

PHASE 2 ENVIRONMENTAL INVESTIGATION
of a site at
LAND AT THE OLD FIRE STATION, WARMINSTER
for
A AND P PROPERTY SERVICES



**Contaminated
Land
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1 EXECUTIVE SUMMARY

The phase 1 report indicates potential for contamination to be present from its current use as car park and from surrounding commercial use as a brewery, malthouse, depot, garage services provider and plastic injection mould engineers.

The proposed site usage is residential with communal soft landscaping. In the area of the communal soft landscaping it is proposed to lower the site by approximately 1m.

Elevated levels of lead have been recorded within samples taken from boreholes positioned across the site. At these levels there is a potential risk to on-site and off-site receptors and appropriate remediation is required.

Lead leachate testing was done after the site strip on the remaining made ground to determine if there is a risk to the aquifer. All the results were below the screening value.

The natural strata underlying the made ground was tested to determine if it had been significantly impacted by contamination leaching from the overlying made ground, the results showed that it was suitable for use in the proposed communal amenity area.

Areas where the development is proposed to comprise of buildings and hardstanding do not pose a significant risk to on-site and off-site receptors therefore made ground can remain in these areas. Across the site made ground should be removed to 600mm below the proposed finished ground level. Alternatively, contaminated material can be removed down to a depth of natural ground, whichever is less.

A barrier water supply pipe may be required by water supply company. It is recommended that this report is provided to the water supplier with a request for the testing, if any, that they require.

It is recommended that a remediation strategy and verification plan is prepared.

It is recommended that this report is referenced in the site Health and Safety Plan and that normal good hygiene practice is observed during the works and subsequent building and grounds maintenance.

If any potentially contaminated spoil is to be removed from site, the Waste Acceptance Criteria (WAC) testing should be agreed with the facility to which the spoil is being transported.

Risk Summary

Very Low	Low	Moderate / Low	Moderate	High
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		Receptors					
		Site Users	Ground Workers	Neighbours	Proposed Building	Aquifer	Watercourse
Sources	Past & current site use (Lead)						
	Naturally occurring contaminants						

2 BRIEF

The purpose of this report is to investigate the potential sources of contamination identified in the phase 1 desktop study. In the light of the investigation results to update the site-specific conceptual model and risk assessment and where source-pathway-receptor linkages are identified advise on potential remedial options.

This report should be read in conjunction with the phase 1 environmental report, ref. 2419-P1E-1 by GO contaminated Land Solutions.

3 INVESTIGATION STRATEGY

The phase 1 environmental desktop report indicates potential for contamination to be present from its current onsite use as a carpark. There is also potential for contamination from offsite uses including brewery, malthouse, depot, garage services provider and plastic injection mould engineers.

3.1 Initial Investigation

The principles of the strategy are to:

- Identify the nature and extent of any contamination in the made ground across the site.

Non-targeted sampling has been used.

As the contamination location is unknown non-targeted sampling was undertaken, this was however restricted to the more sensitive area of proposed communal soft landscaping.

In the area of the communal soft landscaping it is proposed to lower the site by approximately 1m. Samples were therefore taken to target the soil that would be retained onsite.

Location Reference	Rationale for Location	Depth (mbgl)	Sampling, Testing & Monitoring
BH1	Boreholes were located within the proposed communal soft landscaping	1.2 – 1.35	Samples were taken from the made ground. Tested for asbestos, metals, banded aromatic & aliphatic hydrocarbons and speciated PAHs
BH2		1.2 – 1.4	
BH3		1.0 – 1.2	
BH4		1.0 – 1.2	

3.1 Leachate Testing After Site Strip

In the initial investigation elevated levels of Lead were recorded in samples positioned across the site.

The principles of the strategy are to:

- Sample the remaining made ground to determine if there is a risk to the aquifer from the lead exceedances identified in the initial investigation.

As the contamination location is unknown non-targeted sampling was undertaken, this was however restricted to the more sensitive area of proposed communal soft landscaping.

Location Reference	Rationale for Location	Depth (mbgl)	Sampling, Testing & Monitoring
BH11*	Boreholes were located within the proposed communal soft landscaping	0.30-0.50	Samples were taken after site strip Tested for asbestos, metals, banded aromatic & aliphatic hydrocarbons and speciated PAHs Lead leachate
BH12*		0.30-0.45	
BH13*		0.30-0.50	

*New boreholes have been labelled BH11 -BH13 to avoid any confusion with the previous boreholes

3.2 Testing of Substrata

After the initial testing and leachate testing, testing of natural strata underlying the made ground was undertaken to confirm that it had not been significantly impacted by contamination leaching from the overlying made ground.

Location Reference	Rationale for Location	Depth (mbgl)	Sampling, Testing & Monitoring
BH21A*	Boreholes were located within the proposed communal soft landscaping	0.70-0.80	Samples taken from the natural strata & tested for asbestos, metals, banded aromatic & aliphatic hydrocarbons and speciated PAHs
BH22*		0.75-0.90	
BH23*		0.25-0.40	
BH24*		0.35-0.55	

*New boreholes have been labelled BH21A -BH24 to avoid any confusion with the previous boreholes.

4 SITE DESCRIPTION



Photograph 1: View looking north across from the southern boundary

The site is rectangular shaped in plan and occupies 0.1ha. The site is generally flat with a downward gradient from north to south.

At the time of the visit the site was being used as a car park.

Several commercial waste bins were identified on site. Evidence of fly tipping was also identified along the southern site boundary including garden waste, brick, metal and small amounts of domestic waste.

The majority of the site is hard surfaced comprising concrete, paving and gravel. The condition of the hard standing is poor with vegetation growing through cracks in the concrete.

Soft landscaping was identified along the western and eastern site boundaries.

Adjacent to the eastern site boundary an electrical substation was identified.

Vehicle and pedestrian access can be gained directly from The Close via a dedicated entrance. Access to the site can also be gained from a metal fence via a shared access road located adjacent to the northern site boundary.

The northern site boundary is marked by metal fencing and the adjacent unnamed access road, beyond which is a residential block of flats.

The eastern site boundary is marked by The Old Fire Station and The Close, beyond which is a performing arts theatre.

The western site boundary is defined by metal fencing, beyond which is a menu and sign producers, sports bar and residential properties.

The southern site boundary is defined by the private gardens of the neighbouring residential properties, beyond which is High Street Road.

The site is situated in a residential area with local shops, commercial and business premises, community and recreational facilities all in very close proximity.

No significant visual or olfactory evidence of contamination was noted during the visit.

5 SITE WORKS

5.1 Programme

The site works were undertaken on 16 November 2022, 13 April 2023, and 28 April 2023.

5.2 Boreholes

In the initial investigation a total of four boreholes were hand augered to depths of between 1.25 and 1.35m below ground level.

After the site strip a total of three boreholes were hand augered to depths of between 0.60-0.65m below ground level.

To test the natural strata a total of five boreholes were and augered to depths between 0.58-0.90m below ground level.

6 GROUND CONDITIONS

6.1 Geological Survey

Reference to the geological survey of Great Britain indicates that beneath made ground, the area generally is underlain by bedrock comprising sandstone which is described as Boyne Hollow Chert Member

No superficial deposits are recorded beneath the site.

6.2 Hydrogeology & Hydrology

The Environment Agency maps show the site to be located over a Principal Aquifer in the in the bedrock.

While the site does not lie over an aquifer in the superficial stratum it is within 106m of a Secondary A Aquifer in the superficial stratum.

Principal Aquifers comprise layers of rock or drift deposits that have either high intergranular or fracture permeability, meaning they usually provide a high level of water storage. They may support either water supply or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.

Secondary A Aquifers comprise permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

The soils overlying the aquifers are assumed to have a high leaching potential (U) and a worst-case vulnerability classification (H) is assumed due to a lack of data available for restored workings and urban areas.

The Environment Agency maps show the site is not located within a source protection zone of a borehole abstraction point.

The Environment Agency define a zone according to how the groundwater behaves in that area. From this a model of the groundwater environment is developed on which to define the zones.

Groundwater source catchments are divided into three zones:

SPZ1 – Inner protection zone

Defined as the 50 day travel time from any point below the water table to the source. This zone has a minimum radius of 50 metres.

SPZ2 – Outer protection zone

Defined by a 400 day travel time from a point below the water table. This zone has a minimum radius of 250 or 500 metres around the source, depending on the size of the abstraction.

SPZ3 – Source catchment protection zone

Defined as the area around a source within which all groundwater recharge is presumed to be discharged at the source. In confined aquifers, the source catchment may be displaced some distance from the source. For heavily exploited aquifers, the final Source Catchment Protection Zone can be defined as the whole aquifer recharge area where the

ratio of groundwater abstraction to aquifer recharge (average recharge multiplied by outcrop area) is >0.75 .

The nearest surface water feature and main water course of significance to the site appears to be the Swan River approximately 126 metres to the west. This is considered to be too distant to be significantly impacted by the site.

The Environment Agency maps show the site is not located within a flood zone.

The British Geological Society data shows the site lies in an area with potential for groundwater flooding to occur at surface.

7 PROPOSED DEVELOPMENT

Plan details for the proposed redevelopment of the site are shown on the E-ten Architects drawing contained in appendix C.

The drawings shows the development split into two elements.

One element comprising a block of flats including parking facilities, cycle and bin storage, communal soft landscaping and the partial demolition of a listed wall to facilitate the proposed development.

In the area of the communal soft landscaping it is proposed to lower the site by approximately 1m.

The second element comprising residential dwellings without private gardens or communal soft landscaping.

Access to the property is gained via a dedicated entrance from The Close.

8 CONTAMINATION SAMPLING and TESTING

8.1 Laboratory Testing

All samples were placed immediately in cool boxes with ice packs and collected by courier for transport to the laboratory.

The chemical testing was carried out in accordance with standard industry methods in a UKAS approved laboratory which is also currently accredited in accordance with MCERTS for the majority of its testing. Further information regarding this accreditation is available on request together with a full list of test methods if required.

Initial Testing

All samples were tested for a range of commonly occurring contaminants and indicators of contamination including those given by the Contaminated Land Exposure Assessment (CLEA). These include, heavy metals, aromatic and aliphatic hydrocarbons, in accordance with Environment Agency guidelines, and speciated PolyAromatic Hydrocarbon (PAH) only.

All samples were analysed for the presence of asbestos.

Leachate Testing

Three samples were tested for a range of commonly occurring contaminants and indicators of contamination including those given by the Contaminated Land Exposure Assessment (CLEA). These include, heavy metals, aromatic and aliphatic hydrocarbons, in accordance with Environment Agency guidelines, and speciated PolyAromatic Hydrocarbon (PAH) only.

Three samples were also tested for lead leachate.

Testing of Substrata

Four samples were tested for a range of commonly occurring contaminants and indicators of contamination including those given by the Contaminated Land Exposure Assessment (CLEA). These include, heavy metals, aromatic and aliphatic hydrocarbons, in accordance with Environment Agency guidelines, and speciated PolyAromatic Hydrocarbon (PAH) only.

All samples were analysed for the presence of asbestos.

8.2 Initial Test Results

All the results have been compared to the Atkins ATRISKsoil SSVs for residential use

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without plant uptake, for 1% or 6% as appropriate, where available. These guideline values have been derived using the updated CLEA v1.071 model, previously published Category 4 Screening Levels (C4SLs) by DEFRA and information in the Environment Agency guidance SR2. Where ATRISKsoil SSVs have not been derived, the Category 4 Screening Levels have been used, and for determinands which do not have either of the above, the LQM/CIEH Sutable 4 Use Levels (S4ULs) assessment criteria have been used.

TEST RESULTS ABOVE SCREENING VALUES				
Determinand	Reference	Depth	Value (mg/kg)	Screening value (mg/kg)
Lead	BH1	1.2 – 1.35	366	313
	BH2	1.2 – 1.4	823	
	BH3	1.0 – 1.2	558	
	BH4	1.0 – 1.2	426	

Elevated levels of lead have been recorded within made ground samples taken from boreholes positioned across the site. At these levels there is a potential risk to on-site and off-site receptors and appropriate remediation is required.

All samples were screened in the laboratory for the presence of asbestos fibres. No asbestos was identified in any of the samples.

8.3 Leachate Results

Further to the exceedances of lead found in samples positioned across the site, three samples were analysed for lead leachate concentrations.

The screening value applied is that of The Water Supply (UK DWS) Regulations 2016.

Determinand	Reference	Depth	Value (ug/kg)	Screening value (ug/kg)
Lead Leachate	BH11	0.3-0.5	<5	10
	BH12	0.3-0.45	<5	
	BH13	0.3-0.5	<5	

The lead concentrations of the leachate samples were well below the screening value in all the samples taken from across the site. It is not considered that there is any inherent risk to the underlying aquifer. Therefore, the aquifer is not considered to be a receptor in the quantitative risk assessment below.

8.4 Testing of Substrata

The natural strata underlying the made ground was tested to determine if it had been significantly impacted by contamination leaching from the overlying made ground.

All the results have been compared to the Atkins ATRISKsoil SSVs for residential use without plant uptake, for 1% or 6% as appropriate, where available. These guideline values have been derived using the updated CLEA v1.071 model, previously published Category 4 Screening Levels (C4SLs) by DEFRA and information in the Environment Agency guidance SR2. Where ATRISKsoil SSVs have not been derived, the Category 4 Screening Levels have been used, and for determinands which do not have either of the above, the LQM/CIEH Suitable 4 Use Levels (S4ULs) assessment criteria have been used.

All the test results were well below the screening values therefore it is considered that the remaining soil can stay on site.

Full result of the testing and additional testing can be found in appendix F.

9 DISCUSSION

In this investigation samples were tested for a range of commonly occurring contaminants and indicators of contamination including those given by the Contaminated Land Exposure Assessment (CLEA).

Sampling was undertaken within the area of proposed communal soft landscaping.

In the area of the communal soft landscaping it is proposed to lower the site by approximately 1m. Samples were therefore taken to target the soil that would be retained onsite.

The only contaminants identified to exceed the environmental screening level was Lead.

Further to the exceedances of lead found in samples positioned across the site, once the site levels had been reduced to the proposed levels, three samples were taken and analysed a standard range of contaminants and for lead leachate concentrations. The lead concentrations of the leachate samples were well below the screening value in all the samples taken from across the site. It is not considered that there is any inherent risk to the underlying aquifer.

The natural strata underlying the made ground was also tested and all the results were below the screening value.

No olfactory evidence of contamination (such as vapours) was identified during sampling. No visual evidence of contaminants, such as oils, were noted.

All samples were screened in the laboratory for the presence of asbestos fibres. No asbestos was identified in any of the samples.

Not all of the lead in soil is available to plants (or to the human body, should the soil be eaten). The availability of soil lead depends on how tightly it is held by soil particles and on its solubility (how much of it will dissolve in water). At low soil pH (pH<5, acidic conditions) lead is held less tightly and is more soluble. At near neutral or higher pH (pH>6.5, neutral to basic conditions) soil lead is held more strongly, and its solubility is very low. Lead is held very tightly by soil organic matter, so as organic matter increases, lead availability decreases.

Areas where the development is proposed to comprise of buildings and hardstanding do not pose a significant risk to on-site and off-site receptors therefore made ground can remain in these areas. Across the site made ground should be removed to 600mm below the proposed finished ground level. Alternatively, contaminated material can be removed down to a depth of natural ground, whichever is less.

No significant organic containing material was identified within the made ground and it is therefore not considered necessary to undertake any monitoring of potential ground gases.

If any potentially contaminated spoil is to be removed from site, the Waste Acceptance Criteria (WAC) testing should be agreed with the facility to which the spoil is being transported. It is critical that the WAC results are representative of the material to be disposed of and therefore care must be taken to ensure that different materials are not mixed. Guidance can be obtained from Environment Agency document *Waste Sampling and Testing for Disposal to Landfill*.

10 REVISED CONCEPTUAL MODEL

The legislative framework for the regulation of contaminated land is embodied in Part IIA of the Environmental Protection Act 1990, implemented in the Contaminated Land (England) Regulations 2000. This legislation allows for the identification and remediation of land where contamination is causing unacceptable risks to human health or the wider environment. The approach adopted by UK contaminated land policy is that of “suitability for use” which implies that the land should be suitable for its current use and made suitable for any proposed future use.

In this revised contamination assessment the site has been modelled using the Source-Pathway-Receptor approach to produce a site specific conceptual model.

Source - substances or potential contaminants which may cause harm

Pathway - a linkage or route between a source and receptor

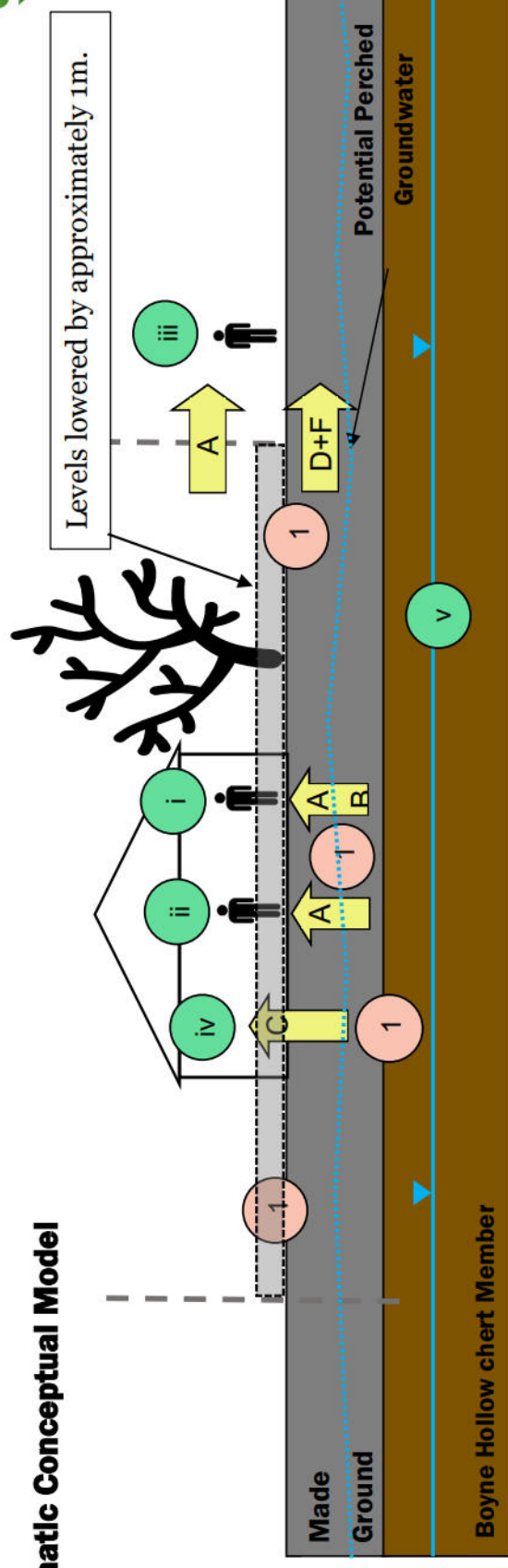
Receptor - humans, plant life, groundwater etc., which could be harmed by a contaminant

Geological records indicate that the site is underlain by an aquifer in the bedrock and therefore there is a potential for contaminants to be transported both to and from site in the groundwater.

From the information available at present a revised conceptual model has been considered.

POTENTIAL PATHWAYS											
RECEPTORS	Site Users	Y	Y	Y	Y	Y	Y	Y	Y	Y	Build-up of ground gas - methane
	Ground Workers	Y	Y	Y	Y	N					Migration via groundwater
	Neighbours	Y	Y			N			Y	Y	
	Proposed Building							Y			
	Watercourse								N		
	Aquifer									N	
	COMMENTS ON DISCOUNTED PATHWAYS										
	No potentially significant sources of ground gas or soil organic matter identified.										
Asbestos not identified in samples											
No major watercourse identified nearby.											
Leachate testing determined that there is no risk to the aquifer. The aquifer is therefore not considered to be receptor											

Schematic Conceptual Model



Sources	Pathways	Receptors
1 Past & current site use (Lead)	A Inhalation, ingestion, dermal contact, vapours	i Site Users
	B Drinking contaminated water supply	ii Ground Workers
	C Direct contact of soil with building materials	iii Neighbours
	D Surface water run-off	iv Proposed Building
	E Surface water percolation to groundwater	v Groundwater
	F Migration via groundwater	

11 REVISED RISK ASSESSMENT

The level of information provided by the phase 1 desktop study report together with the other information within this report is considered suitable to provide the data for a satisfactory risk assessment for the site. While there will always be uncertainties due to known or unknown gaps in information it is considered that sufficient information is available to reduce those uncertainties to within acceptable limits for the nature of the site under review.

An asbestos survey of existing structures and infrastructure (as defined under Section 5(a) of the Control of Asbestos Regulations 2012) was beyond the brief of this report. The risk assessment has been undertaken on the basis that should asbestos be identified within buildings or infrastructure, these materials will be removed appropriately by licensed contractors and asbestos materials disposed of in accordance with legal requirements prior to demolition or other works in order to avoid contaminating soils at the site.

The phase 1 desktop study identified a potential risk to the sub-structure of the new buildings should any alkaline ground conditions, or elevated sulphate levels be present on the site, however this was beyond the brief of this report. As the protection of concrete is normally resolved in the building design process, the designer of the foundations should undertake appropriate geotechnical investigation and take into account the existing ground conditions.

Only contaminants identified to exceed the environmental screening level have been included in the Risk Assessment.

Sources	Potential pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk / Significance	Comment & control measures
Current use as a car park (On-Site)	Lead	Site Users	Dermal contact	Medium	Likely	Moderate risk	Remediation is required
			Inhalation of vapours, indoors and outdoors	Mild	Likely	Moderate/Low risk	
			Soil Ingestion	Medium	Likely	Moderate risk	
			Inhalation of contaminated dust	Medium	Likely	Moderate risk	
			Drinking of water from supply impacted by contaminated soil	Mild	Unlikely	Very low risk	A barrier water supply pipe may be required by water supply company. It is recommended that this report is provided to the water supplier with a request for the testing, if any, that they require.

Sources	Potential pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk / Significance	Comment & control measures
Current use as a car park (On-Site)	Lead	Ground workers	Dermal contact	Mild	Likely	Moderate/Low risk	Information to be contained in site Health & Safety Plan and File. Use of appropriate PPE and normal good hygiene measures. Appropriate dust control measures during construction.
			Inhalation of vapours, indoors and outdoors	Mild	Low likelihood	Low risk	
			Soil Ingestion	Mild	Low likelihood	Low risk	
			Inhalation of contaminated dust	Mild	Likely	Moderate/Low risk	

Sources	Potential pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk / Significance	Comment & control measures
Current use as a car park (On-site)	Lead	Neighbours	Inhalation of vapours, indoors and outdoors	Mild	Unlikely	Very low risk	No action required.
			Inhalation of contaminated dust (during construction)	Mild	Likely	Moderate/Low risk	Appropriate dust control measures during construction.
			Inhalation of contaminated dust (after construction)	Mild	Low likelihood	Low risk	No action required.
			Surface water run-off	Mild	Low likelihood	Low risk	
			Lateral migration of groundwater transporting contaminants	Mild	Low likelihood	Low risk	

Sources	Potential pollutant	Receptor	Pathway	Hazard severity	Likelihood of occurrence	Risk / Significance	Comment & control measures
Naturally occurring contaminants	Sulphates pH	Proposed Building	Direct contact of soil with building materials	Medium	Low likelihood	Moderate/low Risk	As the protection of concrete is normally resolved in the building design process, the designer of the foundations should determine the requirement to undertake any investigation.

Any visual or olfactory evidence of contamination noted during works should be investigated by a suitably qualified person and their recommendations implemented.

12 SITE WORKS and UNEXPECTED CONDITIONS

The sample locations were positioned to cover the site. However, there are areas where investigations were not carried out, and although unlikely given the size of the site, it should be considered possible that other areas may potentially be contaminated. Construction operatives should remain vigilant for any unexpected contamination encountered during development (eg discoloured soil or odours or buried waste). Any unexpected conditions should be investigated by a suitably qualified person and their recommendations implemented.

It is recommended that construction operatives use appropriate PPE, normal good hygiene measures, and appropriate dust control measures if necessary. The risks to construction operatives identified, should be addressed under a Construction (Design and Management) (CDM) Plan. The CDM Regulations place legal duties on those involved in construction work. All construction projects require a plan to ensure that health and safety issues are properly considered during a project's development so that the risk of harm to workers is reduced.

13 CONCLUSIONS

In this investigation elevated levels of lead have been recorded within samples taken from boreholes positioned across the site. At these levels there is a potential risk to on-site and off-site receptors and appropriate remediation is required.

Lead leachate testing was done after the site strip on the remaining made ground to determine if there is a risk to the aquifer. All the results were below the screening value.

The natural strata underlying the made ground was tested to determine if it had been significantly impacted by contamination leaching from the overlying made ground, the results showed that it was suitable for use in the proposed communal amenity area.

Areas where the development is proposed to comprise of buildings and hardstanding do not pose a significant risk to on-site and off-site receptors therefore made ground can remain in these areas. Across the site made ground should be removed to 600mm below the proposed finished ground level. Alternatively, contaminated material can be removed down to a depth of natural ground, whichever is less.

However, there are areas where investigations were not carried out, and due to the

presence of contamination identified, it should be considered possible that other areas may potentially be contaminated. Construction operatives should remain vigilant of any unexpected contamination encountered during development (eg discoloured soil or odours or buried waste).

It is also possible the asbestos may be present in other areas of the site and therefore construction operatives should also ensure that appropriate PPE and good hygiene measures are used, and dust control measures during construction where necessary. Any debris from earlier demolition found during site strip is to be inspected for asbestos by a suitably experienced contractor.

It is recommended that a remediation strategy and verification plan is prepared.

It is recommended that this report is referenced in the site Health and Safety Plan and that normal good hygiene practice is observed during the works and subsequent building and grounds maintenance.

It is recommended that appropriate dust control measures are implemented during construction. To assist in establishing what would be appropriate reference should be made to the Institute of Air Quality Management report entitled: Guidance on the assessment of dust from demolition and construction, version 1.1.

If any potentially contaminated spoil is to be removed from site, the Waste Acceptance Criteria (WAC) testing should be agreed with the facility to which the spoil is being transported.

14 REFERENCES

- Atkins. (2006, July 13). Retrieved from ATRISKsoil: <http://www.atrisksoil.co.uk/>
- BS 5930, British Standard. Code of practice for ground investigations. *British Standards Institution*.
- BS10175, British Standard. (2001). Investigation of potentially contaminated sites - Code of Practice. *London: British Standards Institution*.
- Building Research Establishment. (2004). *Cover Systems for Land Regeneration: Thickness of Cover Systems for Contaminated Land (BR 465)*. IHS BRE Press.
- Card, G. B., Wilson, S., & Mortimer, S. (2012). *A Pragmatic Approach to Ground Gas Risk Assessment*. London, UK: Contaminated Land: Applications in Real Environments.
- Contaminated Land: Applications in Real Environment (CL:AIRE). (2009). *Soil Generic Assessment Criteria for Human Health Risk Assessment*. London: CL:AIRE.
- Contaminated Land: Applications in Real Environment (CL:AIRE). (2014). *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*.
- Environment Agency. Land Contamination Risk Management (LCRM).
- Environment Agency. (2013). *Groundwater protection: principles and practice (GP3)*. Bristol: Environment Agency.
- Environment Agency. (2013). *Waste Sampling and Testing for Disposal to Landfill*. Bristol, UK: EA.
- Health and Safety Executive. (2012). *The Control of Asbestos Regulations 2012*.
- Health and Safety Executive. (2015). *Construction (Design and Management) Regulations 2015*.
- Nathanial, C. P., McCaffrey, C., Gillet, A. G., Ogden, R. C., & Nathanial, J. F. (2015). *The LQM/CIEH S4ULs for Human Health Risk Assessment*. Nottingham: Land Quality Press.
- UK Water Industry Research Ltd. (2010). *Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites*. UKWIR.
- Wilson, S., Oliver, S., Mallet, H., Hutchings, H., & Card, G. (2007). *CIRIA Report C665. Assessing risks posed by hazardous gases to buildings*. London, UK: Construction Industry Research and Information Association.

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The recommendations made and the opinions expressed in this report are based on the borehole records, examination of samples and the results of site and laboratory tests.

The report is issued on the condition that GO Contaminated Land Solutions Ltd will under no circumstances be liable for any loss arising directly or indirectly from ground conditions between the boreholes or trial pits which have not been shown by the boreholes, trial pits or other tests carried out during the investigation.

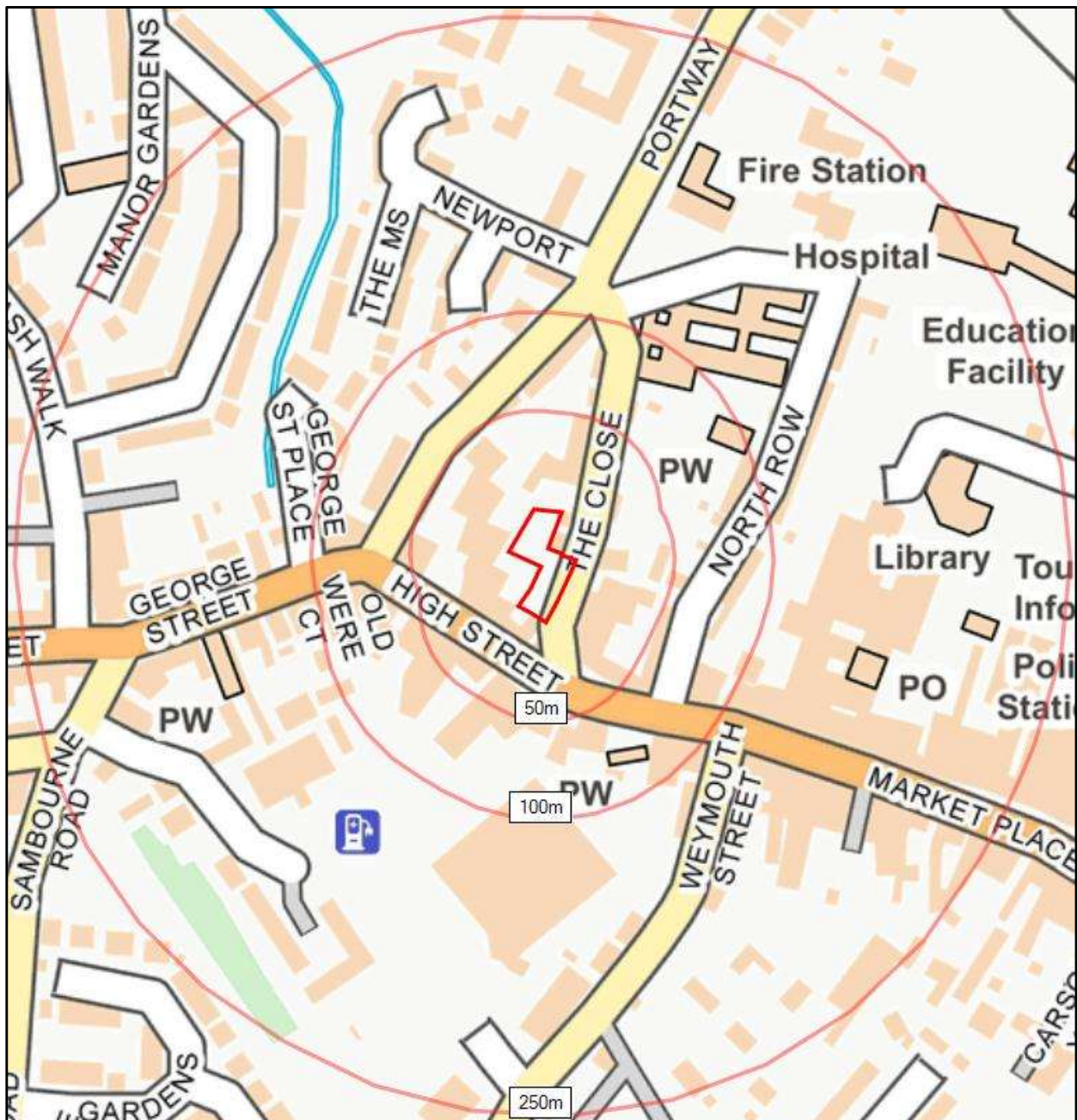
In addition, GO Contaminated Land Solutions Ltd will not be liable for any loss whatsoever arising directly or indirectly from any opinion given on the possible configuration of strata either between the borehole positions or below the maximum depth of the investigation. Such opinions, where given, are for guidance only.

Groundwater levels may also vary with time from those reported during our site investigation due to factors such as tidal conditions, heavy pumping from nearby wells or seasonal changes.

All soil samples will be kept for a period of 28 days after the date of the invoice for this project unless otherwise notified to GO Contaminated Land Solutions Ltd in writing. Should samples be required to be stored for longer than 28 days then a storage charge will be levied.



Appendix A – Site Location Plan



2419-P2E-1-B: Land at Old Fire Station, Warminster
A and P Property Services



Appendix B – Site Works Plan



Appendix C – Existing and Proposed Site Plan



Location Plan
Scale 1:1250



Site Plan
Scale 1:200

DRAWING ISSUED BY: SHELLY CORRIE, PROJECT MANAGER		PROJECT PROPOSED New Fails at The Close		DATE 06/03/2020	
THIS DRAWING IS NOT TO BE REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF THE AUTHOR.		DRAWING TITLE Building Site Plan and Location Plan		DRAWN BY J. HARRIS	
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED.		PROJECT NO. 10272		CHECKED BY J. HARRIS	
ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE STATED.		DRAWING NO. P - 01		DATE 06/03/2020	

2419-P2E-1-B: Land at Old Fire Station, Warminster
A and P Property Services



Appendix D – Borehole Logs (BH1-BH4; BH11-BH13; BH21-BH24)



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Web: www.gosolve.co.uk

BOREHOLE LOG

Project	Land at Old Fire Station				Project No.	2419	
Client	A and P Property Services				Survey date:	16 November 2022	
Log ID	BH1				Hole type:	BH	
Water Strikes	Samples		Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
	Type	depth (m)					
				0.05		STONE	
							-0.10
							-0.20
							-0.30
							-0.40
							-0.50
						MADE GROUND - Silt	-0.60
							-0.70
							-0.80
							-0.90
							-1.00
				1.10			-1.10
						MADE GROUND - Silt with standstone fragments	-1.20
	C	1.2 - 1.35					-1.30
				1.35			-1.40
							-1.50
							-1.60
							-1.70
☒ Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

2419-P2E-1-B: Land at Old Fire Station, Warminster
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BOREHOLE LOG

Project	Land at Old Fire Station				Project No.	2419	
Client	A and P Property Services				Survey date:	16 November 2022	
Log ID		BH2		Hole type: BH			
Water Strikes	Samples		Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
	Type	depth (m)					
				0.05		TOP SOIL	-0.10
						-0.20	
						-0.30	
						-0.40	
						-0.50	
						-0.60	
						-0.70	
						-0.80	
						-0.90	
						-1.00	
						-1.10	
						-1.20	
	C	1.2 - 1.4				-1.30	
				1.40	-1.40		
					-1.50		
					-1.60		
					-1.70		
 Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

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BOREHOLE LOG

Project	Land at Old Fire Station				Project No.	2419	
Client	A and P Property Services				Survey date:	16 November 2022	
Log ID	BH3		Hole type: BH				
Water Strikes	Samples		Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
	Type	depth (m)					
				0.05		TOP SOIL	
							-0.10
							-0.20
							-0.30
							-0.40
							-0.50
							-0.60
						MADE GROUND - Silt, brick fragments and fine sand	-0.70
							-0.80
							-0.90
							-1.00
	C	1.00 - 1.2					-1.10
							-1.20
				1.25			-1.30
						Light grey clayey silty SAND	-1.40
				1.40			-1.50
							-1.60
							-1.70
☒ Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

2419-P2E-1-B: Land at Old Fire Station, Warminster
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BOREHOLE LOG

Project	Land at Old Fire Station				Project No.	2419	
Client	A and P Property Services				Survey date:	16 November 2022	
Log ID		BH4		Hole type: BH			
Water Strikes	Samples		Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
	Type	depth (m)					
				0.10		Stone	-0.10
						MADE GROUND - Silt with brick fragments	-0.20
							-0.30
							-0.40
							-0.50
							-0.60
							-0.70
							-0.80
							-0.90
							-1.00
				1.05		MADE GROUND - Silt with brick fragments and traces of fine sand	-1.10
	C	1.00 - 1.2					-1.20
				1.25			-1.30
							-1.40
							-1.50
							-1.60
							-1.70
☒ Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

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BOREHOLE/TRIAL PIT LOG

Project		Land at Old Fire Station			Project No. 2419		
Client		A and P Property Services			Survey date: 13 April 2023		
Log ID		BH11			Hole type: BH		
Water Strikes	Samples		Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
	Type	depth (m)					
	C	0.30-0.50		0.60		MADE GROUND silt w ith concrete and china fragments	-0.10 -0.20 -0.30 -0.40 -0.50 -0.60 -0.70 -0.80 -0.90 -1.00 -1.10 -1.20 -1.30 -1.40 -1.50 -1.60 -1.70
☒ Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

2419-P2E-1-B: Land at Old Fire Station, Warminster
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BOREHOLE LOG

Project	Land at Old Fire Station				Project No.	2419	
Client	A and P Property Services				Survey date:	13 April 2023	
Log ID		BH12		Hole type: BH			
Water Strikes	Samples Type	depth (m)	Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
	C	0.30-0.45		0.45		MADE GROUND with masonry fragments and ash	-0.10 -0.20 -0.30 -0.40
				0.60		Gray/green clayey sandy SILT	-0.50 -0.60
							-0.70 -0.80 -0.90 -1.00 -1.10 -1.20 -1.30 -1.40 -1.50 -1.60 -1.70
☒ Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

2419-P2E-1-B: Land at Old Fire Station, Warminster
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BOREHOLE LOG

Project		Land at Old Fire Station			Project No. 2419		
Client		A and P Property Services			Survey date: 13 April 2023		
Log ID		BH13		Hole type: BH			
Water Strikes	Samples		Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
	Type	depth (m)					
	C	0.30-0.50				MADE GROUND clayey silt with masonry fragments and ash	-0.10
							-0.30
							-0.40
							-0.50
				0.55		Gray/green clayey sandy SILT	-0.60
				0.65			
							-0.80
							-0.90
							-1.00
							-1.10
							-1.20
							-1.30
							-1.40
							-1.50
							-1.60
							-1.70
☒ Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

2419-P2E-1-B: Land at Old Fire Station, Warminster
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BOREHOLE/TRIAL PIT LOG

Project	Land at Old Fire Station				Project No.	2419	
Client	A and P Property Services				Survey date:	28 April 2023	
Log ID		BH21		Hole type: BH			
Water Strikes	Samples Type	depth (m)	Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
				0.58		MADE GOUND silt and masonry fragments	-0.10 -0.20 -0.30 -0.40 -0.50
						Halted on obstruction	-0.60 -0.70 -0.80 -0.90 -1.00 -1.10 -1.20 -1.30 -1.40 -1.50 -1.60 -1.70
☒ Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

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BOREHOLE LOG

Project		Land at Old Fire Station			Project No.		2419
Client		A and P Property Services			Survey date:		28 April 2023
Log ID		BH21A			Hole type:		BH
Water Strikes	Samples		Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
	Type	depth (m)					
						MADE GROUND silt, masonry fragments, ash and a piece of china	-0.10
							-0.20
							-0.30
							-0.40
							-0.50
							-0.60
	C	070-0.80		0.70		Olive green silty sandy CLAY	-0.70
				0.80			-0.80
							-0.90
							-1.00
							-1.10
							-1.20
							-1.30
							-1.40
							-1.50
							-1.60
							-1.70
▽ Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

2419-P2E-1-B: Land at Old Fire Station, Warminster
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BOREHOLE LOG

Project		Land at Old Fire Station				Project No.		2419	
Client		A and P Property Services				Survey date:		28 April 2023	
Log ID		BH22				Hole type: BH			
Water Strikes	Samples		Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)		
	Type	depth (m)							
	C	0.75-0.90		0.75		MADE GROUND silt and masonry fragments	-0.10		
							-0.20		
							-0.30		
							-0.40		
							-0.50		
							-0.60		
							-0.70		
				0.75		Olive green sandy silty CLAY	-0.80		
				0.90			-0.90		
							-1.00		
							-1.10		
							-1.20		
							-1.30		
							-1.40		
							-1.50		
							-1.60		
							-1.70		
▽ Water strike									
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.									
Key: C - Contamination sample W - Water sample P - PID test									

2419-P2E-1-B: Land at Old Fire Station, Warminster
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BOREHOLE LOG

Project		Land at Old Fire Station			Project No. 2419		
Client		A and P Property Services			Survey date: 28 April 2023		
Log ID		BH23		Hole type: BH			
Water Strikes	Samples		Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
	Type	depth (m)					
	C	0.25-0.40		0.25		MADE GROUND silt w ith masonry fragments	-0.10
			0.40		Olive green sandy silty CLAY w ith light tan/w hite sandstone	-0.30	
							-0.40
							-0.50
							-0.60
							-0.70
							-0.80
							-0.90
							-1.00
							-1.10
							-1.20
							-1.30
							-1.40
							-1.50
							-1.60
							-1.70
☒ Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

2419-P2E-1-B: Land at Old Fire Station, Warminster
A and P Property Services

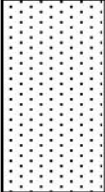


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BOREHOLE LOG

Project		Land at Old Fire Station			Project No. 2419		
Client		A and P Property Services			Survey date: 28 April 2023		
Log ID		BH24		Hole type: BH			
Water Strikes	Samples		Level (m OD)	Depth (m)	Legend	Stratum Description and Observations	Depth (m)
	Type	depth (m)					
						MADE GROUND silty sand	-0.10
				0.35			-0.20
							-0.30
	C	0.35-0.55				Olive green silty SAND from 0.55 some light tan/w hite sand and pieces of sandstone	-0.40
				0.60			-0.50
							-0.60
							-0.70
							-0.80
							-0.90
							-1.00
							-1.10
							-1.20
							-1.30
							-1.40
							-1.50
							-1.60
							-1.70
☒ Water strike							
Remarks: Groundwater not noted during excavations. No visual or olfactory evidence of contamination noted.							
Key: C - Contamination sample W - Water sample P - PID test							

2419-P2E-1-B: Land at Old Fire Station, Warminster
A and P Property Services



Appendix E– Borehole Photographs

BH 1



BH 2



BH 3



BH 4





Appendix F – Contamination Test Results

RESIDENTIAL WITHOUT HOMEGROWN PRODUCE (RwoHP) - SOM 1%									
Determinand	Unit	GAC	Source	Concentration				Number of Tests	Number of Exceedences
				BH1	BH2	BH3	BH4		
Metals									
Arsenic	mg/kg	39.9	DEFRA C4SL	10.5	12.6	14.9	10.6	4	0
Cadmium	mg/kg	149.0	DEFRA C4SL	< 0.5	< 0.5	< 0.5	< 0.5	4	0
Chromium (III)	mg/kg	16700.0	ATRISK SSV	18.6	22.2	17.1	18.1	4	0
Copper	mg/kg	9060.0	ATRISK SSV	77.6	111	79.8	78.0	4	0
Lead	mg/kg	313.0	DEFRA C4SL	366	823	558	426	4	4
Mercury (Inorganic)	mg/kg	244.0	ATRISK SSV	2.3	1.7	1.6	1.0	4	0
Nickel	mg/kg	188.0	ATRISK SSV	20.2	24.6	19.0	16.8	4	0
Selenium	mg/kg	595.0	ATRISK SSV	< 1.0	< 1.0	< 1.0	< 1.0	4	0
Zinc	mg/kg	47000.0	ATRISK SSV	130.0	182.0	122.0	122.0	4	0
Inorganics									
Free Cyanide	mg/kg	34.0	ATRISK SSV	< 1.0	< 1.0	< 1.0	< 1.0	4	0
Hexavalent Chromium	mg/kg	21.0	DEFRA C4SL	< 0.8	< 0.8	< 0.8	< 0.8	4	0
Miscellaneous									
Moisture Content	%	-	-	13.5	9.9	15.1	12.9	4	-
pH	pH units	-	-	8.5	8.4	8.5	8.3	4	-
Soil Organic Matter	%	-	-	4.6	6.0	5.1	4.6	4	-
Stones Content	%	-	-	<9.6	<5.0	<7.2	6.2	4	-
Phenols									
Total Monohydric Phenols	mg/kg	750.0	LQM/CIEH	<5	<5	<5	<5	4	0
Polyaromatic hydrocarbons									
Naphthalene	mg/kg	0.85	ATRISK SSV	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Acenaphthylene	mg/kg	2900.0	LQM/CIEH	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Acenaphthene	mg/kg	2680.0	ATRISK SSV	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Fluorene	mg/kg	3260.0	ATRISK SSV	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Phenanthrene	mg/kg	1300.0	LQM/CIEH	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Anthracene	mg/kg	34300.0	ATRISK SSV	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Fluoranthene	mg/kg	4880.0	ATRISK SSV	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Pyrene	mg/kg	3650.0	ATRISK SSV	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Benzo(a)anthracene	mg/kg	11	LQM/CIEH	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Chrysene	mg/kg	30	LQM/CIEH	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Benzo(b)fluoranthene	mg/kg	3.9	LQM/CIEH	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Benzo(k)fluoranthene	mg/kg	110	LQM/CIEH	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Benzo(a)pyrene	mg/kg	5.3	DEFRA C4SL	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Indeno (1,2,3-cd) pyrene	mg/kg	45	LQM/CIEH	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Dibenzo(a,h)anthracene	mg/kg	0.31	LQM/CIEH	< 0.1	< 0.1	< 0.1	< 0.1	4	0
Benzo(g,h,i)perylene	mg/kg	360	LQM/CIEH	<0.1	<0.1	<0.1	<0.1	4	0
TPH CWG									
>C ₅ -C ₆ Aliphatic	mg/kg	42.9	ATRISK SSV	< 0.01	< 0.01	< 0.01	< 0.01	4	0
>C ₆ -C ₈ Aliphatic	mg/kg	99.6	ATRISK SSV	< 0.01	< 0.01	< 0.01	< 0.01	4	0
>C ₈ -C ₁₀ Aliphatic	mg/kg	13.9	ATRISK SSV	< 1.0	< 1.0	< 1.0	< 1.0	4	0
>C ₁₀ -C ₁₂ Aliphatic	mg/kg	81.8	ATRISK SSV	< 1.0	< 1.0	< 1.0	< 1.0	4	0
>C ₁₂ -C ₁₆ Aliphatic	mg/kg	385.0	ATRISK SSV	< 1.0	< 1.0	< 1.0	< 1.0	4	0
>C ₁₆ -C ₃₅ Aliphatic	mg/kg	212000.0	ATRISK SSV	<2.0	<2.0	<2.0	<2.0	4	0
>C ₃₅ -C ₄₀ Aliphatic	mg/kg	65000.0	LQM/CIEH	< 1.0	< 1.0	< 1.0	< 1.0	4	0
>C ₅ -C ₇ Aromatic (benzene)	mg/kg	0.3	ATRISK SSV	< 0.01	< 0.01	< 0.01	< 0.01	4	0
>C ₇ -C ₈ Aromatic (toluene)	mg/kg	312.0	ATRISK SSV	< 0.01	< 0.01	< 0.01	< 0.01	4	0
>C ₈ -C ₁₀ Aromatic	mg/kg	22.7	ATRISK SSV	< 1.0	< 1.0	< 1.0	< 1.0	4	0
>C ₁₀ -C ₁₂ Aromatic	mg/kg	139.0	ATRISK SSV	< 1.0	< 1.0	< 1.0	< 1.0	4	0
>C ₁₂ -C ₁₆ Aromatic	mg/kg	703.0	ATRISK SSV	< 1.0	< 1.0	< 1.0	< 1.0	4	0
>C ₁₆ -C ₂₁ Aromatic	mg/kg	1930.0	ATRISK SSV	< 1.0	< 1.0	< 1.0	< 1.0	4	0
>C ₂₁ -C ₃₅ Aromatic	mg/kg	1930.0	ATRISK SSV	< 1.0	< 1.0	< 1.0	< 1.0	4	0
>C ₃₅ -C ₄₄ Aromatic	mg/kg	1900.0	LQM/CIEH	<1.0	<1.0	<1.0	<1.0	4	0



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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-44803

Issue: 1

Date of Issue: 23/11/2022

Contact: Peter George

Customer Details: GO Contaminated Land Solutions Ltd
4 De Frene Road
Sydenham
London
SE26 4AB

Quotation No: Q22-02616

Order No: Not Supplied

Customer Reference: 2419

Date Received: 18/11/2022

Date Approved: 23/11/2022

Details: Land at Old Fire Station, Warminster

Approved by:



Tim Reeve, Quality Officer

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Sample Summary

Report No.: 22-44803, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
302289	BH1 1.20 - 1.35	16/11/2022	18/11/2022	Sandy silty loam	
302290	BH2 1.20 - 1.40	16/11/2022	18/11/2022	Sandy silty loam	
302291	BH3 1.00 - 1.20	16/11/2022	18/11/2022	Sandy silty loam	
302292	BH4 1.00 - 1.20	16/11/2022	18/11/2022	Silty loam	

Results Summary

Report No.: 22-44803, issue number 1

ELAB Reference	302289	302290	302291	302292
Customer Reference				
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	BH1	BH2	BH3	BH4
Sample Depth (m)	1.20 - 1.35	1.20 - 1.40	1.00 - 1.20	1.00 - 1.20
Sampling Date	16/11/2022	16/11/2022	16/11/2022	16/11/2022

Determinand	Codes	Units	LOD				
Soil sample preparation parameters							
Moisture Content	N	%	0.1	13.5	9.9	15.1	12.9
Stones Content	N	%	0.1	9.6	5.0	7.2	6.2
Material removed	N	%	0.1	9.6	5.0	7.2	6.2
Description of Inert material removed	N		0	Stones	Stones/Clinker	Stones/Clinker	Stones
Metals							
Arsenic	M	mg/kg	1	10.5	12.6	14.9	10.6
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	18.6	22.2	17.1	18.1
Copper	M	mg/kg	5	77.6	111	79.8	78.0
Lead	M	mg/kg	5	366	823	558	426
Mercury	M	mg/kg	0.5	2.3	1.7	1.6	1.0
Nickel	M	mg/kg	5	20.2	24.6	19.0	16.8
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	130	182	122	122
Inorganics							
Free Cyanide	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8
Miscellaneous							
pH	M	pH units	0.1	8.5	8.4	8.5	8.3
Soil Organic Matter	U	%	0.1	4.6	6.0	5.1	4.6
Phenols							
Total Monohydric Phenols	N	mg/kg	5	< 5	< 5	< 5	< 5

Results Summary

Report No.: 22-44803, issue number 1

				ELAB Reference	302289	302290	302291	302292
				Customer Reference				
				Sample ID				
				Sample Type	SOIL	SOIL	SOIL	SOIL
				Sample Location	BH1	BH2	BH3	BH4
				Sample Depth (m)	1.20 - 1.35	1.20 - 1.40	1.00 - 1.20	1.00 - 1.20
				Sampling Date	16/11/2022	16/11/2022	16/11/2022	16/11/2022
Determinand	Codes	Units	LOD					
Polyaromatic hydrocarbons								
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
TPH CWG								
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total aliphatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total aromatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total petroleum hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_Total)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0



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Results Summary

Report No.: 22-44803, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
302289	1.20 - 1.35	BH1	Grey sandy soil, stones, concrete, clinker	No asbestos detected	n/t	n/t	n/t	n/t
302290	1.20 - 1.40	BH2	Grey sandy soil, stones, concrete, brick, clinker, organics	No asbestos detected	n/t	n/t	n/t	n/t
302291	1.00 - 1.20	BH3	Grey sandy soil, stones, concrete, clinker, glass, organics	No asbestos detected	n/t	n/t	n/t	n/t
302292	1.00 - 1.20	BH4	Grey sandy soil, stones, concrete, brick, clinker	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 22-44803, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Free cyanide	N	As submitted sample	21/11/2022	107	Colorimetry
Hexavalent chromium	N	As submitted sample	21/11/2022	110	Colorimetry
pH	M	Air dried sample	22/11/2022	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	22/11/2022	300	ICPMS
Phenols in solids	N	As submitted sample	21/11/2022	121	HPLC
PAH (GC-FID)	M	As submitted sample	21/11/2022	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	22/11/2022	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	22/11/2022	181	GC-MS
TPH CWG soil by gc-gc	M	As submitted sample	18/11/2022	271	
Asbestos identification	U	Air dried sample	22/11/2022	280	Microscopy
Soil organic matter	U	Air dried sample	22/11/2022	BS1377:P3	Titrimetry

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-44803, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 23-47667

Issue: 1

Date of Issue: 21/04/2023

Contact: Peter George

Customer Details: GO Contaminated Land Solutions Ltd
4 De Frene Road
Sydenham
London
SE26 4AB

Quotation No: Q22-03448

Order No: 2419

Customer Reference: 2419

Date Received: 14/04/2023

Date Approved: 21/04/2023

Details: Land at Old Fire Station, Warminster

Approved by:



Tim Reeve, Quality Officer

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Sample Summary

Report No.: 23-47667, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
318381	BH11 0.30 - 0.50	13/04/2023	14/04/2023	Sandy silty loam	
318382	BH12 0.30 - 0.45	13/04/2023	14/04/2023	Sandy silty loam	
318383	BH13 0.30 - 0.50	13/04/2023	14/04/2023	Sandy silty loam	



Results Summary

Report No.: 23-47667, issue number 1

ELAB Reference				318381	318382 *	318383
Customer Reference						
Sample ID						
Sample Type				SOIL	SOIL	SOIL
Sample Location				BH11	BH12	BH13
Sample Depth (m)				0.30 - 0.50	0.30 - 0.45	0.30 - 0.50
Sampling Date				13/04/2023	13/04/2023	13/04/2023
Determinand	Codes	Units	LOD			
Soil sample preparation parameters						
Moisture Content	N	%	0.1	22.2	21.7	23.3
Stones Content	N	%	0.1	12.1	14.3	12.1
Material removed	N	%	0.1	12.1	14.3	12.1
Description of Inert material removed	N		0	Stone	Stone	Stone
Metals						
Arsenic	M	mg/kg	1	44.3	15.6	11.0
Cadmium	M	mg/kg	0.5	0.6	< 0.5	< 0.5
Chromium	M	mg/kg	5	15.9	15.8	12.1
Copper	M	mg/kg	5	107	131	90.5
Lead	M	mg/kg	5	582	877	588
Mercury	M	mg/kg	0.5	1.2	0.7	< 0.5
Nickel	M	mg/kg	5	18.9	19.4	15.9
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	128	150	122
Inorganics						
Free Cyanide	N	mg/kg	1	< 1.0	< 1.0	< 1.0
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8
Miscellaneous						
pH	M	pH units	0.1	7.9	7.8	7.8
Soil Organic Matter	U	%	0.1	5.5	4.5	4.5
Phenols						
Total Monohydric Phenols	N	mg/kg	5	< 5	< 5	< 5



Results Summary

Report No.: 23-47667, issue number 1

ELAB Reference				318381	318382 *	318383
Customer Reference						
Sample ID						
Sample Type				SOIL	SOIL	SOIL
Sample Location				BH11	BH12	BH13
Sample Depth (m)				0.30 - 0.50	0.30 - 0.45	0.30 - 0.50
Sampling Date				13/04/2023	13/04/2023	13/04/2023
Determinand	Codes	Units	LOD			
Polyaromatic hydrocarbons						
Naphthalene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Acenaphthylene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Acenaphthene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Fluorene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Phenanthrene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Anthracene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Fluoranthene	N	mg/kg	0.1	0.1	n/t	< 0.1
Pyrene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Benzo(a)anthracene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Chrysene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Benzo(b)fluoranthene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Benzo(k)fluoranthene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Benzo(a)pyrene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Dibenzo(a,h)anthracene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Benzo[g,h,i]perylene	N	mg/kg	0.1	< 0.1	n/t	< 0.1
Total PAH(16)	N	mg/kg	0.4	< 0.4	n/t	< 0.4
Naphthalene GCMS	N	mg/kg	0.01	n/t	0.03	n/t
Acenaphthylene GCMS	N	mg/kg	0.01	n/t	< 0.01	n/t
Acenaphthene GCMS	N	mg/kg	0.01	n/t	< 0.01	n/t
Fluorene GCMS	N	mg/kg	0.01	n/t	< 0.01	n/t
Phenanthrene GCMS	N	mg/kg	0.01	n/t	0.18	n/t
Anthracene GCMS	N	mg/kg	0.01	n/t	0.03	n/t
Fluoranthene GCMS	N	mg/kg	0.01	n/t	0.05	n/t
Pyrene GCMS	N	mg/kg	0.01	n/t	0.07	n/t
Benzo(a)anthracene GCMS	N	mg/kg	0.01	n/t	0.04	n/t
Chrysene GCMS	N	mg/kg	0.01	n/t	0.14	n/t
Benzo(b)fluoranthene GCMS	N	mg/kg	0.01	n/t	0.04	n/t
Benzo(k)fluoranthene GCMS	N	mg/kg	0.01	n/t	0.05	n/t
Benzo(a)pyrene GCMS	N	mg/kg	0.01	n/t	0.05	n/t
Indeno(1,2,3-cd)pyrene GCMS	N	mg/kg	0.01	n/t	0.02	n/t
Dibenzo(a,h)anthracene GCMS	N	mg/kg	0.01	n/t	0.01	n/t
Benzo(g,h,i)perylene GCMS	N	mg/kg	0.01	n/t	0.04	n/t
Total PAH(16) GCMS	N	mg/kg	0.04	n/t	0.77	n/t

Results Summary

Report No.: 23-47667, issue number 1

ELAB Reference				318381	318382 *	318383
Customer Reference						
Sample ID						
Sample Type				SOIL	SOIL	SOIL
Sample Location				BH11	BH12	BH13
Sample Depth (m)				0.30 - 0.50	0.30 - 0.45	0.30 - 0.50
Sampling Date				13/04/2023	13/04/2023	13/04/2023
Determinand	Codes	Units	LOD			
BTEX						
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	< 10.0	< 10.0
MTBE	N	ug/kg	10	< 10.0	< 10.0	< 10.0
TPH CWG						
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0	< 1.0	2.8
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	2.6	2.0	1.5
>C35-C40 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	mg/kg	1	2.6	2.0	4.3

* PAH by GCMS due to presence of interferences



Results Summary

Report No.: 23-47667, issue number 1

ELAB Reference		318381	318382	318383
Customer Reference				
Sample ID				
Sample Type		SOIL	SOIL	SOIL
Sample Location		BH11	BH12	BH13
Sample Depth (m)		0.30 - 0.50	0.30 - 0.45	0.30 - 0.50
Sampling Date		13/04/2023	13/04/2023	13/04/2023
Determinand	Codes	Units	LOD	
Metals				
Lead 10:1 extract	N	ug/l	5	< 5

Method Summary

Report No.: 23-47667, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
PAH (GC-MS)	N	As submitted sample	20/04/2023		GC-MS
Leachate metals 10:1 extract	N		20/04/2023	301	ICPMS
Free cyanide	N	As submitted sample	17/04/2023	107	Colorimetry
Hexavalent chromium	N	As submitted sample	17/04/2023	110	Colorimetry
pH	M	Air dried sample	18/04/2023	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	18/04/2023	300	ICPMS
Phenols in solids	N	As submitted sample	17/04/2023	121	HPLC
PAH (GC-FID)	N	As submitted sample	17/04/2023	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	21/04/2023	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	21/04/2023	181	GC-MS
BTEX in solids	M	As submitted sample	21/04/2023	181A	GC-MS
Aliphatic hydrocarbons in soil	N	As submitted sample	17/04/2023	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	21/04/2023	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	19/04/2023	214	GC-FID
Soil organic matter	U	Air dried sample	21/04/2023	BS1377:P3	Titrimetry

Tests marked N are not UKAS accredited

Report Information

Report No.: 23-47667, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
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SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

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b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 23-47949

Issue: 1

Date of Issue: 12/05/2023

Contact: Peter George

Customer Details: GO Contaminated Land Solutions Ltd
4 De Frene Road
Sydenham
London
SE26 4AB

Quotation No: Q22-03448

Order No: Not Supplied

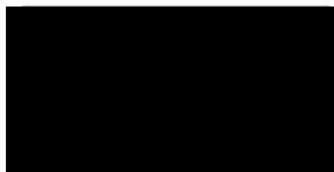
Customer Reference: 2419

Date Received: 02/05/2023

Date Approved: 12/05/2023

Details: Land at Old Fire Station, Warminster

Approved by:



Tim Reeve, Quality Officer

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 23-47949, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
320680	BH21A 0.70 - 0.80	28/04/2023	04/05/2023	Sandy loam	
320681	BH22 0.75 - 0.90	28/04/2023	04/05/2023	Sandy Silty clayey loam	
320682	BH23 0.25 - 0.40	28/04/2023	04/05/2023	Sandy silty loam	
320683	BH24 0.35 - 0.55	28/04/2023	04/05/2023	Loamy sand	

Results Summary

Report No.: 23-47949, issue number 1

ELAB Reference				320680	320681	320682	320683
Customer Reference							
Sample ID							
Sample Type				SOIL	SOIL	SOIL	SOIL
Sample Location				BH21A	BH22	BH23	BH24
Sample Depth (m)				0.70 - 0.80	0.75 - 0.90	0.25 - 0.40	0.35 - 0.55
Sampling Date				28/04/2023	28/04/2023	28/04/2023	28/04/2023
Determinand	Codes	Units	LOD				
Soil sample preparation parameters							
Moisture Content	N	%	0.1	17.0	18.9	20.7	11.1
Stones Content	N	%	0.1	18.3	10.9	21.5	5.0
Material removed	N	%	0.1	18.3	10.9	21.5	5.0
Description of Inert material removed	N		0	stones, clinker	stones, clinker	stones	stones
Metals							
Arsenic	M	mg/kg	1	5.5	^ 6.5	11.6	8.9
Cadmium	M	mg/kg	0.5	< 0.5	^ < 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	24.9	^ 27.8	48.0	58.2
Copper	M	mg/kg	5	19.5	^ 27.1	35.5	14.2
Lead	M	mg/kg	5	92.1	^ 91.7	250	22.3
Mercury	M	mg/kg	0.5	< 0.5	^ < 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	16.6	^ 17.8	24.2	24.9
Selenium	M	mg/kg	1	< 1.0	^ < 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	49.7	^ 62.9	100	63.0
Inorganics							
Free Cyanide	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8
Miscellaneous							
pH	M	pH units	0.1	8.7	^ 8.6	8.4	8.5
Soil Organic Matter	U	%	0.1	1.3	1.7	1.4	0.2
Phenols							
Total Monohydric Phenols	N	mg/kg	5	< 5	< 5	< 5	< 5
Polyaromatic hydrocarbons							
Naphthalene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	N	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH(16)	N	mg/kg	0.4	< 0.4	< 0.4	< 0.4	< 0.4

Results Summary

Report No.: 23-47949, issue number 1

ELAB Reference				320680	320681	320682	320683
Customer Reference							
Sample ID							
Sample Type				SOIL	SOIL	SOIL	SOIL
Sample Location				BH21A	BH22	BH23	BH24
Sample Depth (m)				0.70 - 0.80	0.75 - 0.90	0.25 - 0.40	0.35 - 0.55
Sampling Date				28/04/2023	28/04/2023	28/04/2023	28/04/2023
Determinand	Codes	Units	LOD				
TPH CWG							
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	2.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	1.4	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	1.6	< 1.0	1.4	< 1.0
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0	< 1.0	1.0	< 1.0
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C35-C40 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	3.0	< 1.0	< 1.0	< 1.0



Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY
Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

Results Summary

Report No.: 23-47949, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
320680	0.70 - 0.80	BH21A	Grey Soil, Stones, Clinker, Concrete	No asbestos detected	n/t	n/t	n/t	n/t
320681	0.75 - 0.90	BH22	Grey Soil, Stones, Clinker, Concrete	No asbestos detected	n/t	n/t	n/t	n/t
320682	0.25 - 0.40	BH23	Brown Soil, Stones, Clinker, Concrete	No asbestos detected	n/t	n/t	n/t	n/t
320683	0.35 - 0.55	BH24	Brown Soil, Stones, Clinker, Concrete	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 23-47949, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Free cyanide	N	As submitted sample	05/05/2023	107	Colorimetry
Hexavalent chromium	N	As submitted sample	05/05/2023	110	Colorimetry
pH	M	Air dried sample	11/05/2023	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	11/05/2023	300	ICPMS
Phenols in solids	N	As submitted sample	05/05/2023	121	HPLC
PAH (GC-FID)	N	As submitted sample	09/05/2023	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	09/05/2023	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	09/05/2023	181	GC-MS
Aliphatic hydrocarbons in soil	N	As submitted sample	12/05/2023	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	12/05/2023	214	GC-FID
Asbestos identification	U	Air dried sample	05/05/2023	281	Microscopy
Soil organic matter	U	Air dried sample	10/05/2023	BS1377:P3	Titrimetry

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