present outside of the source areas.

2 Remediation Activities

2.1 Scope of Works

Remediation by Englobe was undertaken to address the identified CHC contamination in soil and groundwater in the northeast corner of the site. To address the identified CHC contamination the following remedial activities as specified within the Ramboll remediation strategy R1620015380_RS_addendum_001 June 2023 were carried out:

- Injection works using direct push injection methods to apply Evonik Industry (formerly PeroxyChem) EHC® Reagent targeting the superficial deposits between 1.5m and 4.0m depth. This product is composed of controlled-release carbon, zero valent iron (ZVI) particles and nutrients used for stimulating ISCR which was injected at locations across the northeast corner to act as a reactive barrier for groundwater potentially flowing into site, and to degrade existing CHC concentrations within soils and groundwater in the vicinity of BH402, 509,511.
- Installation of 3no. down gradient monitoring boreholes to allow groundwater sampling and monitoring of the injection treatment process on groundwater quality in this area.
- Decommissioning of 6no. existing boreholes to allow for follow on development works.

Images obtained during various phases of the works as described above are presented within Appendix B.

2.2 ISCR Injection Treatment

The in-situ chemical reduction (ISCR) treatment of groundwater was undertaken in July 2023 by a specialist subcontractor under the supervision of Englobe. ISCR involved the injection of 85-120kg per location of EHC® Reagent, as a 30% slurry via direct push methods targeting the superficial deposits between 4.0m-1.50m depth. Injection locations were spaced a minimum 3m apart and were subject to site constraints primarily comprising newly installed and existing underground utilities. In addition, no ISCR was undertaken at a depth greater than 4m from surrounding ground level and no ISCR was undertaken within 3m of existing (BH401) and proposed borehole locations (BH601,602, 603). The area within which ISCR injection was undertaken is presented on Drawing D1848_5343_002 within appendix A.

A total of 2650kg EHC® Reagent was injected as part of these works. Injection locations adjacent to the boundary were injected with up to 120kg of EHC® Reagent to form a reactive barrier against any potential off site sources of CHC migrating onto site. The majority of injection locations were injected with 85kgs of EHC® Reagent across the 'plume' area identified around former boreholes 402, 509, 511. Englobe understands Ramboll will undertake long-term groundwater monitoring to determine the effectiveness of the ISCR treatment.

Additional monitoring comprising real time water quality daily monitoring was implemented during these works as a result of the identified potential risk to the nearby brook to the north of the site from daylighting and/or infiltration of EHC into the watercourse via groundwater. Water quality monitoring consisted of obtaining water samples from the brook at upstream and downstream locations and obtaining water quality data using a calibrated YSI meter. Data obtained included Dissolved oxygen, redox potential as well as conductivity. No exceedances +/-15 % of baseline concentrations for the various water quality parameters were recorded during the injection works. A copy of all surface water quality monitoring data obtained is presented in Appendix C.

2.3 Borehole Installation

Upon completion of the ISCR injection works, 3no. monitoring wells were installed down gradient of the ISCR treatment area. The borehole locations identified as BH601, 602, 603 were undertaken using percussive sampling techniques to allow for accurate determination to the depth of the chalk. Each borehole was ceased upon encountering the underlying chalk strata, with the monitoring well constructed to screen the overlying superficial deposits. A summary of the ground conditions identified within BH601, 602, 603 is presented in Table 1 below. Engineering borehole logs are presented within Appendix D.

Table 1 – Summary of ground conditions encountered

	BH601	BH602	BH603
Base of Made Ground mbgl	1.10	1.10	1.30
Superficial deposits mbgl	**1.10-1.60** Soft slightly gravelly clay **1.60-2.30** Peat **2.30-3.60** Gravel	**1.10-1.70** Soft slightly gravelly clay (reworked) **1.7-1.90** reworked chalk and flint **1.90- 2.10** Peat **2.10-2.30** Clayey Gravel	**1.30-1.80** Soft slightly gravelly clay **1.80-2.0** Peat **2.0-2.60** Clayey Gravel **2.60-3.70** Gravel

Weathered Chalk mgbl	3.60-4.0	2.30-2.50	3.70-4.0

Indicative locations of BH601, BH602, BH603 are presented on Drawing D1848_5343_003 within Appendix A. Co-ordinates and elevations of each new well locations were recorded by Faircloth's engineer prior to demobilisation from site.

A total of 4no. soil samples were obtained from BH601 and BH603 with the subsequent laboratory analysis of each sample presented within Appendix E.

2.4 Borehole Decommissioning

Due to upcoming redevelopment works in the northeast corner, a total of 6no monitoring wells were decommissioned as part of Englobe's works. The following borehole locations were decommissioned,

- BH507
- BH402
- BH403
- BH509
- BH510
- BH511

Each borehole location was identified, based on existing borehole log information to terminate at the base of the superficial deposits. At each location the borehole standpipes were extracted from the ground and then each location was overdrilled to remove the well pack materials and subsequently injected with a bentonite-cement (OPC) slurry to surface. Borehole decommissioning records collected on site during the works are presented within Appendix F.

2.5 Environmental Monitoring

Environmental Monitoring comprising of Noise, Dust and odour were undertaken throughout the project at sensitive locations in the vicinity of site. There were no instances of exceedances to the control limits for dust (PM10) and odour. Englobe are unaware of any complaints from adjacent land user as a result of site activities. Records of Environmental monitoring for Dust, noise and odour are provided within Appendix G.

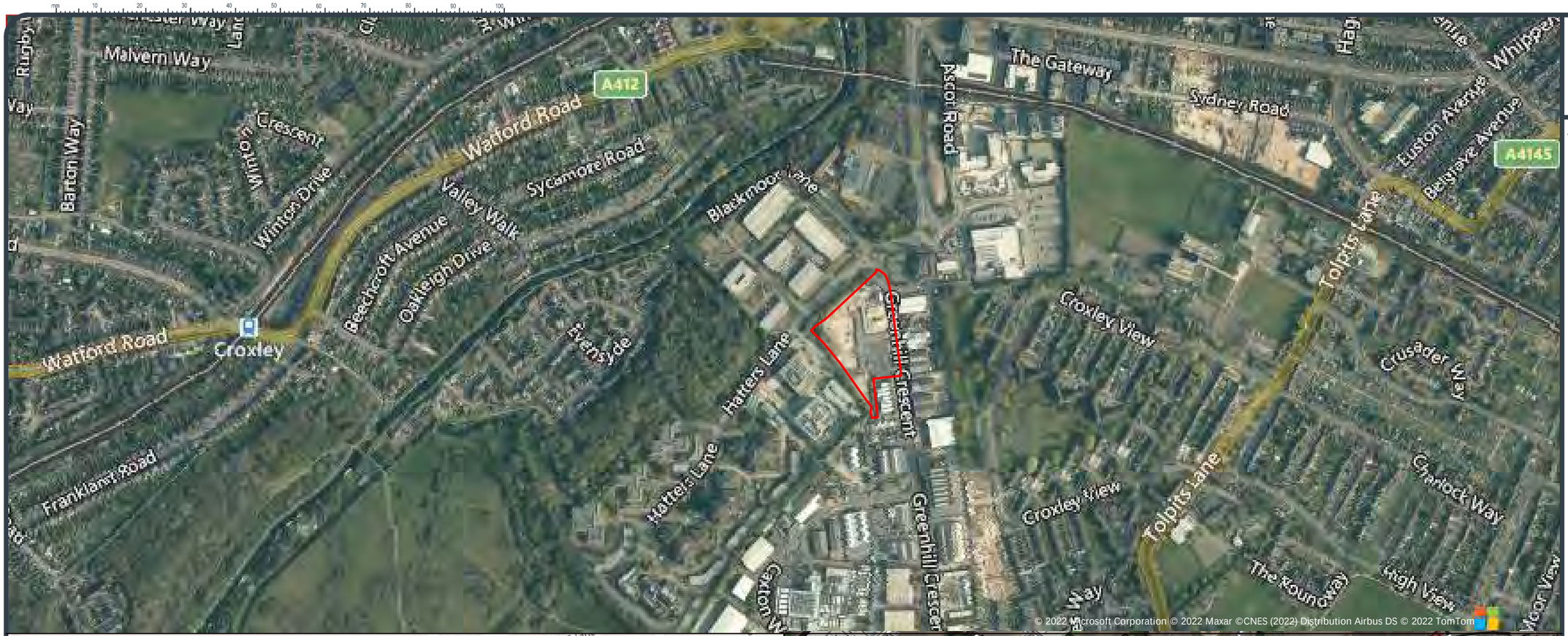
3 Summary

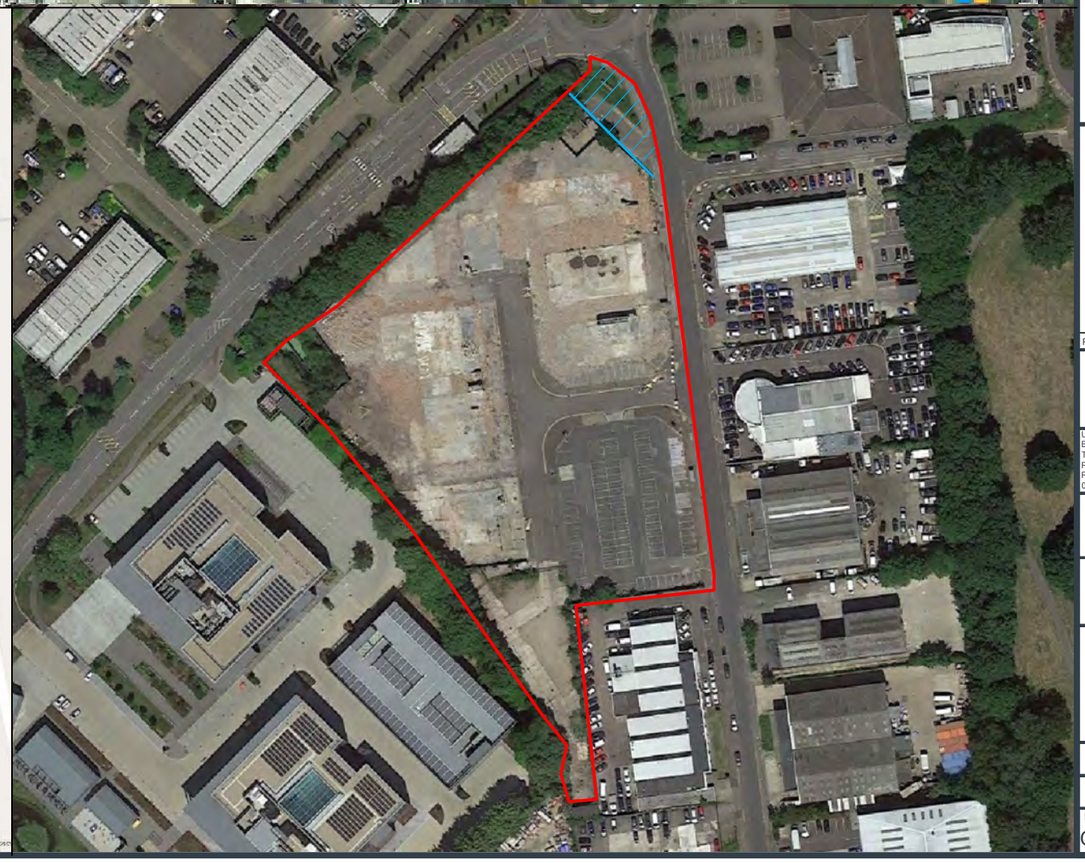
Englobe undertook ISCR Injection for the treatment of CHC impacted soils and groundwater within a pre-defined area in the north east corner of the site. These works were undertaken between 24th - 28st July 2023 and a total of 2650kg of EHC® Reagent was injected as a slurry targeting the underlying superficial deposits.

On completion of the ISCR injection works, a total of 6no. existing monitoring wells were decommissioned to facilitate future redevelopment and utilities/ drainage installations in the north east area. To allow for medium to long term monitoring on the effectiveness of the ISCR treatment coupled with the decommissioning of the 6no former borehole, 3no. new boreholes were undertaken and situated down hydraulic gradient of the ISCR treatment area. These works were completed on 1st August 2023.

No groundwater sampling or monitoring was undertaken by Englobe as part of these works. Soils samples obtained from BH601 & BH603 are for information purposes only and as such have not been commented on within this report.

Appendix A - Drawings





LEGEND

Site Boundary

Northeast works area July 2023

REV	COMMENT	DATE
	Issued for comment	

ENGLOBE

Unit 8, Commerce Park
Brunel Road
Theale
Reading
RG7 4AB
01189 167340

Columbus House
Greenmeadow Springs
Tongwynlais
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CF15 7NE
02920 368636

enquiries@englobecorp.com
www.englobecorp.com

Client
Faircloth Construction

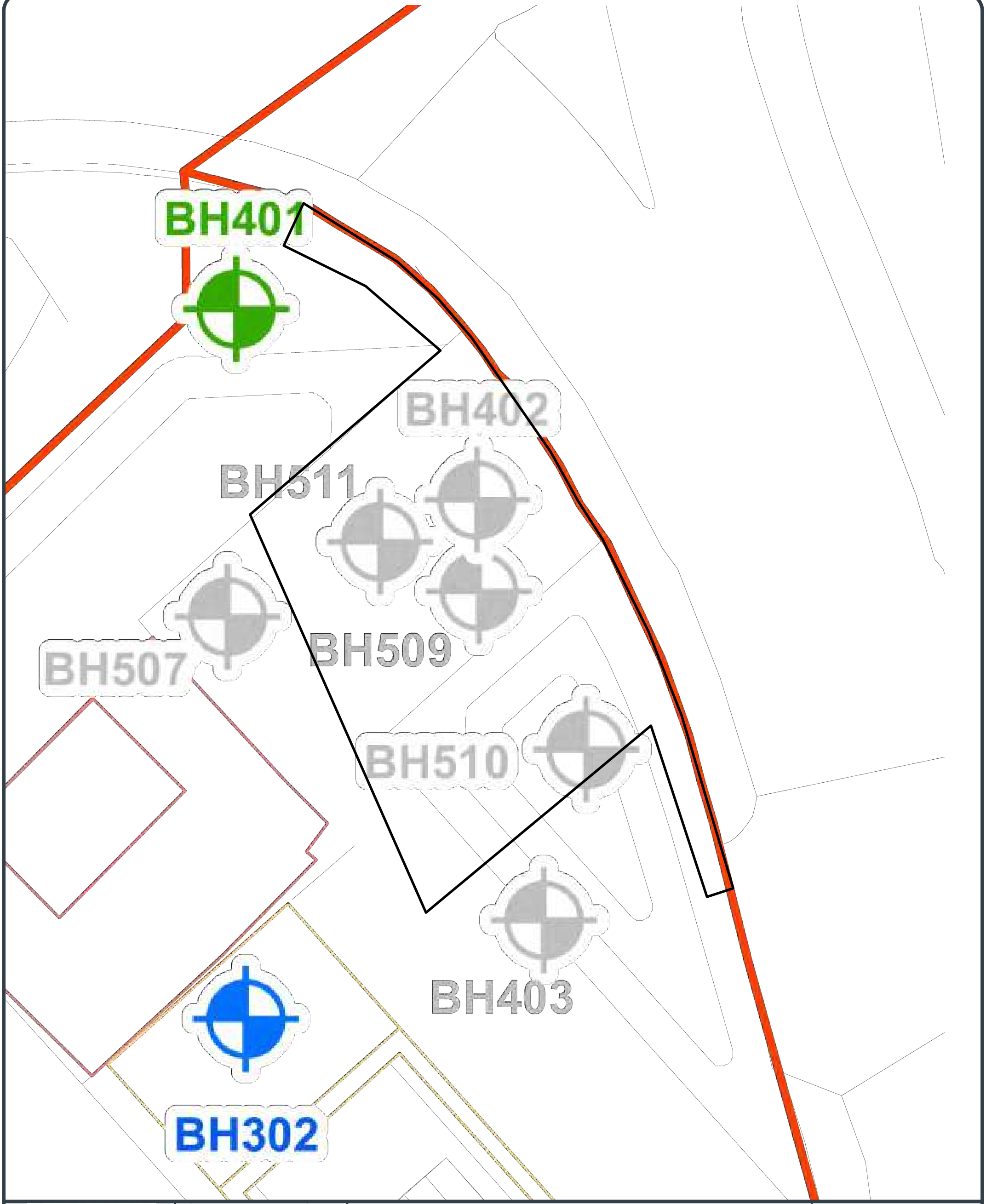
Project
Watford Business Park

Title
Site Location Plan

Drawn by	Checked Date	Authorised Date
JA		

Original Scale	Date	Rev	Paper
NTS	03.05.22	0	A3

Drawing Number
C1848/5343/D001



eNGLOBe

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REV	COMMENT	DATE
O	First Issue	

Legend

- Site Boundary - 2.4m Hoarding / Concrete Panel Fencing
- ISCR Injection Area

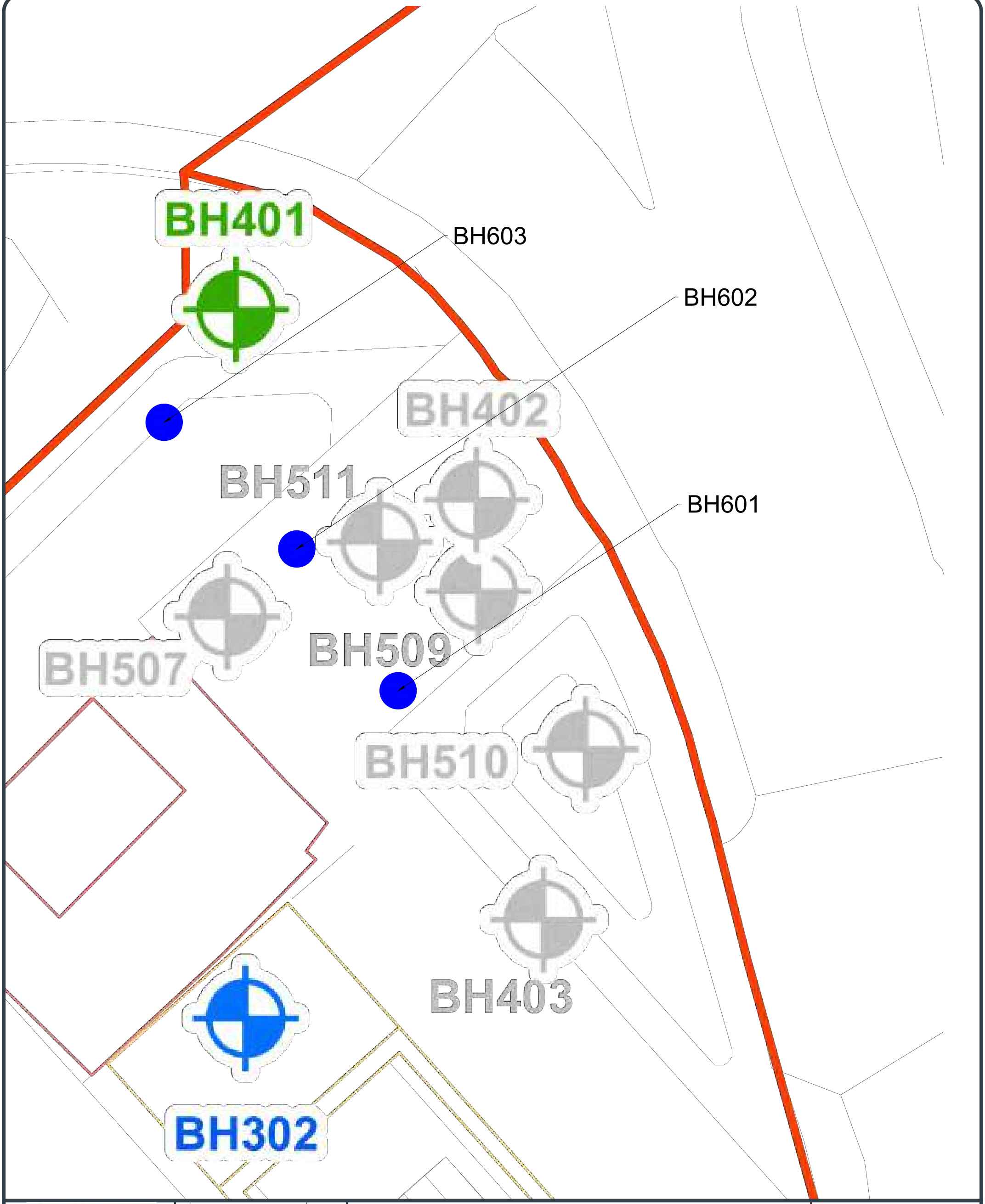
Project
Watford Business Park

Title
ISCR treatment area
- NE corner

Drawn by	Checked Date	Authorised Date
JA		

Original Scale	Date	Rev	Paper
NTS	02.08.23	0	A4

Drawing Number
D1848/5343/002



ENGLOBE

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REV	COMMENT	DATE
O	First Issue	

Legend

- Site Boundary - 2.4m Hoarding / Concrete Panel Fencing
- Site Works Area
- New Borehole Locations (Approx)
- Boreholes Decommissioned by Englobe July 2023

Project: Watford Business Park

Title: New Borehole Locations and decommissioning

Drawn by	Checked	Date	Authorised	Date
JA				

Original Scale	Date	Rev	Paper
NTS	02.08.23	0	A4

Drawing Number: D1848/5343/D003

Appendix B - Site Works Images

Injection works within plume area

Injection works barrier area

Injection works at barrier area adjacent to NE site boundary

Over-drilling of BH402 for decommissioning

Decommissioning of BH403

Grout injection during decommissioning of BH509

Percussive sampling of BH602

Percussive sampling of BH603

Core runs of BH601 (left) and BH603 (right)

Borehole installations BH601 (foreground) 602 (middle) and BH603 (far)

Final site area condition following injection, decommissioning and borehole installation works

Appendix C - Water Quality Monitoring Records

Multiparameter Probe Readings

C1848 Faraday Close. Surface Water Monitoring of Northern Brook			Date: from 24.07.23			Engineer: S. kent		
			Depth to water: N/A			Depth to well base: N/A		
Location	**Date**	**Time**	**Temperature (℃)**	**Dissolved Oxygen (%)**	**pH**	**Conductivity (pH mV)**	**ORP (mV)**	**Remarks**
Upstream	24/07/23	9:31	13.1	56.2	7.26	-18.0	87.1	
Downstream	24/07/23	9:45	13.2	65.6	7.31	-21.6	94.2	Background levels
Downstream	25/07/23	14.45	13.3	61	7.32	-22.2	88.1	Readings after 5 mins
Upstream	25/07/23	15.10	13.0	65.5	7.27	-19.3	95.7	
Downstream	26/07/23	15.35	13.5	68	7.32	-22.5	79.3	
Upstream	26/07/23	15.53	13.1	66.1	7.27	-19.6	98.9	
Downstream	27/07/23	12.50	13.3	63.7	7.26	-19.2	86.3	
Upstream	27/07/23	13.15	13.4	59.9	7.48	-18.3	83.3	
								No site works 28.07.23
Downstream	31/07/23	15:00	13.3	64.7	7.27	-22.3	89.1	Injection works completed 27.07.23
Upstream	31/07/23	11:30	13.2	57.8	7.34	-23.3	90.8	
Downstream	01/08/23	11:40	13.2	61.4	7.32	-22.0	86.2	
Upstream	01/08/23	13:20	13.0	57.3	7.26	-19.7	97.1	

Appendix D - Borehole Logs

Drilling Log

Project Name: Faraday Close	Client: Watford Bourgh Council	Date: 31/07/2023
Location: Watford	Contractor: Englobe	
Project No. : C1848	Crew Name: Subadra	Drilling Equipment: Comacchio 205

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
BH601	WS		SK	1:50	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								MADE GROUND sandy gravelly silt. Gravel comprises concrete, brick and abundant flint
					1.10			
								Soft bluish grey gravelly CLAY with occasional rootlets and organic (black staining)
		1.50	PID	PID=0.4	1.60			
								Soft dark brown slightly friable silty PEAT. Frequent rootlets observed.
		2.00 - 2.50	ES					
		2.00	PID	PID=28.6	2.30			
								Grey slightly clayey fine to coarse GRAVEL (SUPERFICIAL DEPOSITS)
		2.50 - 3.00	ES					
		2.50	PID	PID=15.8				
		3.00	PID	PID=6.3				
		3.50	PID	PID=0.6				
					3.60			Weathered (structureless) CHALK
		4.00	PID	PID=0.3	4.00			End of Borehole at 4.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Hand pit clearance to 1.20m bgl.

Drilling Log

Project Name: Faraday Close	Client: Watford Bourgh Council	Date: 01/08/2023
Location: Watford	Contractor: Englobe	
Project No. : C1848	Crew Name: Subadra	Drilling Equipment: Comacchio 205

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
BH602	WS		SK	1:50	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								MADE GROUND sandy gravelly silt. Gravel comprises concrete, brick and abundant flint
					1.10			Soft bluish grey gravelly CLAY with occasional rootlets and organic (black staining)
		1.50	PID	PID=0.1				
					1.70			Soft white/ grey slightly gravelly CHALK (reworked)
		2.00	PID	PID=19.2	1.90			Soft dark brown slightly friable silty PEAT. Frequent rootlets observed. (SUPERFICIAL DEPOSITS)
					2.10			Slightly sandy slightly clayey fine to coarse GRAVEL (SUPERFICIAL DEPOSITS)
		2.50	PID	PID=3.4	2.30			Weathered (structureless) CHALK
					2.50			End of Borehole at 2.500m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Hand pit clearance to 1.20m bgl.

Drilling Log

Project Name: Faraday Close	Client: Watford Bourgh Council	Date: 01/08/2023
Location: Watford	Contractor: Englobe	
Project No. : C1848	Crew Name: Subadra	Drilling Equipment: Comacchio 205

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
BH603	WS		SK	1:50	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								MADE GROUND sandy gravelly silt. Gravel comprises concrete, brick and abundant flint
					1.30			
		1.50 - 2.00	ES					Soft bluish grey gravelly CLAY with occasional rootlets and organic (black staining)
		1.50	PID	PID=0.6				
					1.80			
		2.00 - 2.50	ES		2.00			Soft dark brown slightly friable silty PEAT. Frequent rootlets observed. (SUPERFICIAL DEPOSITS)
		2.00	PID	PID=18.6				Grey clayey fine to coarse GRAVEL (SUPERFICIAL DEPOSITS)
		2.50	PID	PID=11.2				
					2.60			Slightly sandy slightly clayey fine to coarse GRAVEL (SUPERFICIAL DEPOSITS)
		3.00	PID	PID=0.6				
		3.50	PID	PID=0.1				
					3.70			Weathered (structureless) CHALK
		4.00	PID	PID=0.1	4.00			End of Borehole at 4.000m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Hand pit clearance to 1.20m bgl.

Appendix E – Laboratory Analysis

Element Materials Technology
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Englobe
Unit 8, Commerce Park
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United Kingdom
RG7 4AB

Attention :	Shaun Kent
Date :	15th August, 2023
Your reference :	Watford
Our reference :	Test Report 23/12811 Batch 1
Location :	Faraday Close Watford
Date samples received :	3rd August, 2023
Status :	Final Report
Issue :	1

Four samples were received for analysis on 3rd August, 2023 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

Bruce Leslie
Project Manager

Client Name: Englobe
Reference: Watford
Location: Faraday Close Watford
Contact: Shaun Kent
EMT Job No: 23/12811

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-3	4-6	7-9	10-12							LOD/LOR	Units	Method No.
Sample ID	BH601	BH601	BH603	BH603									
Depth	2.00-2.50	2.50-3.00	1.50-2.00	2.00-2.50									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	31/07/2023	31/07/2023	01/08/2023	01/08/2023									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	03/08/2023	03/08/2023	03/08/2023	03/08/2023									
Arsenic #	7.0	5.3	5.5	4.6							<0.5	mg/kg	TM30/PM15
Barium #	76	26	108	26							<1	mg/kg	TM30/PM15
Beryllium	0.7	<0.5	0.7	<0.5							<0.5	mg/kg	TM30/PM15
Cadmium #	0.5	0.8	0.2	<0.1							<0.1	mg/kg	TM30/PM15
Chromium #	38.6	103.2	82.8	95.0							<0.5	mg/kg	TM30/PM15
Copper #	22	5	287 $_{AA}$	5							<1	mg/kg	TM30/PM15
Lead #	66	8	40	12							<5	mg/kg	TM30/PM15
Mercury #	0.3	<0.1	0.1	0.1							<0.1	mg/kg	TM30/PM15
Nickel #	15.9	50.0	16.6	11.8							<0.7	mg/kg	TM30/PM15
Selenium #	5	<1	2	<1							<1	mg/kg	TM30/PM15
Total Sulphate as SO4 #	2639	178	978	355							<50	mg/kg	TM50/PM29
Vanadium	27	19	32	18							<1	mg/kg	TM30/PM15
Water Soluble Boron #	10.9	0.1	4.2	0.4							<0.1	mg/kg	TM74/PM32
Zinc #	39	27	59	13							<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03							<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05							<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	0.07							<0.04	mg/kg	TM4/PM8
Phenanthrene #	<0.03	<0.03	<0.03	0.35							<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	0.11							<0.04	mg/kg	TM4/PM8
Fluoranthene #	<0.03	<0.03	0.07	0.50							<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03	0.07	0.32							<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	<0.06	0.26							<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02	0.04	0.21							<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07	<0.07	0.32							<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	<0.04	0.15							<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04	<0.04	0.09							<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	<0.04	0.09							<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	<0.6	<0.6	2.5							<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	0.23							<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	<0.02	0.09							<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	109	105	109	108							<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #	16	<2	<2	<2							<2	ug/kg	TM15/PM10
Benzene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Toluene #	14	<3	<3	<3							<3	ug/kg	TM15/PM10
Ethylbenzene #	14	<3	<3	<3							<3	ug/kg	TM15/PM10
m/p-Xylene #	30	<5	<5	<5							<5	ug/kg	TM15/PM10
o-Xylene #	8	<3	<3	<3							<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	66	102	86	105							<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Englobe
Reference: Watford
Location: Faraday Close Watford
Contact: Shaun Kent
EMT Job No: 23/12811

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	4-6	7-9	10-12							LOD/LOR	Units	Method No.
Sample ID	BH601	BH601	BH603	BH603									
Depth	2.00-2.50	2.50-3.00	1.50-2.00	2.00-2.50									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	31/07/2023	31/07/2023	01/08/2023	01/08/2023									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	03/08/2023	03/08/2023	03/08/2023	03/08/2023									
Surrogate Recovery 4-Bromofluorobenzene	69	108	80	96							<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 #	<0.1 SV	<0.1	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
>C6-C8 #	0.4 SV	<0.1	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1 SV	<0.1	0.1	<0.1							<0.1	mg/kg	TM36/PM12
>C10-C12 #	<0.2	<0.2	<0.2	<0.2							<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 #	<4	<4	<4	<4							<4	mg/kg	TM5/PM8/PM16
>C16-C21 #	<7	<7	<7	<7							<7	mg/kg	TM5/PM8/PM16
>C21-C35 #	26	<7	17	<7							<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35	26	<19	<19	<19							<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 #	<0.1 SV	<0.1	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1 SV	<0.1	<0.1	<0.1							<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	<0.1 +	<0.1 +	<0.1 +	<0.1 +							<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2	<0.2	<0.2	<0.2							<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 #	<4	<4	<4	<4							<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 #	<7	<7	<7	<7							<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 #	116	<7	56	<7							<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 #	116	<19	56	<19							<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35)	142	<38	56	<38							<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15							<0.15	mg/kg	TM26/PM21B
Natural Moisture Content	100.8	9.0	39.5	18.0							<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3							<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	1.0282	0.0344	0.0927	0.0394							<0.0015	g/l	TM38/PM20
Chromium III	38.6	103.2	82.8	95.0							<0.5	mg/kg	NONE/NONE
Total Cyanide #	1.8	<0.5	<0.5	5.2							<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	15.70	<0.02	3.42	0.46							<0.02	%	TM21/PM24
Fraction Organic Carbon	0.157	<0.001	0.034	0.005							<0.001	None	TM21/PM24
VOC TICs	See Attached	ND	ND	ND								None	TM15/PM10
1,1,2-Trichloro1,2,2-Trifluoroethane	<100	<100	<100	<100							<100	None	TM15/PM10
Tetrachloromethane	<100	<100	<100	<100							<100	None	TM15/PM10
Tribromomethane	<100	<100	<100	<100							<100	None	TM15/PM10
p-Isopropyltoluene	<100	<100	<100	<100							<100	None	TM15/PM10

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Englobe
Reference: Watford
Location: Faraday Close Watford
Contact: Shaun Kent
EMT Job No: 23/12811

VOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12								
Sample ID	BH601	BH601	BH603	BH603								
Depth	2.00-2.50	2.50-3.00	1.50-2.00	2.00-2.50								
COC No / misc												
Containers	V J T	V J T	V J T	V J T								
Sample Date	31/07/2023	31/07/2023	01/08/2023	01/08/2023								
Sample Type	Soil	Soil	Soil	Soil								
Batch Number	1	1	1	1								
Date of Receipt	03/08/2023	03/08/2023	03/08/2023	03/08/2023								

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	16	<2	<2	<2							<2	ug/kg	TM15/PM10
Chloromethane #	24	<3	<3	<3							<3	ug/kg	TM15/PM10
Vinyl Chloride	14	<2	<2	<2							<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1							<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6	<6							<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7	<7	<7							<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	16	32	63	<3							<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Benzene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	31	117	<3							<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6	<6							<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Toluene #	14	<3	<3	<3							<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	7	32	<3							<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Ethylbenzene #	14	<3	<3	<3							<3	ug/kg	TM15/PM10
m/p-Xylene #	30	<5	<5	<5							<5	ug/kg	TM15/PM10
o-Xylene #	8	<3	<3	<3							<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3							<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	14	<3	7	<3							<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	<5							<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	66	<6	40	<6							<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
4-Isopropyltoluene	16	<4	<4	<4							<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7	<7	<7							<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27							<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7	<7	<7							<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	66	102	86	105							<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	69	108	80	96							<0	%	TM15/PM10

Job number: 23/12811
Sample number: 1
Sample identity: BH601
Sample depth: 2.00-2.50
Sample Type: Soil
Units: ug/kg

Method: VOC
Matrix: Solid

Note: Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

CAS No.	Tentative Compound Identification	Retention Time (minutes)	% Match	Concentration
107-39-1	1-Pentene, 2,4,4-trimethyl-	4.330	91	329

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Englobe
Reference: Watford
Location: Faraday Close Watford
Contact: Shaun Kent

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/12811						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/12811

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution

EMT Job No: 23/12811

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes

EMT Job No: 23/12811

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.			AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	A hot hydrochloric acid digest is performed on a dried and ground sample, and the resulting liquor is analysed.	Yes		AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes		AD	Yes
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes		AR	Yes

EMT Job No: 23/12811

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
NONE	No Method Code	NONE	No Method Code			AD	Yes
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Appendix F – Borehole Decommissioning Records

Monitoring Well ID: BH402

Location (GR): 508982.18 195502.48

The following measurements/observations should be taken before decommissioning:

- Cover Condition: flush cover placed above exposed standpipe
- End Cap Condition: ok
- Reason for decommissioning: due to proposed excavation and development works in the area
- Photograph before decommissioning: 31/7/23

- Depth to water: N/A Depth to base: 3.23mbgl.

From borehole logs:

- Installation depth: 3.50m Screen section interval:2.50-3.50mbgl
- Well pipe diameter: 50mm Borehole / well pack diameter: 150mm

Decommissioning Details

- Method of Decommissioning: Well standpipe pulled intact from ground using rig. Well screen then over drilled (augered). Void then filled with bentonite/ opc grout slurry to surface.
- Depth and position of each backfill/seal material: *Unable to determine in field*
- Type and quantity of backfilling materials: *60L of bentonite/ opc grout slurry*
- Changes made to the borehole/well during the abandonment (e.g. casing removal). None
- Problems encountered in the decommissioning procedure: none

The location of each well should be marked on the ground following decommissioning and the location photographed.

Monitoring Well ID: BH403

Location (GR): 508984.53, 195487.37

The following measurements/observations should be taken before decommissioning:

- Cover Condition: OK - flush cover and concrete surround intact
- End Cap Condition: ok
- Reason for decommissioning: due to proposed excavation and development works in the area
- Photograph before decommissioning: 31/7/23

- Depth to water: N/A
- Depth to base: 1.77mbgl

From borehole logs:

- Installation depth: 3.00m
- Screen section interval:2.0-3.0mbgl
- Well pipe diameter: 50mm
- Borehole / well pack diameter: 150mm

Decommissioning Details

- Method of Decommissioning: Well standpipe pulled intact from ground using rig. Well screen then over drilled (augered). Void then filled with bentonite/ opc grout slurry to surface.
- Depth and position of each backfill/seal material: *Unable to determine in field*
- Type and quantity of backfilling materials: *40L of bentonite/ opc grout slurry*
- Changes made to the borehole/well during the abandonment (e.g. casing removal). None
- Problems encountered in the decommissioning procedure: standpipe appeared damaged at 1m when extracted. Standpipe length removed and slotted section doesn't tie up with log. Possible the top 1m was removed as part of ground removal works noted in the NE area and cover reinstated

The location of each well should be marked on the ground following decommissioning and the location photographed.

Monitoring Well ID: BH507

Location (GR): not available

The following measurements/observations should be taken before decommissioning:

- Cover Condition: OK – flush cover and concrete surround intact
- End Cap Condition: ok
- Reason for decommissioning: due to proposed excavation and development works in the area
- Photograph before decommissioning: 31/7/23

- Depth to water: N/A Depth to base: 2.19mbgl.

From borehole logs:

- Installation depth: 2.50m Screen section interval:1.50-2.50mbgl
- Well pipe diameter: 50mm Borehole / well pack diameter: 150mm

Decommissioning Details

- Method of Decommissioning: Well standpipe pulled intact from ground using rig. Well screen then over drilled (augered). Void then filled with bentonite/ opc grout slurry to surface.
- Depth and position of each backfill/seal material: *Unable to determine in field*
- Type and quantity of backfilling materials: *40L of bentonite/ opc grout slurry*
- Changes made to the borehole/well during the abandonment (e.g. casing removal). None
- Problems encountered in the decommissioning procedure: *None*

The location of each well should be marked on the ground following decommissioning and the location photographed.

Monitoring Well ID: BH509

Location (GR): not available

The following measurements/observations should be taken before decommissioning:

- Cover Condition: OK – gas tap present and 'top hat' cover intact
- End Cap Condition: ok
- Reason for decommissioning: due to proposed excavation and development works in the area
- Photograph before decommissioning: 31/7/23

- Depth to water: N/A
- Depth to base: 2.86mbgl.

From borehole logs:

- Installation depth: 4.50m
- Screen section interval:3.0-4.5mbgl
- Well pipe diameter: 50mm
- Borehole / well pack diameter: 150mm

Decommissioning Details

- Method of Decommissioning: Well standpipe pulled intact from ground using rig. Well screen then over drilled (augered). Void then filled with bentonite/ opc grout slurry to surface.
- Depth and position of each backfill/seal material: *Unable to determine in field*
- Type and quantity of backfilling materials: *70L of bentonite/ opc grout slurry*
- Changes made to the borehole/well during the abandonment (e.g. casing removal). None
- Problems encountered in the decommissioning procedure: Again depth to base and length of standpipe removed does match logs. Possible top 1m of standpipe removed and cover reinstated.

The location of each well should be marked on the ground following decommissioning and the location photographed.

Monitoring Well ID: BH510

Location (GR): not available

The following measurements/observations should be taken before decommissioning:

- Cover Condition: OK – gas tap present and 'top hat' cover intact
- End Cap Condition: ok
- Reason for decommissioning: due to proposed excavation and development works in the area
- Photograph before decommissioning: 31/7/23

- Depth to water: N/A Depth to base: 2.81mbgl.

From borehole logs:

- Installation depth: 4.00m Screen section interval:3.0-4.0mbgl
- Well pipe diameter: 50mm Borehole / well pack diameter: 150mm

Decommissioning Details

- Method of Decommissioning: Well standpipe pulled intact from ground using rig. Well screen then over drilled (augered). Void then filled with bentonite/ opc grout slurry to surface.

- Depth and position of each backfill/seal material: *Unable to determine in field*
- Type and quantity of backfilling materials: *60L of bentonite/ opc grout slurry*
- Changes made to the borehole/well during the abandonment (e.g. casing removal). None
- Problems encountered in the decommissioning procedure: . Again depth to base and length of standpipe removed does match logs. Possible top 1m of standpipe removed and cover reinstated.

The location of each well should be marked on the ground following decommissioning and the location photographed.

Monitoring Well ID: BH511

Location (GR): not available

The following measurements/observations should be taken before decommissioning:

- Cover Condition: OK – gas tap present and 'top hat' cover intact
- End Cap Condition: ok
- Reason for decommissioning: due to proposed excavation and development works in the area
- Photograph before decommissioning: 31/7/23

- Depth to water: N/A Depth to base: 2.52mbgl.

From borehole logs:

- Installation depth: 3.00m Screen section interval:2.0-3.0mbgl
- Well pipe diameter: 50mm Borehole / well pack diameter: 150mm

Decommissioning Details

- Method of Decommissioning: Well standpipe pulled intact from ground using rig. Well screen then over drilled (augered). Void then filled with bentonite/ opc grout slurry to surface.
- Depth and position of each backfill/seal material: *Unable to determine in field*
- Type and quantity of backfilling materials: *60L of bentonite/ opc grout slurry*
- Changes made to the borehole/well during the abandonment (e.g. casing removal). None
- Problems encountered in the decommissioning procedure: *None*

The location of each well should be marked on the ground following decommissioning and the location photographed.

Appendix G – Environmental Monitoring Records

Vapour Trigger Values	**Dust action/limit value**
Off site receptors	General Dust Exposure Action Limit Values:_____ µg/m3 (PM10 15 min TWA)
Stop Work at _____ ppm (5 min TWA) at site boundary	
On site receptors	**Noise exposure limit values and action values**
RPE Criteria _____ ppm (15 min TWA) at treatment area	Action Level: 80 dB(A) (5 min average) when ear protection worn
Stop Work at _____ ppm (15 min TWA) at treatment area when RPE w	Stop work Criteria 85 dB(A) (5 min average)
Odour limit and action values:	**Off site receptors**
Action level: Intensity 3 Extent 3	>5 dB background values
Stop work Criteria: Intensity 4 Extent 4	background value for site: dB

Site: Watford

Date: 24.07.23

Round Number: 1

PID Calibration Passed: N/A Y/N

Weather: cloudy
Wind Direction: sw
mB: 989

Monitoring Equipment Pre-Checks Completed DustMateY - N - N/A
Noise MeterY - N - N/A
PIDY - N - N/A

		VOC		NOISE		DUST								ODOUR		
Location	**Time**	**Average over 5 mins (ppm)**	**Peak over 5 mins (ppm)**	**Average over 5 mins (dBA)**	**Peak over 5 mins (dBA)**	**TSP (µg/m3)**		**PM10 (µg/m^3)**		**PM2.5 (µg/m^3)**		**PM1 (µg/m^3)**		**Intensity 1-5**	**Extent 1-5**	**Comments (Action required?/ Action taken)**
						5 mins	**15 mins**	**5 mins**	**15 mins**	**5 mins**	**15 mins**	**5 mins**	**15 mins**	**see below**		
IMPORTANT: if TRIGGER VALUES are exceeded SITE supervisor and site team should be notified immediately and controls reviewe																
North of injection area	9.10	0	0	69.1	77.2	98.4	85.2	31.2	29.4	14.1	13.23	5.67	4.54	1	1	
South of injection area	9.45	0	0	70.7	83.4	96.4	83	29.2	27.1	13.5	13.07	5.45	4.34	1	1	scissor lift operating <10m away
Use below to record occupational health monitoring readings in active work areas. i.e. Remediation technologies Processes at excavation/ drilling location (Voc's and noise), within/around WTS/BP systems & adjacent to pumps BH and dewatering locations (noise , VOC's), Consideration should be given to use of Datalogging PID for work shift exposure monitoring and use of PErsonal PID etc for workers undertaking tasks where exposure is occuring																

Odour Monitoring Criteria

Intensity
1 No detectable odour
2 Faint odour (barely detectable, need to stand still and inhale facing into the wind)
3 Moderate odour (odour easily detected while walking & breathing normally, possibly offensive)
4 Strong odour (bearable, but offensive odour)
5 Very strong odour (very offensive, possibly causing nausea)

Extent (assuming odour detectable, if not then 0)
1 Local & transient (only during brief periods when wind drops or blows)
2 Transient as above, but detected away from installation boundary
3 Persistent, but fairly localised
4 Persistent and pervasive up to 50m from plant or installation boundary
5 Persistent and widespread (odour detected >50 m from installation boundary)

Vapour Trigger Values **Off site receptors** Stop Work at _____ ppm (5 min TWA) at site boundary **On site receptors** RPE Criteria _____ ppm (15 min TWA) at treatment area Stop Work at _____ ppm (15 min TWA) at treatment area when RPE **Odour limit and action values:** Action level: Intensity 3 Extent 3 Stop work Criteria: Intensity 4 Extent 4	**Dust action/limit value** General Dust Exposure Action Limit Values:_____ µg/m3 (PM10 15 min TWA) **Noise exposure limit values and action values** Action Level: 80 dB(A) (5 min average) when ear protection worn Stop work Criteria 85 dB(A) (5 min average) **Off site receptors** >5 dB background values background value for site: dB

Site: Watford

Date: 25.07.23

Round Number: 2

PID Calibration N/A

Passed: Y/N

Weather: sunny
Wind Direction: nw
mB: 978

Monitoring Equipment Pre-Checks Completed DustMateY
Noise MeterY
PID N/A

		VOC		NOISE		DUST								ODOUR		
Location	**Time**	**Average over 5 mins (ppm)**	**Peak over 5 mins (ppm)**	**Average over 5 mins (dBA)**	**Peak over 5 mins (dBA)**	**TSP (µg/m3)**		**PM10 (µg/m^3)**		**PM2.5 (µg/m^3)**		**PM1 (µg/m^3)**		**Intensity 1-5**	**Extent 1-5**	**Comments (Action required?/ Action taken)**
						5 mins	**15 mins**	**5 mins**	**15 mins**	**5 mins**	**15 mins**	**5 mins**	**15 mins**	**see below**		
PORTANT: if TRIGGER VALUES are exceeded SITE supervisor and site team should be notified immediately and controls review																
North of Injection area	12.10	0	0	72.7	83.9	101.3	98.4	27.1	25.4	14.1	12.45	6.01	5.15	1	1	rig in operation
South of Injection area	12.35	0	0	70.7	80.1	100.3	98.4	25.1	23.8	13.1	11.55	5.75	4.9	1	1	
Use below to record occupational health monitoring readings in active work areas. i.e. Remediation technologies Processes at excavation/ drilling location (Voc's and noise), within/around WTS/BP systems & adjacent to pumps BH and dewatering locations (noise , VOC's), Consideration should be given to use of Datalogging PID for work shift exposure monitoring and use of PErsonal PID etc for workers undertaking tasks where exposure is occuring																

Odour Monitoring Criteria

Intensity
1 No detectable odour
2 Faint odour (barely detectable, need to stand still and inhale facing into the wind)
3 Moderate odour (odour easily detected while walking & breathing normally, possibly offensive)
4 Strong odour (bearable, but offensive odour)
5 Very strong odour (very offensive, possibly causing nausea)

Extent (assuming odour detectable, if not then 0)
1 Local & transient (only during brief periods when wind drops or blows)
2 Transient as above, but detected away from installation boundary
3 Persistent, but fairly localised
4 Persistent and pervasive up to 50m from plant or installation boundary
5 Persistent and widespread (odour detected >50 m from installation boundary)

Vapour Trigger Values	**Dust action/limit value**
Off site receptors	General Dust Exposure Action Limit Values:_____ µg/m3 (PM10 15 min TWA)
Stop Work at _____ ppm (5 min TWA) at site boundary	
On site receptors	**Noise exposure limit values and action values**
RPE Criteria _____ ppm (15 min TWA) at treatment area	Action Level: 80 dB(A) (5 min average) when ear protection worn
Stop Work at _____ ppm (15 min TWA) at treatment area when RPE w	Stop work Criteria 85 dB(A) (5 min average)
Odour limit and action values:	**Off site receptors**
Action level: Intensity 3 Extent 3	>5 dB background values
Stop work Criteria: Intensity 4 Extent 4	background value for site: dB

Site: Watford

Date: 26.07.23

Round Number: 3

Weather: sunny
Wind Direction: sw
mB: 976

Monitoring Equipment Pre-Checks Completed DustMateY
Noise MeterY
PID N/A

PID Calibration Passed: N/A Y/N

		VOC		NOISE		DUST								ODOUR		
Location	**Time**	**Average over 5 mins (ppm)**	**Peak over 5 mins (ppm)**	**Average over 5 mins (dBA)**	**Peak over 5 mins (dBA)**	**TSP (µg/m3)**		**PM10 (µg/m^3)**		**PM2.5 (µg/m^3)**		**PM1 (µg/m^3)**		**Intensity 1-5**	**Extent 1-5**	**Comments (Action required?/ Action taken)**
						5 mins	**15 mins**	**5 mins**	**15 mins**	**5 mins**	**15 mins**	**5 mins**	**15 mins**	**see below**		
MPORTANT: if TRIGGER VALUES are exceeded SITE supervisor and site team should be notified immediately and controls reviewe																
North of Injection area	14.20	0	0	77.4	85	101.7	100.8	24.6	23.08	14.8	12.76	6.87	5.21	1	1	grout pump running
South of Injection area	14.50	0	0	74.4	82.1	98.9	97.6	21.6	20.15	12.4	11.13	5.89	5.12	1	1	grout pump running
Use below to record occupational health monitoring readings in active work areas. i.e. Remediation technologies Processes at excavation/ drilling location (Voc's and noise), within/around WTS/BP systems & adjacent to pumps BH and dewatering locations (noise , VOC's), Consideration should be given to use of Datalogging PID for work shift exposure monitoring and use of PErsonal PID etc for workers undertaking tasks where exposure is occuring																

Odour Monitoring Criteria

Intensity
1 No detectable odour
2 Faint odour (barely detectable, need to stand still and inhale facing into the wind)
3 Moderate odour (odour easily detected while walking & breathing normally, possibly offensive)
4 Strong odour (bearable, but offensive odour)
5 Very strong odour (very offensive, possibly causing nausea)

Extent (assuming odour detectable, if not then 0)
1 Local & transient (only during brief periods when wind drops or blows)
2 Transient as above, but detected away from installation boundary
3 Persistent, but fairly localised
4 Persistent and pervasive up to 50m from plant or installation boundary
5 Persistent and widespread (odour detected >50 m from installation boundary)

Vapour Trigger Values	**Dust action/limit value**
Off site receptors	General Dust Exposure Action Limit Values:_____ µg/m3 (PM10 15 min TWA)
Stop Work at _____ ppm (5 min TWA) at site boundary	
On site receptors	**Noise exposure limit values and action values**
RPE Criteria _____ ppm (15 min TWA) at treatment area	Action Level: 80 dB(A) (5 min average) when ear protection worn
Stop Work at _____ ppm (15 min TWA) at treatment area when RPE w	Stop work Criteria 85 dB(A) (5 min average)
Odour limit and action values:	**Off site receptors**
Action level: Intensity 3 Extent 3	>5 dB background values
Stop work Criteria: Intensity 4 Extent 4	background value for site: dB

Site:	Watford
Date:	31.07.23
Round Number:	4
PID Calibration Passed:	N/A Y/N

Weather: sunny
Wind Direction: s
mB: 977

Monitoring Equipment Pre-Checks Completed DustMateY
Noise MeterY
PID N/A

		VOC		NOISE		DUST								ODOUR		
Location	**Time**	**Average over 5 mins (ppm)**	**Peak over 5 mins (ppm)**	**Average over 5 mins (dBA)**	**Peak over 5 mins (dBA)**	**TSP (µg/m3)**		**PM10 (µg/m^3)**		**PM2.5 (µg/m^3)**		**PM1 (µg/m^3)**		**Intensity 1-5**	**Extent 1-5**	**Comments (Action required?/ Action taken)**
						5 mins	**15 mins**	**5 mins**	**15 mins**	**5 mins**	**15 mins**	**5 mins**	**15 mins**	**see below**		
MPORTANT: if TRIGGER VALUES are exceeded SITE supervisor and site team should be notified immediately and controls reviewe																
North of injection area	13.15	0	0	76.3	82.1	112.3	105.2	30.6	27.7	19.4	15.72	6.05	5.15	1	1	grout pump and rig in operation
South of injection area	13.45	0	0	74.3	80.1	105.3	101	28.6	25.5	19.4	15.72	5.67	4.88	1	1	grout pump and rig in operation. Hearing protection being worn by opertatives
Use below to record occupational health monitoring readings in active work areas. i.e. Remediation technologies Processes at excavation/ drilling location (Voc's and noise), within/around WTS/BP systems & adjacent to pumps BH and dewatering locations (noise , VOC's), Consideration should be given to use of Datalogging PID for work shift exposure monitoring and use of PErsonal PID etc for workers undertaking tasks where exposure is occuring																

Odour Monitoring Criteria

Intensity
1 No detectable odour
2 Faint odour (barely detectable, need to stand still and inhale facing into the wind)
3 Moderate odour (odour easily detected while walking & breathing normally, possibly offensive)
4 Strong odour (bearable, but offensive odour)
5 Very strong odour (very offensive, possibly causing nausea)

Extent (assuming odour detectable, if not then 0)
1 Local & transient (only during brief periods when wind drops or blows)
2 Transient as above, but detected away from installation boundary
3 Persistent, but fairly localised
4 Persistent and pervasive up to 50m from plant or installation boundary
5 Persistent and widespread (odour detected >50 m from installation boundary)

Vapour Trigger Values **Off site receptors** Stop Work at _____ ppm (5 min TWA) at site boundary **On site receptors** RPE Criteria _____ ppm (15 min TWA) at treatment area Stop Work at _____ ppm (15 min TWA) at treatment area when RPE w **Odour limit and action values:** Action level: Intensity 3 Extent 3 Stop work Criteria: Intensity 4 Extent 4	**Dust action/limit value** General Dust Exposure Action Limit Values:_____ µg/m3 (PM10 15 min TWA) **Noise exposure limit values and action values** Action Level: 80 dB(A) (5 min average) when ear protection worn Stop work Criteria 85 dB(A) (5 min average) **Off site receptors** >5 dB background values background value for site: dB

Site: Watford

Date: 1.08.23

Round Number: 5

Weather: Cloudy with sunny spels
Wind Direction: sw
mB: 1001

Monitoring Equipment Pre-Checks Completed DustMateY
Noise MeterY
PID N/A

PID Calibration Passed: N/A Y/N

Location	Time	VOC		NOISE		DUST								ODOUR		Comments (Action required?/ Action taken)
		Average over 5 mins (ppm)	Peak over 5 mins (ppm)	Average over 5 mins (dBA)	Peak over 5 mins (dBA)	TSP (µg/m3)		PM10 (µg/m^3)		PM2.5 (µg/m^3)		PM1 (µg/m^3)		Intensity 1-5	Extent 1-5	
						5 mins	15 mins	5 mins	15 mins	5 mins	15 mins	5 mins	15 mins	see below		
MPORTANT: if TRIGGER VALUES are exceeded SITE supervisor and site team should be notified immediately and controls reviewed																
North of Injection area	13.05	NA	NA	73.6	83.9	115.4	111.3	23.7	19.41	12.46	10.85	6.11	4.98	1	1	
South of Injection area	14.05	NA	NA	72.4	80.9	111.2	107.2	21.5	19.32	11.86	10.44	5.85	4.53	1	1	
Use below to record occupational health monitoring readings in active work areas. i.e. Remediation technologies Processes at excavation/ drilling location (Voc's and noise), within/around WTS/BP systems & adjacent to pumps BH and dewatering locations (noise , VOC's), Consideration should be given to use of Datalogging PID for work shift exposure monitoring and use of PErsonal PID etc for workers undertaking tasks where exposure is occuring																

Odour Monitoring Criteria

Intensity
1 No detectable odour
2 Faint odour (barely detectable, need to stand still and inhale facing into the wind)
3 Moderate odour (odour easily detected while walking & breathing normally, possibly offensive)
4 Strong odour (bearable, but offensive odour)
5 Very strong odour (very offensive, possibly causing nausea)

Extent (assuming odour detectable, if not then 0)
1 Local & transient (only during brief periods when wind drops or blows)
2 Transient as above, but detected away from installation boundary
3 Persistent, but fairly localised
4 Persistent and pervasive up to 50m from plant or installation boundary
5 Persistent and widespread (odour detected >50 m from installation boundary)