



GROUNDTECH
CONSULTING

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Plans		
<i>Plan Reference</i>	<i>Revision</i>	<i>Title</i>
<i>GRO-21549-P01</i>	-	<i>Phase 2 Coverage Plan</i>
<i>GRO-21549-P02</i>	-	<i>Phase Plan</i>
<i>GRO-21549-P03A</i>	-	<i>Section A-A'</i>
<i>GRO-21549-P03B</i>	-	<i>Section B-B'</i>
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<i>GRO-21459-P04A</i>	-	<i>Groundwater Contour Plan</i>
<i>GRO-21459-P05</i>	-	<i>Groundwater Plume Plans</i>
<i>GRO-21459-P06</i>	-	<i>Contamination Plan (Soils)</i>
<i>GRO-21459-P07</i>	-	<i>Contamination Plan (Waters)</i>
<i>GRO-21459-P08A/B</i>	-	<i>Vapour Distribution Plan (F12 and TPH)</i>
<i>GRO-21459-P09</i>	<i>1.1</i>	<i>Revised CSM</i>

1.0 INTRODUCTION

1.1 Project Objectives

Groundtech Consulting Limited have been instructed by Urban Regen to compile a Supplementary Geo-Environmental Appraisal for Phase 2 of a site at Tetrosyl Bevis Green Works in Bury. The supplementary Geo-Environmental Appraisal is required to satisfy the comments made by the Environmental Agency in report referenced SO/2022/122094/02-L01.

The objectives of the supplementary investigation are detailed below:

- *Identify the distribution of the groundwater plumes in the north and whether multiple plumes are present.*
- *Understanding the extent of the plume and rationale for being restricted to the northern area.*
- *Undertake additional groundwater monitoring to gain a greater dataset and understand migration patterns.*
- *Develop an accurate revised CSM.*
- *Include previous laboratory testing results (soils).*
- *Compile all Phase 2 information in an interpretive report.*
- *Classify groundwater contaminants are Hazardous .*
- *Determine the reason for the absence of LNAPL recorded.*
- *Undertake porosity testing to determine site specific parameters.*

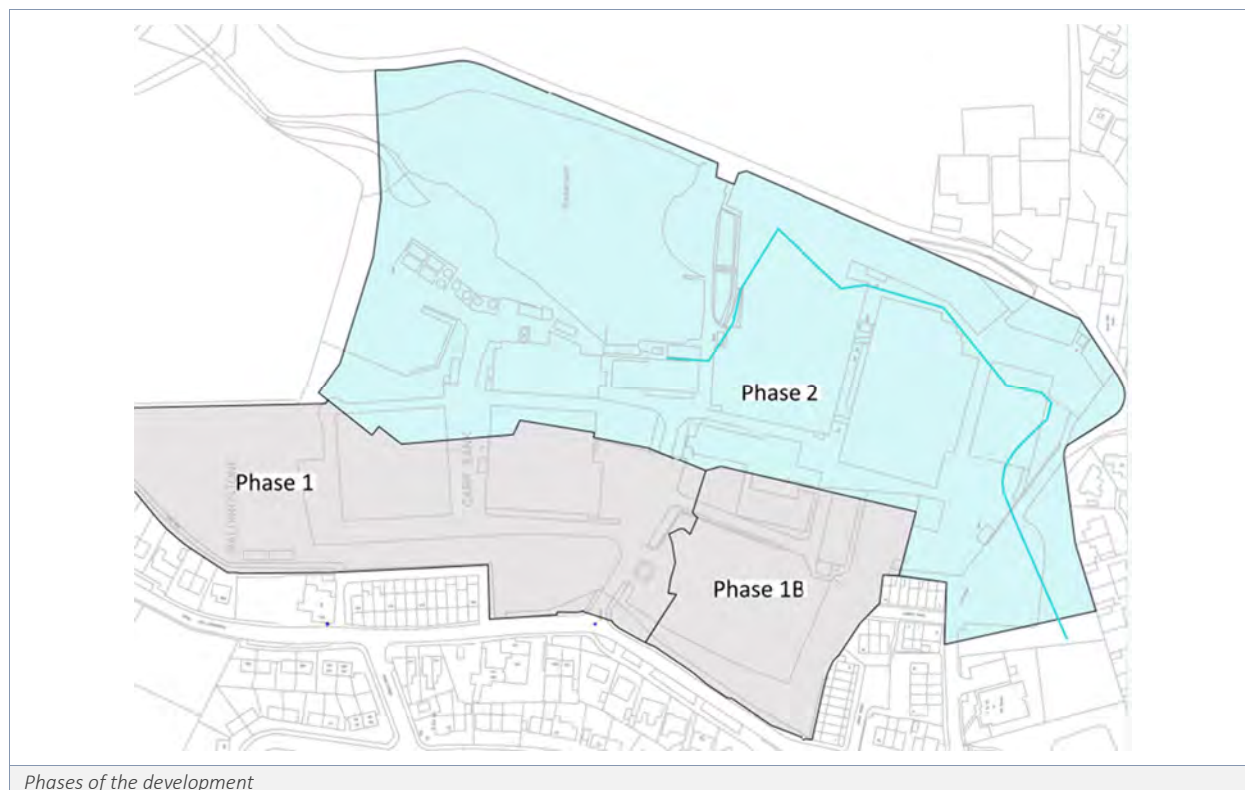
The Appraisal has been prepared in accordance with current UK Legislation and to discharge Land Quality pre-commencement planning conditions.

The report has been undertaken in accordance with current risk assessment guidance LCRM.

A summary of the previous phases of Ground Investigation undertaken by Smith Grant are Summarised in Section 3.0 and the previous phases undertaken by Groundtech Consulting are in Section 4.0.

1.2 Proposed Development

The overall development is residential end use comprising 240 plots with associated private gardens and infrastructure. Phase 1 is currently nearing completion, the historic buildings in Phase 2 have been demolished to undertake the supplementary investigation, finished site levels have not been civilised in Phase 2.



1.3 Limitations

Other conditions may exist on the site that have not been taken into account in this assessment as they are outside the scope of works. Groundtech Consulting are not responsible for these circumstances that are not outlined in the report.

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2.0 SITE SETTING

2.1 Location

The site is located circa 1.85 miles north of Bury Town Centre, as shown on the Project Location Plan *GRO-21459-P01* and is approximately centred on National Grid Reference *380950, 413950*.



Access to the site is gained off Walmersley Old Road to the west of the site.

2.2 Site Description

The site is approximately 10.4 hectares in area and is split into two main areas - Phase 1 and Phase 2. Phase 1 has previously been investigated and remediated with the majority of the residential development having already been constructed. Phase 2 occupies approximately two thirds of the site (7.2 Hectares).

At present, Phase 2 is derelict and occupied by the remnants of the former Tetrosyl factory and associated buildings/offices, goods/tank storage yards, access roads and car park. Generally, the site levels reduce in a north to south direction with the total level change comprising circa 14m to 15m, in some areas this comprises a gradual slope, in other areas there are retaining structures with significant level changes the most notable being the circa 9m change in elevation between the road to the south of the reservoir and the bottom extent of the site.

South Eastern Area

This area comprises the south eastern sections of Phase 2 and the topography is consistent with site levels as a whole comprising a reduction from north to south. Historic infrastructure remains in place immediately south west of the reservoir associated with former Weir controlling the flow of the culvert.

A culvert is situated beneath the eastern part of these areas orientated in a north to south direction from the reservoir. The culvert is consistent with site levels and flows gradually from the north east to the south/south west.

Towards the eastern boundary of Phase 2, an approximately 4m high rectangular stockpile material has been placed, this is to remain in place for the final development to facilitate the new channel for the proposed watercourse which is being diverted from the existing culvert.

Existing floor slabs within the southern section of site at the position of the former warehouses are being grubbed up, floor slabs to the northern areas are remaining at present. Two large stockpiles are indicated at the centre of site containing circa 2500m³ of demolition material being processed to 6F2 material.

Central Area

This area is situated centrally along the eastern extent of the site and covers two thin strips of land, one located along the southern extent of the reservoir and one along the south eastern perimeter of the reservoir.

At present a bridge/footway orientated east to west occupies the area separating the reservoir to the north and the southern areas with a change of elevation of approximately 3m. The infrastructure for the reservoir is indicated to be buried underlying this area including the outlet for the culvert and several buried channel ways.

Southern Boundary

The southern boundary consists of a site entrance and southern boundary, and a heras fenced section situated to the south east separated from the main site by a public walkway.

The most southern area segregated by heras fencing comprises an area of soft landscaping and vegetation stockpile with some areas of fly-tipping visible.

Site Boundaries and Surrounding Features

The southern site boundary is distinguished by a circa 2m high stone built retaining wall that has collapsed in some areas and replaced with heras fencing. The eastern and areas of the western boundary is bordered by heras fencing and the northern and areas of western are bounded by a hedgerow.

The surrounding land uses/features are as follows:

- North - New build housing & agricultural field
- East - Fields/Agricultural land use followed by M66
- South - Residential land use
- West - Residential land use

Site photographs are presented in *Appendix 2*.

3.0 PREVIOUS SMITH GRANT INVESTIGATION SUMMARY

Pertinent points from the previous investigations are provided below.

3.1 Phase 2 Remedial Summary

A total of 112 borehole and trial pit locations across the 10.4 hectare site was approximately equivalent to an average 30m spacing, targeted investigation was carried out in specific parts of the site where contamination has been found or suspected.

Not all locations penetrated the Made Ground, due to obstructions from old foundations, boulders, buried slabs or services. The areas occupied by buildings, the former quarry footprint and some other parts of the site had received limited spatial coverage. The historic substructure is considered to have an impact on the groundwater flows beneath the northern area of Phase 2B and is discussed in subsequent sections and presented on the appended plans.

Site Conditions

Specific substances stored in bulk tanks at the site have included:

- *white spirit (paint thinner - light petroleum distillate) - USTs*
- *monoethylene glycol (antifreeze) - USTs*
- *methanol - USTs*
- *fuel oil (diesel and heating oils) - ASTs / USTs*
- *kerosene (paraffin) - AST*
- *methylene chloride (dichloromethane / DCM) - AST*
- *sodium silicate solution - AST*
- *aromatic solvents (toluene/ethylbenzene/xylenes) - ASTs*
- *bitumen AST*

Numerous (estimated at several hundred) IBCs, 45 gallon drums and other containers on site were present on the site, legible labels including the following:

- *isopropyl alcohol (propan-2-ol) - solvent*
- *C10 aromatic naphtha solvent (aromatic hydrocarbons predominantly in C8-C12 range, with <1% naphthalene)*
- *'Semtol' paraffinic white oil*
- *alcohol-based fragrances*
- *'waste' or unlabelled containers*

Heavy staining was noted on surfaces in several locations, as were sheens on standing water in the vicinity of the sources discussed above.

Surface water culvert runs via lodge overflow channel to south side of dam, then south below mill buildings below Mill Lane and The Croft flowing to an outlet in valley 145m to south west. A preliminary survey of manholes in parts of the site and in Mill Road recorded elevated concentrations of volatile organic compounds (VOCs) measured by PID inferring a degree of discharge or emission from the site was taking place at this time. This could indicate that the culvert had been impacted by the contaminated groundwater including from the primary and secondary sources on the northern area of Phase 2B.

Fifteen potential or known hydrocarbon contamination source areas (APC-1 to APC 15) were identified as shown on *Smith Grant Plan R06-001* and are presented in the table below:

Hotspot Ref	Feature	Investigation Results
Quarry	Former rock quarry, latterly used as a refuse tip	Two perpendicular Trial trenches undertaken. Further investigation required through deeper boreholes. Multiple exceedances were recorded for aliphatic and aromatic hydrocarbons, BTEX compounds, naphthalene, dibenzo(ah)anthracene and the chlorinated solvents TCE, vinyl chloride and 1,2-dichloroethane. These have ranged from the minor (e.g. dibenzo(ah)anthracene) to the highly significant (i.e. C10-12 aliphatic hydrocarbons and vinyl chloride).
1	Former reservoir; underground storage tanks (USTs) for white spirit, antifreeze (MEG) and methanol; above ground storage tanks (ASTs) including heating oil; antifreeze mixing area	The stored fluid in each of the 15 No. USTs was sampled. The contaminants of concern identified were predominantly diesel and white spirit hydrocarbons and alcohols, specifically glycol. A full summary of the results is presented in Section 3 of the report.
2	Drum compound	Trial pitting undertaken. Samples obtained and soils screening using a PID. The contaminants of concern identified comprised hydrocarbons and alcohols, specifically glycol, although chlorinated solvents were detected at lower levels.
3	Fuel oil AST	Access not available at the time of investigation.
4	Diesel AST	Trial pitting undertaken. Samples obtained and soils screening using a PID. No determinands above the residential screening values were detected.
5	Kerosene AST	Trial pitting undertaken. Samples obtained and soils screening using a PID. No determinands above the residential screening values were detected.
6	ASTs for dichloromethane (DCM), white spirit, kerosene, sodium silicate and heating oil - located between former mill buildings	Trial pitting undertaken. Samples obtained and soils screening using a PID. Exceedances of hydrocarbons, dimethyl phthalate and alcohols, specifically glycol were recorded. Although chlorinated solvents were detected at lower levels (i.e. chloromethane), given their higher pollution potential, these will also be included in the pollutants of concern.
7	Electrical transformer and diesel AST on side of mill building	Trial pitting undertaken. Samples obtained and soils screening using a PID. PCBs were elevated in this location associated with the former electrical transformer.
8	Disused AST (contents unknown) on lodge dam	Access not available at the time of investigation.
9	USTs infilled with concrete near boiler house	Trial pitting undertaken. Samples obtained and soils screening using a PID. No exceedances were recorded, however due to elevated PID values remedial works was still recommended.
10	Solvent filling room and ASTs	Trial pitting undertaken. Samples obtained and soils screening using a PID. Primary contaminants identified include aliphatic and aromatic C6-12 hydrocarbons which were associated with very high PID readings in excess of 1,000ppm. Although chlorinated solvents were detected, these were present at much lower concentrations.
11	Solvent recovery plant and tank farm (various ASTs and pipework)	Trial pitting undertaken. Samples obtained and soils screening using a PID. the primary contaminants of concern identified in HS11 are aliphatic and aromatic C6-12 and BTEX hydrocarbons. Although chlorinated solvents were detected these were at much lower concentrations.
13	Waste sludge reclamation plant	Trial pitting undertaken. Samples obtained and soils screening using a PID. Hydrocarbon exceedances across a wide range of fractions were recorded, although other substances were detected at lower levels (i.e. chloromethane).
14	Drum crushing plant	Trial pitting undertaken. Samples obtained and soils screening using a PID. The only contaminant of concern identified above residential screening was the chlorinated solvent TCE, however this was only detected in one sample and was

below detection limits in all 4 of the other samples collected from HS14 (<0.003mg/kg).

Low levels of benzene, vinyl chloride, MTBE and C5-C6 aliphatic hydrocarbons (e.g. pentane/hexane) were detected in RB203. A significant level of dichlorodifluoromethane ('Freon-12') was detected in RB203 and ethyl ether was tentatively identified in the northern area of Phase 1 between HS10 and HS9.

Propylene glycol was recorded in RB201, RB203 and the upstream culvert, but was not detected downstream of the culvert.

Anionic surfactants were detected in all samples and moderate foaming was noted at the culvert exit downstream, while the site was active. This has not been repeated since the cessation of operation.

No VOC/SVOC contamination was detected in groundwater in RB201 and culvert water samples.

Apart from records of a sheen on groundwater and in some saturated soils, no floating product layers were observed in any investigation within the site. The aromatic solvents recorded within groundwater at the site such as the BTEX compounds are Light Non Aqueous Phase Liquids (LNAPLs) in their free states, none of the concentrations recorded in groundwater exceed their respective solubility limits. Apart from a low level of the breakdown compound vinyl chloride, no chlorinated hydrocarbon solvents were detected during any investigation.

3.2 Phase 2 Supplementary Groundwater Investigation (December 2020)

Groundwater investigation was undertaken in the southernmost part of Phase 2 in advance of the rest of Phase 2 for the following reasons:

- *It determined as the downgradient end of the site in respect of groundwater gradients.*
- *The southern part of the site is also the location at which the surface water receptor, the culverted tributary of Pig Lee Brook leaves the site.*
- *A large number of Underground Storage Tanks and potential sources are present in the south of the site.*

The most significant potential contamination hotspots within Phase 2 were considered to be the bulk storage Above Ground Tanks (ASTs) and solvent processing areas located in the north (HS9 to HS11, HS13 and HS14) and central areas (HS5 to HS8) and the USTs in the south (HS1 and HS2).

Selection of the response zones was targeted to the underlying sandstone aquifer, the Rough Rock.

Surface water samples were collected from the Tributary of Pig Lee Brook which leaves the site in a deep culvert at the southern boundary.

Groundwater monitoring installations (RBH301 to RBH305) were drilled in positions downgradient of HS1 to HS4, these were also spread out across the southern parts of Phase 2 to pick up any other plumes emanating from the land to the north. The Ground Investigation work revealed that the general succession of strata can be represented by Made Ground, overlying Glacial Till, underlain by bedrock comprising the Rough Rock Sandstone and the upper Rossendale Formation (Mudstone) which extend to the base of the boreholes in all locations. Groundwater monitoring and testing revealed standing groundwater levels in boreholes of between 5.19mbgl and 9.69mbgl, mainly within sandstone (the Rough Rock). Typically, groundwater levels were encountered at greater depths to the western area of the site.

No sheen, free product or hydrocarbon odour was observed during the groundwater monitoring.

Results of Groundwater Testing

All of the highest concentrations were from RBH305, the borehole directly downgradient of the USTs at HS1. High concentrations of Glycols were reported both at this location and nearby RBH304. The remaining samples contained substantially lower concentrations, for the most part below limits of detection.

The repeat sampling round indicated slightly higher concentrations of hydrocarbons at RBH305 but substantially lower concentrations of Glycols in both RBH304 & RBH305. Traces of Glycols were also reported in RBH302, RBH303 & the surface water sampling point at the downstream culvert outfall but not consistently.

Elevated concentrations in excess of Tier 1 standards are present within the 2 monitoring wells closest to and immediately downgradient to the USTs and Drum Store. Xylenes and other light aromatic fractions are present in the highest concentrations, total hydrocarbons were present at a few thousand µg/l, not at concentrations where free product would be anticipated in the groundwater column.

The other downgradient monitoring wells within Phase 2 did not indicate detectable concentrations of hydrocarbons and only traces of glycols. Other substances detected included very low concentrations of phenols, nitrobenzene, aldehyde, and a fatty acid.

CFCs were absent which suggests impacts from these appears to be restricted to the northern part of the site and are not associated with the aerosol filling plant in the south.

Overall, the combined results indicated that localised pollution of the aquifer underlying the site has occurred and that this is probably resulting in migration of hydrocarbons and glycols beyond the site boundary at HS1 and HS2.

Elsewhere at the downgradient end of the site there is no evidence of contaminant plumes originating from elsewhere within Phase 2.

The report concluded that the area of the USTs at the eastern end of the Phase 2 southern boundary will require remediation to remove the source of the groundwater pollution.

3.3 Phase 2 Supplementary Site Investigation (April 2021)

The initial CSM was further developed in this report as the initial investigation was undertaken into the hotspot areas which were identified in a previous report. Risks associated with the various organic chemicals stored and used on the site exist through the migration of groundwater pollution from sources of hydrocarbons and other VOCs/SVOCs.

It was evident that HS1, HS6, HS10, HS11 & HS13 were the primary sources of contamination across the site and will require remediation by removal of primary and secondary soil sources.

3.4 Phase 2 Supplementary Site Investigation No. 2 (June 2021)

The most significant potential contamination hotspots within Phase 2 are the bulk ASTs and solvent processing areas located in the north in the form of HS9, 10, 11, 13 & 14 as indicated on SGP Hotspot Plan.

The cross sections confirm that the groundwater gradient is relatively flat in the area of the northern hotspots but exhibits a consistent south west gradient outside elsewhere. The more southerly and westerly monitoring wells in Phase 1 and RBH314 and RBH315 would therefore be expected to pick up any contaminant plumes emanating from all of the potential sources within the northern part of Phase 2.

The interface probe did not indicate any detectable layer of non-aqueous phase liquid in any of the boreholes.

Summary of Results

- *Concentrations of hydrocarbons (GRO) were below the limit of detection in all samples except those from the dewatering sump and discharge. There was no evidence of any ongoing pollution of the surface watercourse, however traces of Glycol were present in the downstream culvert discharge, similar to previous monitoring.*
- *All of the highest concentrations are for light volatile aromatic hydrocarbons in the C6-10 range and include the specific indicator compounds Benzene, Toluene, Ethylbenzene and Xylene, although benzene was confirmed to be a minor constituent of the overall mixture, Aliphatic hydrocarbons in the C6-C10 range were also substantially elevated.*
- *Substituted VOCs and SVOCs were also detected in the samples. The most polluting class of these substances are halogenated hydrocarbons. In common with other groundwater samples from the northern and central parts of the site, the CFC Dichlorodifluoromethane was present in all samples from the northern areas. Apart from this various chlorinated solvents and their breakdown products were present, but at much lower concentrations, with the breakdown product vinyl chloride being the most widespread.*
- *Other groups detected included functional groups containing oxygen such as alcohols, esters, ketones and furans. Again, these were present at much lower concentrations than the hydrocarbons and with the exception of MTBE were generally restricted to a small number of locations.*
- *Phenol which was present at these concentration levels in a larger number of samples – the location of these was strongly associated with the distribution of the gasoline range hydrocarbons described above – this was considered a minor component of the same contaminant plume.*
- *MTBE was fairly widespread but with slightly different distributions, MTBE showed a strong correlation with the gasoline range hydrocarbons described above – again this was considered a minor component of the same contaminant plume.*
- *Dichlorodifluoromethane was more dispersed and variable range of concentrations scattered between different locations, the most prevalent being to the south of the main hydrocarbon plume RBH314 and RBH315, RBH316 & RBH317, but also occasional elevated concentrations in the north in RBH323 and RBH327. This is discussed further in subsequent sections.*
- *The groundwater testing in Phase 1 recorded no elevated concentrations in the high density of downgradient monitoring wells, no further assessment was proposed in this area with respect to risks to controlled waters.*

- *The northern parts of Phase 2 had significant impacts to groundwater in the tank farm and solvent filling building (Hotspots 10 & 11), no measurable layer of LNAPL was encountered. Impacts did not appear to have resulted in significant migration to the south and west with monitoring installations 50m from the source areas not indicating any significant impacts.*
- *Groundwater flow is locally to the south east, drawing any plume originating from the most heavily impacted source areas towards the existing reservoir and channel from which the culverted Pig Lee Brook watercourse is drawn. If this was occurring then it is not resulting in ongoing pollution of the surface watercourse by the hydrocarbons which are the main pollutant of concern in the north of Phase 2.*
- *CFCs were detected at more moderate concentrations but appear quite widespread within the central parts of the site. No specific source area was identified for the CFCs – they are not associated with the former aerosol filling plant in the south of the site where concentrations were below limits of detection. Given that total concentrations did not exceed the adopted Tier 1 criteria, the lack of downgradient impacts, and that high vapour pressure will promote rapidly volatilisation to the atmosphere of any which do leach to a surface watercourse, these substances were not considered a substantial pollution risk.*
- *There was no evidence of contaminant plumes originating from the northern areas or elsewhere within Phase 2. Evidence of the plume(s) would be expected in the other downgradient monitoring wells or the surface watercourse.*
- *Transitory impacts from glycols at the culvert discharge was recorded again.*
- *The work undertaken to date strongly supported the presence of multiple plumes of pollutants emanating from the various source zones, comprising mainly, but not exclusively volatile hydrocarbons. The plumes do not appear to extend beyond the site boundary to a degree where exceedances for the adopted criteria are likely, the possible exception was HS1. The area of the USTs at the eastern end of the Phase 2 southern boundary will require remediation to remove the source of the groundwater pollution.*
- *It was recommended that the risks to the surface watercourse will be reduced through the removal of primary sources and the intended partial daylighting and diversion of the culverted section of Pig Lee Brook that currently flows through the central parts of the site, it is to be moved to a new alignment along the eastern boundary of the site.*

4.0 GROUNDTECH CONSULTING GROUNDWATER INVESTIGATION FACTUAL REPORT

Groundtech Consulting undertook twenty one additional boreholes across the central and southern areas of the site in April 2022. The aim of investigation was to achieve better coverage in the southern area of Phase 2, target areas of suspected contamination (hotspots) which were previously inaccessible, maintain a watching brief for visual and olfactory evidence of contamination, obtain soil samples for contamination testing, and install groundwater monitoring wells for subsequent groundwater sampling.

During the investigation 18 No. boreholes (BH501 to BH518) were drilled to depths of between 9.0m and 20.0m bgl and an additional 3 No. boreholes (BH519 to BH521) were drilled to a depth of 20.0m bgl using a Eijkelkamp Fraste drilling rig.

BH519 to BH521 were supplementary locations drilled to obtain design parameters for the new drop shaft to be constructed associated with the realigning of the culvert.

Ground Model

During the investigation Made Ground was recorded to a maximum depth of 14.5m bgl which was present in the southern section of site. Four main Made Ground populations were encountered and comprised the below:

Locations	Depth (m bgl)	Thickness (m)	Strata
BH501, BH511, BH512, BH517, BH519, BH520 & BH521	GL – 14.5	0.7 – 11.5	Dark grey gravelly ashy sand with minor constituents of brick, clinker, sandstone and rare coal.
BH502, BH503, BH504, BH506, BH507, BH510, BH515, BH516, BH518, BH519 & BH520	GL – 13.0	0.1 – 7.0	Soft to firm/firm to stiff grey/brown slightly sandy slightly gravelly clay with minor constituents of brick, sandstone and ceramics.
BH502, BH506, BH509, BH511, BH515, BH518 & BH519	GL – 5.5	0.3 – 2.0	Dark grey/brown slightly clayey slightly gravelly sand with minor constituents of sandstone, brick and ceramics.
BH508, BH517, BH518 & BH520	0.2 – 2.2	0.15 – 1.95	Dark grey/brown occasionally clayey sandy gravel of brick and concrete.

The only natural strata encountered comprised firm becoming stiff slightly sandy slightly gravelly Clay encountered within BH501, BH502, BH505, BH508, BH510 & BH519 at depths between 1.1m to 12.5m bgl. The Clay is typically encountered immediately south of the reservoir and is associated with a historical Glacial feature and is also a contributing factor in restricting the plume(s) beneath the northern area of Phase 2. The Clay encountered within BH510 and BH519 is considered to be weathered Mudstone deposits.

The underlying bedrock consisted of both the Rough Rock which comprised extremely weak to weak brown orange Sandstone and the underlying Rossendale Formation which comprised extremely weak dark grey Mudstone. The Sandstone was predominantly encountered in the south eastern extent of Phase 2, in the south western areas it generally thinned out overlying the Mudstone which then became the predominant strata, the Rossendale Formation is a Secondary A Aquifer.

No evidence of visual or olfactory evidence of contamination was encountered during the Ground Investigation and high PID readings were not recorded.

4.1 Soil Testing Results

Laboratory testing was undertaken on a total of 18 samples to identify contamination within the soils beneath the southern extent of Phase 2. A Generic Quantitative Risk Assessment (GQRA) for residential end use with plant uptake of the results is presented below:

Polycyclic Aromatic Hydrocarbons (PAHs)				
Contaminant	Range (mg/kg)	Screening Value (ug/kg)	Exceedances	Locations
<i>Naphthalene</i>	<10 – 609	2300	0	-
<i>Acenaphthylene</i>	<10 – 87	170,000	0	-
<i>Acenaphthene</i>	<10 – 60	210,000	0	-
<i>Fluorene</i>	<10 – 185	170,000	0	-
<i>Phenanthrene</i>	<10 – 5763	95,000	0	-
<i>Anthracene</i>	<10 – 132	2,400,000	0	-
<i>Fluoranthene</i>	<10 – 1706	280,000	0	-
<i>Pyrene</i>	<10 – 2251	620,000	0	-
<i>Benzo(a)anthracene</i>	<10 – 1328	72,000	0	-
<i>Chrysene</i>	<10 – 1889	15,000	0	-
<i>Benzo(b)fluoranthene</i>	<10 – 1382	26,000	0	-
<i>Benzo(k)fluoranthene</i>	<10 – 538	77,000	0	-
<i>Benzo(a)pyrene</i>	<10 – 1328	22,000	0	-
<i>Indeno(123cd)pyrene</i>	<10 – 528	27,000	0	-
<i>Dibenzo(ah)anthracene</i>	<10 – 208	240	0	-
<i>Benzo(ghi)perylene</i>	<10 – 678	320,000	0	-
TPH CWG - Aliphatics				
Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
>C5-C6	<0.1	42	0	-
>C6-C8	<0.1 – 0.4	100	0	-
>C8-C10	<0.1 – 8.7	27	0	-
>C10-C12	<0.2 – 50.1	130	0	-
>C12-C16	<4.0 – 133	1100	0	-
>C16-C21	<7 – 148	65000	0	-
>C21-C35	<7 – 269	65000	0	-
<i>Total aliphatics C5-35</i>	<19 – 459	-	-	-
TPH CWG – Aromatics				
Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
>C5-EC7	<0.1	70	0	-
>EC7-EC8	<0.1 – 0.2	130	0	-
>EC8-EC10	<0.1 – 0.1	34	0	-
>EC10-EC12	<0.2 – 20.8	74	0	-
>EC12-EC16	<4 – 79	140	0	-
>EC16-EC21	<7 – 312	260	1	BH505 (7.0m)
>EC21-EC35	<7 – 426	1100	0	-
<i>Total aromatics C5-35</i>	<19 – 824	-	-	-

<i>Total aliphatics and aromatics(C5-35)</i>	<38 – 1283	-	-	-
<i>MTBE</i>	<2	49000 ug/kg	0	-
<i>Benzene</i>	<3 – 7	330 ug/kg	0	-
<i>Toluene</i>	<3 – 288	6100000 ug/kg	0	-
<i>Ethylbenzene</i>	<3 – 103	350000 ug/kg	0	-
<i>m/p-Xylene</i>	<5 – 151	240000 ug/kg	0	-
<i>o-Xylene</i>	<3 – 140	250000 ug/kg	0	-
VOCs/SVOCs				
Contaminant	Range (ug/kg)	Screening Value (ug/kg)	Exceedances	Locations
<i>Trichloroethene (TCE)</i>	<3 – 194	16	2	BH502 (0.8m) BH503 (0.25m)
<i>Tetrachloroethene (PCE)</i>	<3	180	0	-
<i>Propyl benzene</i>	<4 – 353	11,000	0	-
<i>1,2,4-Trimethyl Benzene</i>	<6 – 4638	350	1	BH502 (2.1m)
<i>Styrene</i>	<3 – 837.7	810	1	BH504 (0.3m)

The soil contamination plan is presented on GRO-21459-P06.

In general, relatively low concentrations of organic contaminants have been recorded with the exception of a single minor elevation of aromatics (EC16-21) in BH505. Localised VOC concentrations have been detected in the form of TCE, 1,2,4-Trimethyl Benzene and styrene, at levels significantly greater than the relevant screening values. The remaining VOCs have been recorded at levels beneath laboratory screening values with the majority being below laboratory detection limits.

The results have been screened against human health GQRA screening values, Remedial Target Values for risk to groundwater are not available at this stage, and will be generated by the Detailed Quantitative Risk Assessment under separate cover.

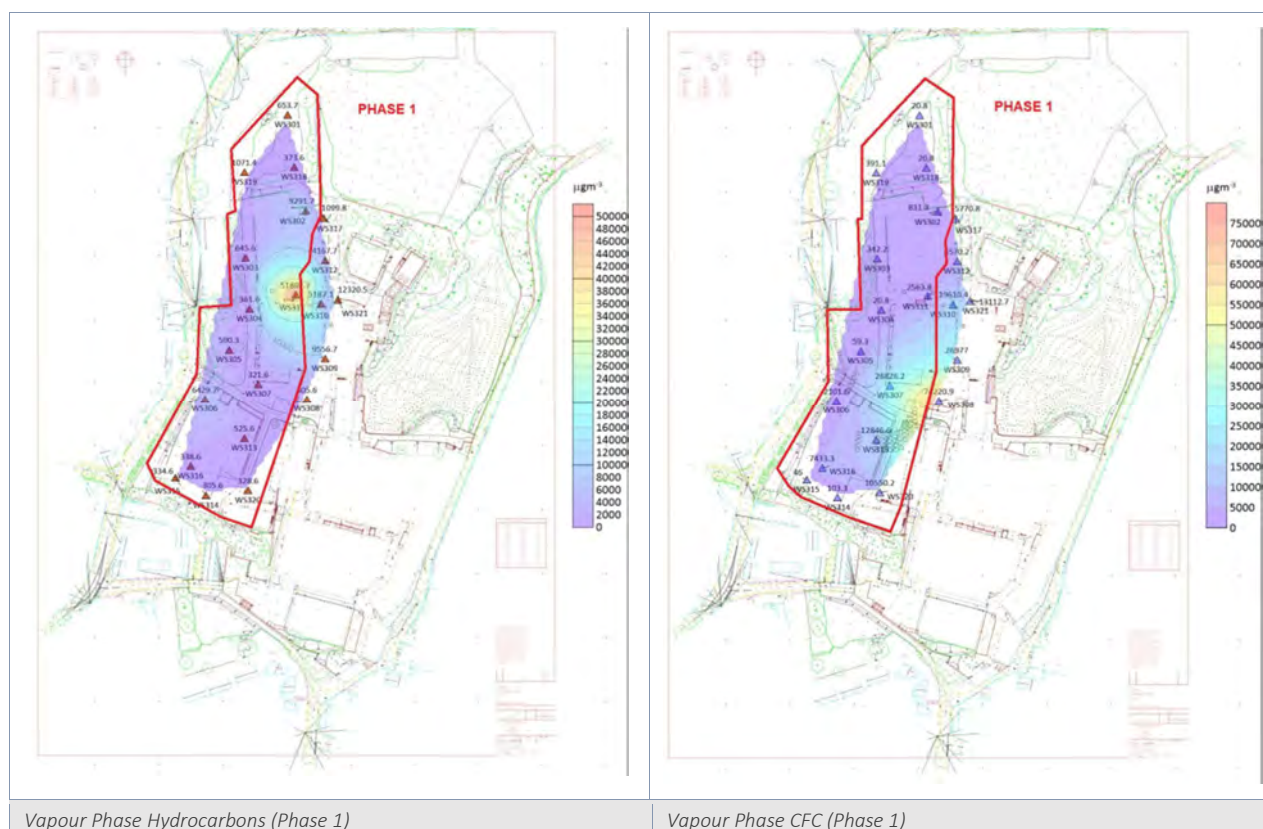
4.2 Soils - Vapour Analysis Phase 2

Volatile Organic Compound testing has been carried out across several phases of investigation dating back to March 2020. Smith Grant LLP have previously produced a Supplementary Site Investigation for Phase 1 referenced R2174-R02-V2 and dated June 2022. Groundtech Consulting have undertaken supplementary works at the northern extent of Phase 2 and produced a permanent ground gas risk assessment referenced GRO-21459-3704_1.1 and dated August 2022.

Smith Grant Investigation – Phase 1

As part of the supplementary Smith Grant Ground Investigation, six ground gas wells (WS308, WS309, WS310, WS312, WS317 & WS318) were installed in the northern area of Phase 2 at HS9, HS10, HS13 and the quarry area.

The results indicate that vapours were recorded within WS309, WS10, WS312 and WS319. The most common exceedances were for light aliphatic and aromatic hydrocarbons in the C8-C10 range, and for the individual aromatic compound benzene. The distribution of vapour-phase hydrocarbons (the total TPH CWG fractions) and vapour phase CFCs (Freon-12) in the sub-surface is summarised below:



A clear pattern of increasing CFCs (Freon-12) WAS present towards the monitoring wells installed along the boundary of Phase 1 and Phase 2, specifically WS308 at the position of HS9. Additionally, the highest concentrations of vapour phase hydrocarbons were located in the north eastern section of Phase 1, possibly associated with sources originating from Phase 2.

Groundtech Consulting Investigation – Phase 2

Groundtech Consulting undertook additional monitoring in April 2022 and thirteen vapour monitoring wells were installed in the northern area of Phase 2 within the recently turned over ground. The exploratory hole plan is presented in *GRO-21459-P08*.

During the installation of the groundwater monitoring wells, PID readings were undertaken and high PID values were recorded at the position HS11 as shown below.

Location	Maximum concentration (ppm)
WS501	0
WS502	0.5
WS503	1.3
WS504	0.3
WS505	0
WS506	0
WS507	138.2
WS508	64
WS509	8.2
WS510	274.5

WS511	335.2
WS512	10.4
WS513	11.7

Thirteen samples of bulk gas were also tested for a VOCs and speciated TPH.

The results recorded MTBE, BTEX, Aliphatic, Aromatics and several VOCs (Chloromethane, 1, 1-Dichloroethane, 1,2 – Dichloroethane, Trichloroethene (TCE), Tetrachloroethene (PCE), Naphthalene, Chlorobenzene and 1, 2, 4 – Trichlorobenzene). The greatest elevations were typically recorded in the eastern and southern wells installed at the position of HS11.

Groundtech Consulting Supplementary Investigation

Groundtech Consulting visited the site on October 2022 to install additional VOC monitoring wells in the northern area of Phase 2 to increase the coverage as highlighted previously by Smith Grant Outline Remedial Strategy referenced R2174-R01-v2 dated May 2019.

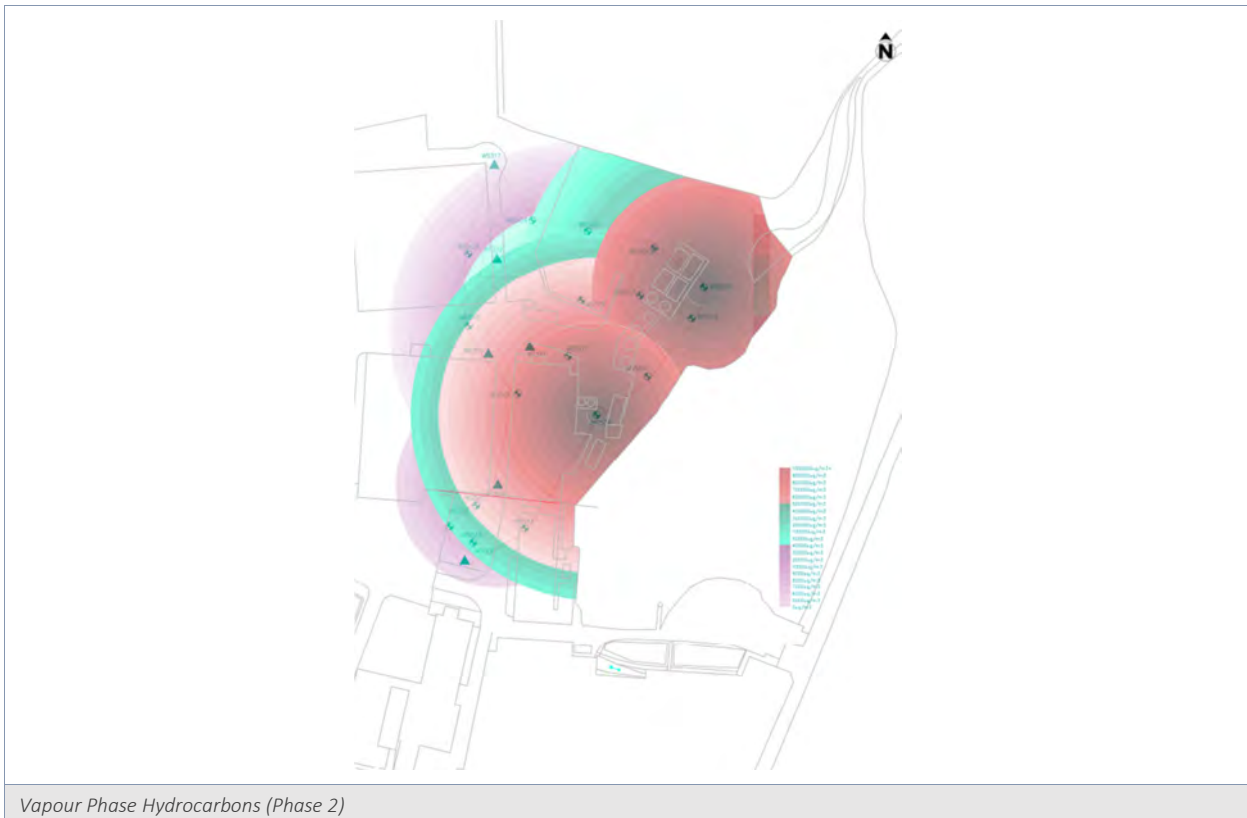
The exploratory hole plan is presented on GRO-21459-P01, the PID recordings during the installation of the monitoring wells are summarised below:

Location	Maximum concentration (ppm)
WS514	422
WS515	0
WS516	1
WS517	0.5

The highest exceedances were typically recorded in the light phase hydrocarbon aromatics in the C8-C12 range, the greatest single elevation was recorded within WS516 in the form of CFC (Freon-12). This is positioned in the groundwater plume at HS10 near a previous VOC monitoring well (WS308).

Concentrations of VOCs have been recorded above laboratory detection limits within WS516 (TCE, 1,1-DCE and 1,1,1-TCE) & WS517 (TCE). The source is considered to be HS9 whereby CFCs were stored and used to make aerosols on the site.

The distribution of vapour phases hydrocarbons comprising all VOC monitoring (Groundtech and SGP) undertaken in Phase 2 is presented below:



The graph illustrates that several primary sources of hydrocarbons are present in this northern area of Phase 2. It shows the highest concentrations emanate from HS11 and HS10.

Another hotspot situated to the south (HS9) recorded high concentrations in WS516 & WS305 which reduce significantly in surrounding areas indicating the contamination is localised. Stability of the source is also indicated due to the lack of change in results between wells installed by Smith Grant in 2020 and Groundtech Consulting in 2022.

The main source of hydrocarbon vapours is indicated to be HS11 and HS10 however it is widespread across the northern area of Phase 2, with the hotspots associated with the hydrocarbons indicated to be HS9 to HS14.

4.3 Groundwater Testing Results

Two additional groundwater sampling visits were undertaken by Groundtech between 7th February 2022 and 8th June 2022. These visits targeted the 22 No. wells installed previously by Smith Grant LLP (RBH301 to RBH305 & RBH314 to RBH330) and the 21 No. wells recently installed wells by Groundtech Consulting (BH501 to BH521).

The main focus of the exercise was to identify the main contaminants affecting the areas previously uninvestigated, therefore a similar range of Contaminants of Concern were scheduled to target the onsite sources of contamination identified in the previous monitoring wells, including GRO (C4-C12) and BTEX. A summary of the groundwater testing in Smith Grant wells and Groundtech Consulting wells is presented below.

Phase 2 – Southern Area

A summary of the laboratory testing is below:

- *No elevated hydrocarbon compounds when compared to Level 2 EQS screening values.*
- *MTBE and BTEX testing was undertaken on all monitoring wells across two monitoring visits. No elevated concentrations have been recorded within the monitoring wells installed by Groundtech Consulting.*
- *A single elevated concentration of m/p-Xylene was recorded within RBH305 situated at the south eastern site boundary near a former large Underground Storage Tank area (HS1).*
- *Total phenol testing was undertaken on the groundwater monitoring wells installed by Groundtech Consulting (BH501 to BH521) as well as two monitoring wells installed by Smith Grant LLP in the southern section of Phase 2 (RBH304 and RBH305). A single elevated concentration of Phenol was recorded within BH506 situated south of the reservoir at the centre of Phase 2, this area was also a mixing area.*
- *No other elevated Contaminants of Concern tested were recorded above Level 2 screening values in the southern area of site.*
- *Glycol testing was also undertaken on the same monitoring wells as Phenols. No elevated glycols have been recorded within the samples screened compared against United States Environmental Protection Agency (US EPA) screening values.*

Phase 2 – Northern Area

Elevated concentrations of MTBE and BTEX were detected within the northern area of Phase 2 (RBH316, RBH317, RBH319, RBH320 to RBH325 and RBH330) located in the vicinity of the former above ground storage tanks (HS10 and HS11). Elevated BTEX and MTBE was recorded within RBH401 and RBH402 which were installed in the vicinity of the above wells for the groundwater treatment trial.

GRO testing was scheduled on the previously installed monitoring wells (RBH314 to RBH330) and the pump treatment wells (RBH401 to RBH403) on two separate occasions. Elevated levels (C4 to C12) above Level 2 screening values were detected within a total of eight samples (RBH325, RBH324, RBH319, RBH320, RBH321, RBH323, RBH316 and RBH401) all located in northern area of Phase 2 indicating a trend with the elevated MTBE and BTEX compounds. The concentrations are associated with the above ground tanks at HS11 in the northern area of Phase 2. The sources/hotspots will be discussed in more detail in Section 6.0.

5.0 SUPPLEMENTARY GROUNDWATER SAMPLING

Groundtech Consulting have undertaken an additional round of groundwater sampling covering all wells in Phase 2 to satisfy the conditions outlined by the Environmental Agency in letter referenced SO/2022/122094/02-L01 and dated 05 October 2022.

5.1 Objectives

The aim of the additional sampling was to:

Maintain watching brief for visual and olfactory evidence of contamination.
Obtain samples using methodology in current guidance for contamination analysis.
Identify realistic pollution linkages to groundwater.
Determine if targeted supplementary investigation in areas of concern is required and for remedial design.
Identify the distribution of the groundwater plumes in the north and whether multiple plumes are present.
Understanding the extent of the plume and rationale for being restricted to the northern area.
Undertake additional groundwater monitoring to gain a greater dataset and understand migration patterns.
Determine if groundwater contaminants are Hazardous.
Determine the reason for the absence of LNAPL recorded.
Undertake porosity testing to determine site specific parameters.
Assess the identified pollution linkages and develop a revised CSM.

5.2 Scope of Works

The following scope of works was completed between the dates of Thursday 13th October and Tuesday 18th October 2022:

- Groundwater monitoring and sampling of monitoring wells BH501 to BH518, RBH301, RBH304, RBH305 and RBH314 to RBH330.

5.3 Geo-Environmental Testing - Groundwater

To inform the Level 2 Generic Quantitative Risk Assessment, the following geo-environmental testing was scheduled to assess the risk from contamination on the site. The testing is based on the potential sources identified by the previous phases of Ground Investigation and discussions with the Environment Agency.

Contaminant of Concern	Matrix	Number
TPH CWG BTEX MTBE + Interpretation	Groundwater	31
Volatile Organic Compounds (VOC)	Groundwater	31
Semi Volatile Organic Compounds (SVOC)	Groundwater	31
Glycols	Groundwater	31
Dissolved Organic Carbon (DoC)	Groundwater	31
Calcium Carbonate (CaCO ₃)	Groundwater	31
Dissolved Oxygen	Groundwater	4
Nitrate	Groundwater	4
Manganese	Groundwater	4

<i>Ferrous</i>	<i>Groundwater</i>	<i>4</i>
<i>Sulphate</i>	<i>Groundwater</i>	<i>4</i>
<i>Sulphide</i>	<i>Groundwater</i>	<i>4</i>
<i>Dissolved Gasses (Methane, Ethane & CO₂)</i>	<i>Groundwater</i>	<i>4</i>

The Geo-Environmental Laboratory Testing Results for the groundwater testing is appended.

5.4 Groundwater Monitoring/Sampling

Well development has previously been carried out at each monitoring well to ensure no cross contamination remained in the water column in the well. The installations were purged to a minimum three times the volume of the water column in the borehole prior to the initial round of sampling.

The method of sampling selected was using low flow pump due to the contamination identified during previous sampling visits.

A water meter was used to test the pH, temperature and conductivity before sampling until equilibrium conditions were met in accordance with BS 10175 guidelines.

The investigation was limited due to some of the monitoring wells being inaccessible and/or no groundwater being present. A summary of the limitations is presented in the table below:

Reference	Reason
<i>BH501</i>	<i>No groundwater/Silt present</i>
<i>BH510</i>	<i>No groundwater</i>
<i>BH512</i>	<i>No groundwater</i>
<i>BH514</i>	<i>Minimal water/Silt present</i>
<i>BH516</i>	<i>Covered by stockpile</i>
<i>BH520</i>	<i>No groundwater/Silt present</i>
<i>RBH314</i>	<i>Destroyed</i>
<i>RBH318</i>	<i>Destroyed</i>
<i>RBH327</i>	<i>Destroyed</i>
<i>RBH328</i>	<i>Destroyed</i>

The monitoring confirms the groundwater levels in the aquifer are lower after a prolonged dry summer and have not recharged to previous levels during winter months.

Samples were sent to the UKAS Accredited laboratory the same day, sampling was carried out in general accordance with BS 5930 and BS 5667.

6.0 GROUNDWATER TESTING RESULTS

Thirty-one samples of groundwater were taken from BH501 to BH518, RBH301, RBH304, RBH305 and RBH314 to RBH330 and were tested for the suite of contaminants described in Section 5.4. The results were compared with reference to a selection of guidance documents as detailed at the rear of this report.

The implementation of the Water Framework Directive (WFD) is to protect and enhance the quality of groundwater and groundwater-dependent ecosystems. The objective of the WFD requires all groundwater bodies (GWBs) are of 'good' status in terms of water quality. This status is based on thresholds for the chemical constituents of groundwater and their impact on ecosystems. Preventing pollution is by far the most sustainable and cost-effective way of maintaining good groundwater quality. The EA are committed to the 'prevent or limit' approach reflected in EU and domestic legislation.

Priority is under the Water Framework Directive to protect water supplies intended for human consumption and ensure protection of groundwater quality that supplies dependent ecosystems. After first guidance in 1992 the following significant guidance has been introduced:

- *Water Framework Directive (2000/60/EC) and the Water Act 2003.*
- *The State of Groundwater in England and Wales 2006.*
- *Second phase of the environmental permitting regime in 2010 replacing the Groundwater Regulations (1999, 2009).*
- *Groundwater Daughter Directive.*

Pollutants can be divided into those that break down easily (degradable pollutants) and those that do not (non-degradable pollutants). The Water Framework Directive introduced the concept of 'hazardous substances' and 'non-hazardous pollutants', which replaced the previous List I and List II of substances considered to pose the greatest threat to the environment.

- *Hazardous substances are the most toxic and must be prevented from entering groundwater. Substances in this list may be disposed of to the ground, under a permit, but must not reach groundwater. They include pesticides, sheep dip, solvents, hydrocarbons, mercury, cadmium and cyanide. If groundwater is already impacted, the objective should be preventing the contamination plume from expanding.*
- *Non-hazardous pollutants are less dangerous and can be discharged to groundwater under a permit but must not cause pollution. Examples include sewage, trade effluent and most wastes. Non-hazardous pollutants include any substance capable of causing pollution and the list is much wider than the previous List II of substances. For example, nitrate is now a non-hazardous pollutant whereas before it was not a List II substance.*

Polluting substances in groundwater can occur as a gas (gaseous phase) or dissolved in water (aqueous phase), or as a non-aqueous phase liquid (NAPL). Some pollutants include substances that dissolve readily in water. These are said to have high solubility; an example is MTBE. Substances that have low solubility (such as oil) are referred to as non-aqueous phase liquids (NAPLs). NAPLs behave differently in groundwater depending on whether they are lighter or heavier than water. Light non-aqueous phase liquids (LNAPLs) may float on the water table whereas dense non-aqueous phase liquids (DNAPLs) may sink through the aquifer until they reach an impermeable layer. They may then generate plumes of contamination. In both cases, the slowly dissolving pollutant may form a plume of dissolved contamination which moves with the groundwater flow.

A table summarising the groundwater testing results is presented below:

Total Petroleum Hydrocarbons				
Contaminant	Range (µg/l)	EQS (µg/l)	Exceedances	Locations
<i>Aliphatic (C5-C6)</i>	<10 – 756	15,000	0	-
<i>Aliphatic (C6-C8)</i>	<10 – 46,897	15,000	3	RBH330, RBH321, RBH325
<i>Aliphatic (C8-C10)</i>	<10 – 10,383	300	7	BH502, RBH319, RBH320, RBH321, RBH324R, RBH325, RBH330
<i>Aliphatic (C10-C12)</i>	<5 – 399	300	1	RBH319
<i>Aliphatic (C12-C16)</i>	<10 – 1260	300	1	RBH325
<i>Aliphatic (C16-C21)</i>	<10 – 50	300	0	-
<i>Aliphatic (C21-C35)</i>	<10	300	0	-
<i>Aromatic (C5-EC7)</i>	<10 – 189	-	-	-
<i>Aromatic (EC7-EC8)</i>	<10 – 164,626	-	-	-
<i>Aromatic (EC8-EC10)</i>	<10 – 53,897	300	9	RBH319, RBH320, RBH321, RBH323R, RBH324, RBH325, RBH326, RBH329, RBH330
<i>Aromatic (EC10-EC12)</i>	<5 – 818	90	6	RBH319, RBH320, RBH321, RBH322R, RBH324, RBH325
<i>Aromatic (EC12-EC16)</i>	<10 – 120	90	1	RBH322R
<i>Aromatic (EC16-EC21)</i>	<10 – 70	90	0	-
<i>Aromatic (EC21-EC35)</i>	<10 – 40	90	0	-
<i>Methyl Tertiary Butyl Ether</i>	<0.1 – 87.7	15	4	RBH319, RBH320, RBH321, RBH325
<i>Benzene</i>	<0.5 – 256.6	10	8	RBH317R, RBH319, RBH320, RBH321, RBH322R, RBH324, RBH325, RBH330
<i>Toluene</i>	<5.0 – 127,711	74	11	RBH317R, RBH319, RBH320, RBH321, RBH322R, RBH323R, RBH324, RBH325, RBH326, RBH329, RBH330
<i>Ethylbenzene</i>	<1.0 – 7,980	300	5	RBH320, RBH321, RBH324, RBH325, RBH330
<i>m/p-Xylene</i>	<2.0 – 35,666	30	11	RBH317, RBH319, RBH320, RBH321, RBH322R, RBH323R, RBH324, RBH325, RBH326, RBH329, RBH330
<i>o-Xylene</i>	<1.0 – 7,591	30	10	RBH319, RBH320, RBH321, RBH322R, RBH323R, RBH324, RBH325, RBH326, RBH329, RBH330
Phenols				

Contaminant	Range (µg/l)	EQS (µg/l)	Exceedances	Locations
<i>Phenol</i>	<1 – 45	7.7	3	BH506, RBH321, RBH325
<i>2-Methylphenol</i>	<0.5 – 300.2	7.7	6	RBH319, RBH320, RBH321, RBH324, RBH325, RBH326
<i>2-Nitrophenol</i>	<0.5	7.7	0	-
<i>2,4-Dichlorophenol</i>	<0.5	7.7	0	-
<i>2,4-Dimethylphenol</i>	<1 – 161	7.7	5	RBH319, RBH320, RBH321, RBH324, RBH325
<i>Pentachlorophenol</i>	<1	7.7	0	-
<i>Glycols</i>				
Contaminant	Range (µg/l)	EQS (µg/l)	Exceedances	Locations
<i>Monoethylene Glycol</i>	<10	14,000 (US EPA)	0	-
<i>Propylene Glycol</i>	<10	14,000 (US EPA)	0	-
<i>Diethylene Glycol</i>	<10	14,000 (US EPA)	0	-
<i>Triethylene Glycol</i>	<10 – 199	14,000 (US EPA)	0	-
<i>Thiodiglycol</i>	<10	14,000 (US EPA)	0	-
<i>VOCs</i>				
Contaminant	Range (µg/l)	EQS (µg/l)	Exceedances	Locations
<i>Chloroform</i>	<2 – 5	2.5	4	BH511, RBH320, RBH321, RBH325
<i>Dichlorodifluoromethane</i>	<2 – 687	10,000 DMotE EPA	0	-
<i>Vinyl Chloride</i>	<0.1 – 9.3	0.5 WHO DWS	5	RBH319, RBH320, RBH321, RBH324, RBH325
<i>Dichloromethane</i>	<3 – 30	20	1	RBH321
<i>1,1-Dichloroethene</i>	<3	30	0	-
<i>1,1,1-Trichloroethane</i>	<2 – 6	100	0	-
<i>1, 2-Cis Dichloroethene</i>	<3 – 194	50	3	RBH320, RBH321, RBH325
<i>Trichloroethene</i>	<3 – 54	10	3	RBH320, RBH321, RBH325
<i>Tetrachloroethene</i>	<3 – 29	10	3	RBH320, RBH321, RBH325
<i>Chlorobenzene</i>	<2 – 142	300 WHO DWS	0	-
<i>1,2-Dichlorobenzene</i>	<1 – 4	20		

Northern Area

Elevated levels of BTEX were recorded twelve of the thirteen samples screened in the northern area of site. Toluene is present at the highest concentrations in RBH520 positioned at the south of HS11. Much lower concentrations of BTEX have been recorded in the western and northern western areas of site located beneath HS10 and the former quarry.

Hydrocarbon levels have been detected over relevant Level 2 EQS screening values in the northern area, with the majority of exceedances present in the volatile range of Aliphatic (C9-10) and Aromatic (EC8-EC10). The distribution follows the same pattern as BTEX indicating the main source of hydrocarbon contamination in this area is HS11.

Speciated PAHs have generally been recorded at levels below laboratory detection limits, some detectable levels of speciated PAHs have been identified above relevant screening values in the northern area. These

are considered to be hydrocarbon derived and correlate with elevated total petroleum hydrocarbons discussed above.

Elevated phenols have been detected within RBH319, RBH320, RBH321, RBH324, RBH325 and RBH326 and therefore typically present at elevation concentrations in the eastern area of Phase 2 immediately west of the existing reservoir. The elevations are all located within the footprint of HS11 and associated with spills/leaks at the ASTs in this area.

A single minor elevation of Di-N-butyl phthalate was detected within RBH330 in the north western area at the position of the former quarry and IBC storage. The rest of the phthalates were recorded at levels below laboratory detection limits.

All of the remaining CoCs tested for were recorded at concentrations below the laboratory limits of detection.

Southern Area

In comparison to the northern area, limited concentrations of CoCs have been recorded at levels above relevant Level 2 screening values with the majority being recorded at levels below laboratory testing values.

No elevations of BTEX, MTBE, glycols or phthalates were detected.

A single exceedance of Aliphatic (C8-C10) at a concentration of 488ug/l was detected within BH502, positioned at the newly identified hotspot to the north. Immediately south of BH502, at BH506 elevated phenol was recorded at a concentration of 45ug/l and is considered elevated from the newly identified hotspot source. The source of the contamination in BH502 and BH506 could also be the culvert as both these locations are positioned directly adjacent to the culvert.

In addition, chloroform was recorded in BH511 positioned in the south area of Phase 2 located within the footprint of HS4. Chloroform is likely to have been used as a solvent in the production of resins, adhesives or oils. It is also a possibility the culvert is the source of the chloroform entering the culvert in the north of the site from HS10/HS11 and migrating towards HS4 along the culvert. However, the main source of this is considered to be the local Hotspot.

7.0 PHASE 2 SOIL DISCUSSION

7.1 Soils – Site Setting

The site has been historically utilised primarily as an automotive products manufacturing factory which was active from mid 1960s. Bevis Green print works and several mills are indicated to have predated the factory and a quarry is indicated circa 1928 in the north. An extract of past land uses is presented in the extract below.



1844 Map



1890 Map

Tetrosyl are indicated to have developed the site mid in the 1960s changing the site usage from Print Works to Car Accessories Factory. Processes on the site comprised the usage, transfer and storage of chemicals across the site. The chemicals previously stored onsite are indicated to include white spirit, monoethylene glycol (anti-freeze), methanol, fuel oil, kerosene, methylene chloride, sodium silicate solution, aromatic solvents and bitumen. An image of the above ground tanks (ASTs) positioned in the northern section of site is presented below.



Above Ground Storage Tanks (ASTs)

The primary sources of contamination are considered to be the Aboveground Storage Tanks (ASTs) and Underground Storage Tanks (USTs), combined with poor housekeeping on the site. These sources have been identified through previous phases of investigation as detailed on the Site Coverage Plan *GRO-21459-P01*. Impaction of the soils has been confirmed by previous testing of the soils, the identified hotspots are displayed on the Groundtech Coverage Plan.

Previous investigation by E3P has recorded elevated aromatic and aliphatic (C6-C12) and BTEX within the northern area of site at HS11 in addition to minor exceedances of chlorinated solvents. At HS10, the same CoCs were recorded at elevated concentrations however significantly higher PID readings were present.

The primary sources in the northern area have now been removed as part of the demolition process, the secondary sources of contamination in the form of impacted soils and bedrock still remain in-situ.

Smith Grant completed additional trial pits at these positions post demolition. The results were consistent with E3Ps findings indicating that elevated levels of BTEX and aliphatic/aromatic (C6-C35) are the most predominant in the soils at HS11. High concentrations of xylenes were recorded in the soils in addition to aliphatic (C10-C12) levels in the volatile range, considered to be associated with spillages of solvent from the ASTs. Elevated levels of TCE, PCE, 1,2-Dichloroethane and Chlorobenzene were also recorded. In HS10, a similar range of CoCs were detected above laboratory screening values including TCE and Vinyl chloride. Toluene was the only BTEX recorded at minor levels above screening values, aliphatics and aromatics in the volatile range were recorded at levels significantly above screening values.

Other sources of contamination identified include numerous IBCs, 45 gallon drums and other forms of containers were present on the site, legible labels including isopropyl alcohol, C10 aromatic naphtha solvent, 'Semtol' paraffinic white oil, alcohol based fragrances and 'waste' or unlabelled containers. These sources are presented in the table in Section 3.1 and on the SGP Hotspot Plan appended.

Smith Grant have undertaken an investigation into the area of former ASTs post demolition, producing a large coverage of this area. Significantly elevated concentrations of hydrocarbons were recorded in the trial pits in addition to high PID readings of greater than 1,000ppm, however low concentrations of other contaminants were recorded in the Made Ground soils.

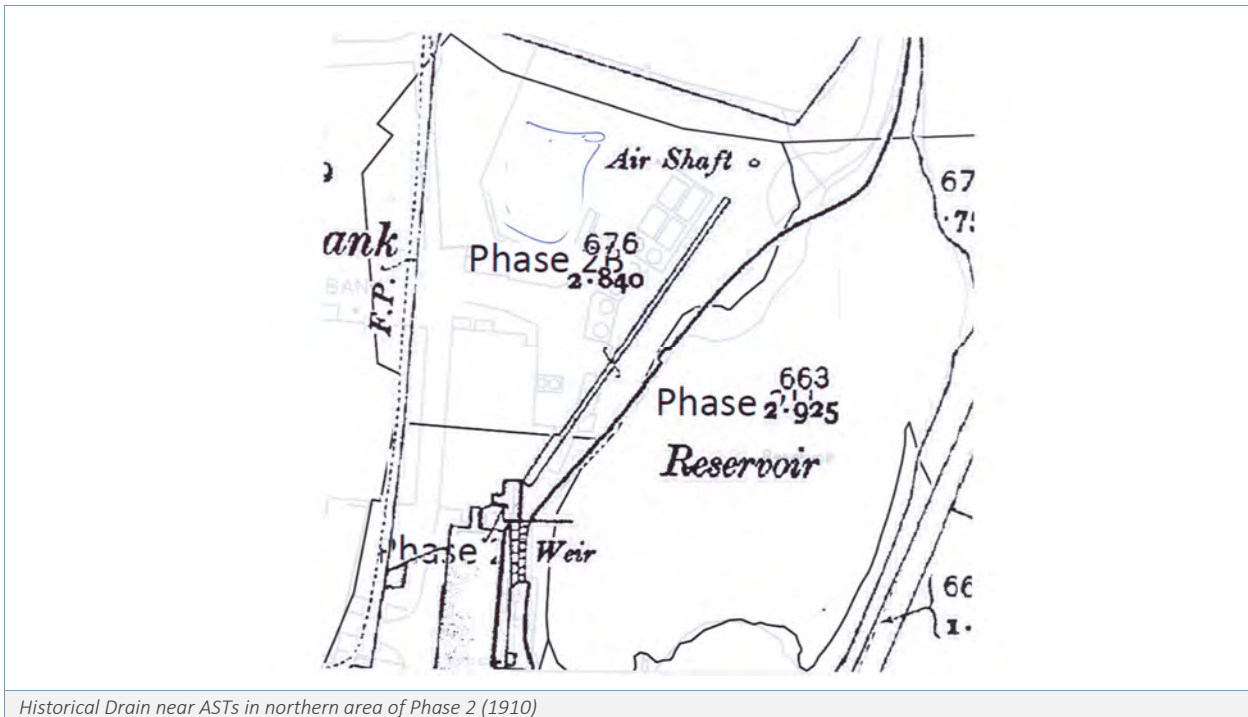
During demolition works at the northern end of site in the vicinity of HS10 to HS14, impacted soils were excavated to bedrock. The excavated soils were excavated from the hotspots based on visual and olfactory evidence in the form of a hydrocarbon odours and high PID readings, minimal evidence of LNAPL was observed during the excavation work, the only free phase observed is presented on the photograph below. The bedrock was also observed to be also impacted by contaminants associated with the ASTs in this area, the bedrock has not been excavated beyond the uppermost weathered layers.



LNAPL at Hotspot 10

Poor housekeeping from previous usage as the Tetrosyl factory was noted at the time of the investigations with evidence of spillages and leaks from the ASTs frequent, anecdotal evidence indicates the transfer and storage of contaminative products was in IBCs with limited control measures. The northern area of site where the AST farms are located (HS10 to HS14) lies on a higher elevation to the rest of Phase 2 to the south, significant substructure is present in the ground here associated with the change in elevation and the adjacent reservoir.

Historical maps show an open drain adjacent to the eastern extent of the ASTs orientated north east to south west, the drain is positioned directly adjacent to the slab the ASTs are set on. The drain appears to sink where the weir overspill for the reservoir is located and is therefore likely using the culvert as an outfall. It is considered likely that spillages/leaks associated with the tanks have migrated to the drain off the edge of the slab impacting the surrounding soils and also into the culvert. An extract of the historical map detailing the position of drain is presented below.



The shape and postulated extent of the groundwater plume discussed in subsequent sections of this report supports the theory that the drain has influenced the distribution of contaminants in both the soils and the groundwater.

Southern Area

Along the southern boundary of Phase 2, the most significant source of contamination is considered to be the Underground Storage Tanks (USTs) classified as HS1. The USTs at this position stored white spirit, antifreeze and methanol, the ASTs in this area include heating oils and antifreeze mixing oils. At the position of the USTs significant contamination was noted above the base of tanks associated with poor housekeeping, the tanks were in good condition and no leaks were observed in the tanks or concrete beneath. An image of the USTs in the south eastern area of site during decommissioning and removal is presented below:



Underground Storage Tanks (USTs)

7.2 Soils - Supplementary Investigation Phase 2

Limited Ground Investigation had previously been undertaken on the southern and central area of Phase 2 due to inaccessibility of site associated with the presence of Tetrosyl factory warehouse buildings and workshops. As a result, hotspots have been identified based on available Ground Investigation information and desk-based information, specifically relating to primary sources of contamination such as ASTs, USTs and a substation. Previous investigation into these hotspots have been undertaken by Smith Grant LLP in 2021 that has recorded elevated CoC within the soils at accessible hotspots as presented on Groundtech Plan *GRO-21459-P01*. The findings indicate that the highest elevations of CoC were recorded in the northern area of Phase 2. Sparsely distributed contamination was recorded in the remainder of Phase 2, specifically at HS2, HS6 and HS7. Minor elevations of PCBs were recorded within the trial pit undertaken at HS7 present at the position of the former substation, minor VOCs were recorded at HS2 in the form of TCE, PCE and Chloromethane. Small elevations of Aromatic (C12-C16) were also detected in HS2 (former drum compound). Elevated concentrations of Total Petroleum Hydrocarbons, Dibenzo(ah)anthracene, THC, Chloromethane, and Dimethyl phthalate were recorded at HS6. The highest elevations were recorded as Dimethyl Phthalate with a concentration of 13,131,176mg/kg, which would indicate the presence of free phase product or a solid source. The rest of the contaminants at HS6 tested were recorded as minor exceedances of the relevant screening values.

Significant contamination is not expected on southern area due to significant building coverage and therefore contamination is likely to have used the associated drainage network as a pathway as opposed to significantly impacting the soils. Drainage has been removed as part of the demolition under a watching brief and no gross contamination has been identified. In addition, drainage network is linked to the culvert acting as a receptor to the mobile contamination rather than the groundwater in southern area of Phase 2.

Groundtech Consulting carried out supplementary Investigation at the remaining areas of Phase 2 in 2022 to provide site wide coverage as presented on *GRO-21459-P01*. During this investigation, laboratory testing has recorded relatively low concentrations of Aromatics (EC16-EC21), Trichloroethene (TCE), 1,2,4-

Trimethyl Benzene and Styrene within BH502 to BH505, this is presented on contamination plan *GRO-21459-P06*. No other contaminants of concern have been detected in the investigation. These concentrations are considered to be associated with Hotspot 5 (BH505), Hotspot 6 (BH503 & BH504) and an additional hotspot has been included by Groundtech Consulting associated with a former tank not previously identified. HS5 has been identified as a previous AST for kerosene and poor housekeeping is considered the result of the aromatic concentrations within BH505. HS6 has been identified as AST for white spirit, kerosene, heating oils and DCM - spillages at this position are considered the source of CoC concentrations. The use of the AST at the recently identified hotspot is unknown, however the contaminants of concern recorded indicate usage of white spirit.

The hydrocarbon concentrations and VOCs at HS5 and HS6 were anticipated based on previous investigation undertaken by Smith Grant, however previous investigation has not been carried out at the newly identified hotspot. Concentrations of PCBs have not been recorded at levels above laboratory detection limits in comparison to previous elevated levels recorded by Smith Grant at HS7 at the position of the former substation. No other sources of PCBs have been identified across the site.

Additionally, elevated concentrations were not recorded in the south eastern area of site at HS2 in comparison to the aromatic (EC12-EC16), TCE, PCE and chloromethane concentrations detected previously.

The Trichloroethene and Styrene concentrations recorded within BH503 and BH504 are situated within HS6 and are considered to be a result of spillages/leaks of ASTs in this area. No elevations have been recorded within BH513, BH514 and BH515 indicating that the contamination is localised.

The aromatic concentrations (EC16-EC21) of 260mg/kg recorded within BH505 is considered to be an anomaly and a result of the ash content of the granular Made Ground localised to this area.

No visual or olfactory evidence of contamination was noted during the Ground Investigation and high PID concentrations were not recorded.

Based on the results of the investigation in comparison with the results of previous investigation undertaken by Smith Grant, the main sources of contamination are considered to be the ASTs described above situated in the northern area of Phase 2 as well as the USTs along the south eastern boundary. Better coverage has been achieved by the supplementary investigation, no gross contamination has been recorded in the central or southern area of Phase 2 and no visual or olfactory evidence was recorded during the Ground Investigation in the previously inaccessible areas, this is likely due to the footprints of the buildings that previously occupied this area of the site. Gross contamination is considered to be localised to the northern area with the exception of localised hotspots in the south. In addition, the site formation levels are to be significantly raised in the southern and central area of site and existing soils will be buried at significant depth.

The hotspots in Phase 2 will be remediated upon derivation of the Remedial Target Values (RTVs) from the revised Detailed Qualitative Risk Assessment (DQRA). The primary sources (USTs and ASTs) have been removed during earthworks and the verification will focus on the excavation of secondary sources. A risk from diffuse contamination associated with the deep Made Ground in the backfilled reservoir and valley on the southern area has not been identified through the laboratory testing. The Made Ground in this area was generally granular consisting of ashy sand with minor constituents of brick, clinker, mudstone, concrete and sandstone.

8.0 PHASE 2 GROUNDWATER DISCUSSION

Multiple rounds of groundwater sampling and testing has been undertaken in Phase 2 dating back to September 2020. The previous groundwater testing by SGP covered the northern area and the southern boundary of the southern area, the majority of the central and southern area was not investigated due to access pre demolition.

The site is recorded by the BGS as being covered by superficial deposits of Glacial Till (boulder clay), with bedrock exposed just outside the northern boundary. Ground Investigation information shows that the Glacial Till is generally thin sandy gravelly Clay, usually less than 2m thick, and absent over significant parts of the site.

Bedrock is mapped as the Rough Rock, a Sandstone of the Millstone Grit series (Namurian age). Close to the western boundary this gives way to the underlying Upper Haslingden Flags, sequences of Sandstones and Mudstones.

The Rough Rock is typically around 20m thick, the Rossendale Formation is shown to subcrop close to the south eastern and southern western boundary of the site. The upper boundary of the Rossendale Formation beneath the Rough Rock comprises dark grey fissile mudstone of the Subcrenatum Marine Band as proven by the Ground Investigation discussed in subsequent sections.

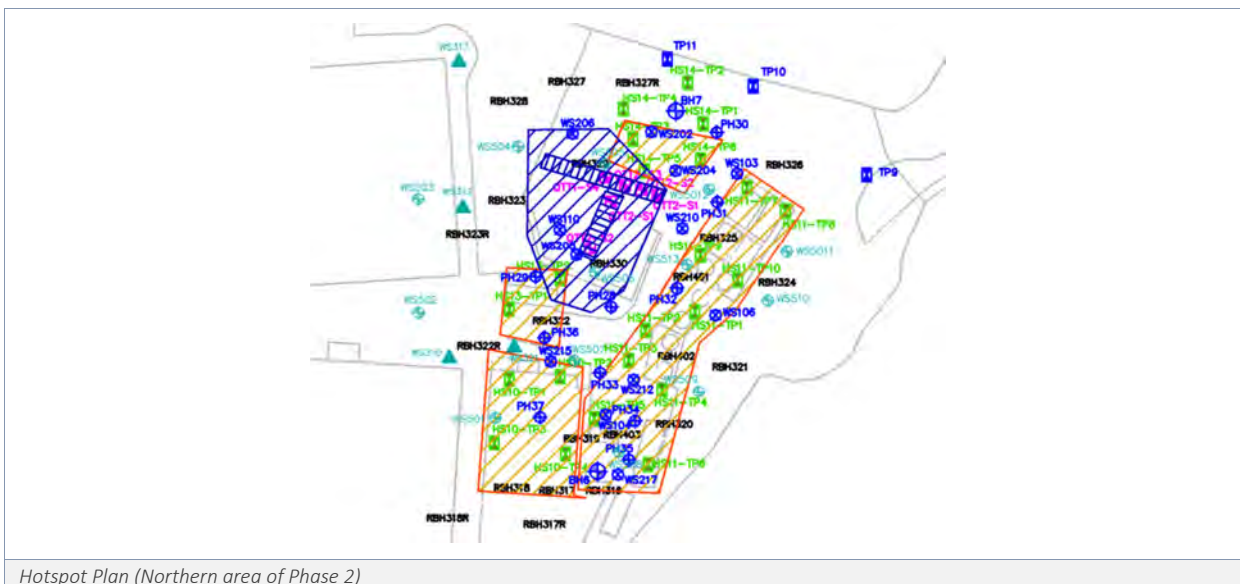
The impounded reservoir will locally affect groundwater flows and is discussed in subsequent sections.

Groundtech Consulting have previously undertake groundwater sampling and testing of the SGP monitoring wells and the 21 No. wells installed in early 2022 which confirmed the groundwater plume in the northern area of Phase 2 and localised impaction of the central and southern area.

After liaison with the EA, additional sampling and testing of the wells installed previously by Smith Grant LLP in Phase 2 and the 21 No. groundwater monitoring wells installed by Groundtech Consulting has been carried out. The findings of the Phase 2 investigation is discussed in Sections 8.1 to 8.3 below.

8.1 Phase 2 – Northern Area

The groundwater monitoring undertaken by SGP was in the monitoring wells (RBH314 to RBH330) installed at the northern area of Phase 2. The most significant contamination hotspots within Phase 2 were the bulk ASTs and solvent processing areas located in the north (HS9, 10, 11, 13 & 14) as indicated on SGP Hotspot Plan. It is estimated that before the demolition of the ASTs up to several tonne of potentially contaminative material has spilled, although no free phase was observed and the interface probe did not indicate any detectable layer of Light Non-Aqueous Phase Liquid (LNAPL) in any of the boreholes. The results of the monitoring undertaken by Smith Grant indicate significant impaction of the groundwater from HS11. An extract of the hotspot plan for the northern area of Phase 2 is presented below:



The highest concentrations are for light volatile aromatic hydrocarbons in the C6-10 range and include the specific indicator compounds Benzene, Toluene, Ethylbenzene and Xylene, although benzene was suggested to be a minor constituent of the overall mixture, probably because its use was phased out under dangerous substances directives or has been subject to significant degradation due to the groundwater conditions. Aliphatic hydrocarbons in the C6-C10 range were also substantially elevated. Benzene, toluene, ethylbenzene and aromatic/aliphatic (C10-12) are all considered to be part of the composition of white spirit.

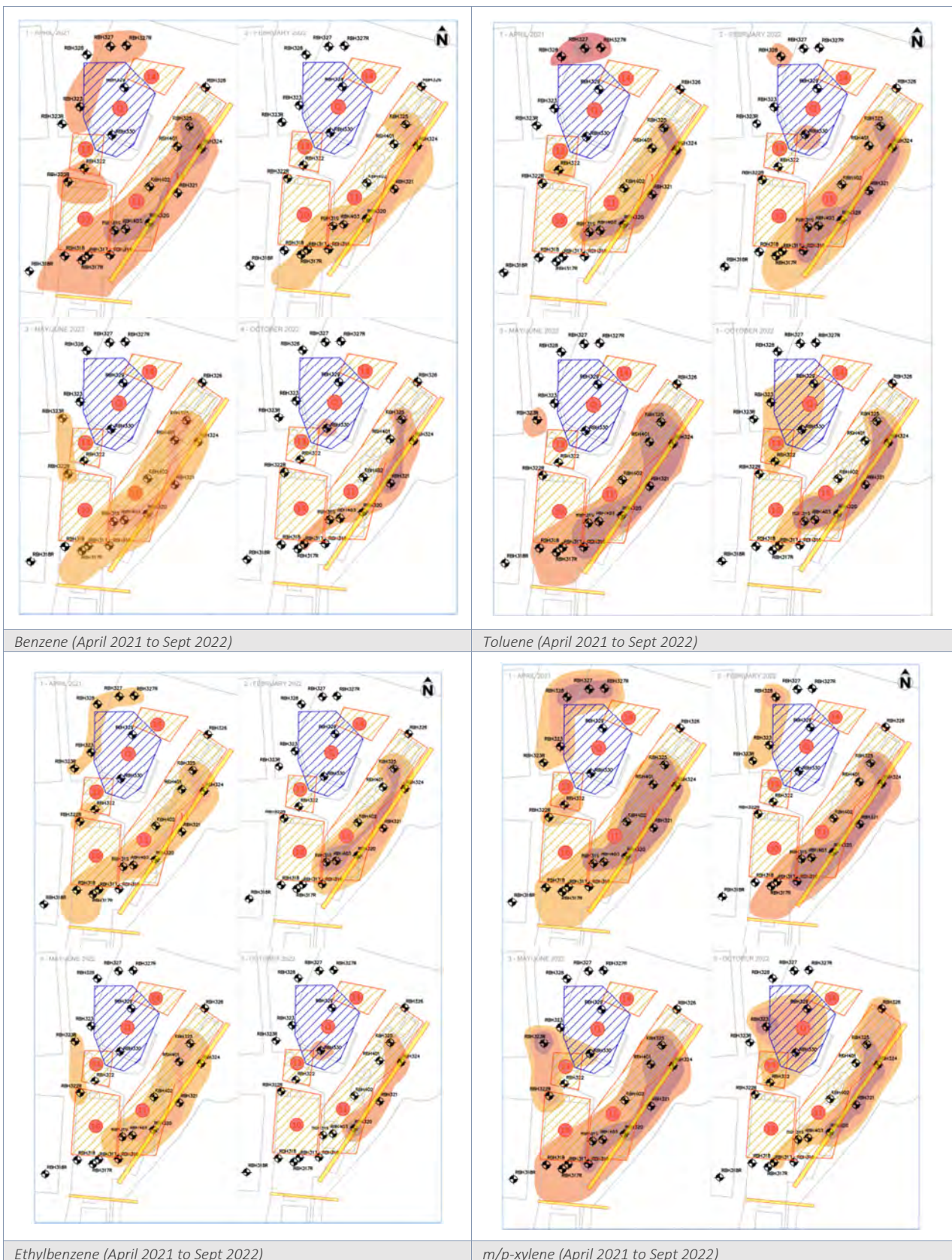
Up to this point the groundwater contamination has been discussed as a single plume in the northern area, in reality the groundwater contamination is numerous plumes coexisting as one larger plume. This is the result of the presence of multiple primary sources resulting from leaks and spills from different locations over the operational history of the facility. The postulated extent of the groundwater plumes for all four groundwater monitoring visits is presented on *GRO-21459-P05*.

The groundwater plumes illustrate that HS11 is the most significant source of BTEX, the photograph in Section 6.1 highlights the risk associated with this former source. Concentrations of 100 times EQS screening values have been typically recorded beneath the footprint of HS11, migrating southwards alongside the position of the historic drain not progressing past the position of the historic substructure associated with the reservoir and change in elevation as illustrated on the plume plans below.

Concentrations of BTEX of between 10 to 100 times the EQS screening value have been identified in the north western area of Phase 2 at the position of HS14. At this position, a localised plume is indicated which is considered to be associated with the drum crushing plant whereby fuel derived hydrocarbons are considered to be a source in addition to white spirit and volatiles associated with IBC storage.

HS13 comprises an additional localised plume associated with the former tank at this location. It has been previously indicated to be utilised as a waste sludge reclamation plant and therefore a source of organic contamination in the form of hydrocarbons is likely.

The results indicate that HS10 appears to be contributing to the groundwater plume, in addition to the contamination in the area originating from HS13 and HS14.

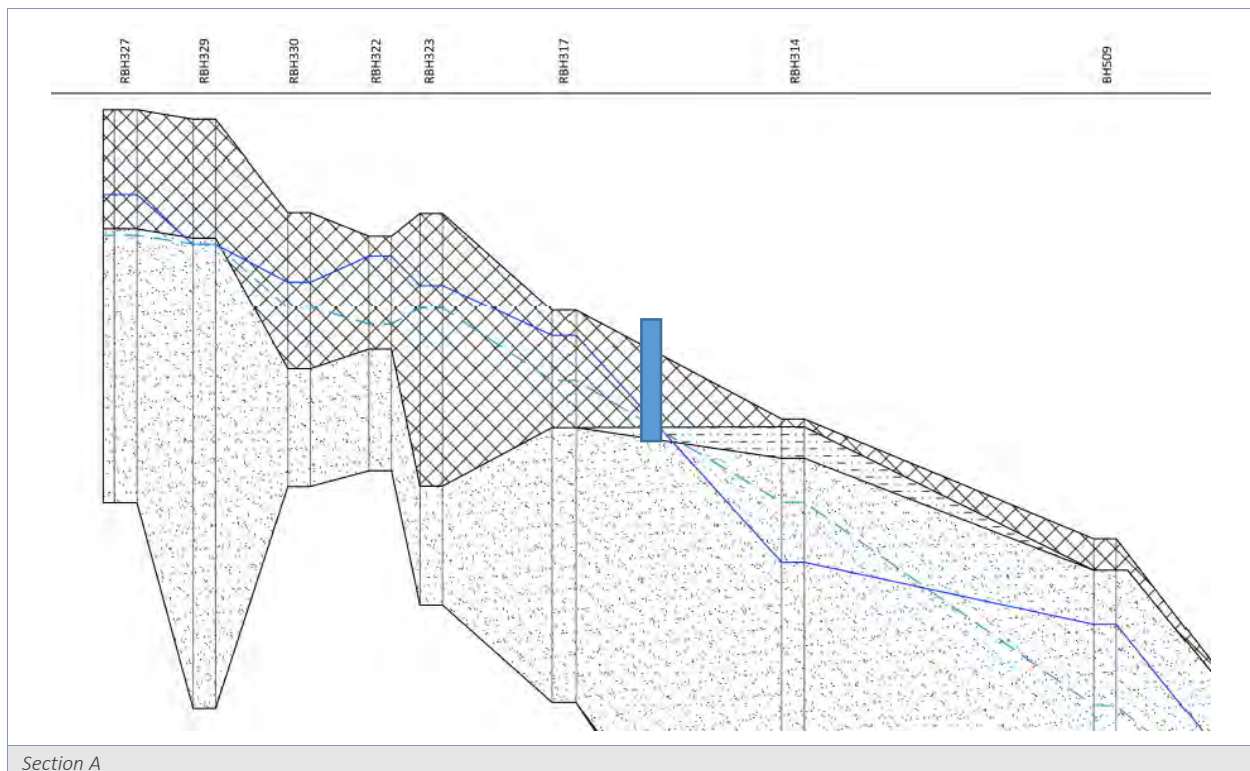


There have been no significant changes in the groundwater plumes over the four groundwater monitoring visits. Evidence of a reduction in extent within the extreme north western area of site on the latest set of

results are present however this is as a result of inaccessibility of wells and the contamination is still recorded in the wells immediately south indicating a significant reduction in the extent of the groundwater has not occurred. HS11 is indicated to have the highest concentrations of BTEX throughout the monitoring visits, however some evidence of the plume decreasing in size is present to the south where concentrations reduce significantly.

The movement of the groundwater plumes display a south westerly migration pattern which correlates with reducing topography. However, it is clear that the plume within HS11 has been aided in distribution by the historic drain feature located immediately east likely using the culvert as an outfall. Additionally, the groundwater contours indicate that the groundwater advances to the south west, aided by historic features associated by the former weir. The reservoir has also influenced the groundwater flow and gradient in this area.

As discussed earlier, the impacted soils and subsequently the groundwater at shallow depths in the Made Ground and Sandstone appears to have been strongly influenced by the historic drainage features. The extent and shape of the groundwater plume is supported by the distribution of the TPH vapours presented on *GRO-21459-P08* which concentrates around HS11 and HS10 and the pattern of the higher concentrations is in a south westerly direction. The dissolved phase groundwater plume appears to have remained stable, the ground conditions and low groundwater gradient in the northern area will be contributing factors to the minimal migration away from the source areas within the Rough Rock Aquifer. These factors in isolation are not considered to be sufficient to prevent the groundwater plume migrating to the south/south westwards over a likely period in excess of 40 years, an additional factor thought to be historic substructure including the head wall constructed at the weir overspill at the reservoir is also restricting migration.



The historic feature/headwall is positioned between RBH317 and RBH314 as shown above, and also intercepts impermeable Glacial Till at this point. To the north of the feature the groundwater level is in the

Made Ground, to the south of the historic feature the groundwater is beneath the Glacial Till in the Rough Rock Sandstone. Groundtech Consulting do not know the construction of the substructure but consider this to potentially be the additional factor preventing migration of the plume. This scenario can only exist with an outfall to the culvert which exists in the form of the weir. Also, there is the possibility of two groundwater levels existing above the Glacial Till on the northern area, and below the Glacial Till in the southern area at the lower elevation as shown on the extract above.

Based on this hypothesis, it is recommended the historic substructure remains in-situ until further assessment and/or remediation of the groundwater plume has been undertaken. The dissolved phased contamination is likely to have migrated through the drainage and to the culvert which leaves the site on the south western boundary 200m south west, the outfall is a further 145m further south west.

As discussed, the historic substructure is considered a contributing factor for the abrupt boundary of the plume immediately south of RBH316. A photograph of the substructure/masonry wall acting as a barrier preventing the migration of contamination towards the southern area of site is presented in below.



Historical feature northern area of Phase 2

This historical substructure may also be a contributing factor to the low gradient on the northern area compared to the southern area of Phase 2, where the Glacial Till plateaus overlying the shallower dipping Sandstone in this area. The groundwater on the northern area is at as shallow gradient in the Made Ground in comparison to the steeper gradient in the Sandstone on the southern area which is in line with the natural topography and landforms beneath the site.

The absence of LNAPL is unexpected based on the identified sources. It is considered that the reason for the absence is associated with the drainage system active during the site usage as Tetrosyl car manufacturing factory. The historic drainage feature system and outfall present in the northern section of Phase 2 are considered to be providing a migration pathway at the most significant source of contamination (HS11). The majority of the CoCs recorded are greater than the respective solubility limit indicating that the contamination is expected outside the dissolved phase which indicates that NAPL would be expected to be present. Therefore, it is likely that the NAPL present has now migrated offsite via historic drainage.

The concentrations of BTEX, hydrocarbons, VOCs (TCE, chloroform, vinyl chloride) are Hazardous groundwater substances in accordance with the Groundwater Daughter Directive. Proposed remedial action should ensure the groundwater plume in the northern area does not expand or migrate downgradient. The remainder of the substances including glycols and phenols are Non-Hazardous. Currently, the ground model and CSM has demonstrated that the plume is not expanding and is being constraint by a number of factors. This should remain the case until further assessment and remediation is agreed with the Environment Agency.

In the northern area, elevated concentrations of MTBE, BTEX, GRO (>C4-C8) and GRO (>C8-C12) were recorded as presented on Groundwater Contamination Plan GRO-21459-P07. The trends are indicated on the groundwater plume plans which typically show a south westerly downgradient flow terminating around RBH315 where the head wall and culvert are present to intercept the groundwater.

During the most recent monitoring visit (September 2022), additional testing was undertaken in the northern section of Phase 2 which comprised a similar suite of contaminants as the initial monitoring visit undertaken by Smith Grant. In addition to the elevated concentrations discussed above, elevated levels of phenols and VOCs have been recorded in the northern area as discussed below.

- *No concentrations of glycols have been recorded at levels above laboratory detection limits, which is consistent with the initial groundwater monitoring visit undertaken by Smith Grant LLP (GRO-21459-P07). This is likely due to being an ingredient of antifreeze and therefore highly soluble and volatile and already dispersed.*
- *Elevated concentrations of phenols have been recorded in the northern area in the form of phenol, 2-Methylphenol and 2,4-Dimethylphenol. The elevations have been recorded within monitoring wells RBH319, RBH320, RBH321, RBH324, RBH325 and RBH326 as presented on GRO-21459-P07. It can be seen that the elevated phenols are located within the position of HS11 and are therefore considered to be related to the ASTs previously present at this position, likely a raw product used in production processes on the site. The location of the phenols coincide with the distribution of the gasoline range organics and are a minor component of the same contaminant plume and likely from the same volatile source. Previous monitoring has recorded phenols beneath HS11 however is considered to be widespread rather than specific to HS11, the reason for the lack of phenols recorded in the vicinity of the quarry area is due to inaccessibility of the wells and assumed to still be present.*
- *VOC testing has recorded elevated concentrations of chloroform, vinyl chloride, dichloromethane, 1,2-cis dichloroethene, trichloroethene and tetrachloroethene). The elevations were typically recorded within RBH320, RBH321 and RBH325.*
 - *Tetrachloroethene was used as an effective automotive brake cleaner and is likely to have been stored as a raw product in HS11. Trichloroethylene, cis-1,2-*

dichloroethene and vinyl chloride discussed below are all degradation byproducts of tetrachloroethene.

- *Vinyl chloride has been recorded within RBH324 at a value of 2.2ug/l (screening value of 0.5ug/l WHO DWS). All elevations fall within the footprint of HS11 further demonstrating this area of contamination is localised to the northern area of site beneath HS11. Previous investigation has recorded elevated VOCs within RBH318 and RBH323. However, concentrations of VOCs have been recorded below the screening values within RBH319 and RBH330 which could indicate reducing conditions in the northern area of Phase 2. Vinyl chloride is considered to be a daughter breakdown product of the halogenated hydrocarbons recorded across the site and indicates degradation has occurred. CFCs are localised in the northern area to HS11 and not considered as widespread as the GRO contamination. Vinyl chloride is a by-product of 1,2-cis dichloroethane, however the contamination typically follows the same distribution.*
- *The source of chloroform is thought to be storage of raw product in the northern area of the site, and have been recorded at the core of the groundwater plume around HS11. The chloroform is potentially also the cause of the foaming at the culvert discharge point.*
- *Dichloromethane was used in the manufacture of aerosols on the site and is miscible with many organic solvents, and is a degradation byproduct of tetrachloroethene.*
- *Trichloroethene is a degradation by-product of tetrachloroethene and also breaks down via the reductive dechlorination pathway to 1,2cis-Dichloroethene and Vinyl Chloride. Trichloroethene can be used to manufacture aerosols or as a degreaser.*

Analysis has been undertaken to determine the trend of BTEX recorded across the groundwater monitoring visits between April 2021 and May 2022. The results indicate that there is no clear reduction in concentrations across the monitoring visits. Measured dissolved oxygen, nitrate, manganese, iron, sulfate, and sulfide concentrations have been used to classify redox conditions in groundwater samples according to the framework devised by McMahon and Chapelle (2008) and extended by Chapelle and others (in press).

Mixed (oxic-anoxic) redox conditions have been determined based on the dissolved oxygen-sulphate-Iron(III) redox process. The presence of dissolved carbon dioxide and methane in all samples tested and absence of ethane in RBH26 and RBH15 suggest anoxic conditions, as does the presence of halogenated breakdown products in the core of the plume. The dissolved oxygen concentration significantly in excess of 0.5mg/l suggest Oxic conditions, however there are uncertainties associated with detection limit O₂ measurements.

Chlorinated compounds such as PCE are recalcitrant under aerobic conditions, but amenable to degradation under anaerobic conditions which is indicated to exist in the plume. Redox conditions in petroleum hydrocarbon-contaminated aquifers can change rapidly in time and space, and this could be the case over the lifetime of the plume where mixed oxic-anoxic conditions are indicated with the lower concentrations of benzene recorded. The degradation of petroleum hydrocarbons occurs in oxic conditions and under certain subsurface conditions at a rate that means that dissolved phase plumes reach a steady-

state a relatively short distance from the source. The rate of degradation depends on a number of factors such as source, redox potential, groundwater flow velocity and contaminant concentration. This will be assessed further as part of the Hydrogeological DQRA.

Groundwater remediation required for treatment of the existing groundwater plume(s) and the DQRA undertaken by Groundtech Consulting is to be revised to generated RTVs for soil and groundwater. Additional porosity testing of the sandstone has been undertaken to develop specific parameters for porosity as opposed to using published values. Furthermore, remediation of the smear zone is also required to prevent rebound from the adsorbed phase occurring during changes of groundwater levels.

All of the concentrations of alcohols, esters, ketones and furans have been recorded at levels below relevant groundwater and soil screening values and are of low toxicity and degrade readily. Most were recorded below laboratory detection limits. Therefore, these contaminants are not considered to have impacted the site.

8.2 Phase 2 - Southern Area

Smith Grant Partnership (SGP) have previously undertaken groundwater monitoring at the southern boundary of Phase 2 (RBH301 to RBH305), the highest concentrations were recorded in RBH305 followed by RBH304, both of which are located within the footprint of HS1 when the Underground Storage Tanks (USTs) were still in-situ. The remaining samples from RBH301 to RBH303 contained substantially lower concentrations, for the most part below limits of detection and with trace levels of glycols present. Therefore, results indicate that contamination of the aquifer is present to the south east (HS1), however no other groundwater contamination/plumes exist in the remaining hotspots (HS3 to HS4).

Localised exceedances of Aliphatic (C8-C10) in BH502 and chloroform in BH511 have been recorded by the latest round of groundwater testing. These are associated with identified hotspots and removal of the primary and secondary sources will be sufficient and allow natural attenuation to occur. Both of these boreholes and BH506 are on the approximate line of the culvert and could be potentially being impacted by the culvert which we know has been impacted by the plume on the northern area of the site.

No other contaminants of concern were detected in the remainder of the central/southern area of Phase 2 (HS1 to HS9) when compared with Level 2 EQS screening values and it is concluded that the southern/central area of site is not impacted by the northern groundwater plume - HS10 to HS14, particularly HS11.

Evidence of LNAPL contamination was observed during the groundwater sampling at BH506 in the centre of Phase 2, phenol has been consistently recorded across both visits at slightly elevated concentrations, however phenolic compounds are miscible in water. Remedial action in the form of removal of the impacted soils and LNAPL is required in this area.

The contamination recorded in the remaining areas of Phase 2 was localised to HS1 in the south eastern section of site. SGP sampling recorded concentrations of hydrocarbons and/or Glycols in RBH304, RBH305, RBH302, RBH303 & the surface water sampling point at the downstream culvert outfall but not consistently. The other downgradient monitoring wells within Phase 2 did not indicate detectable concentrations of hydrocarbons and only traces of glycols, which were also detectable at trace concentrations in the surface water outfall on the initial monitoring round.

The elevated glycols and xylenes previously recorded within the southern area of Phase 2 (HS1 and HS2) are considered a result of the USTs and ASTs in the vicinity. During the demolition works, the USTs were

removed and were in good condition with no evidence of leakages. This would explain the limited impact of groundwater, although it is possible that some of the contamination has migrated offsite to the south as the south eastern corner of the site recorded the thickest Rough Rock Sandstone and groundwater flow in a south easterly direction. The contamination is again likely associated with poor housekeeping when filling USTs/ASTs, transporting the substances across site and within the mixing area. The use of antifreeze in this area is related to the concentrations of white spirit (xylene) recorded. No elevated hydrocarbons, BTEX or glycols were recorded by the recent groundwater testing undertaken post removal of the primary and secondary source in that area.

TCE has been recorded in the Made Ground soils at HS6 and is considered a result of the aerosol ASTs in this area however it is evident that this has not impacted the groundwater. Additionally, elevated concentrations of styrene and benzene breakdown compounds have been recorded in Made Ground soils at HS6.

8.3 Surface Waters – Culvert

The culverted stream (tributary of Pig Lee Brook) was considered to be the principle point of discharge and receptor for groundwater flows from the site by the previous investigations. The culvert appears to be generally of masonry construction often with a flagstone roof below the mill, becoming a brick arch or tube downstream. A culvert survey carried out for the Environment Agency in 2012 noted infiltration to the culvert at various points along its length.

The deepest area of fill is recorded as lying to the south of Mill Lane ('The Croft') where historical mapping showed a fill embankment over the culverted stream and the former Pig Lee Brook Tributary valley landform which has been infilled in this area.

According to the EA survey detailed in previous reports the culvert is impacted at several points across the site. This is a possibility due to the masonry construction, the main impact is however thought to be from the plume on the northern area of the site.

The groundwater levels and sections indicate the Sandstone aquifer does not provide a direct base flow to the culvert however, the culvert is indicated to influence gradients locally. The glycols recorded at the discharge point is likely to originate from the surface water drainage system in the northern area of Phase 2 over the last 40 years and concentrations will be dependent on the flow through the culvert at the time of sampling and testing.

The culvert is to be raised and diverted from its current position which will isolate the Pig Lee Tributary from the Sandstone aquifer and localised or unidentified sources on the southern area of Phase 2. This is considered sufficient to reduce the risk to the surface waters on the site to an acceptable level. This is independent of the remedial action required for the northern area of Phase 2 discussed in previous sections of this report.

There is no record of mine drainage from the old mine adits or former shafts, these locations have been treated through grouting under the supervision of Urban Regen. The shafts on the south eastern area appear to be former abstraction points, they are linked to the culvert, and likely influence groundwater flow locally. No contamination has been encountered in this area of the site local to RBH517 and is not acting as a pathway. Treatment of the air shaft will be undertaken to remove the risk, although this feature is up gradient of all source areas.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The several phases of investigation and testing have identified a significant source of contamination on the northern area of Phase 2, predominantly due to the Contaminants of Concerns stored in HS11 which comprised a solvent recovery plant and various ASTs storing chemicals including light-phase hydrocarbons, halogenated hydrocarbons and phenols.

The contaminants from the primary and secondary sources have impacted the groundwater in the northern area where several plumes coexist and overlap. Although, the highest groundwater concentrations are restricted to one continuous body of water in the eastern part of HS10 and HS11 which appears to be associated with a historical drainage features. Several CoC have been identified as Hazardous Substances in accordance with the Groundwater Daughter Directive and the main objective is to prevent the plume expanding. The plume appears to be stable as it has not been recorded in downgradient locations such on the southern area of Phase 2. The absence of significant impact on the southern area of the site down gradient is considered to be as a result of a combination of factors including degradation rates, groundwater gradient, ground conditions and historical features. As a result, specific remedial action is not required in the southern section of Phase 2 with respect to groundwater plumes, however possible LNAPL has been recorded in BH506 and further investigation is required.

The groundwater plume appears to have used the culvert outfall as a migration pathway and the poor condition of the culvert may have impacted the southern area of the site locally.

Several hotspots have been identified on the northern and southern areas of Phase 2 that required remediation when Remedial Target Values have been determined. A revised Hydrogeological Detailed Quantitative Risk Assessment is required to determine the RTVs for both soils and groundwater.

The following outline remedial strategy is proposed with respect to Controlled Waters and should be discussed as part of the Options Appraisal in the revised Phase 2 Remedial Strategy.

Revision of Detailed Hydrogeological DQRA
Excavation and validation of secondary soil sources in identified hotspots
Further Investigation of possible NAPL identified at RBH506
Remediation of groundwater plume on northern area
Diversion of culvert including raising of levels on southern area
Grubbing up of existing culvert post diversion.
Obtain regulatory approval from Environment Agency

10.0 RELEVANT INDUSTRY REFERENCES

- British Standards Institution. *Investigation of Potentially Contaminated sites - code of practice*. BS 10175:2017.
- British Standards Institution '*Code of Practice for Site Investigations*' BS 5930:2015
- British Standards Institution "*Geotechnical investigation and testing – Identification and classification of soil*" BS EN ISO 14688:2002.
- British Standards Institution "*Geotechnical investigation and testing – Identification and classification of rock*" BS EN ISO 14689:2002.
- BRE Report BR211 '*Radon – Guidance on protective measures for new buildings*' 2015 Edition.
- BRE Special Digest 1: "*Concrete in Aggressive Ground*" 3rd Ed 2005.
- CIRIA 552 "*Contaminated Land Risk Assessment – A guide to good practice*" 2001.
- CIRIA C665 "*Assessing Risks Posed by Hazardous Ground Gases to Buildings*" 2007.
- Wilson & Card "*Proposed method classifying gassing sites*" Ground Engineering 1999.
- Card & Steve Wilson in "*A pragmatic approach to ground gas risk assessment for the 21st Century*" - CIRIA/Environmental Protection UK Ground gas seminar 2011
- BS 8576:2013 '*Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs)*'
- BS 8485:2015 '*Code of practise for the design of protective measures for methane and carbon dioxide ground gases for new buildings*'
- The Hazardous Waste (England) Regulations 2005.
- Environment Agency Hazardous Waste: "*Guidance on the classification and assessment of waste*" WM3 ver 1 May 2015.
- The National Planning Policy Framework (NPPF) March 2012
- DETR. Circular 02/2000 Contaminated Land.
- Environment Agency, 2009 'Using Soil Guideline Values'.
- Environment Agency, 2009 'Updated Technical Background to the CLEA model'.
- Environment Agency, 2009 'Human health toxicological assessment of contaminants in soil'.
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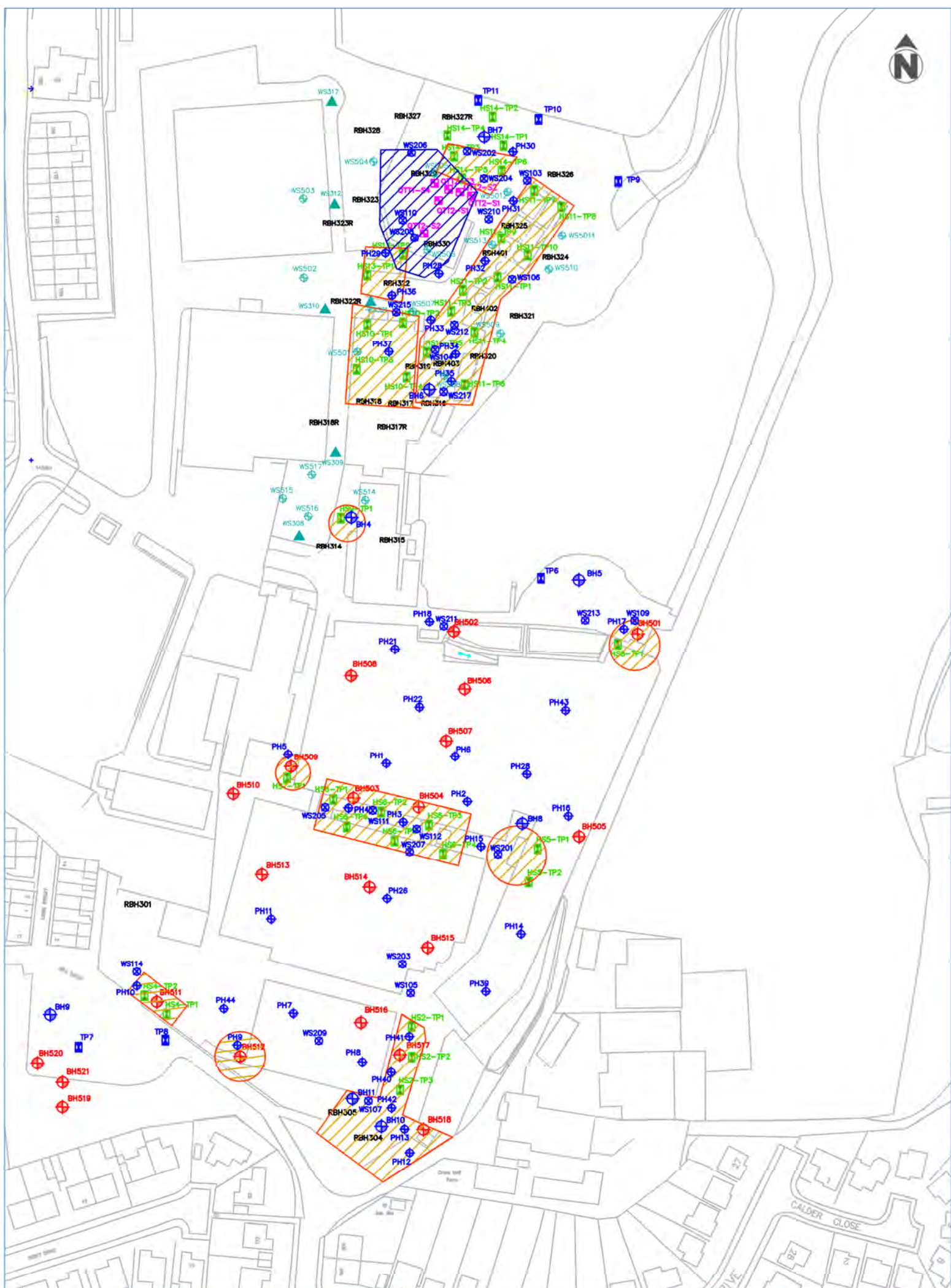
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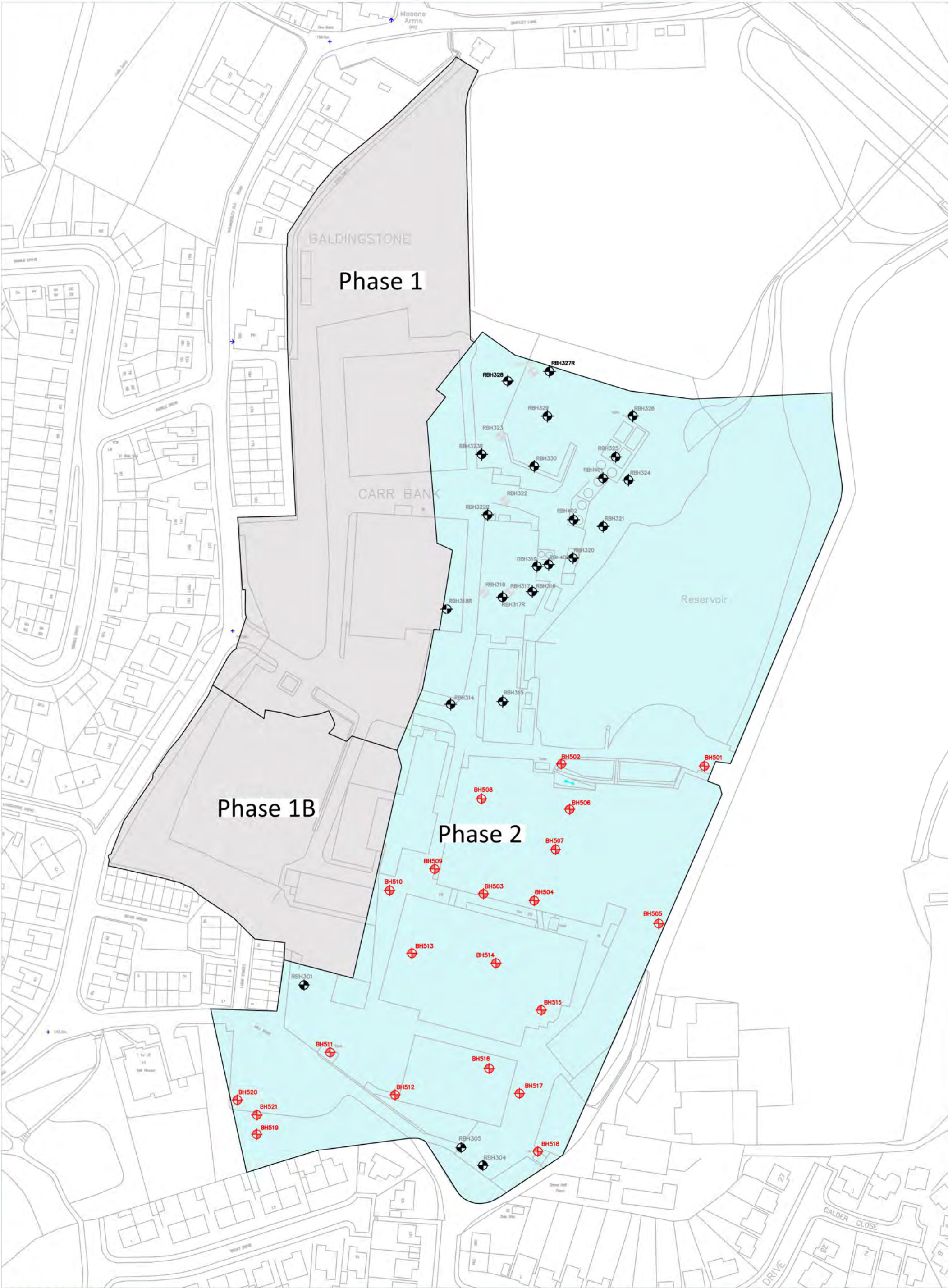
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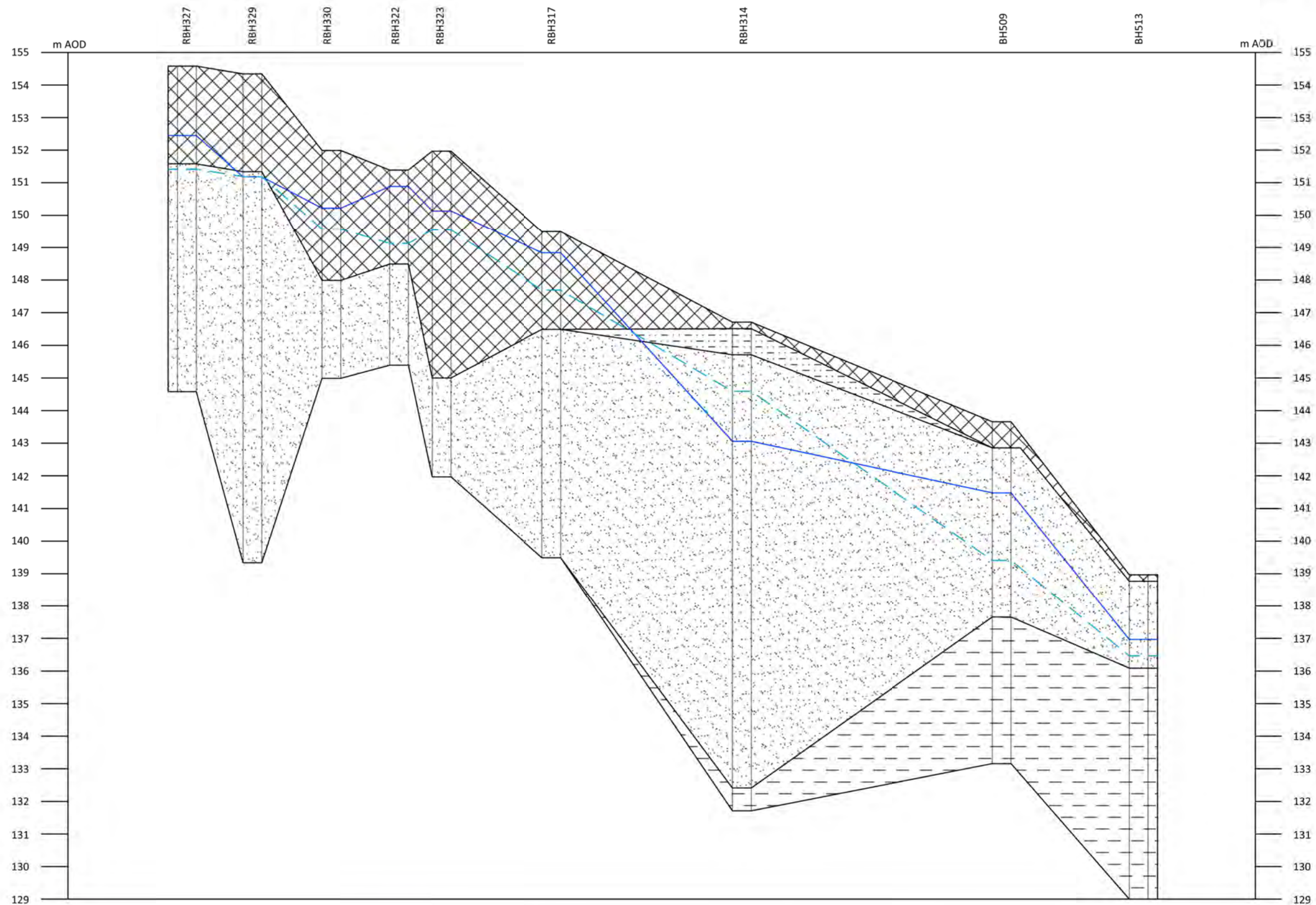
APPENDIX 1 - Plans





NORTH

SOUTH



GROUNDTECH
CONSULTING



CLIENT

URBAN REGEN

PROJECT TITLE

TETROSYL BEVIS GREEN WORKS, BURY

PLAN TITLE

SECTION A-A'

DATE

JULY 2022

SCALE

NTS

PLAN NUMBER

GRO-21459-P03A

Rev.

Details

Date

Status

Preliminary

Draft

Issued

For Comment

Approved

Notes

MADE GROUND

SANDSTONE

GLACIAL TILL

MUDSTONE

COAL

SANDSTONE

MUDSTONE

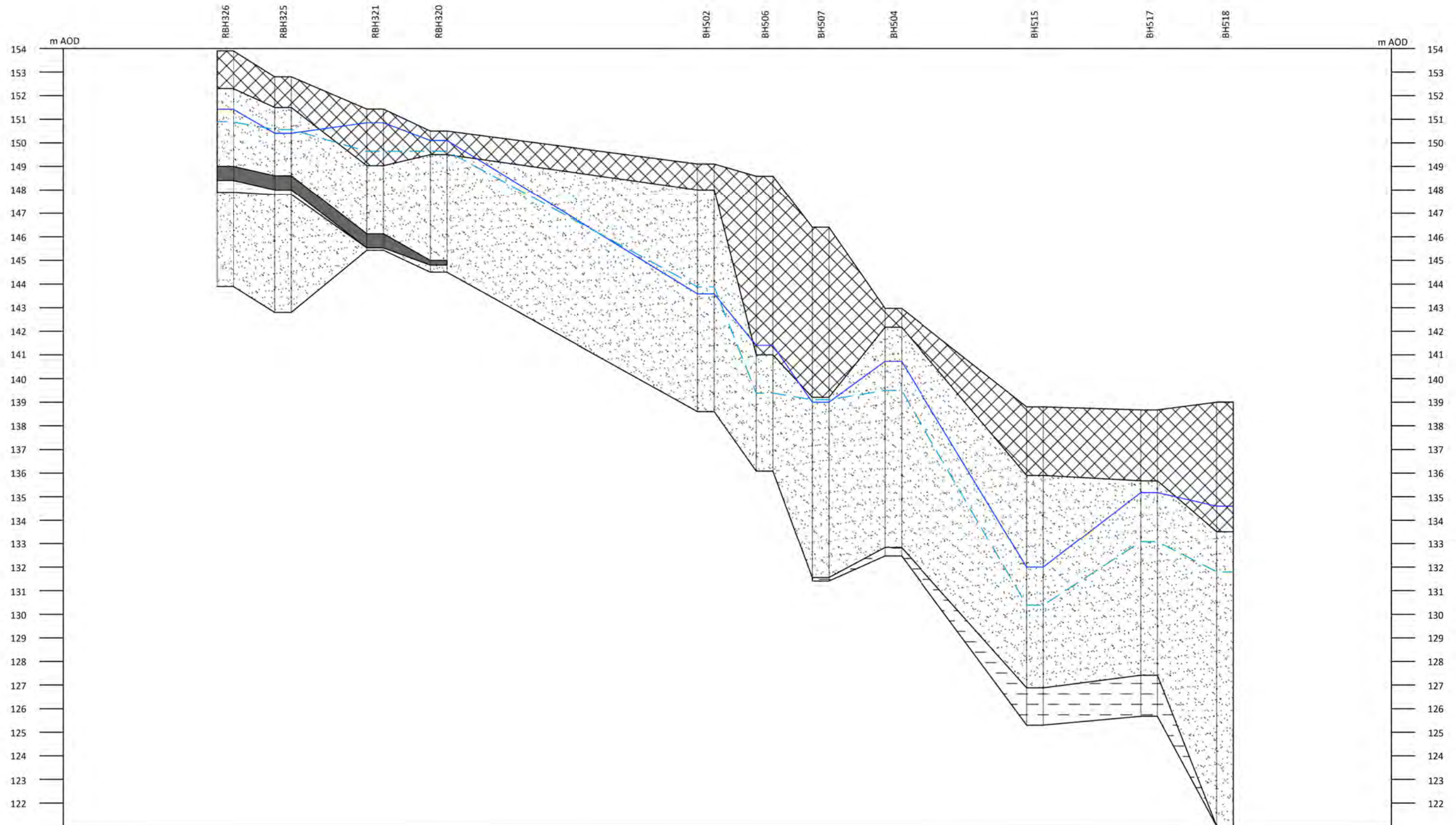
GROUNDWATER DURING MONITORING

GROUNDWATER STRIKE



NORTH

SOUTH



GROUNDTECH
CONSULTING



CLIENT

URBAN REGEN

PROJECT TITLE

TETROSYL BEVIS GREEN WORKS, BURY

PLAN TITLE

SECTION B-B'

DATE

JULY 2022

SCALE

NTS

PLAN NUMBER

GRO-21459-P03B

Rev.	Details	Date

Status	
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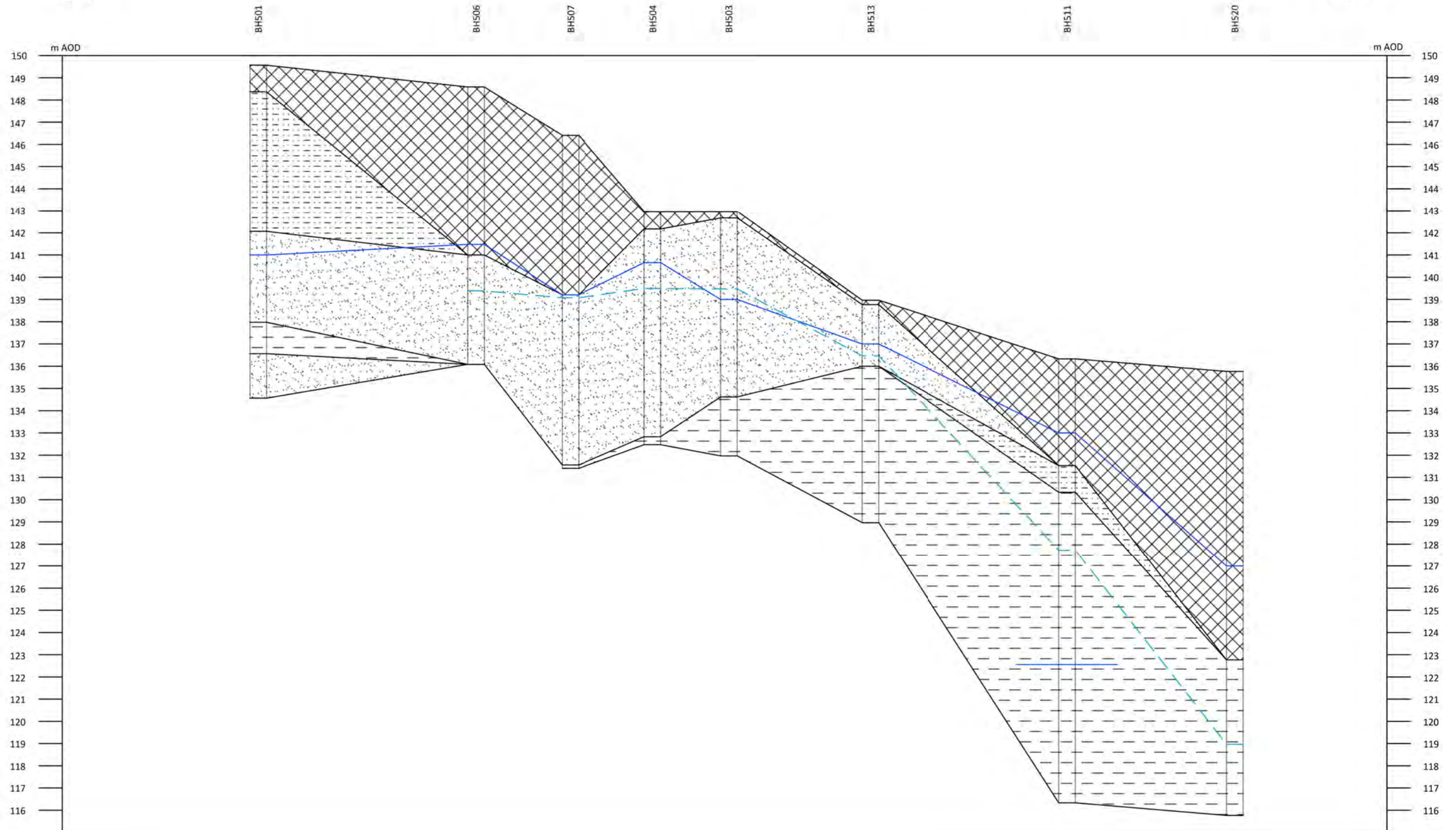
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	GLACIAL TILL		MUDSTONE		GROUNDWATER STRIKE
	COAL				



NORTH
EAST

SOUTH
WEST



GROUNDTECH
CONSULTING



CLIENT

URBAN REGEN

PROJECT TITLE

TETROSYL BEVIS GREEN WORKS, BURY

PLAN TITLE

SECTION C-C'

DATE

JULY 2022

SCALE

NTS

PLAN NUMBER

GRO-21459-P03C

Rev.

Details

Date

Status

Preliminary

Draft

Issued

For Comment

Approved

Notes

MADE GROUND

GLACIAL TILL

COAL

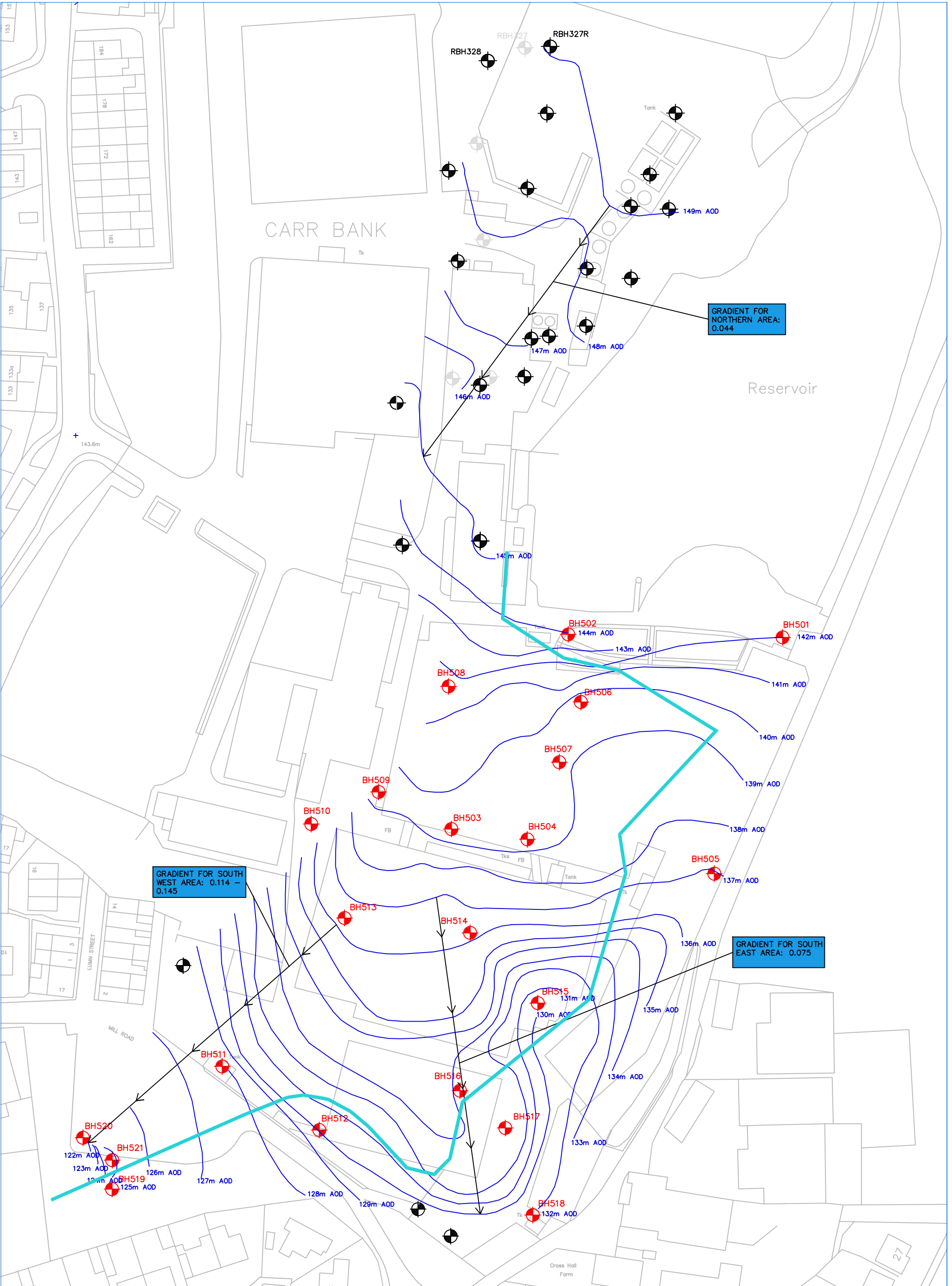
SANDSTONE

MUDSTONE

GROUNDWATER STRIKE

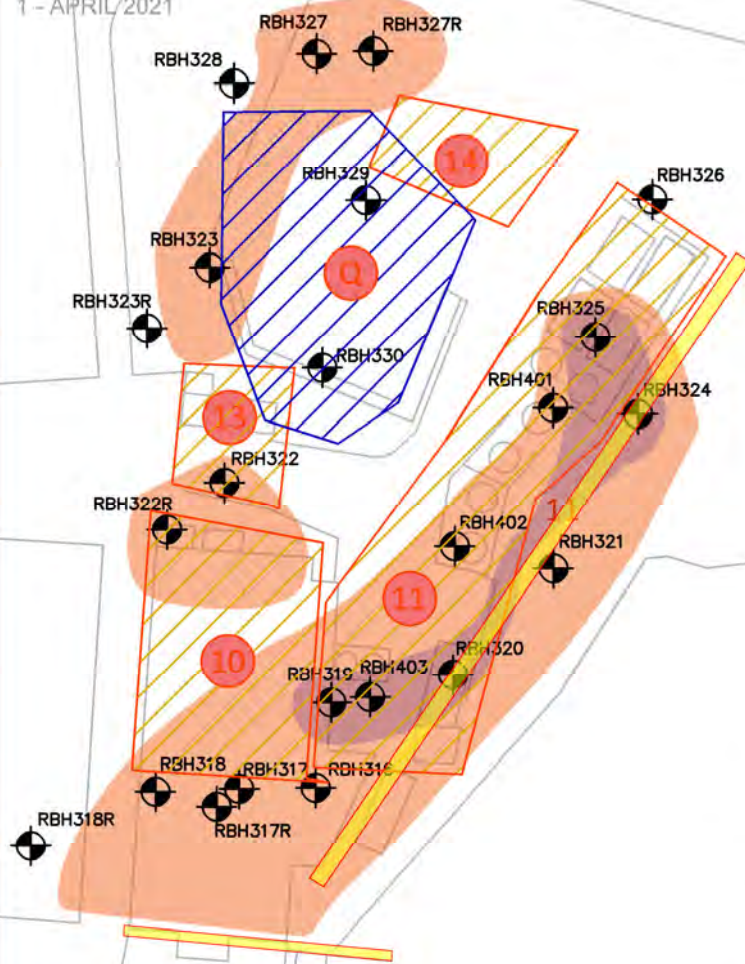
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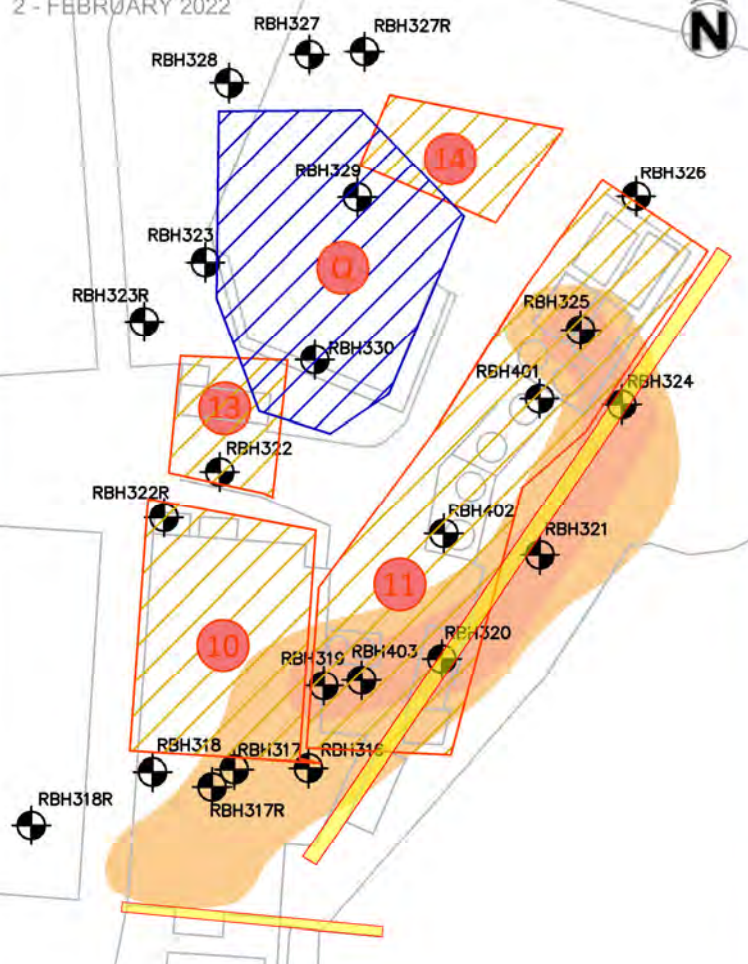


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	URBAN REGEN	JULY 2022			Preliminary	
	PROJECT TITLE	SCALE			Draft	
	TETROSYL BEVIS GREEN WORKS, BURY	1:500 @ A1			Issued	
	PLAN TITLE	PLAN NUMBER			For Comment	
	GROUNDWATER CONTOUR PLAN	GRO-21459-P04	Rev.	Details	Date	Approved

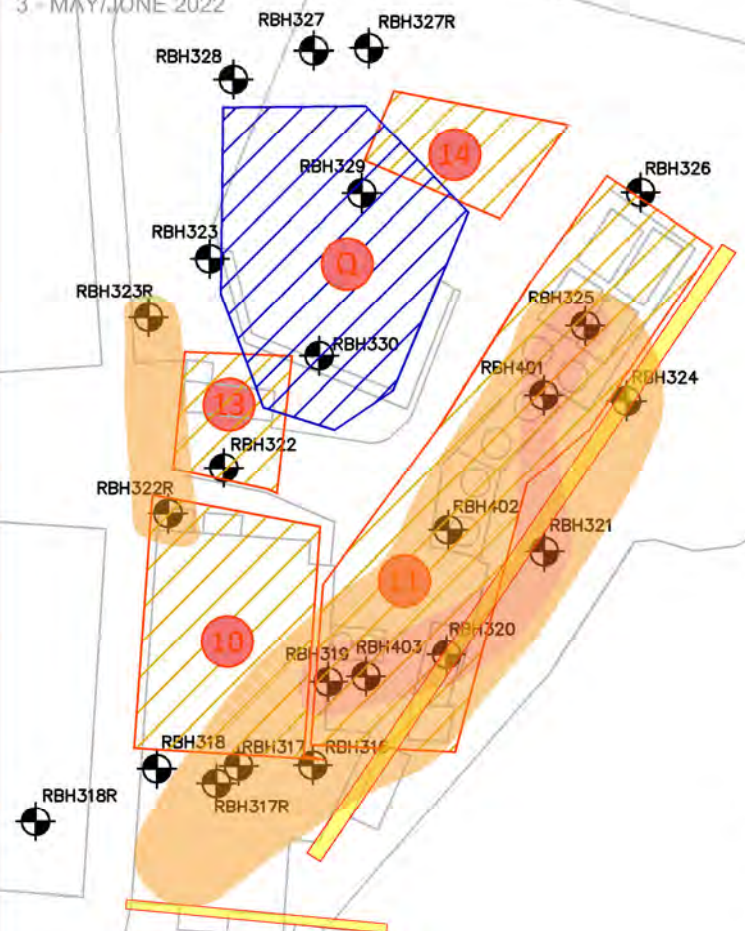
1 - APRIL 2021



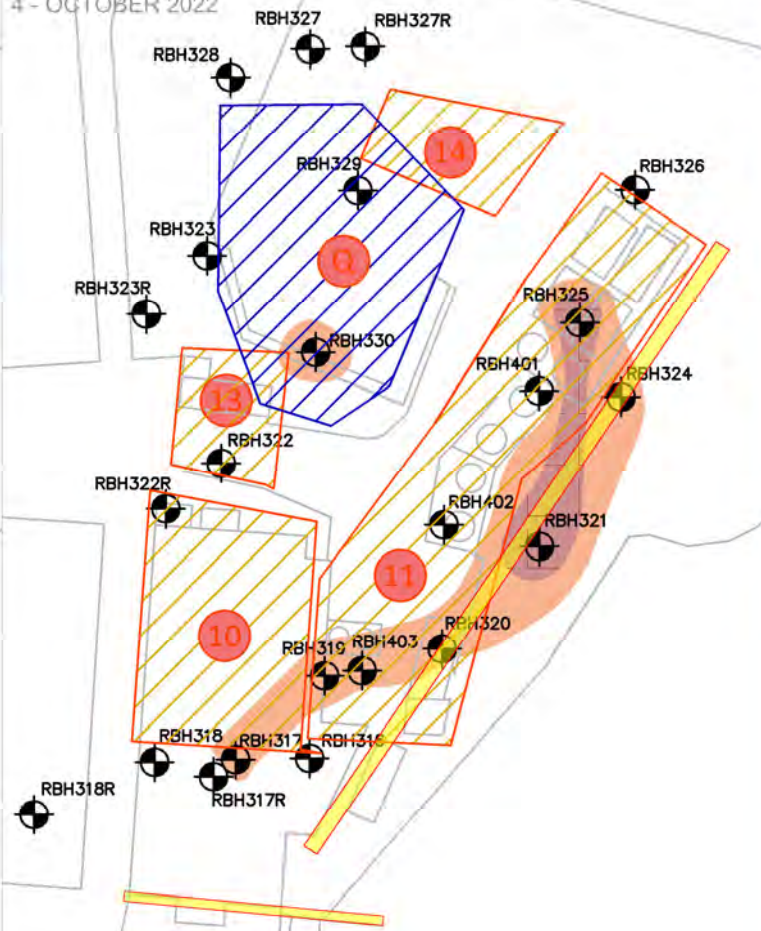
2 - FEBRUARY 2022



3 - MAY/JUNE 2022



4 - OCTOBER 2022

GROUNDTECH
CONSULTING

CLIENT
URBAN RESIN

PROJECT TITLE
TETROSYL BEVIR GREEN WORKS BURY

PLAN TITLE
GROUNDWATER PLUMES MONITORING

DATE
NOVEMBER 2022

SCALE
NTS

PLAN NUMBER
GRO-21580-P05A

Rev: Details

Date

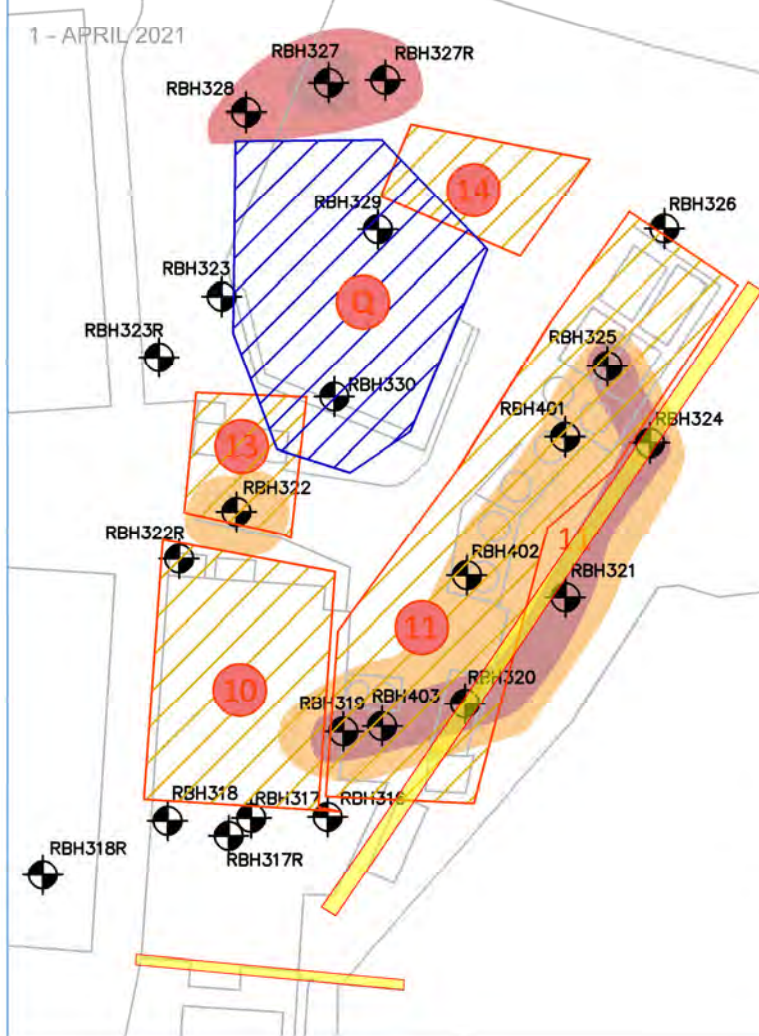
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Issued
For Comments
Approved

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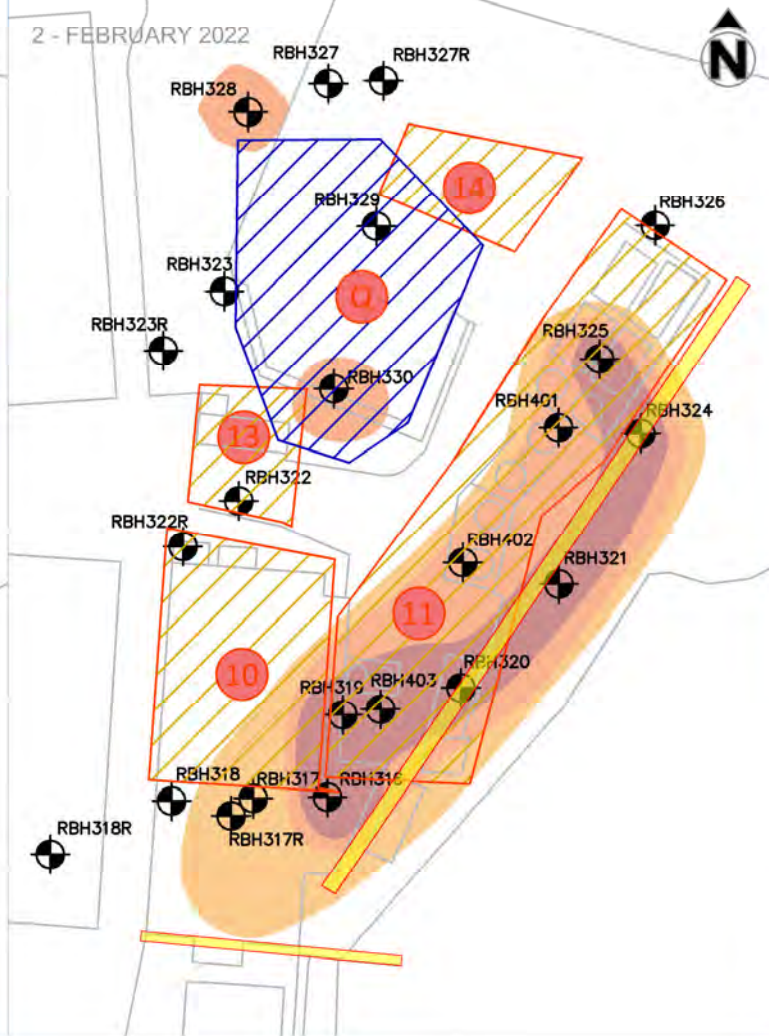
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- Postulated Groundwater Plumes: 10-100+ EQS Values
- Postulated Groundwater Plumes: 1-10+ EQS Values



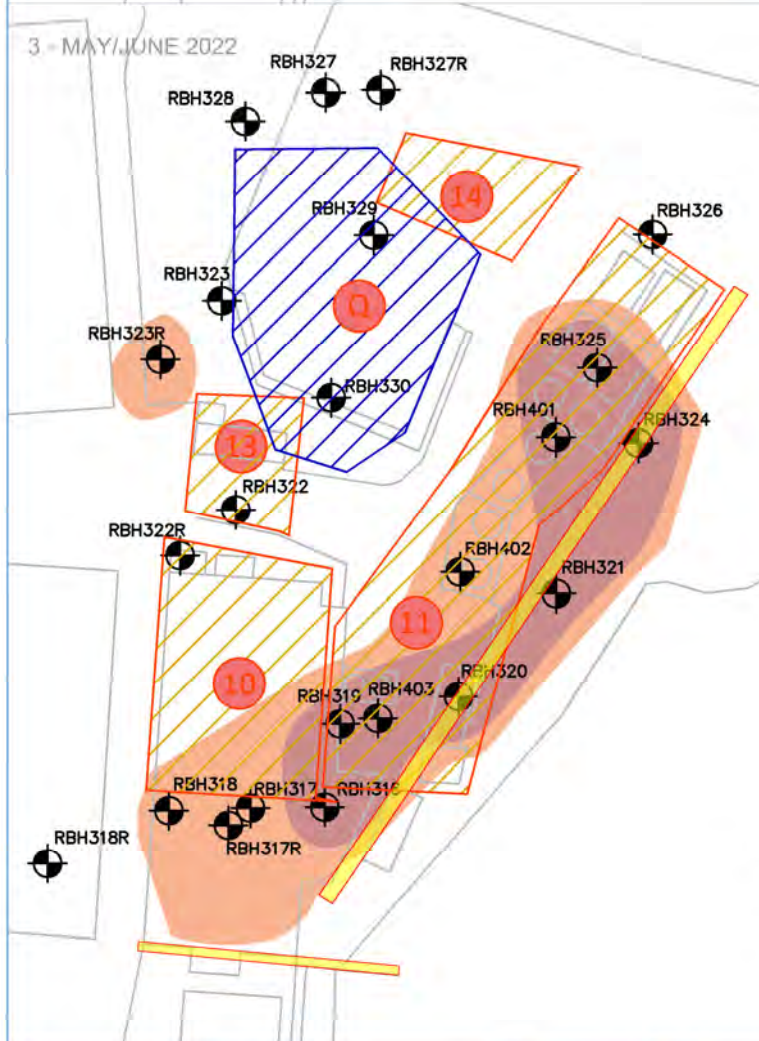
1 - APRIL 2021



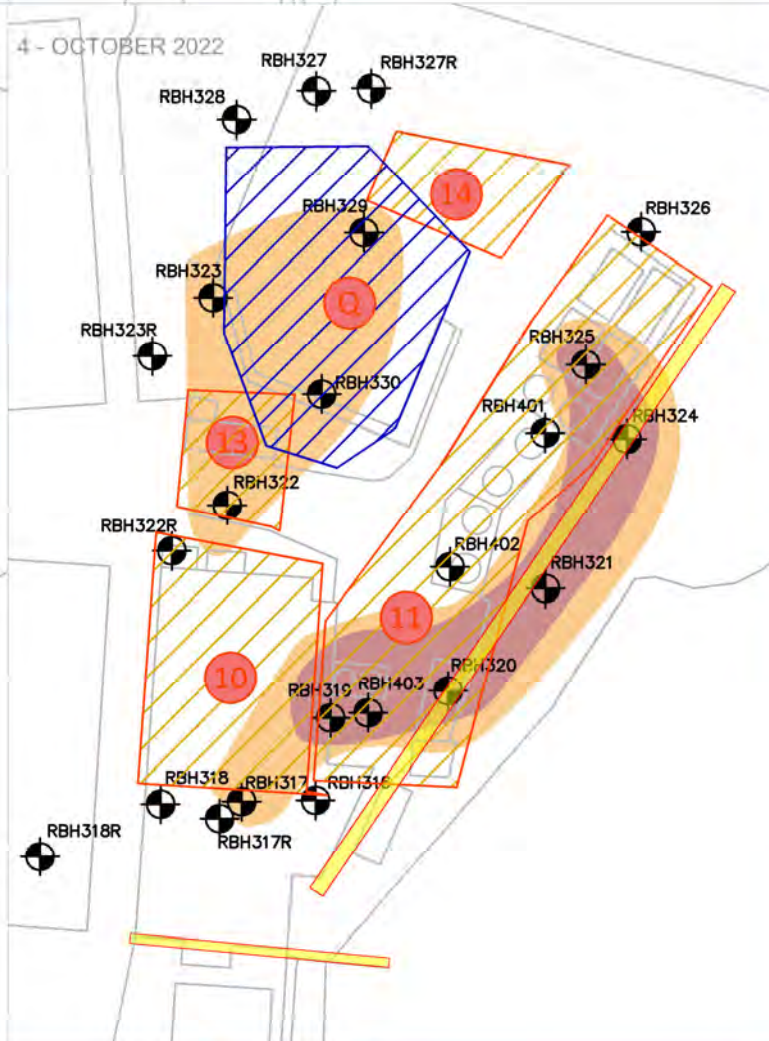
2 - FEBRUARY 2022



3 - MAY/JUNE 2022



4 - OCTOBER 2022

GROUNDTECH
CONSULTING

CLIENT

URBAN RESIN

PROJECT TITLE

TETROSYL BEVIR GREEN WERKS BURY

PLAN TITLE

GROUNDWATER PLUMES TOLLUENE

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NOVEMBER 2022

SCALE

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PLAN NUMBER

GRO-215504-P02H

Rev: Details

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Notes

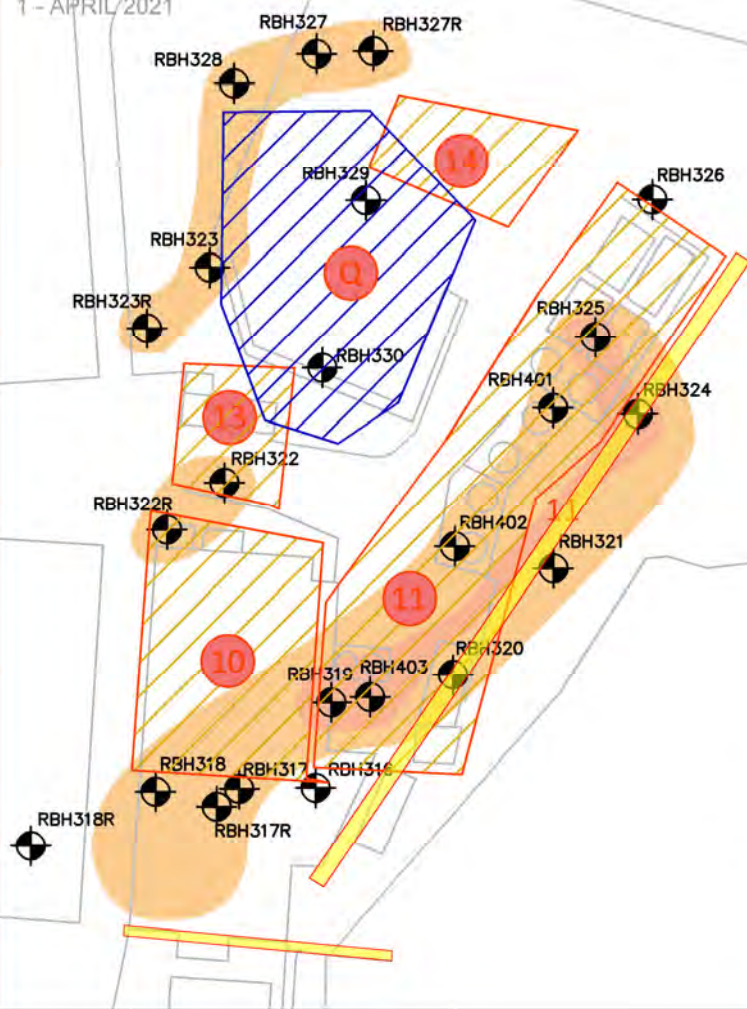
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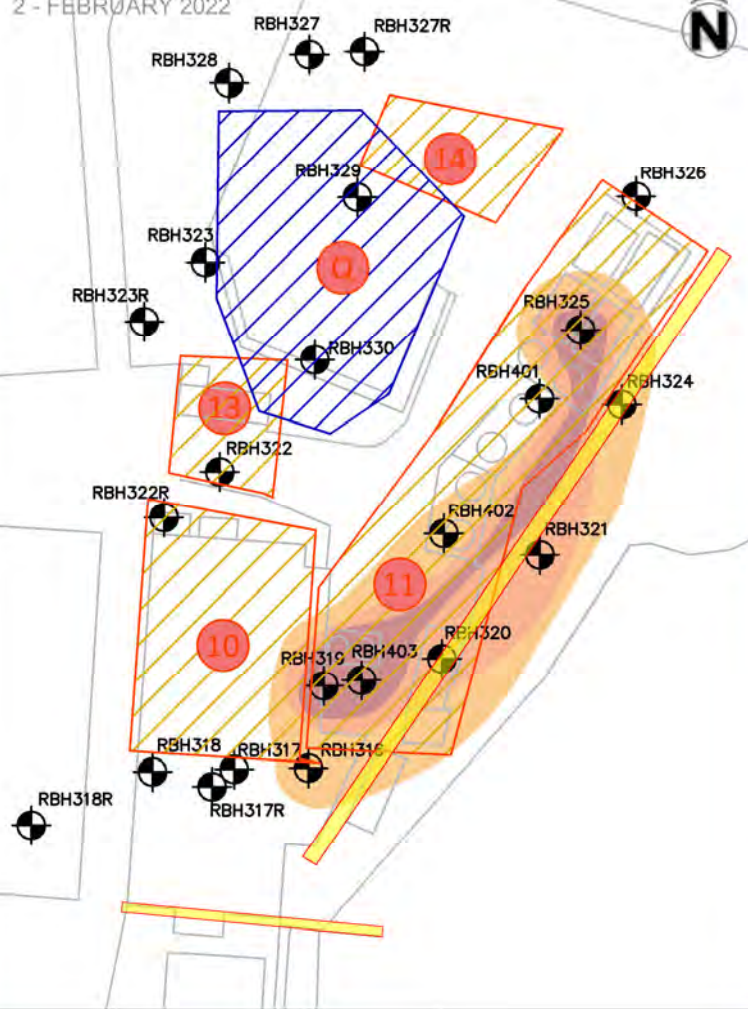
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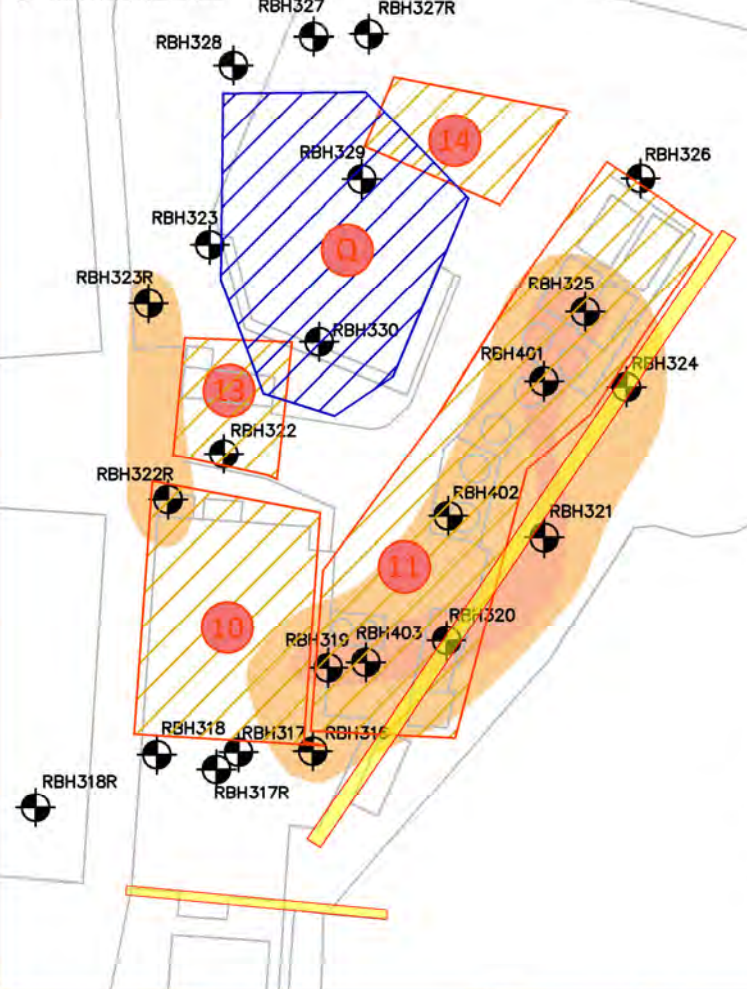
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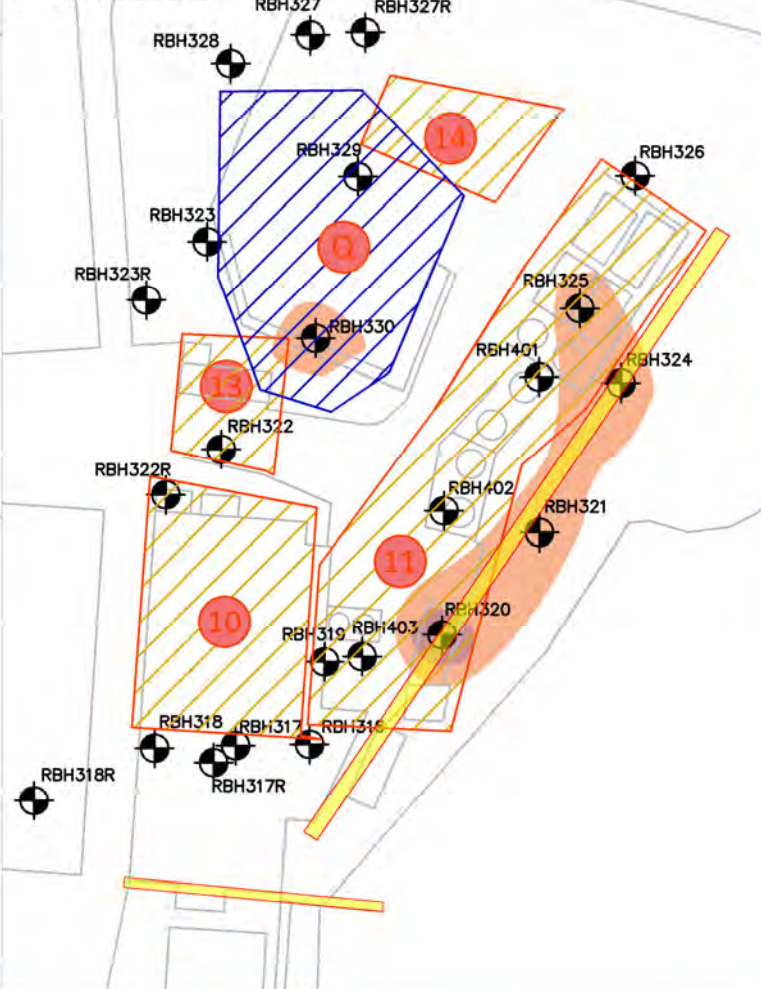
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4 - OCTOBER 2022

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PROJECT TITLE

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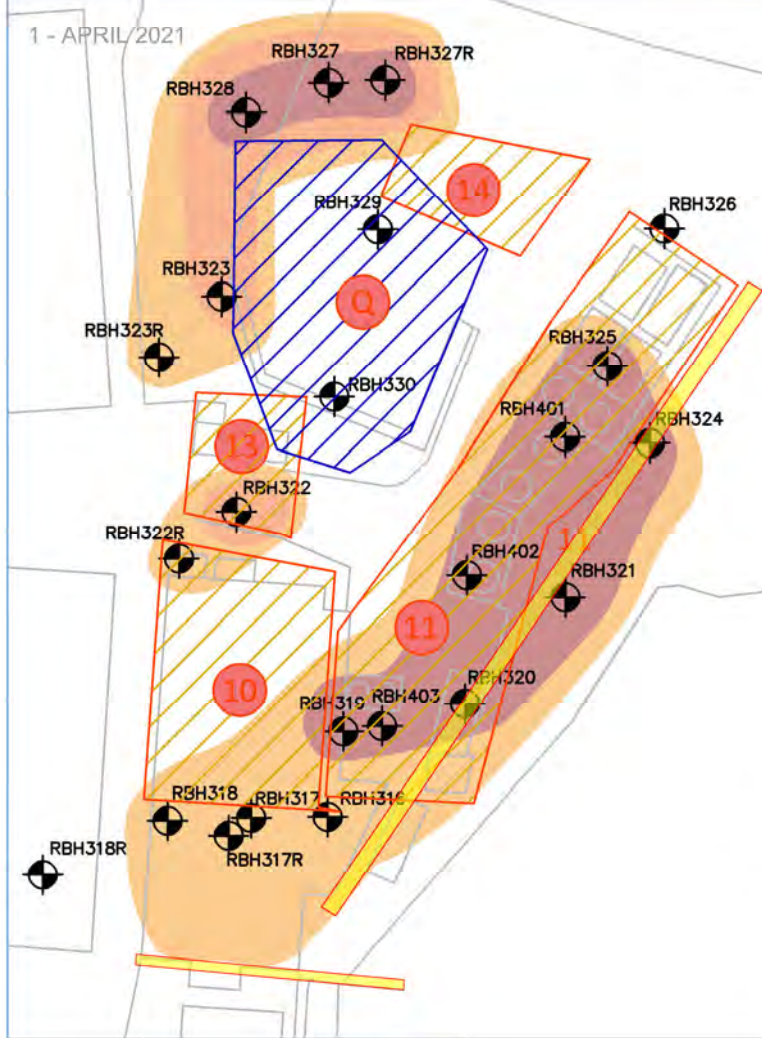
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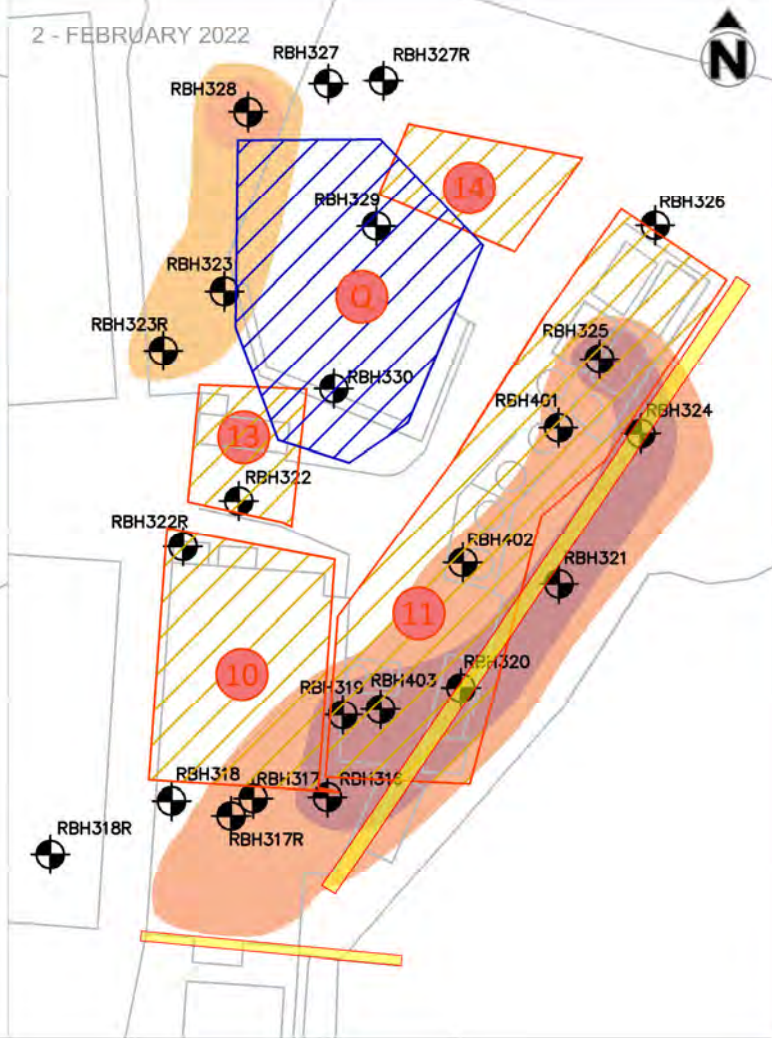
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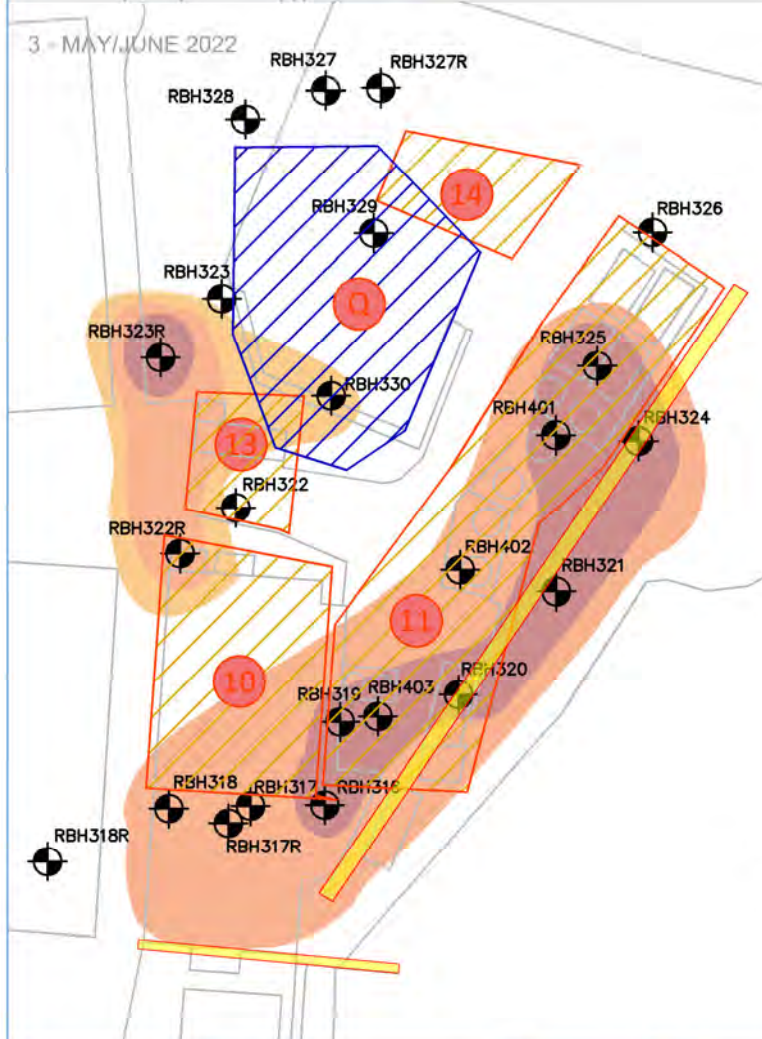
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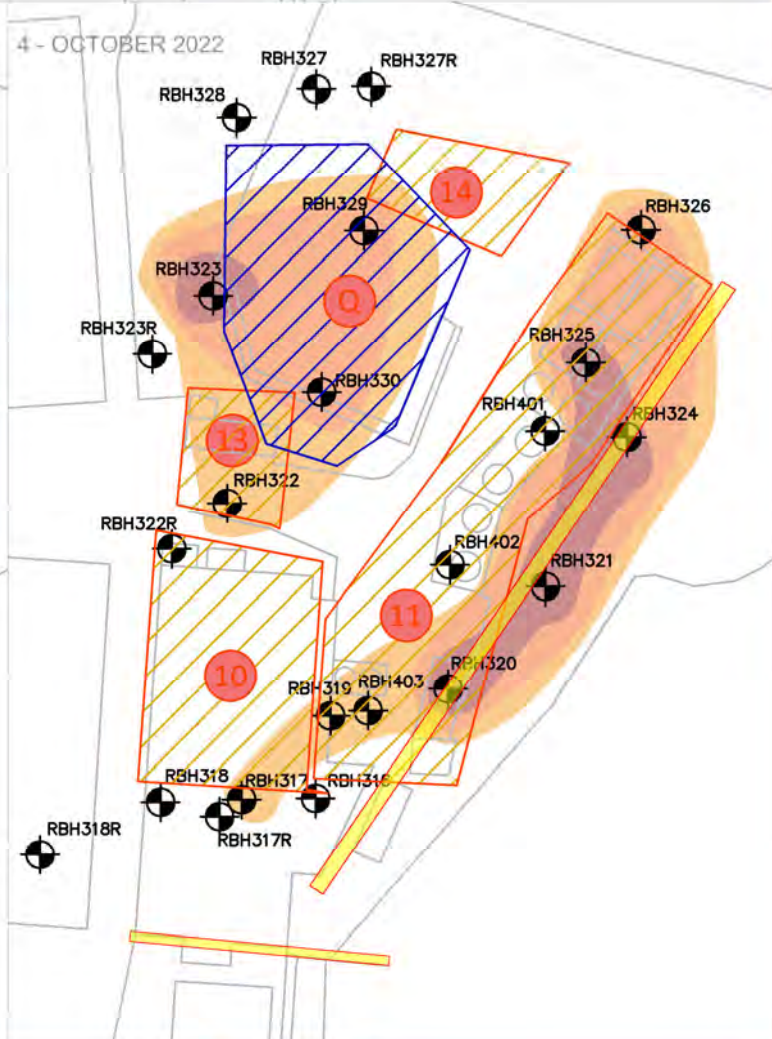
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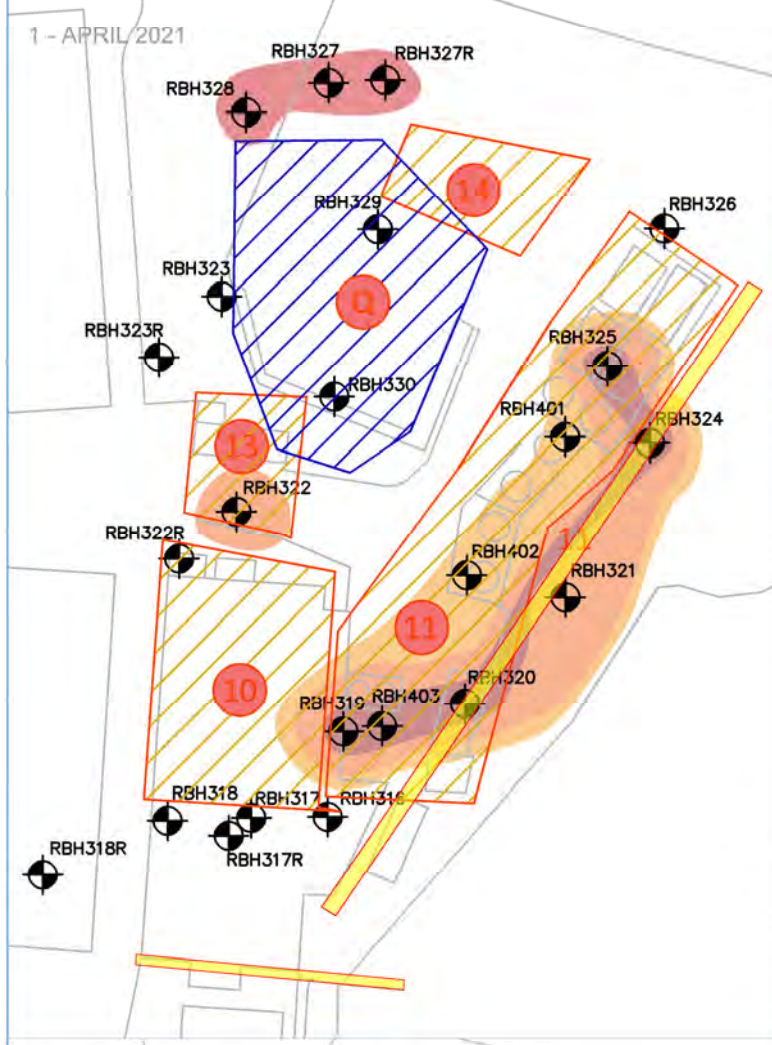
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Postulated Groundwater Plumes 10-100+ EQS Values

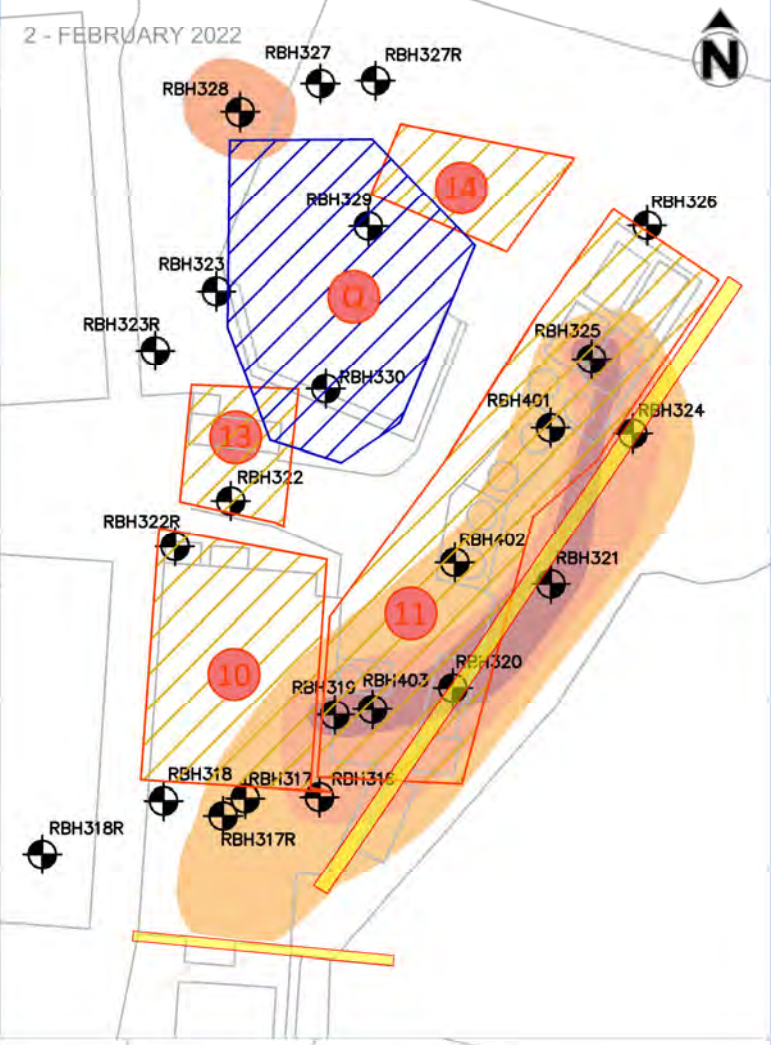
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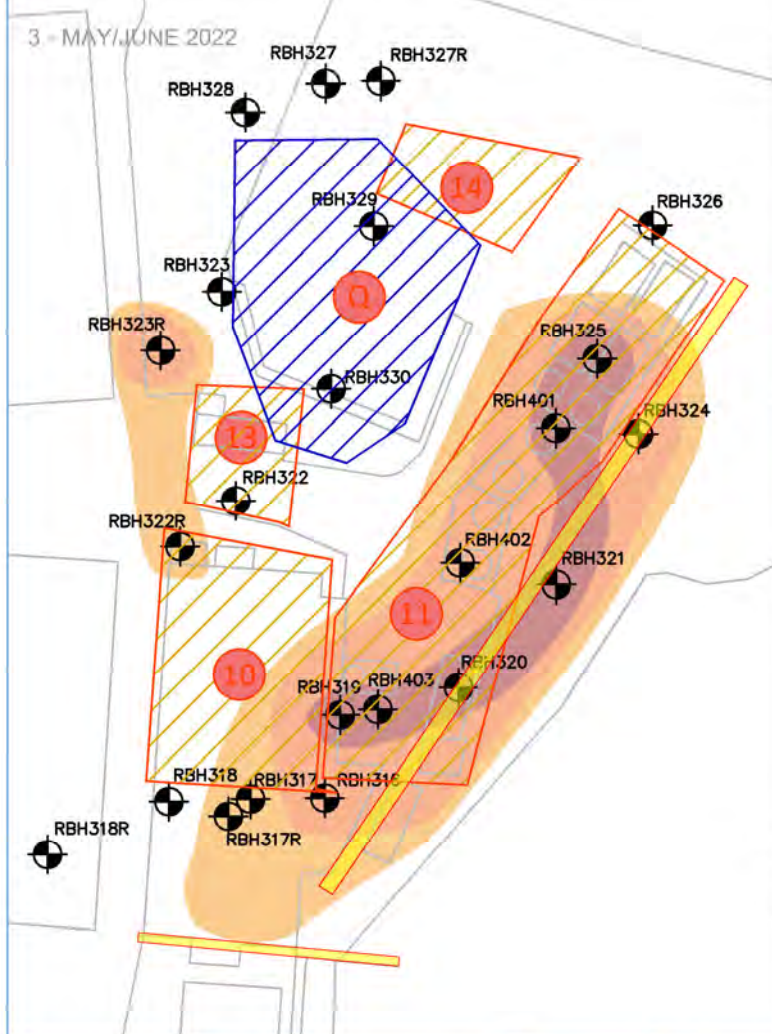
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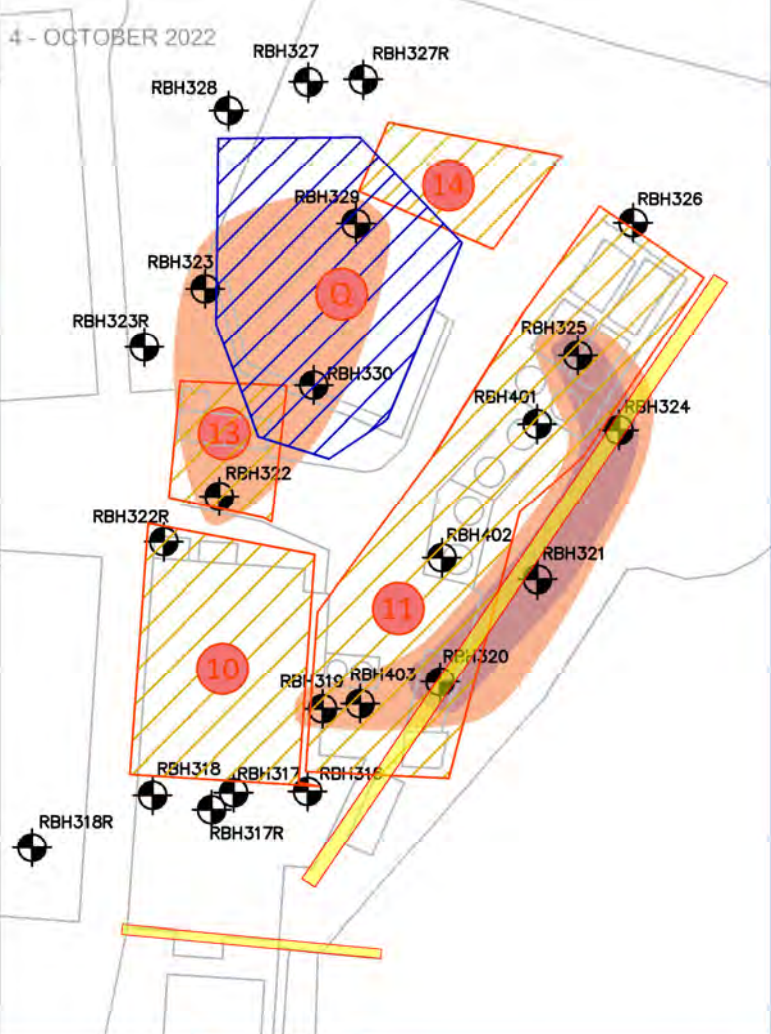
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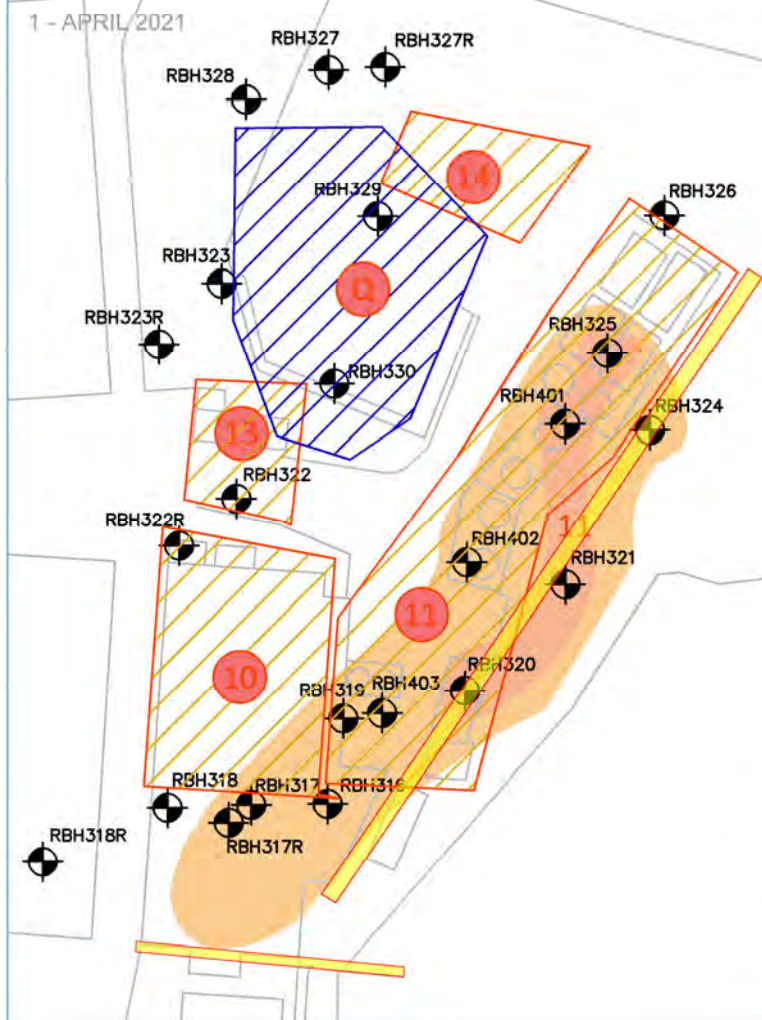
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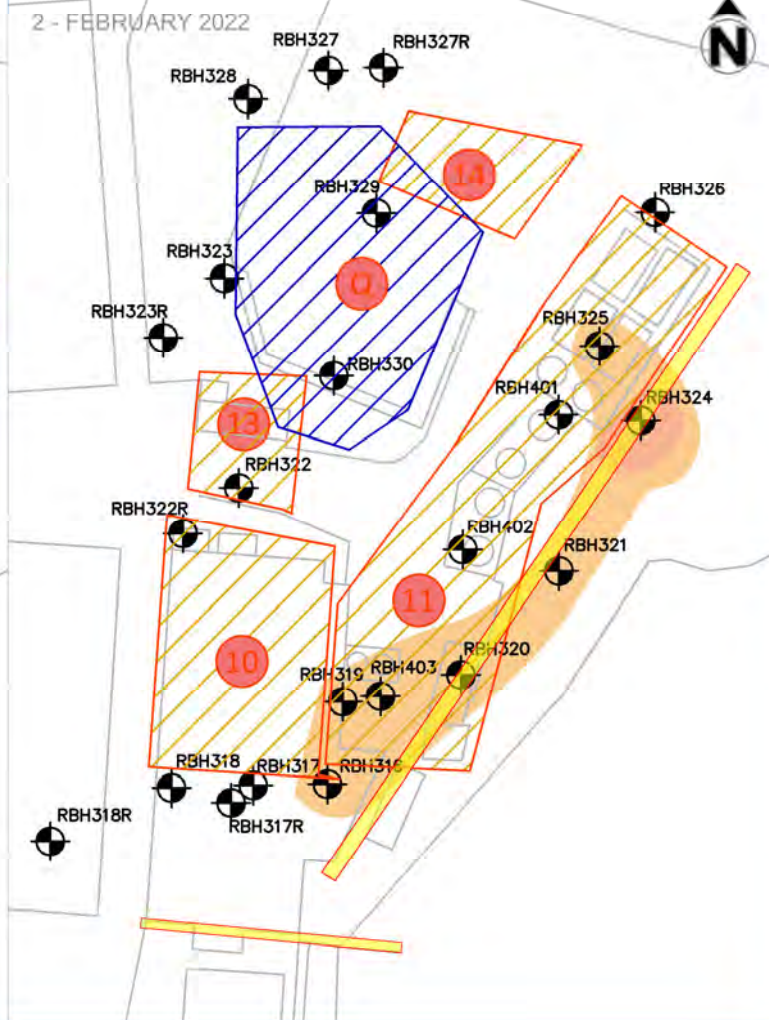
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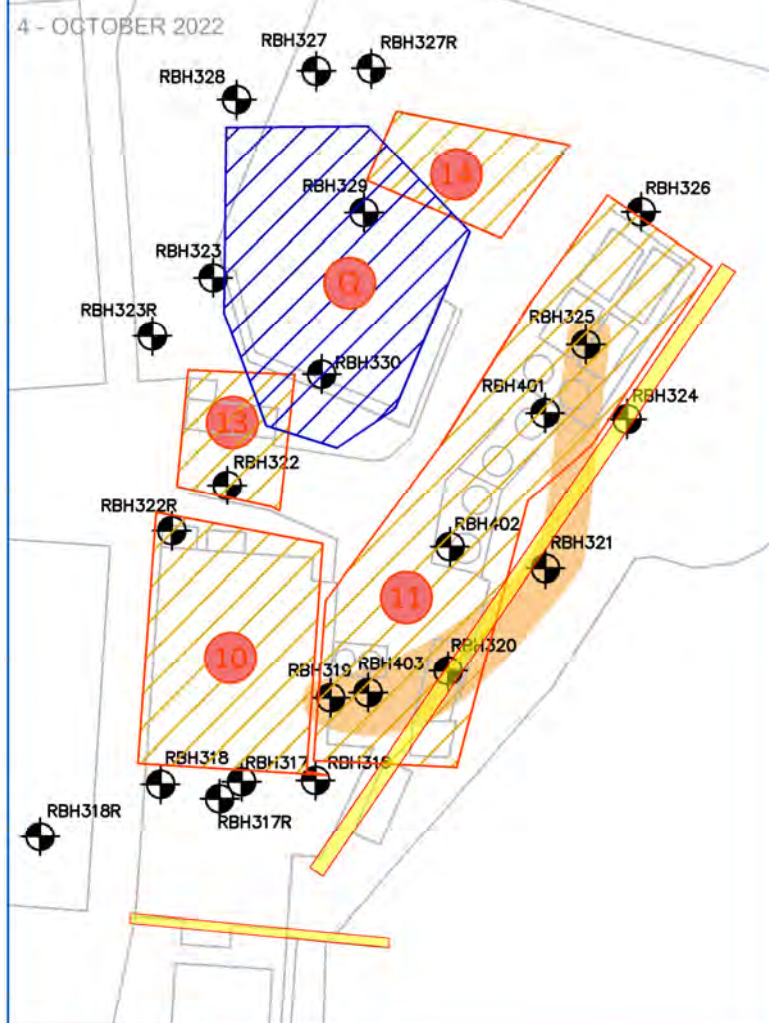
1 - APRIL 2021



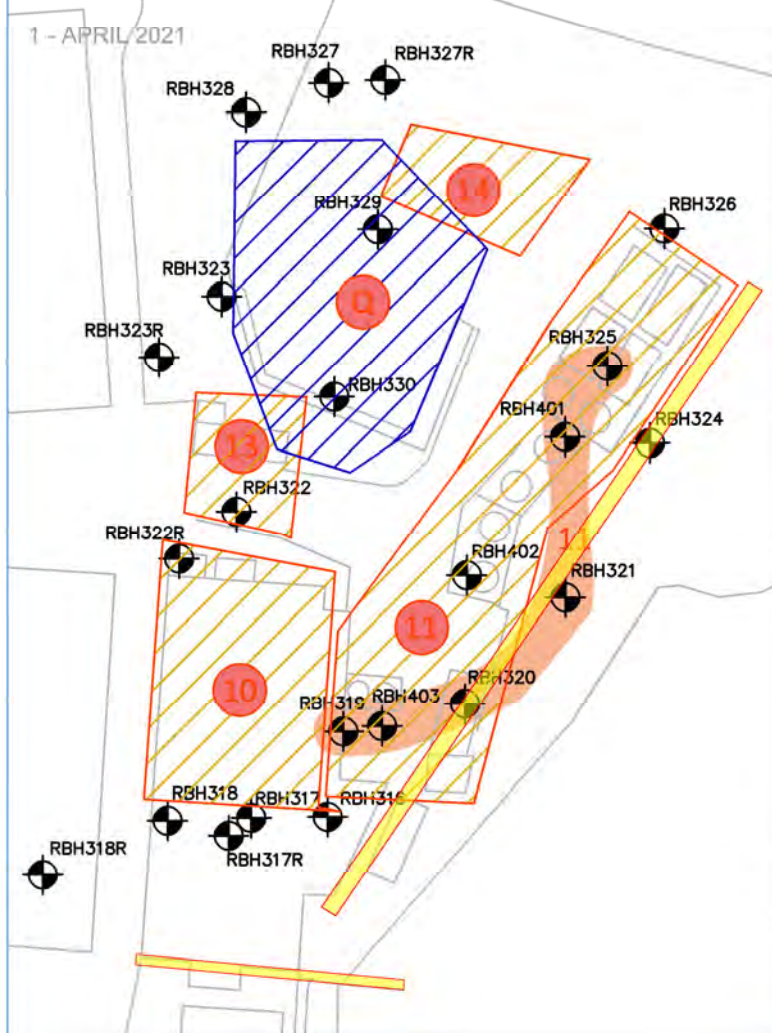
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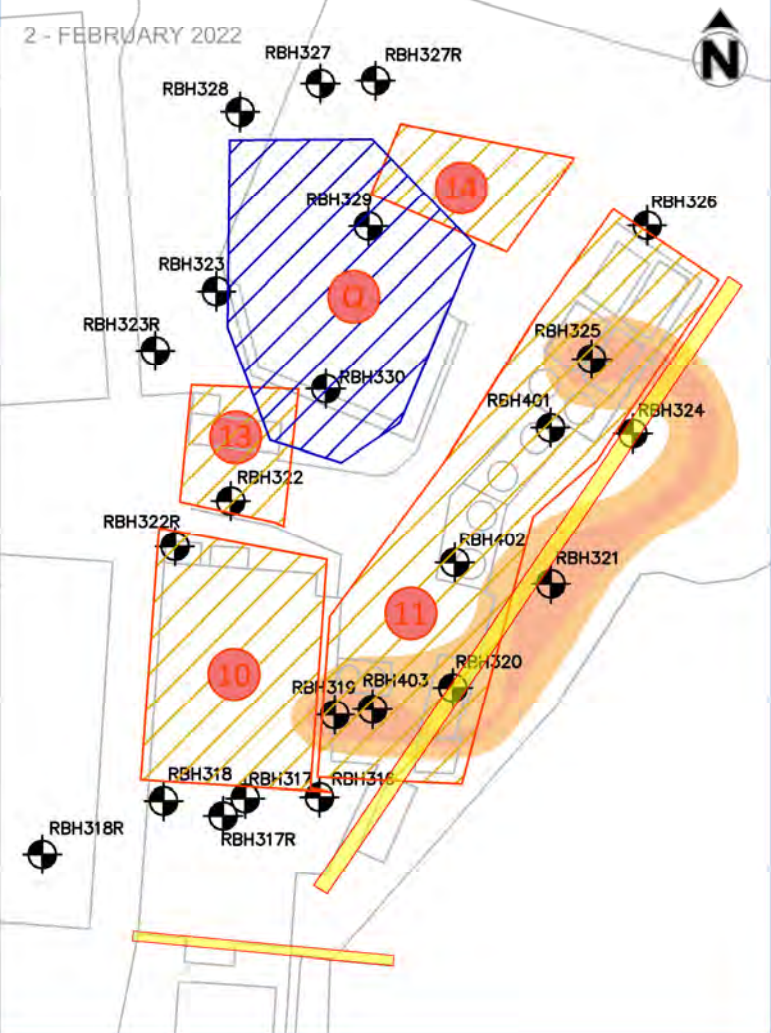
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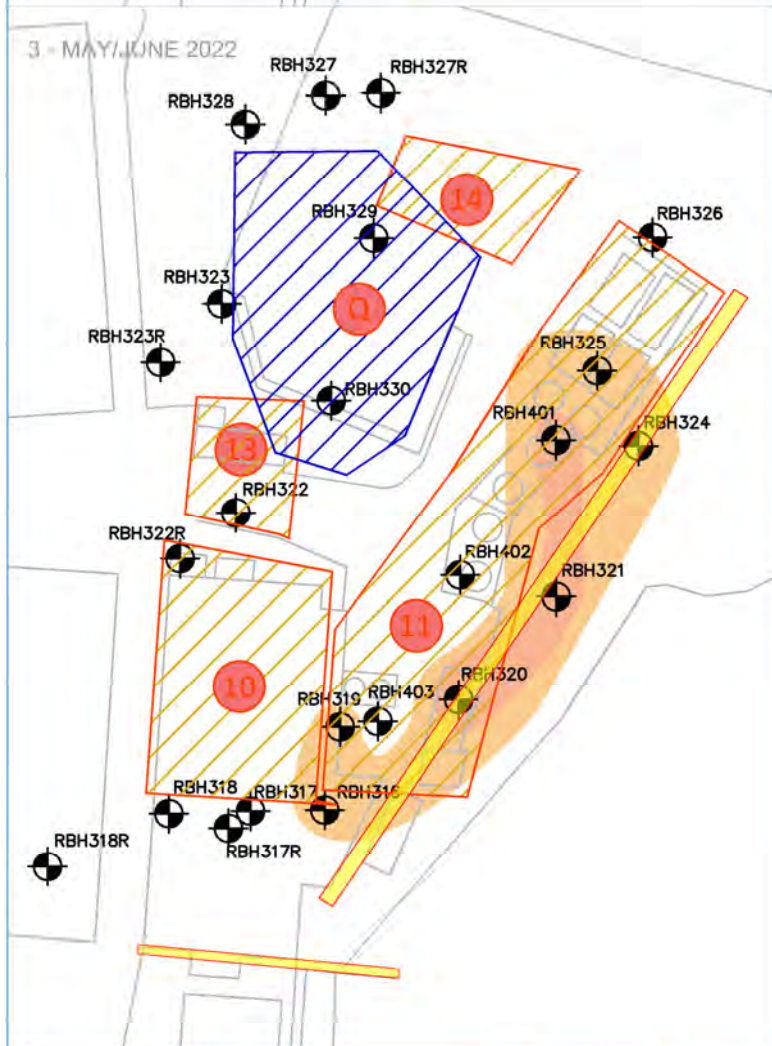
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NOVEMBER 2022
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GRO-211580-P05B

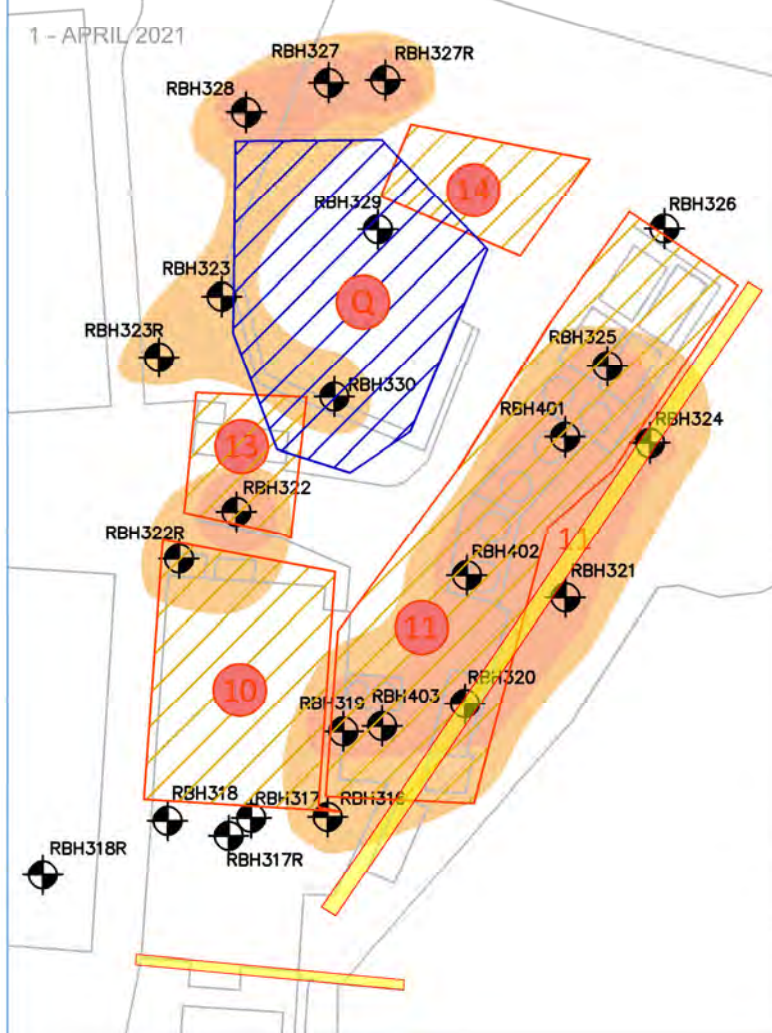
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For Comment
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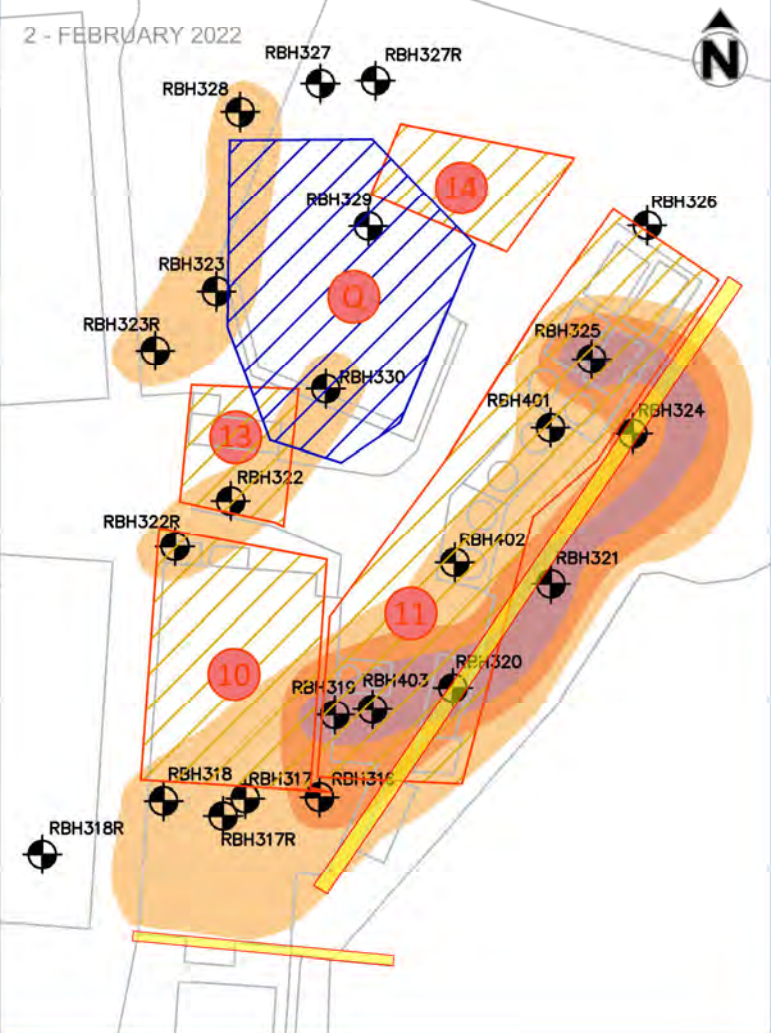
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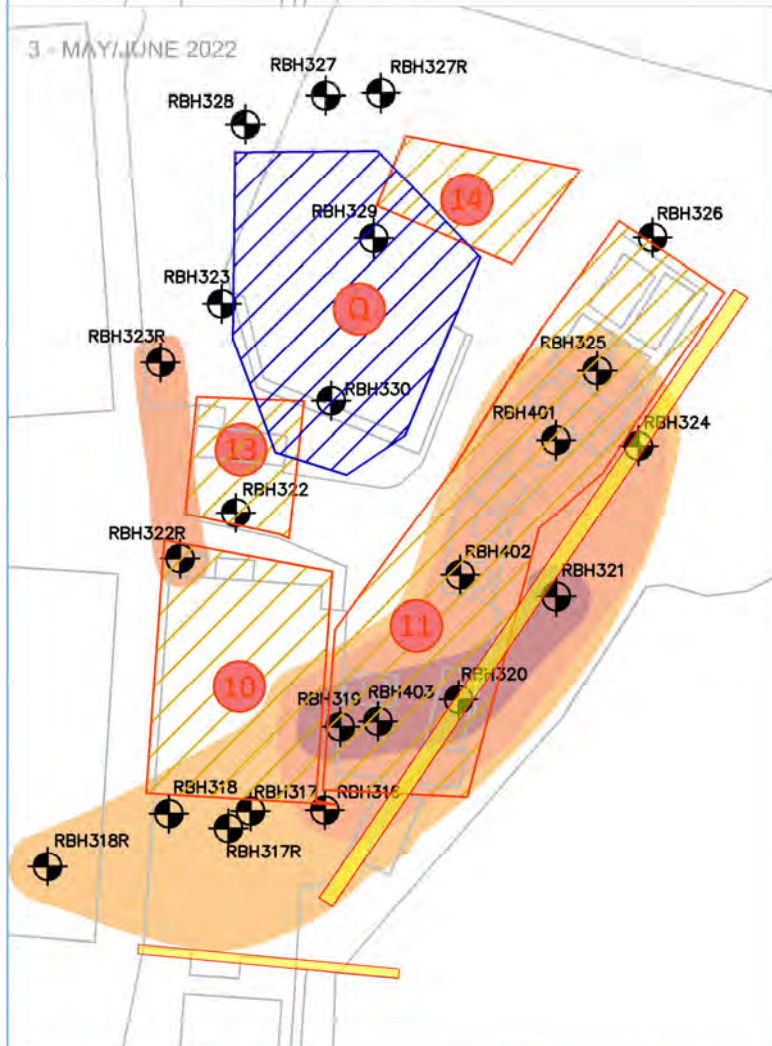
1 - APRIL 2021



2 - FEBRUARY 2022



3 - MAY/JUNE 2022



GROUNDTECH
CONSULTING



CLIENT
URBAN RESIN
PROJECT TITLE
TETROSYL BEVIE GREEN WORKS BURY
PLAN TITLE
GROUNDWATER PLUMES DR01-DR-013

DATE
NOVEMBER 2022
SCALE
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PLAN NUMBER
GRO-21-580-P05C

Rev: 01
Date:

Status:
Preliminary
Draft
Issued
For Comment
Approved

Notes:
Postulated Groundwater Plumes: 10x EQS Values
Postulated Groundwater Plumes: 10-100x EQS Values
Postulated Groundwater Plumes: 1-10x EQS Values





Nonoxonolone (12) = 0.00-0.45 mg/kg

Ethyleneurea = 0.402 - 58.461mg/kg
 m/p. Xylene = 3.546 - 85.835mg/kg
 AlphaChl-C10-C12 = 15.1 - 161.5mg/kg
 AlphaChl-C10-C12 = 570.0 - 1954.1mg/kg
 AromatChl-C10-C12 = 3.5 - 35.9mg/kg
 AromatChl-C10-C12 = 162.4 - 442.7mg/kg
 AromatChl-C12-C16 = 81 - 185mg/kg
 AromatChl-C16-C21 = 7.3 - 504mg/kg
 NaphtChl = 2.367 - 2.465mg/kg
 Chlaphenothre = 0.003 - 0.011mg/kg

1,4-Dibenzene-2,3-5,4-7 mg/kg
 Aliphatic C6-C8-12,9-278.4mg/kg
 Aliphatic C8-110-6.4-150.3 mg/kg
 Aliphatic C10-C12-10.0-106.4mg/kg
 Aromatic C7-C8-3.0-291.4mg/kg
 Aromatic C8-C10-1.3-192.6mg/kg
 Aromatic C10-C12-16.3-137.2mg/kg
 Trichloroethylene (TCE)-40.002-0.02mg/kg
 Vinyl Chloride-0.02-0.01Gms/kg

B-1502
Trichloroethane-194mg/kg
1,2,4-Trimethyl Benzene-46.38mg/kg

H57
F57's Inter=0.041mp/ps

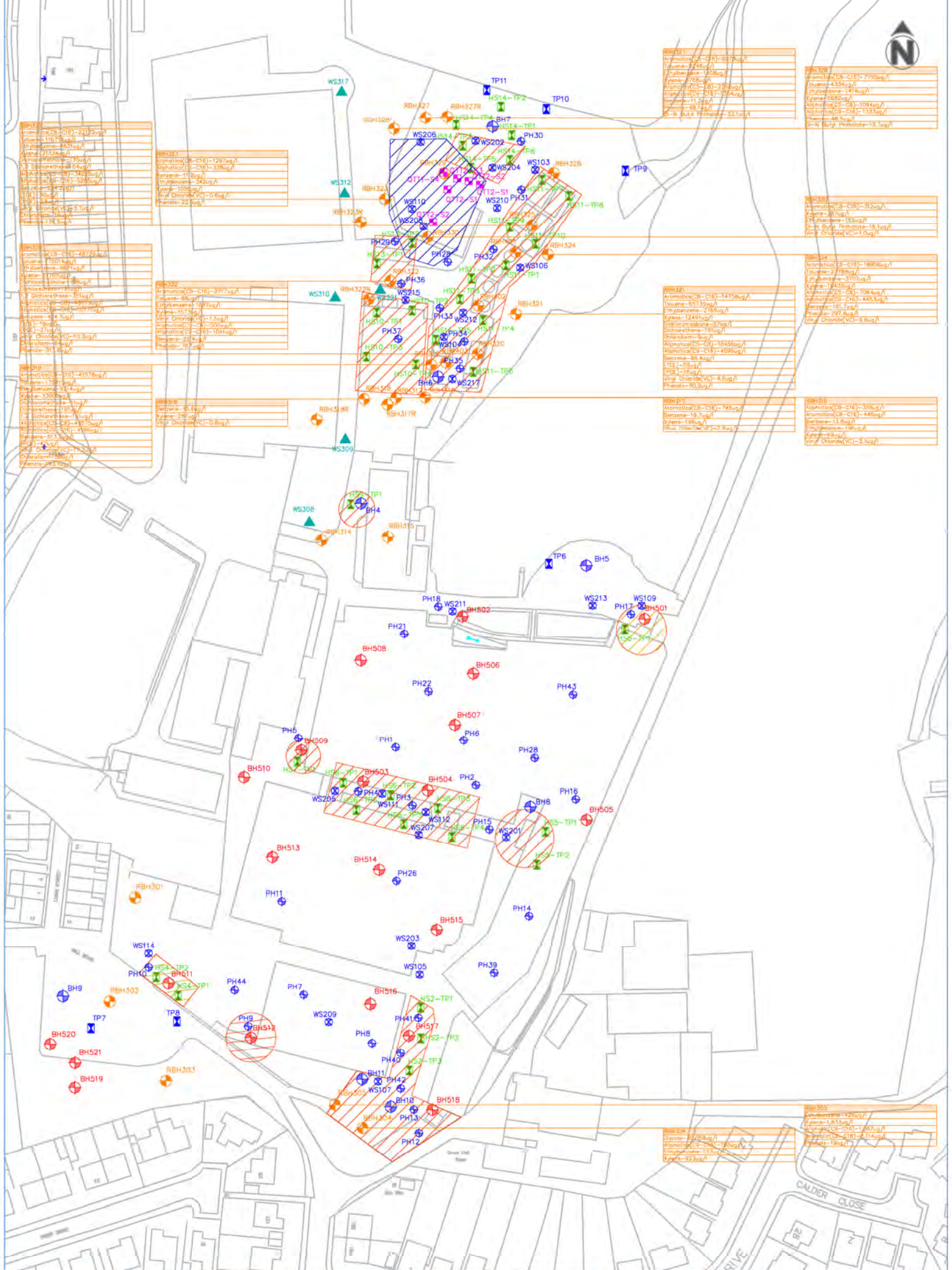
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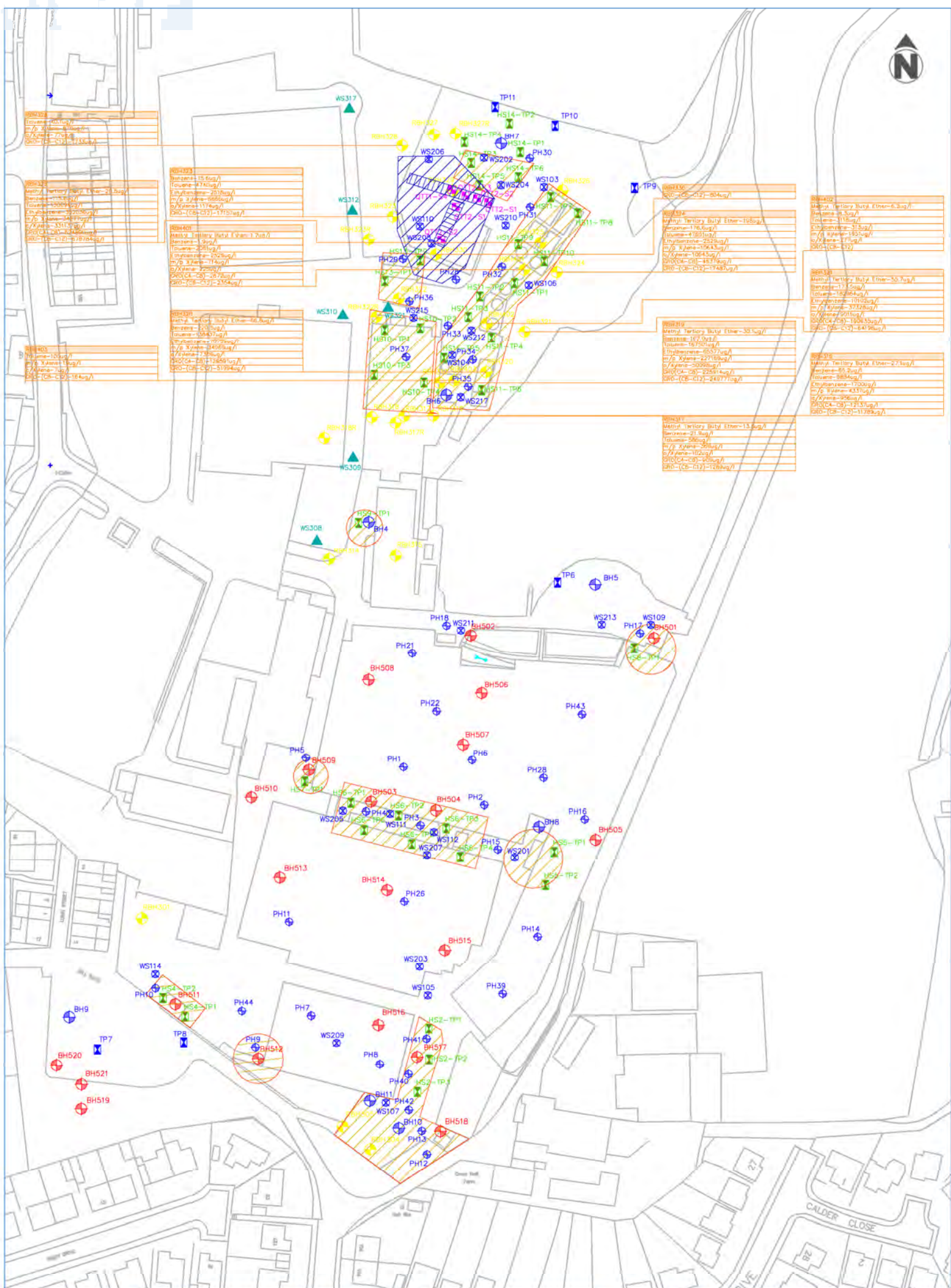
194503

H56

Aliphatic (C6-C10)	≤ 0.1 mg/kg
Aliphatic (C10-C12)	≤ 2 to 7.5 mg/kg
Aromatic (C6-C10)	≤ 0.1 to 5.7 mg/kg
Aromatic (C10-C12)	≤ 0.1 to 18.2 mg/kg
Aromatic (C12-C16)	≤ 0.4 to 4.0 mg/kg
Dibenz(a,h)anthracene	≤ 0.01 to 0.44 mg/kg
Trichloroethylene (TCE)	≤ 0.05 to 0.07 mg/kg
Dichloromethane	≤ 0.001 to 35 mg/kg
Dimethyl aniline	≤ 0.001 to 1.8 to 1.79 mg/kg

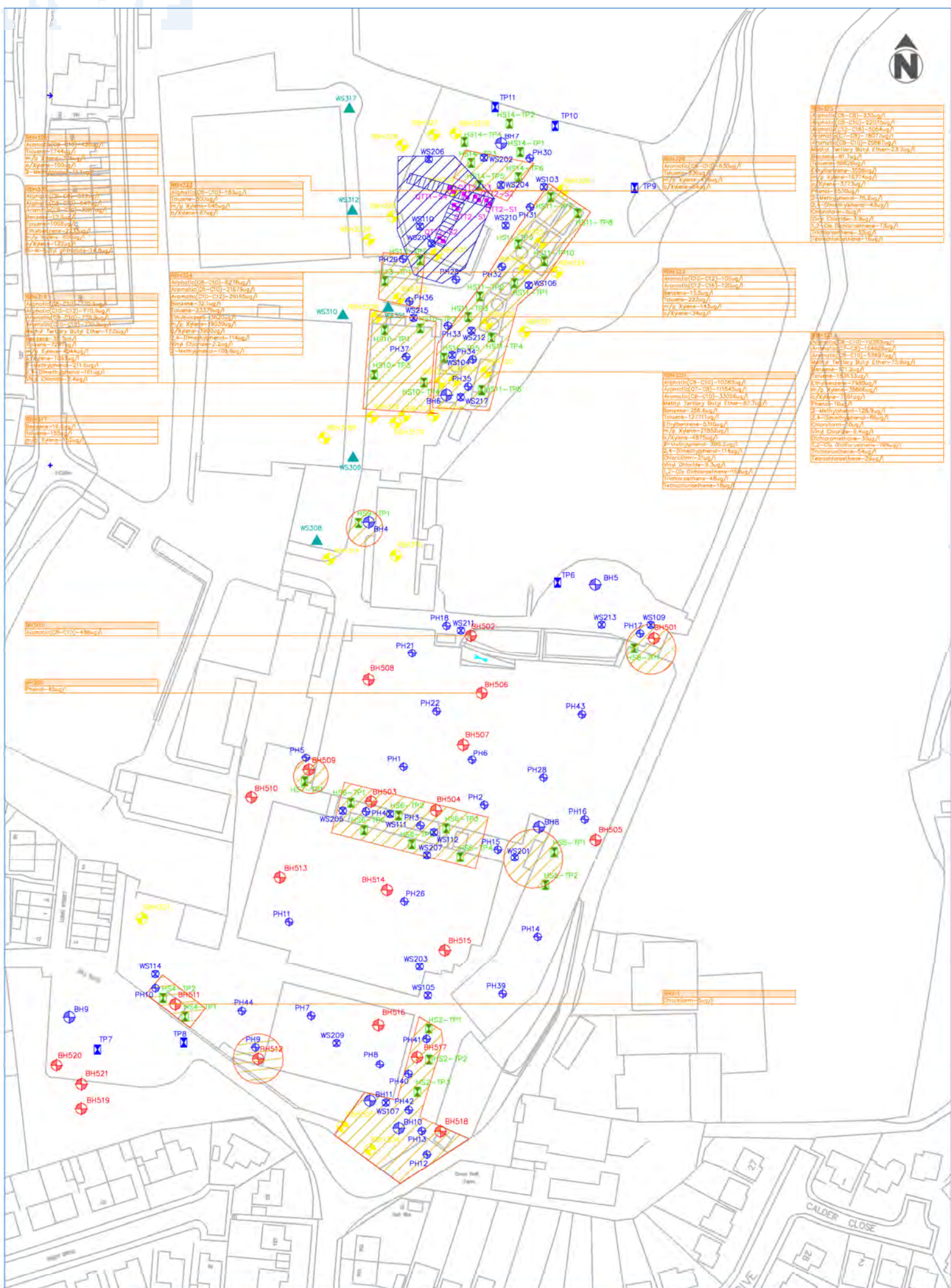
Aromatic(C12-C16)-o-160 mg/kg
 Trichloroethane(TCE)-<0.003-0.120mg/kg
 Tetrachloroethene(PCE)-<0.003-0.560 mg/kg





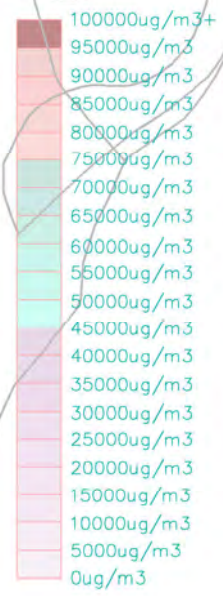
GROUNDTECH CONSULTING 	CLIENT	DATE				Status	Notes  Hotspot Areas  Quarry Areas 
	URBAN REGEN	NOVEMBER 2022				Preliminary	
	PROJECT TITLE	SCALE				Draft	
	TETROSYL BEVIS GREENWORKS BURY	NTS				Issued	
	PLAN TITLE	PLAN NUMBER				For Comments	
	GROUNDTECH GW CONTAMINATION PLAN - FEBRUARY 2022	GRO-2158-P078	Rev:	Date:		Approved	



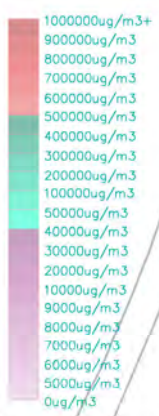
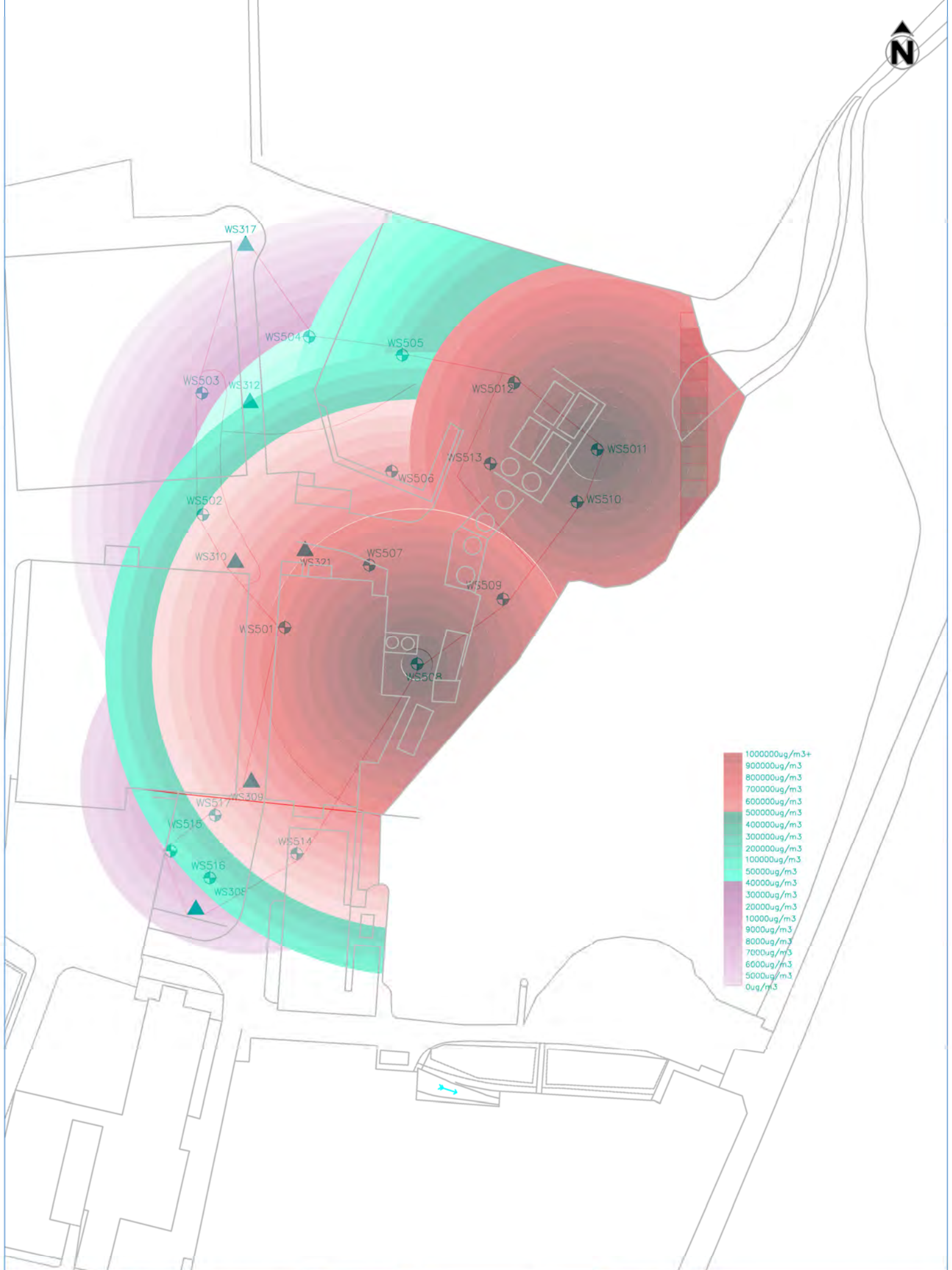


PH101	Ammonia (C6-C10) - 230ug/l
PH102	Ammonia (C6-C10) - 220ug/l
PH103	Ammonia (C6-C10) - 200ug/l
PH104	Ammonia (C6-C10) - 180ug/l
PH105	Ammonia (C6-C10) - 160ug/l
PH106	Ammonia (C6-C10) - 140ug/l
PH107	Ammonia (C6-C10) - 120ug/l
PH108	Ammonia (C6-C10) - 100ug/l
PH109	Ammonia (C6-C10) - 80ug/l
PH110	Ammonia (C6-C10) - 60ug/l
PH111	Ammonia (C6-C10) - 40ug/l
PH112	Ammonia (C6-C10) - 20ug/l
PH113	Ammonia (C6-C10) - 10ug/l
PH114	Ammonia (C6-C10) - 5ug/l
PH115	Ammonia (C6-C10) - 2ug/l
PH116	Ammonia (C6-C10) - 1ug/l
PH117	Ammonia (C6-C10) - 0.5ug/l
PH118	Ammonia (C6-C10) - 0.2ug/l
PH119	Ammonia (C6-C10) - 0.1ug/l
PH120	Ammonia (C6-C10) - 0.05ug/l

PH121	Ammonia (C6-C10) - 100ug/l
PH122	Ammonia (C6-C10) - 80ug/l
PH123	Ammonia (C6-C10) - 60ug/l
PH124	Ammonia (C6-C10) - 40ug/l
PH125	Ammonia (C6-C10) - 20ug/l
PH126	Ammonia (C6-C10) - 10ug/l
PH127	Ammonia (C6-C10) - 5ug/l
PH128	Ammonia (C6-C10) - 2ug/l
PH129	Ammonia (C6-C10) - 1ug/l
PH130	Ammonia (C6-C10) - 0.5ug/l
PH131	Ammonia (C6-C10) - 0.2ug/l
PH132	Ammonia (C6-C10) - 0.1ug/l
PH133	Ammonia (C6-C10) - 0.05ug/l
PH134	Ammonia (C6-C10) - 0.02ug/l
PH135	Ammonia (C6-C10) - 0.01ug/l
PH136	Ammonia (C6-C10) - 0.005ug/l
PH137	Ammonia (C6-C10) - 0.002ug/l
PH138	Ammonia (C6-C10) - 0.001ug/l
PH139	Ammonia (C6-C10) - 0.0005ug/l
PH140	Ammonia (C6-C10) - 0.0002ug/l



GROUNDTECH CONSULTING	CLIENT		DATE				Status:		Notes:
	URBAN RESER		NOVEMBER 2022				Preliminary		
	PROJECT TITLE		SCALE				Draft		
	TETROSYL BEVIR GREEN WORKS BURY		A3				Issued	☒	
	PLAN TITLE		PLAN NUMBER				For Comments		
	VOC VAPOR DISTRIBUTION PLAN		GRO-21158-P05A	Rev:	Details	Date	Approved		

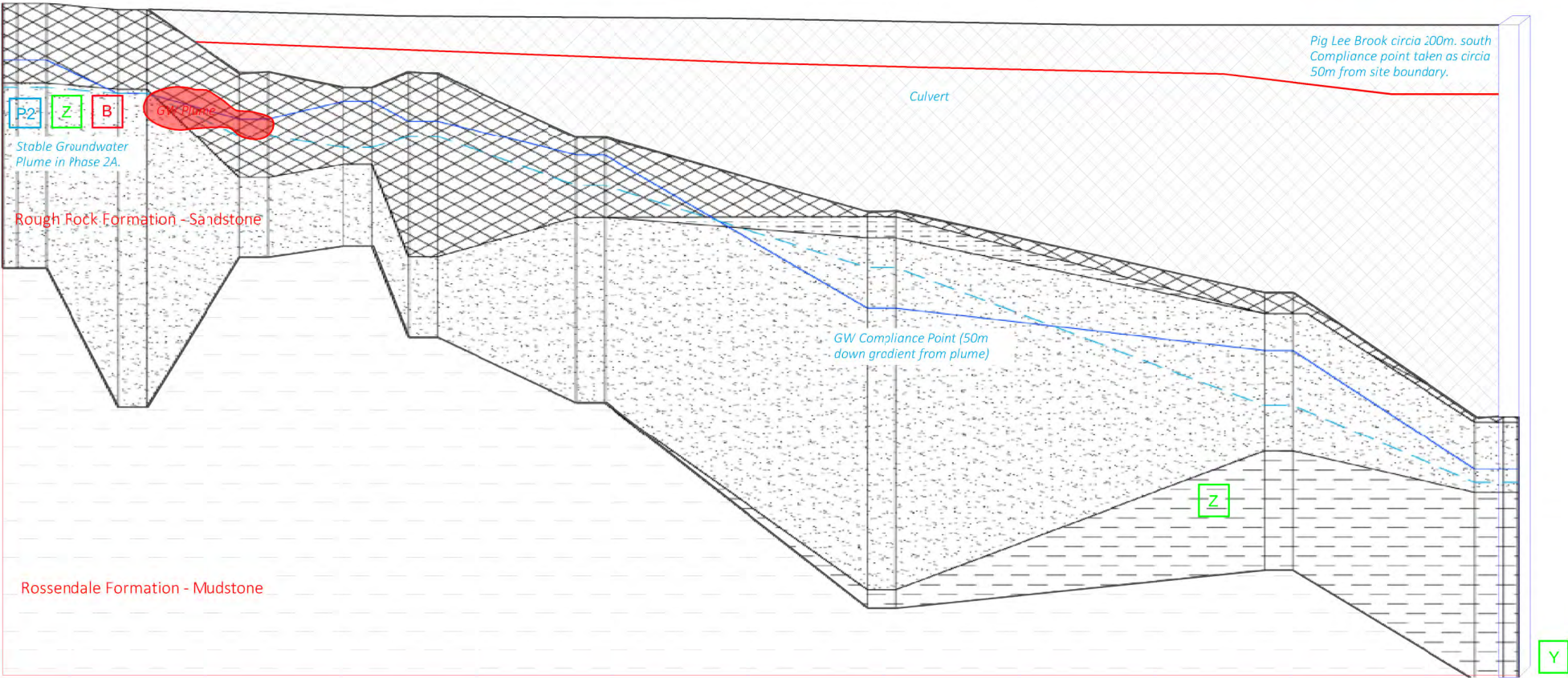


	CLIENT		DATE				Status	Notes	
	URBAN RESER		NOVEMBER 2022				Preliminary		
	PROJECT TITLE		SCALE				Draft		
	TETROSYL BEVIR GREEN WORKS BURY		A5				Issued		
	PLAN TITLE		PLAN NUMBER				For Comments		
	TYPE VAPOR DISTRIBUTION PLAN		GRO-21158.P08E	Rev:	Details	Date	Approved		

SOURCES
A. Contaminated soils / Made Ground.
B. Contaminated Groundwater

POLLUTION LINKAGES
P1. Impaction of groundwater from soil contamination.
P2. Migration of soil and groundwater contamination impacting surface waters.

RECEPTORS
Y. Tributary of Pig Lee Brook & Pig Lee Brook
Z. Groundwater within the underlying Secondary A Bedrock Aquifer.



GROUNDTECH CONSULTING G	CLIENT	DATE			Status		Notes
	URBAN REGEN	NOVEMBER 2022			Preliminary		
	PROJECT TITLE	SCALE			Draft		
	TETROSYL BEVIS GREEN WORKS, BURY	NTS			Issued	●	
	PLAN TITLE	PLAN NUMBER	DECEMBER 2022		For Comment		
	GROUNDWATER CSM	GRO-21459-P09	1.1	General	Date	Approved	
		Rev.		Details			



APPENDIX 2 - Exploratory Hole Logs



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 23/03/2022 - 24/03/2022		
Location: BURY			Contractor:			Co-ords: E381033.30 N413851.21		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH501		Hole Type CP+RC		Level 149.56m AoD		Logged By LH		Page Number Sheet 2 of 8

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		2.50	ES								Firm brown slightly sandy slightly gravelly CLAY. Gravel is angular fine to medium of mudstone. <u>Becoming dark grey and rare gravel from 2.0m bgl.</u>	
											<u>Becoming stiff to very stiff from 3.0m bgl.</u>	3
												4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 8.5m bgl. 3. Monitoring standpipe installation to 10.0m bgl (7.5m plain, 2.5m slotted).



Rotary Core Log

[illegible]

GROUNDTECH
CONSULTING

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 23/03/2022 - 24/03/2022		
Location: BURY			Contractor:			Co-ords: E381033.30 N413851.21		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH501		Hole Type CP+RC		Level 149.56m AoD		Logged By LH		Page Number Sheet 4 of 8

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
								7.00	142.56		Firm brown slightly sandy slightly gravelly CLAY. Gravel is angular fine to medium of mudstone.	7
											Brown orange medium to coarse SAND and angular to subrounded medium GRAVEL of chert and quartzite.	
											Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly gravelly cobbles of sandstone.	
			NI					7.50	142.06			8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 8.5m bgl. 3. Monitoring standpipe installation to 10.0m bgl (7.5m plain, 2.5m slotted).





Project Name: TETROSYL				Client: URBAN REGEN				Date: 23/03/2022 - 24/03/2022					
Location: BURY				Contractor:				Co-ords: E381033.30 N413851.21					
Project No. : GRO-21459				Crew Name:				Drilling Equipment:					
Borehole Number BH501		Hole Type CP+RC		Level 149.56m AoD		Logged By LH		Scale 1:10		Page Number Sheet 5 of 8			
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD							
		7.50 - 9.00					8.27	141.29		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly gravelly cobbles of sandstone.			
			1							Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.			
			NI	100	8	8				Between 8.39m and 8.74m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.			
										Between 8.74m and 9.0m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.			
		NI				Between 9.0m and 9.35m bgl recovered as brown orange slightly gravelly sand. Gravel is angular fine of sandstone.							
						Between 9.45m and 9.71m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.							
		9.00 - 10.50	NI								Between 9.95m and 10.1m bgl recovered as		
			1										
			NI	100	45	34							
2													

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 8.5m bgl. 3. Monitoring standpipe installation to 10.0m bgl (7.5m plain, 2.5m slotted).

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 23/03/2022 - 24/03/2022		
Location: BURY			Contractor:			Co-ords: E381033.30 N413851.21		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH501		Hole Type CP+RC		Level 149.56m AoD		Logged By LH		Page Number Sheet 6 of 8

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
			NI								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <i>Between 9.95m and 10.1m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.</i> <i>Between 10.38m and 10.42m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.</i> <i>No recovery between 10.5m and 10.52m bgl. Between 10.52m and 11.59m bgl recovered as brown orange slightly gravelly sand. Gravel is angular fine of sandstone and coal.</i>	
			2									
			NI									
			1									
		10.50 - 12.00	NR									11
			NI									
				99	23	20						12
			3					11.59	137.98			
											Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities.	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 8.5m bgl. 3. Monitoring standpipe installation to 10.0m bgl (7.5m plain, 2.5m slotted).																	



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 23/03/2022 - 24/03/2022		
Location: BURY			Contractor:			Co-ords: E381033.30 N413851.21		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH501		Hole Type CP+RC		Level 149.56m AoD		Logged By LH		Page Number Sheet 7 of 8

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		12.00 - 13.50	NR								Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities. <i>No recovery between 12.0m and 12.3m bgl.</i>	13
			4									
			NI								Becoming extremely weak grey MUDSTONE residually weathered recovered as slightly sandy clayey gravel of mudstone between 12.5m and 12.65m bgl.	
			NI								Between 12.65m and 12.79m bgl recovered as slightly sandy clayey gravel of mudstone.	
			2									
			NI								Between 12.81m and 12.83m bgl recovered as slightly sandy clayey gravel of mudstone.	
			2									
			NI								Between 12.9m and 12.95m bgl recovered as slightly sandy clayey gravel of mudstone.	
			1									
		13.00 - 13.50	NI								Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly gravelly cobbles of sandstone. <i>Between 13.0m and 13.5m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.</i>	
											NO RECOVERY.	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 8.5m bgl. 3. Monitoring standpipe installation to 10.0m bgl (7.5m plain, 2.5m slotted).																	



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 23/03/2022 - 24/03/2022		
Location: BURY			Contractor:			Co-ords: E381033.30 N413851.21		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH501		Hole Type CP+RC		Level 149.56m AoD		Logged By LH		Page Number Sheet 8 of 8

Well	Water	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
		13.50 - 15.00	NR				14.28	135.28		NO RECOVERY.	15
			NI				14.44	135.12		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly gravelly cobbles of sandstone.	
			1	55	14	7				Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.	
			NI							Between 14.5m and 14.82m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.	
			1								
			NI							Between 14.93m and 14.96m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.	
			1				15.00	134.56		End of Borehole at 15.000m	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 8.5m bgl. 3. Monitoring standpipe installation to 10.0m bgl (7.5m plain, 2.5m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022		
Location: BURY			Contractor:			Co-ords: E380970.73 N413852.09		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH502		Hole Type CP+RC		Level 149.10m AoD		Logged By LH		Page Number Sheet 1 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		0.40	ES								MADE GROUND: Dark grey slightly clayey slightly gravelly sand. Gravel is angular to subangular fine to coarse of mixed lithologies including sandstone and brick. Rootlets present.	
		0.80	ES					0.60	148.50		MADE GROUND: Soft dark grey slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to coarse of mixed lithologies including sandstone and rare brick.	1
		1.30	ES					1.10	148.00		Soft grey brown slightly sandy slightly gravelly slightly silty CLAY. Gravel is angular to subangular fine to coarse of sandstone and rare flint.	2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks 1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 5.4m bgl. 3. No solid core recovery due to sonic vibration erosion of strata. 4. Monitoring standpipe installation to 7.0m bgl (5.0m plain, 2.0m slotted).																	
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--	--

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022		
Location: BURY			Contractor:			Co-ords: E380970.73 N413852.09		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH502		Hole Type CP+RC		Level 149.10m AoD		Logged By LH		Page Number Sheet 2 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		2.10	ES								Soft grey brown slightly sandy slightly gravelly slightly silty CLAY. Gravel is angular to subangular fine to coarse of sandstone and rare flint.	
								3.20	145.90		Extremely weak brown orange medium grained SANDSTONE residually weathered recovered as sightly clayey gravelly sand. <i>Becoming stiff and friable with mudstone gravel from 3.2m bgl.</i>	3
												4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 5.4m bgl. 3. No solid core recovery due to sonic vibration erosion of strata. 4. Monitoring standpipe installation to 7.0m bgl (5.0m plain, 2.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022		
Location: BURY			Contractor:			Co-ords: E380970.73 N413852.09		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH502		Hole Type CP+RC		Level 149.10m AoD		Logged By LH		Page Number Sheet 3 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
											Extremely weak brown orange medium grained SANDSTONE residually weathered recovered as slightly clayey gravelly sand. <i>Recovered as slightly gravelly sand with rare cobbles of sandstone from 4.0m bgl.</i>	5
		4.50 - 6.00	NI	100	0	0						
												6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

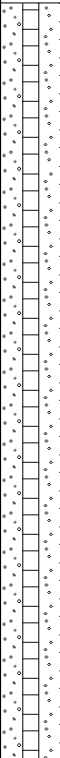
Remarks
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 5.4m bgl. 3. No solid core recovery due to sonic vibration erosion of strata. 4. Monitoring standpipe installation to 7.0m bgl (5.0m plain, 2.0m slotted).



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022		
Location: BURY			Contractor:			Co-ords: E380970.73 N413852.09		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH502		Hole Type CP+RC		Level 149.10m AoD		Logged By LH		Page Number Sheet 4 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		6.00 - 7.50	NI	100	0	0					Extremely weak brown orange medium grained SANDSTONE residually weathered recovered as sightly clayey gravelly sand.	7
												8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 5.4m bgl. 3. No solid core recovery due to sonic vibration erosion of strata. 4. Monitoring standpipe installation to 7.0m bgl (5.0m plain, 2.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022		
Location: BURY			Contractor:			Co-ords: E380970.73 N413852.09		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH502		Hole Type CP+RC		Level 149.10m AoD		Logged By LH		Page Number Sheet 5 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		7.50 - 9.00	NI	100	0	0					Extremely weak brown orange medium grained SANDSTONE residually weathered recovered as sightly clayey gravelly sand.	9
		9.00 - 10.50	NI	100	0	0						
												10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 5.4m bgl. 3. No solid core recovery due to sonic vibration erosion of strata. 4. Monitoring standpipe installation to 7.0m bgl (5.0m plain, 2.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022		
Location: BURY			Contractor:			Co-ords: E380970.73 N413852.09		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH502		Hole Type CP+RC		Level 149.10m AoD		Logged By LH		Page Number Sheet 6 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
								10.50	138.60		Extremely weak brown orange medium grained SANDSTONE residually weathered recovered as slightly clayey gravelly sand.	11
											End of Borehole at 10.500m	
												12

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 5.4m bgl. 3. No solid core recovery due to sonic vibration erosion of strata. 4. Monitoring standpipe installation to 7.0m bgl (5.0m plain, 2.0m slotted).





Project Name: TETROSYL						Client: URBAN REGEN						Date: 29/03/2022						
Location: BURY						Contractor:						Co-ords: E380936.63 N413795.25						
Project No. : GRO-21459						Crew Name:						Drilling Equipment:						
Borehole Number BH503			Hole Type CP+RC			Level 142.97m AoD			Logged By LH			Scale 1:10			Page Number Sheet 1 of 6			
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description							
		0.25	ES					0.20	142.77		MADE GROUND: Reinforced concrete.							
								0.30	142.67		MADE GROUND: Dark brown slightly gravelly slightly sandy clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick and sandstone.							
											Extremely weak light brown SANDSTONE residually weathered recovered as slightly sandy gravel.							
		0.75	ES															
					NR													
			NI															
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)	
Remarks																		
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.0m bgl. 3. Monitoring standpipe installation to 7.0m bgl (3.0m plain, 4.0m slotted).																		

GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 29/03/2022			
Location: BURY				Contractor:				Co-ords: E380936.63 N413795.25			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH503		Hole Type CP+RC		Level 142.97m AoD		Logged By LH		Scale 1:10		Page Number Sheet 2 of 6	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD							
		1.50 - 3.00	11	94	70	22					Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities and quartzite inclusions.		
		3.00 - 4.50	NR									No recovery between 3.0m and 3.22m bgl.	3
			NI									Between 3.22m and 3.54m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.	
			2	85	34	15						Between 3.54m and 3.64m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.	
			NI									Between 3.69m and 3.82m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.	
			1										
			NI										
		4											

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks															
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.0m bgl. 3. Monitoring standpipe installation to 7.0m bgl (3.0m plain, 4.0m slotted).															

GROUNDTECH
CONSULTING

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 29/03/2022		
Location: BURY			Contractor:			Co-ords: E380936.63 N413795.25		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH503		Hole Type CP+RC		Level 142.97m AoD		Logged By LH		Page Number Sheet 3 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		4.50 - 6.00	NI								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities and quartzite inclusions. <i>Between 4.15m and 4.5m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.</i>	5
			NR								<i>No recovery between 4.5m and 4.57m bgl.</i>	
			NI								<i>Between 4.57m and 5.0m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.</i>	
			2									
			NI	95	41	35					<i>Between 5.22m and 5.37m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.</i>	
			1									
			NI								<i>Between 5.57m and 5.65m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.</i>	
			2									
			NI								<i>Between 5.81m and 5.91m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.</i>	
			1									
												6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.0m bgl. 3. Monitoring standpipe installation to 7.0m bgl (3.0m plain, 4.0m slotted).





G GROUNDTECH CONSULTING						Rotary Core Log											
Project Name: TETROSYL							Client: URBAN REGEN				Date: 29/03/2022						
Location: BURY							Contractor:				Co-ords: E380936.63 N413795.25						
Project No.: GRO-21459							Crew Name:				Drilling Equipment:						
Borehole Number BH503			Hole Type CP+RC			Level 142.97m AoD			Logged By LH		Scale 1:10		Page Number Sheet 4 of 6				
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
			NR	TCR	SCR	RQD				.							
			1							.	Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities and quartzite inclusions. <u>No recovery between 6.0m and 6.05m bgl.</u>						
			Nl							.	Between 6.27m and 6.36m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.						
			1							.							
			Nl							.	Between 6.47m and 6.63m bgl recovered as slightly sandy slightly gravely cobbles.						
										.	Between 6.63m and 7.06m bgl recovered as silty sand.						
		6.00 - 7.50		97	58	58				.							
			Nl							.							
								7.06	135.91	.					7		
			1							.	Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities and quartzite inclusions. Between 7.2m and 7.4m bgl recovered as slightly clayey slightly sandy cobbly gravel of sandstone and mudstone.						
			Nl							.							
			1							.							
			NR							.	No recovery between 7.5m and 7.61m bgl.						
			Nl							.	Between 7.61m and 7.78m bgl recovered as slightly clayey slightly sandy cobbly gravel of sandstone and mudstone.						
										.							
			4							.							
										.					8		
Hole Diameter	Casing Diameter	Chiselling		Inclination and Orientation				Drilling Flush									
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.0m bgl. 3. Monitoring standpipe installation to 7.0m bgl (3.0m plain, 4.0m slotted).																	

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 29/03/2022		
Location: BURY			Contractor:			Co-ords: E380936.63 N413795.25		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH503		Hole Type CP+RC		Level 142.97m AoD		Logged By LH		Page Number Sheet 5 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		7.50 - 9.00		93	56	53		8.35	134.62			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.0m bgl. 3. Monitoring standpipe installation to 7.0m bgl (3.0m plain, 4.0m slotted).																	



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 29/03/2022		
Location: BURY			Contractor:			Co-ords: E380936.63 N413795.25		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH503		Hole Type CP+RC		Level 142.97m AoD		Logged By LH		Page Number Sheet 6 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		9.00 - 11.00	1								Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities. <i>Between 10.09m and 10.22m bgl recovered as slightly gravelly clay.</i>	
			NI									
			1									
			NI	100	71	49						
			4									
								11.00	131.97		End of Borehole at 11.000m	11
												12

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.0m bgl. 3. Monitoring standpipe installation to 7.0m bgl (3.0m plain, 4.0m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 29/03/2022 - 30/04/2022			
Location: BURY				Contractor:				Co-ords: E380958.80 N413792.25			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH504		Hole Type CP+RC		Level 142.97m AoD		Logged By LH		Scale 1:10		Page Number Sheet 1 of 6	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		0.30	ES					0.20	142.77		MADE GROUND: Reinforced concrete.	
								0.80	142.17		MADE GROUND: Dark brown slightly gravelly slightly sandy clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, glass and sandstone. <i>Brick cobbles encountered from 0.5m bgl.</i>	
								1.50	141.47		Extremely weak light brown SANDSTONE residually weathered recovered as slightly sandy gravel.	1
		1.80	NI ES								Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone. <i>Between 1.5m and 2.44m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

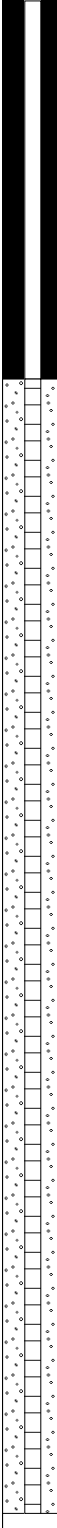
Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.3m bgl. 3. Monitoring standpipe installation to 9.5m bgl (2.0m plain, 7.5m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 29/03/2022 - 30/04/2022		
Location: BURY			Contractor:			Co-ords: E380958.80 N413792.25		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH504		Hole Type CP+RC		Level 142.97m AoD		Logged By LH		Page Number Sheet 2 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		1.50 - 3.00									Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone.	3
			5	100	29	27						
			NI									
		3.00 - 4.50	6	100	65	43					Between 2.94m and 3.0m bgl recovered as slightly sandy gravelly cobbles. Between 3.0m and 3.24m bgl recovered as slightly sandy cobbly gravel of sandstone.	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.3m bgl. 3. Monitoring standpipe installation to 9.5m bgl (2.0m plain, 7.5m slotted).



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 29/03/2022 - 30/04/2022		
Location: BURY			Contractor:			Co-ords: E380958.80 N413792.25		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH504		Hole Type CP+RC		Level 142.97m AoD		Logged By LH		Page Number Sheet 3 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
			NI								Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone. <i>Between 4.0m and 4.35m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	5
			3									
		4.50 - 6.00	NI								<i>Between 4.5m and 4.87m bgl recovered as slightly clayey slightly sandy cobbly gravel of sandstone.</i>	
			NI								<i>Between 4.87m and 5.24m bgl recovered as slightly sandy gravelly cobbles.</i>	
			4	100	36	30						
			NI								<i>Between 5.9m and 6.0m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

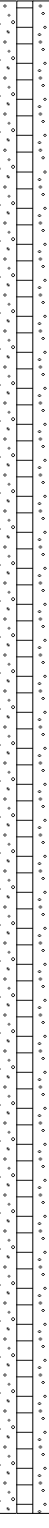
Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.3m bgl. 3. Monitoring standpipe installation to 9.5m bgl (2.0m plain, 7.5m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 29/03/2022 - 30/04/2022		
Location: BURY			Contractor:			Co-ords: E380958.80 N413792.25		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH504		Hole Type CP+RC		Level 142.97m AoD		Logged By LH		Page Number Sheet 4 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		6.00 - 7.50	NI	100	11	0					Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone. <i>Between 6.0m and 7.0m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	
			1									
			NI								<i>Between 7.05m and 7.15m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	
			2									
			NI								<i>Between 7.25m and 7.31m bgl recovered as slightly sandy cobbly gravel of sandstone. .</i>	
			1									
			NI								<i>Between 7.39m and 7.5m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	
			NR								<i>No recovery between 7.5m and 7.59m bgl.</i>	
			NI								<i>Between 7.59m and 7.68m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	
			3									

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks 1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.3m bgl. 3. Monitoring standpipe installation to 9.5m bgl (2.0m plain, 7.5m slotted).																	
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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 29/03/2022 - 30/04/2022			
Location: BURY				Contractor:				Co-ords: E380958.80 N413792.25			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH504		Hole Type CP+RC		Level 142.97m AoD		Logged By LH		Scale 1:10		Page Number Sheet 5 of 6	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description					
				TCR	SCR	RQD										
		7.50 - 9.00					98	39	29		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone. Between 8.05m and 8.09m bgl recovered as slightly sandy cobbly gravel of sandstone. Between 8.19m and 8.67m bgl recovered as slightly sandy cobbly gravel of sandstone.					
			NI													
			1													
			NI													
			1													
			NI													
			1													
		9.00 - 10.50	NR				91	36	8						No recovery between 9.0m and 9.14m bgl. Between 9.14m and 9.57m bgl recovered as slightly sandy cobbly gravel of sandstone. Between 9.62m and 9.66m bgl recovered as slightly sandy cobbly gravel of sandstone. Between 9.74m and 9.8m bgl recovered as slightly sandy cobbly gravel of sandstone.	
			NI													
			1													
			NI													
			1													
			NI													
	6															

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks															
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.3m bgl. 3. Monitoring standpipe installation to 9.5m bgl (2.0m plain, 7.5m slotted).															

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 29/03/2022 - 30/04/2022		
Location: BURY			Contractor:			Co-ords: E380958.80 N413792.25		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH504		Hole Type CP+RC		Level 142.97m AoD		Logged By LH		Page Number Sheet 6 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
			NI					10.14	132.83		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone.	
											Extremely weak dark grey MUDSTONE residually weathered recovered as slightly clayey gravel. <i>Between 10.14m and 10.5m bgl recovered as slightly sandy cobbly gravel of sandstone and mudstone.</i>	
								10.50	132.47		End of Borehole at 10.500m	

11

12

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks
 1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.3m bgl. 3. Monitoring standpipe installation to 9.5m bgl (2.0m plain, 7.5m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 24/03/2022		
Location: BURY			Contractor:			Co-ords: E381013.37 N413782.22		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH505		Hole Type CP+RC		Level 144.27m AoD		Logged By LH		Page Number Sheet 1 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
											MADE GROUND: Brown orange gravelly sand with low cobble and boulder content of sandstone. Gravel is angular to subangular fine to coarse of mixed lithologies including concrete, brick, ceramics and sandstone.	1
												2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 6.85m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.8m plain, 3.2m slotted).																	



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 24/03/2022		
Location: BURY			Contractor:			Co-ords: E381013.37 N413782.22		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH505		Hole Type CP+RC		Level 144.27m AoD		Logged By LH		Page Number Sheet 2 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
											MADE GROUND: Brown orange gravelly sand with low cobble and boulder content of sandstone. Gravel is angular to subangular fine to coarse of mixed lithologies including concrete, brick, ceramics and sandstone.	3
												4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks 1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 6.85m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.8m plain, 3.2m slotted).																	
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[illegible]

GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 24/03/2022		
Location: BURY			Contractor:			Co-ords: E381013.37 N413782.22		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH505		Hole Type CP+RC		Level 144.27m AoD		Logged By LH		Page Number Sheet 4 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
											Firm dark grey slightly gravelly slightly sandy silty CLAY. Gravel is angular to subrounded fine to coarse of mixed lithologies including sandstone, mudstone and rare coal. <i>Becoming dark grey to black from 6.0m bgl.</i>	
								6.85	137.42			
		7.00	ES								Extremely weak black bituminous COAL residually weathered.	7
								7.80	136.47		Extremely weak grey mottled brown MUDSTONE residually weathered recovered as slightly gravelly friable clay.	8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 6.85m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.8m plain, 3.2m slotted).



[illegible]

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10 -



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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 24/03/2022			
Location: BURY				Contractor:				Co-ords: E381013.37 N413782.22			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH505		Hole Type CP+RC		Level 144.27m AoD		Logged By LH		Scale 1:10		Page Number Sheet 6 of 7	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
											Extremely weak grey mottled brown MUDSTONE residually weathered recovered as slightly gravelly friable clay.	
			NR					10.50	133.77		NO RECOVERY.	
								10.79	133.48		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone.	11
		10.50 - 12.00	NI	81	19	0						
			3					11.76	132.51		Weak brown orange fine to medium grained SANDSTONE moderately weathered with sub-horizontal smooth planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.	12

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 6.85m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.8m plain, 3.2m slotted).

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 24/03/2022		
Location: BURY			Contractor:			Co-ords: E381013.37 N413782.22		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH505		Hole Type CP+RC		Level 144.27m AoD		Logged By LH		Page Number Sheet 7 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		12.00 - 13.50	NR								Weak brown orange fine to medium grained SANDSTONE moderately weathered with sub-horizontal smooth planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.	
			NI	59	19	15					Between 12.62m and 13.27m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.	13
			NI									
			2									
								13.50	130.77		End of Borehole at 13.500m	14

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 6.85m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.8m plain, 3.2m slotted).





Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 30/03/2022 - 31/03/2022									
Location: BURY				Contractor:				Co-ords: E380974.43 N413832.34									
Project No. : GRO-21459				Crew Name:				Drilling Equipment:									
Borehole Number BH506		Hole Type CP+RC		Level 148.58m AoD		Logged By LH		Scale 1:10		Page Number Sheet 1 of 7							
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD					MADE GROUND: Dark brown slightly silty slightly clayey slightly gravelly sand. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, sandstone, refractory brick and rare glass.						
								0.60	147.98		MADE GROUND: Dark brown slightly gravelly slightly sandy silty clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, sandstone, refractory brick and rare glass.						
		1.00	ES					1.00	147.58		MADE GROUND: Dark brown slightly silty slightly clayey slightly gravelly sand. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, sandstone, refractory brick and rare glass.	1					
								1.60	146.98		MADE GROUND: Dark brown slightly gravelly slightly sandy silty clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, sandstone, refractory brick and rare glass.						
								2.00	146.58			2					
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.0m plain, 4.0m slotted).																	

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 30/03/2022 - 31/03/2022		
Location: BURY			Contractor:			Co-ords: E380974.43 N413832.34		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH506		Hole Type CP+RC		Level 148.58m AoD		Logged By LH		Page Number Sheet 2 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		4.00	ES					4.00	144.58		MADE GROUND: Dark brown slightly silty slightly clayey slightly gravelly sand. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, sandstone, refractory brick and rare glass.	3
												4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

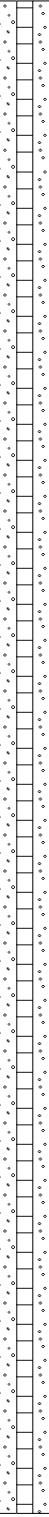
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.0m plain, 4.0m slotted).





Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 30/03/2022 - 31/03/2022		
Location: BURY			Contractor:			Co-ords: E380974.43 N413832.34		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH506		Hole Type CP+RC		Level 148.58m AoD		Logged By LH		Page Number Sheet 4 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
											MADE GROUND: Dark brown slightly gravelly slightly sandy silty clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, sandstone, refractory brick and rare glass.	
								7.40	141.18		MADE GROUND: Reinforced concrete.	7
								7.58	141.00		Extremely weak light brown medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy gravel.	
		8.00	ES					8.00	140.58			8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.0m plain, 4.0m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 30/03/2022 - 31/03/2022		
Location: BURY			Contractor:			Co-ords: E380974.43 N413832.34		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH506		Hole Type CP+RC		Level 148.58m AoD		Logged By LH		Page Number Sheet 5 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		8.00 - 9.50	NR					8.05	140.53		NO RECOVERY.	9
			NI					8.15	140.43		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly gravelly cobbles of sandstone.	
			4								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to widely spaced discontinuities red iron weathering and quartzite inclusions.	
			1	97	65	48						
			NI									
			2									
			NI									
												10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.0m plain, 4.0m slotted).

Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 30/03/2022 - 31/03/2022			
Location: BURY				Contractor:				Co-ords: E380974.43 N413832.34			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH506		Hole Type CP+RC		Level 148.58m AoD		Logged By LH		Scale 1:10		Page Number Sheet 6 of 7	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		9.50 - 11.00	NI								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to widely spaced discontinuities red iron weathering and quartzite inclusions. <i>Between 10.0m and 10.21m bgl recovered as slightly sandy cobbly gravel.</i> <i>Between 10.35m and 10.71m bgl recovered as slightly gravely sand.</i>	
			1									
			NI	100	50	50						
			1									
		11.00 - 12.50	NR								<i>No recovery between 11.0m and 11.26m bgl.</i> <i>Between 11.7m and 11.78m bgl recovered as slightly sandy cobbly gravel.</i> <i>Between 11.88m and 12.04m bgl recovered as slightly sandy cobbly gravel.</i>	11
			5	83	56	39						
			NI									
			2									
			NI									

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks															
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.0m plain, 4.0m slotted).															



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 30/03/2022 - 31/03/2022		
Location: BURY			Contractor:			Co-ords: E380974.43 N413832.34		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH506		Hole Type CP+RC		Level 148.58m AoD		Logged By LH		Page Number Sheet 7 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
			1					12.50	136.08		Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to widely spaced discontinuities red iron weathering and quartzite inclusions. <i>Between 12.07m and 12.18m bgl recovered as slightly sandy cobbly gravel.</i>	
			NI									
			3									
											End of Borehole at 12.500m	
												13
												14

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 10.0m bgl (6.0m plain, 4.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 31/03/2022		
Location: BURY			Contractor:			Co-ords: E380968.13 N413814.72		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH507		Hole Type CP+RC		Level 146.41m AoD		Logged By LH		Page Number Sheet 1 of 8

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		1.50	ES								MADE GROUND: Dark brown slightly gravelly slightly sandy clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, glass and sandstone.	1
												2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks 1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 15.0m bgl (7.0m plain, 8.0m slotted).																	
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 31/03/2022		
Location: BURY			Contractor:			Co-ords: E380968.13 N413814.72		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH507		Hole Type CP+RC		Level 146.41m AoD		Logged By LH		Page Number Sheet 2 of 8

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
								3.00	143.41		MADE GROUND: Dark brown slightly gravelly slightly sandy clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, glass and sandstone.	
											NO RECOVERY.	3
												4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 15.0m bgl (7.0m plain, 8.0m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 31/03/2022		
Location: BURY			Contractor:			Co-ords: E380968.13 N413814.72		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH507		Hole Type CP+RC		Level 146.41m AoD		Logged By LH		Page Number Sheet 3 of 8

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
								5.00	141.41		NO RECOVERY.	
											MADE GROUND: Dark brown slightly gravelly slightly sandy clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, glass and sandstone.	5
												6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 15.0m bgl (7.0m plain, 8.0m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 31/03/2022			
Location: BURY				Contractor:				Co-ords: E380968.13 N413814.72			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH507		Hole Type CP+RC		Level 146.41m AoD		Logged By LH		Scale 1:10		Page Number Sheet 4 of 8	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		7.00	ES					7.00	139.41		MADE GROUND: Dark brown slightly gravelly slightly sandy clay. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, glass and sandstone.	
								7.20	139.21		MADE GROUND: Reinforced concrete.	7
								8.00	138.41		Extremely weak brown medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy gravel.	8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks																
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 15.0m bgl (7.0m plain, 8.0m slotted).																

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 31/03/2022		
Location: BURY			Contractor:			Co-ords: E380968.13 N413814.72		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH507		Hole Type CP+RC		Level 146.41m AoD		Logged By LH		Page Number Sheet 5 of 8

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		8.00 - 9.00	NI					8.04	138.37		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly gravelly cobbles of sandstone.	
											Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to widely spaced discontinuities red iron weathering and quartzite inclusions.	
			8	100	74	46						
			NI								Between 8.8m and 9.13m bgl recovered as slightly sandy cobbly gravel.	
		9.00 - 10.50	NI									9
			1									
			NI								Between 9.23m and 9.34m bgl recovered as slightly sandy cobbly gravel.	
			1									
			ES NI	100	55	49					Between 9.45m and 9.63m bgl recovered as slightly sandy cobbly gravel.	
			2									
			NI								Between 9.9m and 10.57m bgl recovered as slightly sandy cobbly gravel.	10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 15.0m bgl (7.0m plain, 8.0m slotted).																	

GROUNDTECH
CONSULTING

Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 31/03/2022			
Location: BURY				Contractor:				Co-ords: E380968.13 N413814.72			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH507		Hole Type CP+RC		Level 146.41m AoD		Logged By LH		Scale 1:10		Page Number Sheet 6 of 8	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		10.50 - 12.00	3				100	87	83		Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to widely spaced discontinuities red iron weathering and quartzite inclusions. Between 10.67m and 10.7m bgl recovered as slightly sandy cobbly gravel. Between 11.0m and 11.04m bgl recovered as slightly sandy cobbly gravel.	11
			NI									
			NI									
			1									
			NI									
			3									
			NI									
			1									
			1									
			1									
			1									
			1									
												12

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 15.0m bgl (7.0m plain, 8.0m slotted).

GROUNDTECH
CONSULTING

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 31/03/2022		
Location: BURY			Contractor:			Co-ords: E380968.13 N413814.72		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH507		Hole Type CP+RC		Level 146.41m AoD		Logged By LH		Page Number Sheet 7 of 8

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		12.00 - 13.50	1								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to widely spaced discontinuities red iron weathering and quartzite inclusions. <i>Between 12.14m and 14.0m bgl recovered as slightly sandy cobbly gravel.</i>	13
			NI	100	9	9						
			NI									14

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

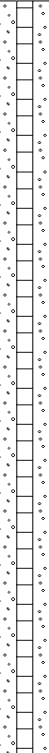
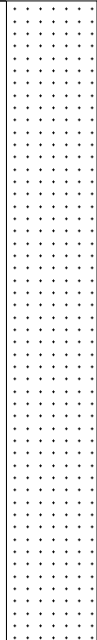
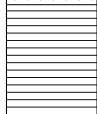
Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 15.0m bgl (7.0m plain, 8.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 31/03/2022		
Location: BURY			Contractor:			Co-ords: E380968.13 N413814.72		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH507		Hole Type CP+RC		Level 146.41m AoD		Logged By LH		Page Number Sheet 8 of 8

Well	Water	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
		13.50 - 15.00	3							Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to widely spaced discontinuities red iron weathering and quartzite inclusions. <i>Between 14.29m and 14.38m bgl recovered as slightly sandy cobbly gravel.</i> <i>Between 14.41m and 14.5m bgl recovered as slightly sandy cobbly gravel.</i> <i>Between 14.53m and 14.85m bgl recovered as slightly sandy cobbly gravel.</i>	
			NI								
			1								
			NI								
			1								
			NI								
			NI								
							14.85	131.56		Extremely weak grey friable MUDSTONE residually weathered recovered as slightly clayey gravel.	
							15.00	131.41		End of Borehole at 15.000m	15

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

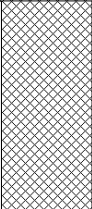
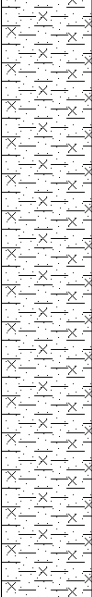
Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 7.2m bgl. 3. Monitoring standpipe installation to 15.0m bgl (7.0m plain, 8.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022 - 28/03/2022		
Location: BURY			Contractor:			Co-ords: E380935.79 N413836.89		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH508		Hole Type CP+RC		Level 147.70m AoD		Logged By LH		Page Number Sheet 1 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		1.00	ES					0.28	147.42		MADE GROUND: Reinforced concrete.	1
											MADE GROUND: Dark grey slightly sandy angular to subangular medium to coarse gravel of brick and concrete.	
								1.20	146.50		Firm brown slightly sandy slightly silty CLAY.	2
								2.00	145.70		Becoming slightly gravelly of sandstone from 1.5m bgl.	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

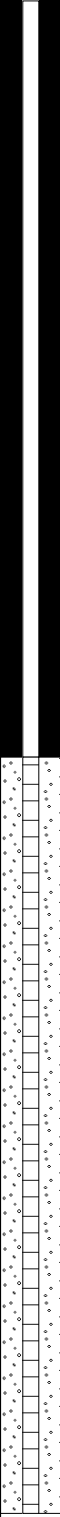
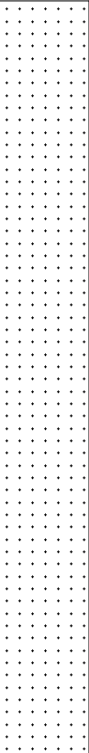
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.4m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.0m plain, 5.0m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL		Client: URBAN REGEN		Date: 25/03/2022 - 28/03/2022	
Location: BURY		Contractor:		Co-ords: E380935.79 N413836.89	
Project No. : GRO-21459		Crew Name:		Drilling Equipment:	
Borehole Number BH508	Hole Type CP+RC	Level 147.70m AoD		Logged By LH	Scale 1:10
				Page Number Sheet 2 of 6	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		3.00 - 4.50	NR	70	43	25		3.00	144.70		Extremely weak light brown SANDSTONE residually weathered recovered as slightly sandy gravel.	3
											NO RECOVERY.	
											Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly gravelly cobbles of sandstone.	
											Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.	
											Between 3.63m and 3.67m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.	
											Between 3.7m and 3.72m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.4m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.0m plain, 5.0m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022 - 28/03/2022		
Location: BURY			Contractor:			Co-ords: E380935.79 N413836.89		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH508		Hole Type CP+RC		Level 147.70m AoD		Logged By LH		Page Number Sheet 3 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD							
			NI								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <u>Between 3.75m and 3.8m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.</u> <u>Between 3.86m and 3.9m bgl recovered as slightly sandy slightly gravel of sandstone.</u> <u>Between 3.93m and 4.18m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.</u>		
			4										
		4.50 - 6.00	NR									<u>No recovery between 4.5m and 4.59m bgl.</u> <u>Between 4.59m and 5.18m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.</u>	
			NI										
			2										
			NI								<u>Between 5.43m and 9m bgl recovered as slightly sandy slightly gravelly cobbles of sandstone.</u>		

5

6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.4m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.0m plain, 5.0m slotted).

GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022 - 28/03/2022		
Location: BURY			Contractor:			Co-ords: E380935.79 N413836.89		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH508		Hole Type CP+RC		Level 147.70m AoD		Logged By LH		Page Number Sheet 4 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		6.00 - 7.50	NI	100	0	0					Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.	7
			NI									8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.4m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.0m plain, 5.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022 - 28/03/2022		
Location: BURY			Contractor:			Co-ords: E380935.79 N413836.89		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH508		Hole Type CP+RC		Level 147.70m AoD		Logged By LH		Page Number Sheet 5 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		7.50 - 9.00	NI	100	0	0					Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.	
								9.00	138.70		Extremely weak grey MUDSTONE residually weathered recovered as slightly sandy clayey gravel of mudstone.	9
			NI									10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.4m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.0m plain, 5.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 25/03/2022 - 28/03/2022		
Location: BURY			Contractor:			Co-ords: E380935.79 N413836.89		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH508		Hole Type CP+RC		Level 147.70m AoD		Logged By LH		Page Number Sheet 6 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		9.00 - 11.00	NI	100	0	0					Extremely weak grey MUDSTONE residually weathered recovered as slightly sandy clayey gravel of mudstone.	
								11.00	136.70		End of Borehole at 11.000m	11
												12

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.4m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.0m plain, 5.0m slotted).



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 28/03/2022		
Location: BURY			Contractor:			Co-ords: E380915.39 N413806.07		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH509		Hole Type CP+RC		Level 143.66m AoD		Logged By LH		Page Number Sheet 1 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		0.50	ES								MADE GROUND: Dark brown slightly clayey slightly gravelly sand. Gravel is angular to subangular fine to coarse of mixed lithologies including brick and sandstone.	
		1.00	ES					0.80	142.86		Extremely weak light brown SANDSTONE residually weathered recovered as slightly sandy gravel.	1
			NI					1.50	142.16		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone.	2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.3m bgl. 3. Monitoring standpipe installation to 6.0m bgl (2.0m plain, 4.0m slotted).



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 28/03/2022		
Location: BURY			Contractor:			Co-ords: E380915.39 N413806.07		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH509		Hole Type CP+RC		Level 143.66m AoD		Logged By LH		Page Number Sheet 2 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		1.50 - 3.00	NI	100	0	0					Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone.	
			NR					3.00	140.66		NO RECOVERY.	3
		3.00 - 4.50	NI	90	0	0		3.15	140.51		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone.	
												4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.3m bgl. 3. Monitoring standpipe installation to 6.0m bgl (2.0m plain, 4.0m slotted).



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 28/03/2022		
Location: BURY			Contractor:			Co-ords: E380915.39 N413806.07		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH509		Hole Type CP+RC		Level 143.66m AoD		Logged By LH		Page Number Sheet 3 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
											Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly cobbly gravel of sandstone.	
			NI									
		4.50 - 6.00		100	0	0					Becoming dark grey to black with fine mudstone inclusions from 5.0m to 6.0m bgl.	5
			NI									
								6.00	137.66			6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.3m bgl. 3. Monitoring standpipe installation to 6.0m bgl (2.0m plain, 4.0m slotted).



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 28/03/2022		
Location: BURY			Contractor:			Co-ords: E380915.39 N413806.07		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH509		Hole Type CP+RC		Level 143.66m AoD		Logged By LH		Page Number Sheet 5 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		7.50 - 9.00	11	100	100	79					Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities.	
		9.00 - 10.50	NI								Between 9.0m and 9.15m bgl recovered as slightly gravelly clay of mudstone.	9
			3									
			NI								Between 9.35m and 9.43m bgl recovered as slightly gravelly clay of mudstone.	
			1	100	60	39					Between 9.52m and 9.81m bgl recovered as slightly gravelly clay of mudstone.	
			NI									
			2									10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.3m bgl. 3. Monitoring standpipe installation to 6.0m bgl (2.0m plain, 4.0m slotted).																	





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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 04/04/2022 - 06/04/2022		
Location: BURY			Contractor:			Co-ords: E380895.72 N413796.72		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH510		Hole Type CP+RC		Level 142.91m AoD		Logged By LH		Page Number Sheet 1 of 5

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		0.80	ES					0.20	142.71		MADE GROUND: Reinforced concrete.	
											MADE GROUND: Firm dark grey slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to coarse of mixed lithologies including quartzite, concrete, brick and sandstone.	
												1
												2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.5m bgl. 3. Monitoring standpipe installation to 4.5m bgl (1.5m plain, 3.0m slotted).



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 04/04/2022 - 06/04/2022		
Location: BURY			Contractor:			Co-ords: E380895.72 N413796.72		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH510		Hole Type CP+RC		Level 142.91m AoD		Logged By LH		Page Number Sheet 2 of 5

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		2.80	ES					2.50	140.41		MADE GROUND: Firm dark grey slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to coarse of mixed lithologies including quartzite, concrete, brick and sandstone.	
											Stiff dark brown slightly sandy slightly gravelly silty CLAY. Gravel is angular to subangular fine to coarse of mixed lithologies including sandstone, mudstone, chert and quartzite.	3
												4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.5m bgl. 3. Monitoring standpipe installation to 4.5m bgl (1.5m plain, 3.0m slotted).





Project Name: TETROSYL							Client: URBAN REGEN						Date: 04/04/2022 - 06/04/2022					
Location: BURY							Contractor:						Co-ords: E380895.72 N413796.72					
Project No. : GRO-21459							Crew Name:						Drilling Equipment:					
Borehole Number BH510			Hole Type CP+RC			Level 142.91m AoD			Logged By LH			Scale 1:10			Page Number Sheet 3 of 5			
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description							
				TCR	SCR	RQD												
		5.00 - 6.50	8				5.00	137.91		Stiff dark brown slightly sandy slightly gravelly silty CLAY. Gravel is angular to subangular fine to coarse of mixed lithologies including sandstone, mudstone, chert and quartzite.	5							
			Nl	100	53	12				Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities.								
			11									Between 5.46m and 5.53m bgl recovered as slightly clayey gravel.						
											Between 5.96m and 6.03m bgl recovered as	6						
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)	
Remarks																		
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.5m bgl. 3. Monitoring standpipe installation to 4.5m bgl (1.5m plain, 3.0m slotted).																		

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 04/04/2022 - 06/04/2022		
Location: BURY			Contractor:			Co-ords: E380895.72 N413796.72		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH510		Hole Type CP+RC		Level 142.91m AoD		Logged By LH		Page Number Sheet 4 of 5

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
			NI								Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities. <i>Between 5.96m and 6.03m bgl recovered as slightly gravelly clay.</i>	
		6.50 - 8.00	NI	100	32	25					<i>Between 6.5m and 7.4m bgl recovered as slightly gravelly clay of mudstone.</i>	7
			7									8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.5m bgl. 3. Monitoring standpipe installation to 4.5m bgl (1.5m plain, 3.0m slotted).



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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 04/04/2022 - 06/04/2022			
Location: BURY				Contractor:				Co-ords: E380895.72 N413796.72			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH510		Hole Type CP+RC		Level 142.91m AoD		Logged By LH		Scale 1:10		Page Number Sheet 5 of 5	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description			
				TCR	SCR	RQD								
		8.00 - 10.00	NI									Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities. <i>Between 8.0m and 8.5m bgl recovered as medium to coarse sand.</i>	9	
			NI											<i>Between 8.5m and 8.89m bgl recovered as slightly gravelly clay of mudstone.</i>
			5	100	32	11								<i>Between 9.0m and 9.45m bgl recovered as slightly gravelly clayey sand.</i>
			NI											
			10											
								10.00	132.91		End of Borehole at 10.000m	10		

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks															
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.5m bgl. 3. Monitoring standpipe installation to 4.5m bgl (1.5m plain, 3.0m slotted).															

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 13/04/2022 - 14/04/2022		
Location: BURY			Contractor:			Co-ords: E380869.76 N413725.95		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH511		Hole Type CP+RC		Level 136.33m AoD		Logged By LH		Page Number Sheet 1 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		1.00	ES								MADE GROUND: Grey slightly clayey gravelly sand. Gravel is angular to subangular fine to coarse of mixed lithologies including concrete and tarmac.	1
												2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.2m bgl and 13.5m bgl rising to 8.4m bgl after 20 minutes. 3. Standpipe monitoring dual installation at 5.0m bgl (2.0m plain, 3.0m slotted) and 15.0m bgl (12.0m plain, 3.0m slotted).



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 13/04/2022 - 14/04/2022		
Location: BURY			Contractor:			Co-ords: E380869.76 N413725.95		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH511		Hole Type CP+RC		Level 136.33m AoD		Logged By LH		Page Number Sheet 2 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		3.50	ES					3.00	133.33		MADE GROUND: Grey slightly clayey gravelly sand. Gravel is angular to subangular fine to coarse of mixed lithologies including concrete and tarmac.	
											MADE GROUND: Black slightly gravelly ashy sand. Gravel is angular to subangular fine to coarse of mixed lithologies including clinker, sandstone and rare coal.	3
												4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.2m bgl and 13.5m bgl rising to 8.4m bgl after 20 minutes. 3. Standpipe monitoring dual installation at 5.0m bgl (2.0m plain, 3.0m slotted) and 15.0m bgl (12.0m plain, 3.0m slotted).



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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 13/04/2022 - 14/04/2022			
Location: BURY				Contractor:				Co-ords: E380869.76 N413725.95			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH511		Hole Type CP+RC		Level 136.33m AoD		Logged By LH		Scale 1:10		Page Number Sheet 3 of 10	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
											MADE GROUND: Black slightly gravelly ashy sand. Gravel is angular to subangular fine to coarse of mixed lithologies including clinker, sandstone and rare coal.	
								4.80	131.53		Soft to firm brown orange slightly sandy clay with rare sandstone gravel (Possibly reworked).	5
			5.50	ES					6.00	130.33		Becoming slightly gravelly of mudstone and sandstone from 5.2m bgl.

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.2m bgl and 13.5m bgl rising to 8.4m bgl after 20 minutes. 3. Standpipe monitoring dual installation at 5.0m bgl (2.0m plain, 3.0m slotted) and 15.0m bgl (12.0m plain, 3.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 13/04/2022 - 14/04/2022		
Location: BURY			Contractor:			Co-ords: E380869.76 N413725.95		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH511		Hole Type CP+RC		Level 136.33m AoD		Logged By LH		Page Number Sheet 5 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		7.50 - 9.00									Extremely weak grey MUDSTONE moderately weathered recovered as slightly clayey angular to subangular fine to coarse gravel of mudstone with low cobble content.	
			NI								Between 8.18m and 8.27m bgl recovered as slightly clayey gravel of mudstone.	
			6	89	50	19						
			NI								Between 8.61m and 8.71m bgl recovered as slightly clayey gravel of mudstone.	
		9.00 - 10.50	10									
			NI								Between 9.0m and 9.08m bgl recovered as slightly clayey gravel of shale.	9
			8									
			NI								Between 9.25m and 9.37m bgl recovered as slightly clayey gravel of mudstone.	
			12	100	34	0						
											Between 9.69m and 10.5m bgl recovered as slightly clayey gravel of mudstone.	
												10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.2m bgl and 13.5m bgl rising to 8.4m bgl after 20 minutes. 3. Standpipe monitoring dual installation at 5.0m bgl (2.0m plain, 3.0m slotted) and 15.0m bgl (12.0m plain, 3.0m slotted).



[illegible]

[illegible]

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 13/04/2022 - 14/04/2022		
Location: BURY			Contractor:			Co-ords: E380869.76 N413725.95		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH511		Hole Type CP+RC		Level 136.33m AoD		Logged By LH		Page Number Sheet 8 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		13.50 - 15.00	NI	100	0	0					Extremely weak grey MUDSTONE moderately weathered recovered as slightly clayey angular to subangular fine to coarse gravel of mudstone with low cobble content.	15
		15.00 - 16.50	NI	100	0	0						
												16

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.2m bgl and 13.5m bgl rising to 8.4m bgl after 20 minutes. 3. Standpipe monitoring dual installation at 5.0m bgl (2.0m plain, 3.0m slotted) and 15.0m bgl (12.0m plain, 3.0m slotted).



[illegible]



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 12/04/2022 - 13/04/2022		
Location: BURY			Contractor:			Co-ords: E380898.07 N413707.39		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH512		Hole Type CP+RC		Level 136.57m AoD		Logged By LH		Page Number Sheet 1 of 9

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		0.50	ES								MADE GROUND: Black slightly gravelly ashy sand. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, clinker, sandstone and rare coal.	
								1.00	135.57		MADE GROUND: Soft to firm brown orange slightly sandy clay with rare sandstone gravel (Reworked).	1
		2.00	ES									2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.2m bgl after 20 minutes. 3. Monitoring standpipe installation to 12.0m bgl (6.0m plain, 6.0m slotted).





Project Name: TETROSYL				Client: URBAN REGEN				Date: 12/04/2022 - 13/04/2022									
Location: BURY				Contractor:				Co-ords: E380898.07 N413707.39									
Project No. : GRO-21459				Crew Name:				Drilling Equipment:									
Borehole Number BH512		Hole Type CP+RC		Level 136.57m AoD		Logged By LH		Scale 1:10		Page Number Sheet 2 of 9							
Well	Water	Depth (m)	Type /FI	Coring TCR SCR RQD			Diameter Recovery (SPH)	Depth (m)	Level (m)	Legend	Stratum Description						
								4.00	132.57		MADE GROUND: Soft to firm brown orange slightly sandy clay with rare sandstone gravel (Reworked).						
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.2m bgl after 20 minutes. 3. Monitoring standpipe installation to 12.0m bgl (6.0m plain, 6.0m slotted).																	

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 12/04/2022 - 13/04/2022		
Location: BURY			Contractor:			Co-ords: E380898.07 N413707.39		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH512		Hole Type CP+RC		Level 136.57m AoD		Logged By LH		Page Number Sheet 3 of 9

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		4.50	ES								MADE GROUND: Dark brown slightly clayey slightly gravelly ashy sand. Gravel is angular to subangular medium of mixed lithologies including coal, clinker, sandstone and mudstone.	
								6.00	130.57			5
												6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.2m bgl after 20 minutes. 3. Monitoring standpipe installation to 12.0m bgl (6.0m plain, 6.0m slotted).



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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 12/04/2022 - 13/04/2022			
Location: BURY				Contractor:				Co-ords: E380898.07 N413707.39			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH512		Hole Type CP+RC		Level 136.57m AoD		Logged By LH		Scale 1:10		Page Number Sheet 4 of 9	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		6.20	ES								Extremely weak grey mottled brown MUDSTONE residually weathered recovered as slightly gravelly friable clay.	
								7.00	129.57		Extremely weak grey MUDSTONE moderately weathered recovered as slightly clayey angular to subangular fine to coarse gravel of mudstone with low cobble content.	7
		7.00 - 8.50	NI	100	29	29			8.00	128.57		

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.2m bgl after 20 minutes. 3. Monitoring standpipe installation to 12.0m bgl (6.0m plain, 6.0m slotted).

GROUNDTECH
CONSULTING

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 12/04/2022 - 13/04/2022		
Location: BURY			Contractor:			Co-ords: E380898.07 N413707.39		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH512		Hole Type CP+RC		Level 136.57m AoD		Logged By LH		Page Number Sheet 5 of 9

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		8.50 - 10.00	2								Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities.	
			NI								Between 8.44m and 8.54m bgl recovered as slightly clayey gravel of mudstone.	
			NI									
			7									
			NI								Between 8.71m and 8.78m bgl recovered as slightly clayey gravel of mudstone.	
			1								Between 8.84m and 9.46m bgl recovered as slightly clayey gravel of mudstone.	
			NI									
			3									
			NI								Between 9.88m and 10.57m bgl recovered as slightly clayey gravel of mudstone.	
												9

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.2m bgl after 20 minutes. 3. Monitoring standpipe installation to 12.0m bgl (6.0m plain, 6.0m slotted).



GROUNDTECH
CONSULTING

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 12/04/2022 - 13/04/2022		
Location: BURY			Contractor:			Co-ords: E380898.07 N413707.39		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH512		Hole Type CP+RC		Level 136.57m AoD		Logged By LH		Page Number Sheet 6 of 9

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		10.00 - 11.50	NI								Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities.	
			6	100	27	7						
			NI									
			NI									
			NI								Between 10.95m and 15.49m bgl recovered as slightly clayey gravel of mudstone.	11
			NI									12

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.2m bgl after 20 minutes. 3. Monitoring standpipe installation to 12.0m bgl (6.0m plain, 6.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 12/04/2022 - 13/04/2022		
Location: BURY			Contractor:			Co-ords: E380898.07 N413707.39		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH512		Hole Type CP+RC		Level 136.57m AoD		Logged By LH		Page Number Sheet 7 of 9

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		11.50 - 13.00	NI	100	0	0					Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities.	13
		13.00 - 14.50	NI	100	0	0						14

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks 1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.2m bgl after 20 minutes. 3. Monitoring standpipe installation to 12.0m bgl (6.0m plain, 6.0m slotted).																	
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Project Name: TETROSYL				Client: URBAN REGEN				Date: 12/04/2022 - 13/04/2022									
Location: BURY				Contractor:				Co-ords: E380898.07 N413707.39									
Project No. : GRO-21459				Crew Name:				Drilling Equipment:									
Borehole Number BH512		Hole Type CP+RC		Level 136.57m AoD		Logged By LH		Scale 1:10		Page Number Sheet 8 of 9							
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
		14.50 - 16.00	NI	100	14	0					Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities.	15					
			2														
			NI								Between 15.6m and 15.9m bgl recovered as slightly clayey gravel of mudstone.						
			3									16					
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.2m bgl after 20 minutes. 3. Monitoring standpipe installation to 12.0m bgl (6.0m plain, 6.0m slotted).																	

Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 12/04/2022 - 13/04/2022			
Location: BURY				Contractor:				Co-ords: E380898.07 N413707.39			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH512		Hole Type CP+RC		Level 136.57m AoD		Logged By LH		Scale 1:10		Page Number Sheet 9 of 9	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD							
		16.00 - 18.00	NR								Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities. <i>No recovery between 16.0m and 16.4m bgl.</i>	17	
			NI	80	26	0							Between 16.4m and 17.49m bgl recovered as slightly clayey gravel of mudstone.
			15										
								18.00	118.57		End of Borehole at 18.000m	18	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks 1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.2m bgl after 20 minutes. 3. Monitoring standpipe installation to 12.0m bgl (6.0m plain, 6.0m slotted).																

GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 04/04/2022			
Location: BURY				Contractor:				Co-ords: E380905.45 N413769.27			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH513		Hole Type CP+RC		Level 138.97m AoD		Logged By LH		Scale 1:10		Page Number Sheet 1 of 5	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		0.30	ES					0.20	138.77		MADE GROUND: Reinforced concrete.	
											Extremely weak brown medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy gravel.	
		1.00 - 2.50	NI	100	0	0		1.00	137.97		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly gravelly cobbles of sandstone.	1
		1.80	ES									2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks															
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.0m bgl. 3. Monitoring standpipe installation to 3.0m bgl (1.0m plain, 2.0m slotted).															



Rotary Core Log

Project Name: TETROSYL						Client: URBAN REGEN						Date: 04/04/2022						
Location: BURY						Contractor:						Co-ords: E380905.45 N413769.27						
Project No. : GRO-21459						Crew Name:						Drilling Equipment:						
Borehole Number BH513			Hole Type CP+RC			Level 138.97m AoD			Logged By LH			Scale 1:10			Page Number Sheet 2 of 5			
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description							
				TCR	SCR	RQD												
		2.50 - 4.00	NI				100	3	0		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly gravelly cobbles of sandstone.					3		
												Between 2.2m and 2.88m bgl recovered as locally clayey slightly sandy gravel of sandstone and mudstone.						
			NI															
			1															
		4.00	ES					4.00	134.97		Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. Extremely weak dark grey MUDSTONE residually weathered recovered as slightly sandy slightly gravelly clay.					4		
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush						
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)	
Remarks																		
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.0m bgl. 3. Monitoring standpipe installation to 3.0m bgl (1.0m plain, 2.0m slotted).																		

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 04/04/2022		
Location: BURY			Contractor:			Co-ords: E380905.45 N413769.27		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH513		Hole Type CP+RC		Level 138.97m AoD		Logged By LH		Page Number Sheet 3 of 5

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
			NR					4.05	134.92		NO RECOVERY.	
			NI								Extremely weak dark grey MUDSTONE residually weathered recovered as slightly sandy slightly gravelly clay. <i>Between 4.15m and 6.0m bgl recovered as slightly clayey gravel of shale.</i>	
		4.00 - 5.50	NI	97	0	0						5
			NI									6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.0m bgl. 3. Monitoring standpipe installation to 3.0m bgl (1.0m plain, 2.0m slotted).





Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 04/04/2022		
Location: BURY			Contractor:			Co-ords: E380905.45 N413769.27		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH513		Hole Type CP+RC		Level 138.97m AoD		Logged By LH		Page Number Sheet 5 of 5

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		8.50 - 10.00	7								Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities.	9
			NR								No recovery between 8.5m and 8.7m bgl.	
			2									
			NI								Between 9.19m and 9.24m bgl recovered as slightly gravelly clay.	
			7	81	74	64						
								10.00	128.97		End of Borehole at 10.000m	10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

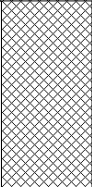
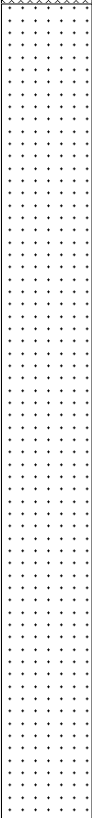
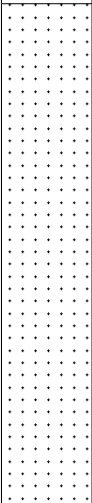
Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 2.0m bgl. 3. Monitoring standpipe installation to 3.0m bgl (1.0m plain, 2.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 01/04/2022		
Location: BURY			Contractor:			Co-ords: E380942.10 N413764.94		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH514		Hole Type CP+RC		Level 142.90m AoD		Logged By LH		Page Number Sheet 1 of 5

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		0.50	ES					0.25	142.65		MADE GROUND: Reinforced concrete.	1
											Extremely weak light brown medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy gravel.	
		1.00 - 2.00	NI					1.33	141.57		Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.	
			7	100	23	0					Between 1.58m and 1.81m bgl recovered as slightly sandy gravelly cobbles.	
			NI									
			4									
			NI								Between 1.91m and 1.98m bgl recovered as slightly sandy gravelly cobbles.	
			ES									
		2.00	ES									2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.0m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.5m plain, 4.5m slotted).



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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 01/04/2022			
Location: BURY				Contractor:				Co-ords: E380942.10 N413764.94			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH514		Hole Type CP+RC		Level 142.90m AoD		Logged By LH		Scale 1:10		Page Number Sheet 2 of 5	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		2.00 - 3.50	6								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <i>Between 2.31m and 2.38m bgl recovered as slightly sandy cobbly gravel.</i> <i>Between 2.46m and 2.56m bgl recovered as slightly sandy cobbly gravel.</i> <i>Between 3.0m and 3.29m bgl recovered as slightly sandy cobbly gravel.</i> <i>No recovery between 3.5m and 4.0m bgl.</i>	3
			NI									
			1									
			NI									
			2	100	67	28						
			NI									
			2									
			NR									4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks															
1. Hand dug inspection pit to 1.0m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.5m plain, 4.5m slotted).															



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 01/04/2022		
Location: BURY			Contractor:			Co-ords: E380942.10 N413764.94		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH514		Hole Type CP+RC		Level 142.90m AoD		Logged By LH		Page Number Sheet 3 of 5

Well	Water	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
		3.50 - 5.00	NI							Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <i>Between 4.0m and 4.26m bgl recovered as slightly sandy cobbly gravel.</i>	5
			2	67	38	24					
			NI								
			4								
			NI								
		5.00 - 6.50	NI							<i>Between 4.59m and 4.7m bgl recovered as slightly sandy cobbly gravel.</i>	5
			2	100	28	18					
										<i>Between 4.95m and 5.55m bgl recovered as slightly sandy gravelly cobbles.</i>	5
										<i>Between 5.82m and 6.0m bgl recovered as slightly sandy cobbly gravel.</i>	6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.0m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.5m plain, 4.5m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 01/04/2022		
Location: BURY			Contractor:			Co-ords: E380942.10 N413764.94		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH514		Hole Type CP+RC		Level 142.90m AoD		Logged By LH		Page Number Sheet 4 of 5

Well	Water	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
		6.50 - 8.00	NI							Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.	
			NR							No recovery between 6.5m and 6.6m bgl.	
			3								
			NI							Between 6.8m and 7.1m bgl recovered as slightly sandy cobbly gravel.	
			NI	93	43	26				Between 7.1m and 7.5m bgl recovered as medium to coarse sand.	7
			4				7.50	135.40		Extremely weak grey MUDSTONE with sandstone interbedded residually weathered recovered as slightly sandy clayey gravel of mudstone and sandstone.	
							8.00	134.90			8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks
 1. Hand dug inspection pit to 1.0m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.5m plain, 4.5m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 01/04/2022		
Location: BURY			Contractor:			Co-ords: E380942.10 N413764.94		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH514		Hole Type CP+RC		Level 142.90m AoD		Logged By LH		Page Number Sheet 5 of 5

Well	Water	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
		8.00 - 9.00	NR				8.05	134.85		NO RECOVERY.	9
			NI							Weak brown orange SANDSTONE with mudstone interbedded residually weathered recovered as slightly clayey slightly sandy gravel.	
			5	95	39	11	8.51	134.39		Weak brown orange medium to coarse grained SANDSTONE interbedded with mudstone moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities quartzite inclusions.	
			NI							Between 8.84m and 8.91m bgl recovered as slightly clayey slightly sandy gravel of mudstone and sandstone.	10
			1								
							9.00	133.90		End of Borehole at 9.000m	

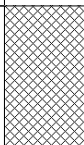
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.0m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 8.0m bgl (3.5m plain, 4.5m slotted).



Rotary Core Log

Project Name: TETROSYL						Client: URBAN REGEN						Date: 06/04/2022 - 07/04/2022					
Location: BURY						Contractor:						Co-ords: E380961.86 N413744.45					
Project No. : GRO-21459						Crew Name:						Drilling Equipment:					
Borehole Number BH515			Hole Type CP+RC			Level 138.80m AoD			Logged By LH			Scale 1:10			Page Number Sheet 1 of 7		
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
		0.50	ES					0.20	138.60		MADE GROUND: Reinforced concrete.					1	
								MADE GROUND: Dark brown slightly silty gravelly sand. Gravel is angular to subangular medium to coarse of mixed lithologies including brick, clinker, concrete, ceramics, refractory brick and glass.									
								0.75	138.05		MADE GROUND: Soft dark brown slightly sandy slightly gravelly silty clay. Gravel is angular to subangular medium to coarse of mixed lithologies including brick, clinker, concrete, ceramics, refractory brick and glass.						
		1.50	ES													2	
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 6.8m bgl. 3. Monitoring standpipe installed to 12.0m bgl (6.0m plain, 6.0m slotted).																	

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 06/04/2022 - 07/04/2022		
Location: BURY			Contractor:			Co-ords: E380961.86 N413744.45		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH515		Hole Type CP+RC		Level 138.80m AoD		Logged By LH		Page Number Sheet 2 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		3.00	ES					2.90	135.90		MADE GROUND: Soft dark brown slightly sandy slightly gravelly silty clay. Gravel is angular to subangular medium to coarse of mixed lithologies including brick, clinker, concrete, ceramics, refractory brick and glass.	3
								3.00	135.80		Extremely weak brown medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy gravel.	
			NR					3.12	135.68		NO RECOVERY.	
			3									
		3.00 - 4.50	NI	92	45	25					Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <i>Between 3.31m and 3.69m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	4
			2									
			NI								<i>Between 3.88m and 4.05m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 6.8m bgl. 3. Monitoring standpipe installed to 12.0m bgl (6.0m plain, 6.0m slotted).																	







Project Name: TETROSYL				Client: URBAN REGEN				Date: 06/04/2022 - 07/04/2022			
Location: BURY				Contractor:				Co-ords: E380961.86 N413744.45			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH515		Hole Type CP+RC		Level 138.80m AoD		Logged By LH		Scale 1:10		Page Number Sheet 4 of 7	
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
				TCR	SCR	RQD					
		6.00 - 7.50	NI	100	68	44					Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <u>Between 6.17m and 6.22m bgl recovered as slightly sandy cobbly gravel of sandstone.</u>
			1								
			NI								
			4								
			NI								
			2								
			NI								
			1								
			NI								
			3								
			NI								
			2								
			NI								
			Hole Diameter Casing Diameter Chiselling Inclination and Orientation Drilling Flush Depth Base Diameter Depth Base Diameter Depth Top Depth Base Duration Tool Depth Top Depth Base Inclination Orientation Depth Top Depth Base Type Colour Min (%) Max (%)								
Hole Diameter Casing Diameter Chiselling Inclination and Orientation Drilling Flush Depth Base Diameter Depth Base Diameter Depth Top Depth Base Duration Tool Depth Top Depth Base Inclination Orientation Depth Top Depth Base Type Colour Min (%) Max (%)											8
Hole Diameter Casing Diameter Chiselling Inclination and Orientation Drilling Flush Depth Base Diameter Depth Base Diameter Depth Top Depth Base Duration Tool Depth Top Depth Base Inclination Orientation Depth Top Depth Base Type Colour Min (%) Max (%)											
Hole Diameter Casing Diameter Chiselling Inclination and Orientation Drilling Flush Depth Base Diameter Depth Base Diameter Depth Top Depth Base Duration Tool Depth Top Depth Base Inclination Orientation Depth Top Depth Base Type Colour Min (%) Max (%)											
Hole Diameter Casing Diameter Chiselling Inclination and Orientation Drilling Flush Depth Base Diameter Depth Base Diameter Depth Top Depth Base Duration Tool Depth Top Depth Base Inclination Orientation Depth Top Depth Base Type Colour Min (%) Max (%)											
Hole Diameter Casing Diameter Chiselling Inclination and Orientation Drilling Flush Depth Base Diameter Depth Base Diameter Depth Top Depth Base Duration Tool Depth Top Depth Base Inclination Orientation Depth Top Depth Base Type Colour Min (%) Max (%)											
Hole Diameter Casing Diameter Chiselling Inclination and Orientation Drilling Flush Depth Base Diameter Depth Base Diameter Depth Top Depth Base Duration Tool Depth Top Depth Base Inclination Orientation Depth Top Depth Base Type Colour Min (%) Max (%)											
Hole Diameter Casing Diameter Chiselling Inclination and Orientation Drilling Flush Depth Base Diameter Depth Base Diameter Depth Top Depth Base Duration Tool Depth Top Depth Base Inclination Orientation Depth Top Depth Base Type Colour Min (%) Max (%)											
Hole Diameter Casing Diameter Chiselling Inclination and Orientation Drilling Flush											

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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 06/04/2022 - 07/04/2022			
Location: BURY				Contractor:				Co-ords: E380961.86 N413744.45			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH515		Hole Type CP+RC		Level 138.80m AoD		Logged By LH		Scale 1:10		Page Number Sheet 5 of 7	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description				
				TCR	SCR	RQD									
		7.50 - 9.00	NI				100	51	45		Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.				
			2												
		9.00 - 10.50	NI				100	27	15					Between 9.0m and 9.2m bgl recovered as slightly sandy cobbly gravel of sandstone.	9
			2												
			NI												
			1												
			NI												
			2												

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks															
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 6.8m bgl. 3. Monitoring standpipe installed to 12.0m bgl (6.0m plain, 6.0m slotted).															

GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 06/04/2022 - 07/04/2022			
Location: BURY				Contractor:				Co-ords: E380961.86 N413744.45			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH515		Hole Type CP+RC		Level 138.80m AoD		Logged By LH		Scale 1:10		Page Number Sheet 6 of 7	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
			NI								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. No recovery between 10.5m and 10.58m bgl. Between 10.58m and 10.76m bgl recovered as slightly sandy cobbly gravel of sandstone. Between 10.96m and 11.1m bgl recovered as slightly sandy cobbly gravel of sandstone. Extremely weak dark grey MUDSTONE residually weathered recovered as slightly	
			NR									
			NI									
			3									
			NI									
		10.50 - 12.00		94	69	33						
			8									
			NI					11.92	126.88			
								12.00	126.80			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 6.8m bgl. 3. Monitoring standpipe installed to 12.0m bgl (6.0m plain, 6.0m slotted).

GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 06/04/2022 - 07/04/2022			
Location: BURY				Contractor:				Co-ords: E380961.86 N413744.45			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH515		Hole Type CP+RC		Level 138.80m AoD		Logged By LH		Scale 1:10		Page Number Sheet 7 of 7	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description
				TCR	SCR	RQD					
		12.00 - 13.50	NR					12.05	126.75		Extremely weak dark grey MUDSTONE residually weathered recovered as slightly sandy slightly gravelly clay. NO RECOVERY.
			7								Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities.
			NI								Between 12.45m and 12.52m bgl recovered as slightly gravelly clay of mudstone.
			16	97	76	23					
			NI					13.50	125.30		Between 13.3m and 13.5m bgl recovered as slightly gravelly clay of mudstone.
											End of Borehole at 13.500m

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 6.8m bgl. 3. Monitoring standpipe installed to 12.0m bgl (6.0m plain, 6.0m slotted).



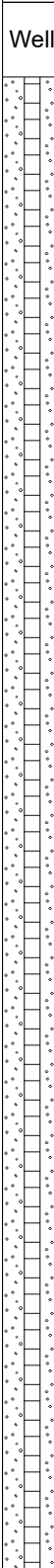
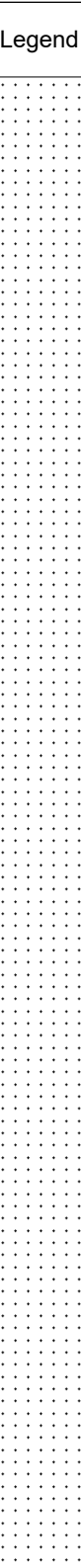


Project Name: TETROSYL						Client: URBAN REGEN							Date: 08/04/2022 - 11/04/2022							
Location: BURY						Contractor:							Co-ords: E380939.13 N413718.88							
Project No. : GRO-21459						Crew Name:							Drilling Equipment:							
Borehole Number BH516			Hole Type CP+RC			Level 137.00m AoD			Logged By LH			Scale 1:10			Page Number Sheet 2 of 6					
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description									
				TCR	SCR	RQD														
			NI								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <u>Between 1.86m and 1.89m bgl recovered as slightly sandy slightly cobbly gravel of sandstone.</u> <u>Between 1.93m and 2.0m bgl recovered as slightly sandy slightly cobbly gravel.</u> <u>Between 2.0m and 2.33m bgl recovered as slightly sandy cobbles.</u>									
			6																	
		2.00 - 3.50	NI	100	44	0					<u>Between 2.69m and 2.95m bgl recovered as slightly sandy slightly cobbly gravel.</u>									
			2																	
			NI								<u>Between 3.0m and 3.08m bgl recovered as slightly sandy slightly cobbly gravel.</u>									
			1																	
			NI								<u>Between 3.14m and 3.26m bgl recovered as slightly sandy slightly cobbly gravel.</u>									
			2								<u>Between 3.28m and 3.82m bgl recovered as slightly sandy slightly cobbly gravel.</u>									
			NI																	
			NI																	
			2																	
											<u>Between 3.94m and 4.18m bgl recovered as</u>									
Hole Diameter	Casing Diameter			Chiselling				Inclination and Orientation				Drilling Flush								
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)			
Remarks																				
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.0m bgl. 3. Monitoring standpipe installed to 6.0m bgl (3.0m plain, 3.0m slotted).																				

GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL		Client: URBAN REGEN		Date: 08/04/2022 - 11/04/2022	
Location: BURY		Contractor:		Co-ords: E380939.13 N413718.88	
Project No. : GRO-21459		Crew Name:		Drilling Equipment:	
Borehole Number BH516	Hole Type CP+RC	Level 137.00m AoD		Logged By LH	Scale 1:10
				Page Number Sheet 3 of 6	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD							
		3.50 - 5.00	NI	100	12	0					Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <u>Between 3.94m and 4.18m bgl recovered as slightly sandy slightly cobbly gravel.</u>	5	
			1										
		5.00 - 6.00	NI	100	0	0							<u>Between 5.24m and 5.55m bgl recovered as slightly sandy slightly cobbly gravel.</u>
			NI										<u>Between 5.55m and 6.0m bgl recovered as medium to coarse sand.</u>
												6	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.0m bgl. 3. Monitoring standpipe installed to 6.0m bgl (3.0m plain, 3.0m slotted).																	



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 08/04/2022 - 11/04/2022		
Location: BURY			Contractor:			Co-ords: E380939.13 N413718.88		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH516		Hole Type CP+RC		Level 137.00m AoD		Logged By LH		Page Number Sheet 4 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		6.00 - 7.50	NR								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <u>No recovery between 6.0m and 6.1m bgl.</u> <u>Between 6.1m and 8.25m bgl recovered as slightly sandy slightly cobbly gravel.</u>	7
			NI	93	0	0						
			NI									8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.0m bgl. 3. Monitoring standpipe installed to 6.0m bgl (3.0m plain, 3.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 08/04/2022 - 11/04/2022		
Location: BURY			Contractor:			Co-ords: E380939.13 N413718.88		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH516		Hole Type CP+RC		Level 137.00m AoD		Logged By LH		Page Number Sheet 5 of 6

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		7.50 - 9.00									Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. Between 8.41m and 8.73m bgl recovered as slightly sandy slightly cobbly gravel.	
			2									
			NI	100	15	0						
			1									
			NI									
			12					8.73	128.27		Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities. Between 8.82m and 9.0m bgl recovered as slightly clayey gravel of mudstone.	9
												10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.0m bgl. 3. Monitoring standpipe installed to 6.0m bgl (3.0m plain, 3.0m slotted).																	



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 08/04/2022 - 11/04/2022		
Location: BURY			Contractor:			Co-ords: E380939.13 N413718.88		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH516		Hole Type CP+RC		Level 137.00m AoD		Logged By LH		Page Number Sheet 6 of 6

Well	Water	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
		9.00 - 11.00	NI							Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities. <i>Between 10.0m and 10.33m bgl recovered as slightly clayey gravel of mudstone.</i> <i>Between 10.55m and 10.87m bgl recovered as slightly clayey gravel of mudstone.</i> <i>Between 10.71m and 10.73m bgl recovered as slightly clayey gravel of mudstone.</i> <i>Between 10.82m and 10.93m bgl recovered as slightly clayey gravel of mudstone.</i> <i>Between 10.96m and 11.0m bgl recovered as slightly clayey gravel of mudstone.</i> End of Borehole at 11.000m	11
			7								
			NI								
			3								
			NI								
			2								
			NI								
			1								
			NI				11.00	126.00			12

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks
 1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.0m bgl. 3. Monitoring standpipe installed to 6.0m bgl (3.0m plain, 3.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 07/04/2022 - 08/04/2022		
Location: BURY			Contractor:			Co-ords: E380952.36 N413707.97		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH517		Hole Type CP+RC		Level 138.68m AoD		Logged By LH		Page Number Sheet 1 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		0.80	ES					0.20	138.48		MADE GROUND: Reinforced concrete.	1
								0.35	138.32		MADE GROUND: Dark brown slightly sandy angular to subangular medium to coarse gravel of brick with low cobble content of brick.	
											MADE GROUND: Dark brown slightly gravelly slightly ashy sand with occasional cobble content of sandstone. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, ceramics, glass, clinker and sandstone.	
		1.80	ES								<u>Becoming very ashy from 1.0m bgl.</u>	2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.3m bgl after 20 minutes. 3. Monitoring standpipe installation to 11.0m bgl (4.0m plain, 7.0m slotted).



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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 07/04/2022 - 08/04/2022			
Location: BURY				Contractor:				Co-ords: E380952.36 N413707.97			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH517		Hole Type CP+RC		Level 138.68m AoD		Logged By LH		Scale 1:10		Page Number Sheet 2 of 7	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
											MADE GROUND: Dark brown slightly gravelly slightly ashy sand with occasional cobble content of sandstone. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, ceramics, glass, clinker and sandstone.	
		3.20	ES					3.00	135.68		Extremely weak brown medium to coarse grained SANDSTONE residually weathered recovered as slightly clayey sandy gravel. <i>Mild hydrocarbon odour and black staining from 3.1m to 3.6m bgl.</i>	3
		4.00	ES					4.00	134.68			4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks															
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.3m bgl after 20 minutes. 3. Monitoring standpipe installation to 11.0m bgl (4.0m plain, 7.0m slotted).															



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 07/04/2022 - 08/04/2022		
Location: BURY			Contractor:			Co-ords: E380952.36 N413707.97		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH517		Hole Type CP+RC		Level 138.68m AoD		Logged By LH		Page Number Sheet 3 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		4.00 - 5.50	1								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities and quartzite inclusions. <u>Between 4.06m and 4.58m bgl recovered as slightly sandy cobbly gravel of sandstone.</u> <u>Between 4.74m and 4.78m bgl recovered as slightly sandy gravel of sandstone.</u> <u>Between 4.9m and 5.0m bgl recovered as slightly sandy cobbly gravel of sandstone.</u> <u>Between 5.12m and 5.5m bgl recovered as slightly sandy cobbly gravel of sandstone.</u>	5
			NI									
			2									
			NI	100	29	8						
			3									
			NI									
			1									
			NI									
			4									

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.3m bgl after 20 minutes. 3. Monitoring standpipe installation to 11.0m bgl (4.0m plain, 7.0m slotted).



Rotary Core Log

Project Name: TETROSYL		Client: URBAN REGEN		Date: 07/04/2022 - 08/04/2022	
Location: BURY		Contractor:		Co-ords: E380952.36 N413707.97	
Project No. : GRO-21459		Crew Name:		Drilling Equipment:	
Borehole Number BH517	Hole Type CP+RC	Level 138.68m AoD	Logged By LH	Scale 1:10	Page Number Sheet 4 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
		5.50 - 7.00	NI	100	67	32				Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities and quartzite inclusions. <u>Between 6.0m and 6.16m bgl recovered as slightly sandy cobbly gravel of sandstone.</u> <u>Between 6.36m and 6.53m bgl recovered as slightly sandy cobbly gravel of sandstone.</u> <u>Between 6.91m and 7.0m bgl recovered as slightly sandy cobbly gravel of sandstone.</u> <u>No recovery between 7.0m and 7.5m bgl.</u> <u>Between 7.5m and 7.54m bgl recovered as slightly sandy cobbly gravel of sandstone.</u> <u>Between 7.7m and 7.74m bgl recovered as slightly sandy cobbly gravel of sandstone.</u> <u>Between 7.87m and 7.92m bgl recovered as slightly sandy cobbly gravel of sandstone.</u>	7						
			2														
			NI														
			3														
			NI														
		7.00 - 8.50	NR	67	20	8											
			NI														
			4														
			NI														
			3														
			NI														
			1														

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.3m bgl after 20 minutes. 3. Monitoring standpipe installation to 11.0m bgl (4.0m plain, 7.0m slotted).																	



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 07/04/2022 - 08/04/2022		
Location: BURY			Contractor:			Co-ords: E380952.36 N413707.97		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH517		Hole Type CP+RC		Level 138.68m AoD		Logged By LH		Page Number Sheet 5 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
			NI								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities and quartzite inclusions. <i>Between 8.07m and 8.5m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	
		8.50 - 10.00	NI								<i>Between 8.5m and 9.0m bgl recovered as medium to coarse sand with rare cobbles.</i>	
											<i>Between 9.0m and 9.41m bgl recovered as slightly sandy cobbly gravel of sandstone.</i>	9
			3									
			NI								<i>Between 9.96m and 10.72m bgl recovered as</i>	10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.3m bgl after 20 minutes. 3. Monitoring standpipe installation to 11.0m bgl (4.0m plain, 7.0m slotted).



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 07/04/2022 - 08/04/2022		
Location: BURY			Contractor:			Co-ords: E380952.36 N413707.97		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH517		Hole Type CP+RC		Level 138.68m AoD		Logged By LH		Page Number Sheet 6 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		10.00 - 11.50	NI								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities and quartzite inclusions. <i>Between 9.96m and 10.72m bgl recovered as slightly sandy cobbly gravel of sandstone.</i> <i>Between 10.83m and 11.26m bgl recovered as slightly sandy cobbly gravel of sandstone.</i> Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities. <i>Between 11.44m and 11.5m bgl recovered as slightly clayey gravel of mudstone.</i> <i>Between 11.5m and 13.0m bgl recovered as gravelly clay of mudstone.</i>	11
			1	100	19	14						
			NI									
			3									
			NI					11.26	127.42			12

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.3m bgl after 20 minutes. 3. Monitoring standpipe installation to 11.0m bgl (4.0m plain, 7.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 07/04/2022 - 08/04/2022		
Location: BURY			Contractor:			Co-ords: E380952.36 N413707.97		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH517		Hole Type CP+RC		Level 138.68m AoD		Logged By LH		Page Number Sheet 7 of 7

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		11.50 - 13.00	NI	100	0	0					Extremely weak grey friable MUDSTONE moderately weathered with horizontal smooth planar open very closely to medium spaced discontinuities.	
								13.00	125.68		End of Borehole at 13.000m	13
												14

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 3.5m falling to 5.3m bgl after 20 minutes. 3. Monitoring standpipe installation to 11.0m bgl (4.0m plain, 7.0m slotted).





Project Name: TETROSYL						Client: URBAN REGEN						Date: 11/04/2022					
Location: BURY						Contractor:						Co-ords: E380960.38 N413682.58					
Project No. : GRO-21459						Crew Name:						Drilling Equipment:					
Borehole Number BH518			Hole Type CP+RC			Level 139.02m AoD			Logged By LH			Scale 1:10			Page Number Sheet 1 of 9		
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPH)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
		1.00	ES					0.25	138.77		MADE GROUND: Reinforced concrete.					1 -	
											MADE GROUND: Brown sandy angular to subangular fine to coarse gravel of brick and sandstone.						
											<u>Becoming clayey from 1.9m bgl.</u>					2 -	
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 18.0m bgl (6.0m plain, 12.0m slotted).																	





Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 11/04/2022									
Location: BURY				Contractor:				Co-ords: E380960.38 N413682.58									
Project No. : GRO-21459				Crew Name:				Drilling Equipment:									
Borehole Number BH518		Hole Type CP+RC		Level 139.02m AoD		Logged By LH		Scale 1:10		Page Number Sheet 3 of 9							
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
		5.00	ES					4.60	134.42		MADE GROUND: Firm to stiff brown slightly sandy silty clay.	5					
											MADE GROUND: Brown slightly clayey slightly silty sand.						
											Extremely weak brown medium to coarse grained SANDSTONE residually weathered recovered as slightly clayey sandy gravel.						
		6.00	ES							6.00	133.02			6			
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 18.0m bgl (6.0m plain, 12.0m slotted).																	

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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 11/04/2022		
Location: BURY			Contractor:			Co-ords: E380960.38 N413682.58		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH518		Hole Type CP+RC		Level 139.02m AoD		Logged By LH		Page Number Sheet 4 of 9

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		6.00 - 8.00	NI					6.12	132.90		Weak brown orange medium to coarse grained SANDSTONE residually weathered recovered as slightly sandy slightly gravelly cobbles of sandstone.	
			10								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.	
											Between 6.79m and 7.2m bgl recovered as slightly sandy cobbly gravel.	
				100	46	32						7
		7.20	ES NI								Between 7.2m and 7.4m bgl recovered as medium to coarse sand.	
											Between 7.4m and 7.75m bgl recovered as slightly sandy cobbly gravel.	
			1									8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 18.0m bgl (6.0m plain, 12.0m slotted).



[illegible]



Project Name: TETROSYL						Client: URBAN REGEN							Date: 11/04/2022							
Location: BURY						Contractor:							Co-ords: E380960.38 N413682.58							
Project No. : GRO-21459						Crew Name:							Drilling Equipment:							
Borehole Number BH518			Hole Type CP+RC			Level 139.02m AoD			Logged By LH			Scale 1:10			Page Number Sheet 6 of 9					
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description									
				TCR	SCR	RQD														
		10.00 - 12.00	NR	88	75	58					Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. No recovery between 10.0m and 10.24m bgl. Between 10.24m and 10.33m bgl recovered as slightly sandy gravelly cobbles. Between 11.06m and 11.15m bgl recovered as slightly sandy cobbly gravel. Between 11.52m and 11.58m bgl recovered as slightly sandy cobbly gravel.							11		
			NI																	
			5																	
			NI																	
			3																	
			NI																	
			3																	
Remarks																				
1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 18.0m bgl (6.0m plain, 12.0m slotted).																				

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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 11/04/2022		
Location: BURY			Contractor:			Co-ords: E380960.38 N413682.58		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH518		Hole Type CP+RC		Level 139.02m AoD		Logged By LH		Page Number Sheet 7 of 9

Well	Water	Depth (m)	Type /FI	Coring			Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD					
		12.00 - 14.00	6							Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions.	
			NI							Between 12.58m and 12.73m bgl recovered as slightly sandy cobbly gravel.	
			1							Between 12.79m and 13.07m bgl recovered as slightly sandy cobbly gravel.	
			NI							Between 13.3m and 13.47m bgl recovered as slightly sandy cobbly gravel.	
			1								
			NI								
			3								
			NI							Between 13.94m and 14.0m bgl recovered as	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 18.0m bgl (6.0m plain, 12.0m slotted).



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 11/04/2022		
Location: BURY			Contractor:			Co-ords: E380960.38 N413682.58		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH518		Hole Type CP+RC		Level 139.02m AoD		Logged By LH		Page Number Sheet 8 of 9

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		14.00 - 16.00	3								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <i>Between 13.94m and 14.0m bgl recovered as slightly sandy cobbly gravel.</i>	15
			NI	100	14	14					<i>Between 14.38m and 16.0m bgl recovered as slightly sandy cobbly gravel.</i>	
												16

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Hand dug inspection pit to 1.2m bgl. 2. Groundwater encountered at 4.5m bgl. 3. Monitoring standpipe installation to 18.0m bgl (6.0m plain, 12.0m slotted).





Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 11/04/2022				
Location: BURY				Contractor:				Co-ords: E380960.38 N413682.58				
Project No. : GRO-21459				Crew Name:				Drilling Equipment:				
Borehole Number BH518		Hole Type CP+RC		Level 139.02m AoD		Logged By LH		Scale 1:10		Page Number Sheet 9 of 9		
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
			NR								Weak brown orange medium to coarse grained SANDSTONE moderately weathered with sub-horizontal smooth to rough planar stepped open very close to medium spaced discontinuities red iron weathering and quartzite inclusions. <u>No recovery between 16.0m and 16.53m bgl.</u>	
									</			

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 19/04/2022 - 20/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.58 N413690.14		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH519		Hole Type CP+RC		Level 136.00m AoD		Logged By LH		Page Number Sheet 1 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		0.00 - 1.50	B								MADE GROUND: Dark brown slightly gravelly sandy topsoil. Gravel is angular to subangular fine to coarse of mixed lithologies including brick. Rootlets present.	
		0.50	ES					0.20	135.80		MADE GROUND: Dark brown slightly clayey gravelly sand. Gravel is angular to subangular medium to coarse of mixed lithologies including sandstone and brick.	
		1.50 1.50 - 3.00	B D				(6)	2.00	134.00			2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 5.0m bgl rising to 4.7m bgl and 13.7m bgl sitting at 13.7m after 20 minutes. 3. Monitoring standpipe installed to 11.5m bgl (5.0m plain and 6.5m slotted).





GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 19/04/2022 - 20/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.58 N413690.14		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH519		Hole Type CP+RC		Level 136.00m AoD		Logged By LH		Page Number Sheet 3 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		4.50 - 6.00	B				(3)	4.50	131.50		NO RECOVERY.	5
		6.00	B				(8)				MADE GROUND: Black slightly clayey slightly gravelly ashy sand. Gravel is angular to subangular fine to coarse of mixed lithologies including clinker, coal and rare brick.	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 5.0m bgl rising to 4.7m bgl and 13.7m bgl sitting at 13.7m after 20 minutes. 3. Monitoring standpipe installed to 11.5m bgl (5.0m plain and 6.5m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 19/04/2022 - 20/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.58 N413690.14		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH519		Hole Type CP+RC		Level 136.00m AoD		Logged By LH		Page Number Sheet 4 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		6.00 - 7.50	ES								MADE GROUND: Black slightly clayey slightly gravelly ashy sand. Gravel is angular to subangular fine to coarse of mixed lithologies including clinker, coal and rare brick.	7
		7.50 7.50 - 9.00	B D				(9)					
		8.00	ES									

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 5.0m bgl rising to 4.7m bgl and 13.7m bgl sitting at 13.7m after 20 minutes. 3. Monitoring standpipe installed to 11.5m bgl (5.0m plain and 6.5m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 19/04/2022 - 20/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.58 N413690.14		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH519		Hole Type CP+RC		Level 136.00m AoD		Logged By LH		Page Number Sheet 5 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		9.00 9.00 - 10.50	B D				(8)				MADE GROUND: Black slightly clayey slightly gravelly ashy sand. Gravel is angular to subangular fine to coarse of mixed lithologies including clinker, coal and rare brick.	9
												10

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 5.0m bgl rising to 4.7m bgl and 13.7m bgl sitting at 13.7m after 20 minutes. 3. Monitoring standpipe installed to 11.5m bgl (5.0m plain and 6.5m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 19/04/2022 - 20/04/2022			
Location: BURY				Contractor:				Co-ords: E380837.58 N413690.14			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH519		Hole Type CP+RC		Level 136.00m AoD		Logged By LH		Scale 1:10		Page Number Sheet 6 of 10	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		12.00	D				(27)	11.50	124.50		MADE GROUND: Black slightly clayey slightly gravelly ashy sand. Gravel is angular to subangular fine to coarse of mixed lithologies including clinker, coal and rare brick.	11

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

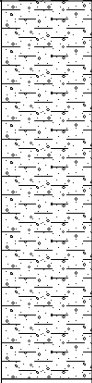
Remarks															
1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 5.0m bgl rising to 4.7m bgl and 13.7m bgl sitting at 13.7m after 20 minutes. 3. Monitoring standpipe installed to 11.5m bgl (5.0m plain and 6.5m slotted).															



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 19/04/2022 - 20/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.58 N413690.14		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH519		Hole Type CP+RC		Level 136.00m AoD		Logged By LH		Page Number Sheet 7 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		12.00 12.00 - 12.45	ES U					12.50	123.50		Soft to firm brown orange slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded of flint.	13
											Weak dark grey MUDSTONE moderately weathered recovered as slightly sandy gravelly friable clay.	
			NR				N=50 (5.8/50 for 245mm)	13.50	122.50		NO RECOVERY.	
								13.73	122.27		Extremely weak brown mottled grey MUDSTONE residually weathered recovered as slightly sandy gravelly friable clay.	

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 5.0m bgl rising to 4.7m bgl and 13.7m bgl sitting at 13.7m after 20 minutes. 3. Monitoring standpipe installed to 11.5m bgl (5.0m plain and 6.5m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 19/04/2022 - 20/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.58 N413690.14		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH519		Hole Type CP+RC		Level 136.00m AoD		Logged By LH		Page Number Sheet 8 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		13.50 - 15.00	NI	85	0	0					Extremely weak brown mottled grey MUDSTONE residually weathered recovered as slightly sandy gravelly friable clay.	
		15.00	D				(40)					15
		15.00 - 16.50	NI	100	37	0						
			4					15.84	120.16		Extremely weak dark grey MUDSTONE residually weathered with smooth planar to undulating very close to closely spaced subhorizontal discontinuities.	16

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 5.0m bgl rising to 4.7m bgl and 13.7m bgl sitting at 13.7m after 20 minutes. 3. Monitoring standpipe installed to 11.5m bgl (5.0m plain and 6.5m slotted).









Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 20/04/2022 - 21/04/2022				
Location: BURY				Contractor:				Co-ords: E380829.09 N413705.14				
Project No. : GRO-21459				Crew Name:				Drilling Equipment:				
Borehole Number BH520		Hole Type CP+RC		Level 135.77m AoD		Logged By LH		Scale 1:10		Page Number Sheet 1 of 10		
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 20/04/2022 - 21/04/2022		
Location: BURY			Contractor:			Co-ords: E380829.09 N413705.14		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH520		Hole Type CP+RC		Level 135.77m AoD		Logged By LH		Page Number Sheet 2 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		3.00	D				(4)				MADE GROUND: Firm dark brown slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to coarse of mixed lithologies including wood, clinker, brick and rare coal.	3
												4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 8.7m bgl. 3. Monitoring standpipe installed to 20.0m bgl (15.0m plain and 5.0m slotted).







Project Name: TETROSYL				Client: URBAN REGEN				Date: 20/04/2022 - 21/04/2022									
Location: BURY				Contractor:				Co-ords: E380829.09 N413705.14									
Project No. : GRO-21459				Crew Name:				Drilling Equipment:									
Borehole Number BH520		Hole Type CP+RC		Level 135.77m AoD		Logged By LH		Scale 1:10		Page Number Sheet 4 of 10							
Well	Water	Depth (m)	Type /FI	Coring TCRSCRQD			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
		7.50	D				(6)	7.00	128.77		MADE GROUND: Firm dark brown slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to coarse of mixed lithologies including wood, clinker, brick and rare coal.	7					
		8.00	ES								MADE GROUND: Black slightly gravelly ashy sand locally clayey. Gravel is angular to subangular medium of clinker.	8					
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 8.7m bgl. 3. Monitoring standpipe installed to 20.0m bgl (15.0m plain and 5.0m slotted).																	

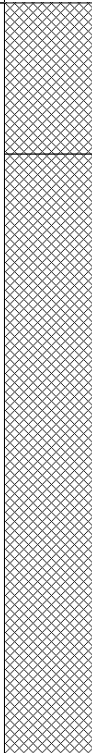
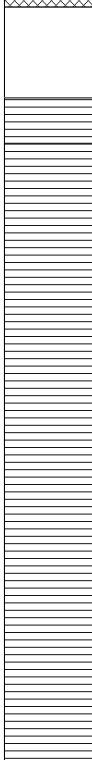
Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 20/04/2022 - 21/04/2022									
Location: BURY				Contractor:				Co-ords: E380829.09 N413705.14									
Project No. : GRO-21459				Crew Name:				Drilling Equipment:									
Borehole Number BH520		Hole Type CP+RC		Level 135.77m AoD		Logged By LH		Scale 1:10		Page Number Sheet 5 of 10							
Well	Water	Depth (m)	Type /FI	Coring TCRSCR RQD			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
		9.00	D				(7)				MADE GROUND: Black slightly gravelly ashy sand locally clayey. Gravel is angular to subangular medium of clinker.	9					
												10					
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 8.7m bgl. 3. Monitoring standpipe installed to 20.0m bgl (15.0m plain and 5.0m slotted).																	



Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 20/04/2022 - 21/04/2022		
Location: BURY			Contractor:			Co-ords: E380829.09 N413705.14		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH520		Hole Type CP+RC		Level 135.77m AoD		Logged By LH		Page Number Sheet 7 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD							
		12.45 - 12.90 12.50	U ES					12.20	123.57		MADE GROUND: Black slightly gravelly ashy sand locally clayey. Gravel is angular to subangular medium of clinker.	13	
											MADE GROUND: Firm dark grey slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to coarse of mixed lithologies.		
		13.00 - 13.50 13.25	NR						13.00	122.77			NO RECOVERY.
			NI						13.12	122.65			Extremely weak brown mottled grey MUDSTONE residually weathered recovered as slightly sandy gravelly friable clay. <i>Between 13.34m and 13.74m bgl recovered as firm slightly sandy gravelly clay.</i> <i>Becoming brown orange from 13.74m bgl.</i> Extremely weak dark grey MUDSTONE residually weathered with smooth planar to undulating very close to closely spaced subhorizontal discontinuities. <i>Between 13.34m and 13.74m bgl recovered as</i>
			3										
			D NI	92	19	0		(48)	13.81	121.96			
			5										
										14			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 8.7m bgl. 3. Monitoring standpipe installed to 20.0m bgl (15.0m plain and 5.0m slotted).





Project Name: TETROSYL				Client: URBAN REGEN				Date: 20/04/2022 - 21/04/2022									
Location: BURY				Contractor:				Co-ords: E380829.09 N413705.14									
Project No. : GRO-21459				Crew Name:				Drilling Equipment:									
Borehole Number BH520		Hole Type CP+RC		Level 135.77m AoD		Logged By LH		Scale 1:10		Page Number Sheet 8 of 10							
Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description						
				TCR	SCR	RQD											
		14.50 - 16.00	NI				(57)				Extremely weak dark grey MUDSTONE residually weathered with smooth planar to undulating very close to closely spaced subhorizontal discontinuities. <u>Between 13.34m and 13.74m bgl recovered as firm slightly sandy gravelly clay.</u> <u>Becoming brown orange from 13.74m bgl.</u> <u>Between 13.86m and 14.5m bgl recovered as clayey slightly cobbly gravel of mudstone.</u>	15					
			NI								<u>Between 14.5m and 15.0m bgl recovered as firm slightly sandy gravelly clay.</u>						
			NI								<u>Between 15.0m and 15.29m bgl recovered as slightly silty slightly sandy gravelly clay.</u>						
			NI								<u>Between 15.29m and 15.40m bgl recovered as stiff slightly sandy slightly gravelly clay.</u>						
			NI								<u>Between 15.4m and 15.54m bgl recovered as slightly clayey angular to subangular medium to coarse gravel of shale.</u>						
			2								<u>Between 15.64m and 15.94m bgl recovered as slightly clayey angular to subangular medium to coarse gravel of shale.</u>						
			NI								<u>Undulating to stepped and sub horizontal</u>						
			1														
			NI														
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)
Remarks																	
1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 8.7m bgl. 3. Monitoring standpipe installed to 20.0m bgl (15.0m plain and 5.0m slotted).																	

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 20/04/2022 - 21/04/2022		
Location: BURY			Contractor:			Co-ords: E380829.09 N413705.14		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH520		Hole Type CP+RC		Level 135.77m AoD		Logged By LH		Page Number Sheet 9 of 10

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description		
				TCR	SCR	RQD							
		16.50	NI	100	17	0	(60)			Extremely weak dark grey MUDSTONE residually weathered with smooth planar to undulating very close to closely spaced subhorizontal discontinuities. <u>Undulating to stepped and sub horizontal (45degree) discontinuities indicated between 15.94m and 15.99m bgl.</u> <u>Between 15.99m and 16.85m bgl recovered as slightly clayey angular to subangular medium to coarse gravel of shale.</u>	17		
			D										
		16.00 - 17.50	NI									<u>Between 16.85m and 17.0m bgl recovered as firm slightly sandy gravelly clay.</u>	
			NI										<u>Between 17.0m and 17.09m bgl recovered as clayey slightly sandy slightly cobbly angular to subangular medium to coarse gravel.</u>
			1										
			NI										<u>Between 17.18m and 17.22m bgl recovered as clayey slightly sandy slightly cobbly angular to subangular medium to coarse gravel.</u>
			1										
			NI										<u>Between 17.3m and 17.41m bgl recovered as sandy angular to subangular fine to coarse gravel of chert, quartzite and mudstone.</u>
			1										
			NI										<u>Between 17.5m to 17.52m bgl recovered as firm slightly gravelly clay.</u>
		6	<u>Between 17.92m bgl 18.55m bgl recovered as firm to stiff slightly gravelly clay.</u>										
	(50)												

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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 20/04/2022 - 21/04/2022			
Location: BURY				Contractor:				Co-ords: E380829.09 N413705.14			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH520		Hole Type CP+RC		Level 135.77m AoD		Logged By LH		Scale 1:10		Page Number Sheet 10 of 10	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description									
				TCR	SCR	RQD														
		17.50 - 19.00	NI	100	39	12					Extremely weak dark grey MUDSTONE residually weathered with smooth planar to undulating very close to closely spaced subhorizontal discontinuities. Between 18.73m and 18.88m bgl recovered as firm to stiff slightly gravelly clay. Between 18.88m and 19.0m bgl recovered as slightly clayey slightly silty angular to subangular coarse gravel. No recovery between 19.0m and 19.32m bgl.	19								
			1																	
			NI																	
			NI																	
		19.00 - 20.00	NR	68	0	0														
			NI																	
			NI																	
																			D	
																				(49)
20.00																				
	115.77																			
		End of Borehole at 20.000m											20							

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 8.7m bgl. 3. Monitoring standpipe installed to 20.0m bgl (15.0m plain and 5.0m slotted).

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 21/04/2022 - 22/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.64 N413698.58		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH521		Hole Type CP+RC		Level 135.82m AoD		Logged By LH		Page Number Sheet 1 of 11

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		1.00	ES					0.20	135.62		MADE GROUND: Dark brown slightly gravelly sandy topsoil. Gravel is angular to subangular fine to coarse of mixed lithologies including brick. Rootlets present.	1
		1.50	D				(3)	1.50	134.32		MADE GROUND: Dark brown slightly gravelly slightly sandy clayey silt. Gravel is angular to subangular fine to coarse of mixed lithologies including wood and brick. Rootlets present.	
											MADE GROUND: Dark brown gravelly sand locally ashy. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, mudstone and clinker.	2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 6.7m falling to 6.9m bgl after 20 minutes. 3. Monitoring standpipe installed to 14.0m bgl (3.0m plain and 11.0m slotted).



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Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 21/04/2022 - 22/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.64 N413698.58		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH521		Hole Type CP+RC		Level 135.82m AoD		Logged By LH		Page Number Sheet 2 of 11

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		3.00	D				(2)				MADE GROUND: Dark brown gravelly sand locally ashy. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, mudstone and clinker.	3
												4

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 6.7m falling to 6.9m bgl after 20 minutes. 3. Monitoring standpipe installed to 14.0m bgl (3.0m plain and 11.0m slotted).



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CONSULTING

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 21/04/2022 - 22/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.64 N413698.58		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH521		Hole Type CP+RC		Level 135.82m AoD		Logged By LH		Page Number Sheet 3 of 11

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		4.50	D				(6)				MADE GROUND: Dark brown gravelly sand locally ashy. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, mudstone and clinker.	
		5.00	ES								Becoming ashy from 5.0m bgl.	5
		6.00	D				(7)					6

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

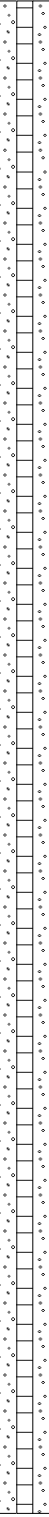
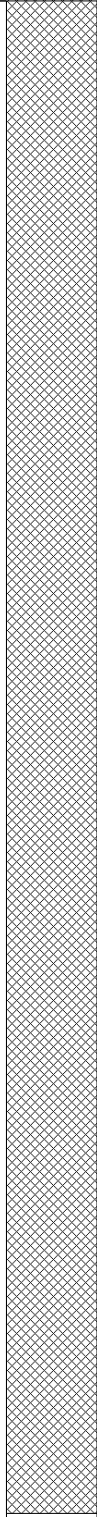
1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 6.7m falling to 6.9m bgl after 20 minutes. 3. Monitoring standpipe installed to 14.0m bgl (3.0m plain and 11.0m slotted).



GROUNDTECH
CONSULTING

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 21/04/2022 - 22/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.64 N413698.58		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH521		Hole Type CP+RC		Level 135.82m AoD		Logged By LH		Page Number Sheet 4 of 11

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		7.50	D				(4)				MADE GROUND: Dark brown gravelly sand locally ashy. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, mudstone and clinker.	7

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 6.7m falling to 6.9m bgl after 20 minutes. 3. Monitoring standpipe installed to 14.0m bgl (3.0m plain and 11.0m slotted).



GROUNDTECH
CONSULTING

Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 21/04/2022 - 22/04/2022			
Location: BURY				Contractor:				Co-ords: E380837.64 N413698.58			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH521		Hole Type CP+RC		Level 135.82m AoD		Logged By LH		Scale 1:10		Page Number Sheet 5 of 11	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		9.00	D				(9)				MADE GROUND: Dark brown gravelly sand locally ashy. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, mudstone and clinker.	9
		10.00	ES									

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks																
1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 6.7m falling to 6.9m bgl after 20 minutes. 3. Monitoring standpipe installed to 14.0m bgl (3.0m plain and 11.0m slotted).																

GROUNDTECH
CONSULTING

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 21/04/2022 - 22/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.64 N413698.58		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH521		Hole Type CP+RC		Level 135.82m AoD		Logged By LH		Page Number Sheet 6 of 11

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		10.50	D				(8)				MADE GROUND: Dark brown gravelly sand locally ashy. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, mudstone and clinker.	11
		12.00	D				(6)					12

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 6.7m falling to 6.9m bgl after 20 minutes. 3. Monitoring standpipe installed to 14.0m bgl (3.0m plain and 11.0m slotted).



GROUNDTECH
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Rotary Core Log

Project Name: TETROSYL				Client: URBAN REGEN				Date: 21/04/2022 - 22/04/2022			
Location: BURY				Contractor:				Co-ords: E380837.64 N413698.58			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH521		Hole Type CP+RC		Level 135.82m AoD		Logged By LH		Scale 1:10		Page Number Sheet 7 of 11	

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
											MADE GROUND: Dark brown gravelly sand locally ashy. Gravel is angular to subangular fine to coarse of mixed lithologies including brick, mudstone and clinker.	
		13.20	ES					13.00	122.82		MADE GROUND: Dark brown slightly clayey sandy angular to subangular gravel of sandstone with low cobble content of sandstone.	13
		13.50	D				(10)	13.50	122.32		MADE GROUND: Dark brown gravelly ashy sand. Gravel is angular to subangular medium of clinker.	14

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 6.7m falling to 6.9m bgl after 20 minutes. 3. Monitoring standpipe installed to 14.0m bgl (3.0m plain and 11.0m slotted).

Rotary Core Log

Project Name: TETROSYL			Client: URBAN REGEN			Date: 21/04/2022 - 22/04/2022		
Location: BURY			Contractor:			Co-ords: E380837.64 N413698.58		
Project No. : GRO-21459			Crew Name:			Drilling Equipment:		
Borehole Number BH521		Hole Type CP+RC		Level 135.82m AoD		Logged By LH		Page Number Sheet 8 of 11

Well	Water	Depth (m)	Type /FI	Coring			Diameter Recovery (SPT)	Depth (m)	Level (m)	Legend	Stratum Description	
				TCR	SCR	RQD						
		15.00	NR				(10)	14.50	121.32		MADE GROUND: Dark brown gravelly ashy sand. Gravel is angular to subangular medium of clinker.	15
											NO RECOVERY.	
											Extremely weak dark grey MUDSTONE residually weathered with smooth planar to undulating very close to closely spaced subhorizontal discontinuities.	
											Between 14.94m and 15.1m bgl recovered as slightly clayey cobbles of mudstone.	
											Between 15.1m and 16.0m bgl recovered as slightly silty slightly sandy angular to subangular fine to coarse gravel of mudstone.	
		14.50 - 16.00	NI									16

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation				Drilling Flush					
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation	Depth Top	Depth Base	Type	Colour	Min (%)	Max (%)

Remarks

1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 6.7m falling to 6.9m bgl after 20 minutes. 3. Monitoring standpipe installed to 14.0m bgl (3.0m plain and 11.0m slotted).









Project Name: TETROSYL				Client: URBAN REGEN				Date: 21/04/2022 - 22/04/2022			
Location: BURY				Contractor:				Co-ords: E380837.64 N413698.58			
Project No. : GRO-21459				Crew Name:				Drilling Equipment:			
Borehole Number BH521		Hole Type CP+RC		Level 135.82m AoD		Logged By LH		Scale 1:10		Page Number Sheet 11 of 11	
Well	Water	Depth (m)	Type /FI	Coring TCR SCR RQD			Diameter Recovery (SPH)	Depth (m)	Level (m)	Legend	Stratum Description
							N=50 (25 for 60mm/ 50 for 125mm)				Extremely weak dark grey MUDSTONE residually weathered with smooth planar to undulating very close to closely spaced subhorizontal discontinuities. <i>Between 19.93m to 20.0m bgl recovered as slightly clayey angular to subangular medium to coarse gravel of shale.</i> End of Borehole at 20.000m
Remarks											
1. Borehole cleared and set out by engineer. 2. Groundwater encountered at 6.7m falling to 6.9m bgl after 20 minutes. 3. Monitoring standpipe installed to 14.0m bgl (3.0m plain and 11.0m slotted).											

APPENDIX 3 - Geo-Environmental Testing (Soils)

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



Attention : Jamie Parr
Date : 21st June, 2022
Your reference : GRO-21459
Our reference : Test Report 22/5105 Batch 1
Location : Tetrosyl
Date samples received : 29th March, 2022
Status : Final Report
Issue : 2

Ten samples were received for analysis on 29th March, 2022 of which seven 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:



Phil Sommerton BSc

Senior Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Jamie Parr
EMT Job No: 22/5105

Report : Solid

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

EMT Sample No.	1-3	4-6	13-15	19-21	22-24	25-27	28-30				Please see attached notes for all abbreviations and acronyms		
Sample ID	BH501	BH501	BH502	BH502	BH505	BH505	BH508						
Depth	0.60	1.50	0.80	2.10	5.50	7.00	1.00						
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	23/03/2022	23/03/2022	25/03/2022	25/03/2022	24/03/2022	24/03/2022	27/03/2022						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	29/03/2022	29/03/2022	29/03/2022	29/03/2022	29/03/2022	29/03/2022	29/03/2022				LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether	<2 ^{SV}	<2	<2	<2	<2 ^{SV}	<2 ^{SV}	<2				<2	ug/kg	TM15/PM10
Benzene	<3 ^{SV}	<3	<3	<3	6 ^{SV}	7 ^{SV}	<3				<3	ug/kg	TM15/PM10
Toluene	288 ^{SV}	31	28	<3	12 ^{SV}	28 ^{SV}	<3				<3	ug/kg	TM15/PM10
Ethylbenzene	22 ^{SV}	6	22	10	11 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
m/p-Xylene	151 ^{SV}	26	116	41	41 ^{SV}	<5 ^{SV}	<5				<5	ug/kg	TM15/PM10
o-Xylene	140 ^{SV}	33	31	<3	23 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	55 ^{SV}	75	72	96	51 ^{SV}	21 ^{SV}	81				<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	45 ^{SV}	56	57	87	43 ^{SV}	42 ^{SV}	75				<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)	0.2	<0.1	<0.1 ^{SV}	0.4	0.1 ^{SV}	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	0.1	0.2	0.2 ^{SV}	8.4	0.1 ^{SV}	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)	9.0	<0.2	8.5	32.5	<0.2	50.1	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)	13	<4	<4	<4	<4	133	<4				<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)	25	<7	<7	<7	<7	148	19				<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)	175	52	<7	<7	18	128	269				<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	222	52	<19	41	<19	459	288				<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Aromatics													
>C5-EC7 (HS_1D_AR)	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)	0.2	<0.1	<0.1 ^{SV}	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)	<0.1	<0.1	<0.1 ^{SV}	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)	2.4	<0.2	4.7	20.8	3.0	6.6	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)	<4	<4	<4	<4	<4	79	<4				<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)	23	<7	<7	<7	<7	312	<7				<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)	165	36	<7	<7	20	426	196				<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR)	191	36	<19	21	23	824	196				<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Total aliphatics and aromatics (C5-35) (EH+HS_CU_1D_Total)	413	88	<38	62	<38	1283	484				<38	mg/kg	TM5/PM8/PM16/PM12/PM10
Monoethylene glycol	<50	<50	<50	<50	<50	<50	<50				<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	<50	<50	<50	<50				<50	ug/kg	TM179/PM8
Diethylene glycol	<50	<50	<50	<50	<50	<50	<50				<50	ug/kg	TM179/PM8
Triethylene glycol	<50	<50	<50	<50	<50	<50	<50				<50	ug/kg	TM179/PM8
Thiodiglycol	<50	<50	<50	<50	<50	<50	<50				<50	ug/kg	TM179/PM8

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Jamie Parr
EMT Job No: 22/5105

SVOC Report : Solid

EMT Sample No.	1-3	4-6	13-15	19-21	22-24	25-27	28-30				Please see attached notes for all abbreviations and acronyms		
Sample ID	BH501	BH501	BH502	BH502	BH505	BH505	BH508						
Depth	0.60	1.50	0.80	2.10	5.50	7.00	1.00						
COC No / misc Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	23/03/2022	23/03/2022	25/03/2022	25/03/2022	24/03/2022	24/03/2022	27/03/2022						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	29/03/2022	29/03/2022	29/03/2022	29/03/2022	29/03/2022	29/03/2022	29/03/2022	LOD/LOR	Units	Method No.			
SVOC MS													
Phenols													
2-Chlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
2,4-Dichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
2,4-Dimethylphenol	21	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
4-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
Phenol	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
PAHs													
2-Chloronaphthalene	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
2-Methylnaphthalene	609	104	136	<10	167	517	14	<10	ug/kg	TM16/PM8			
Naphthalene	588	62	124	<10	108	202	14	<10	ug/kg	TM16/PM8			
Acenaphthylene	13	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8			
Acenaphthene	<10	<10	<10	<10	<10	<10	18	<10	ug/kg	TM16/PM8			
Fluorene	13	13	<10	<10	<10	185	15	<10	ug/kg	TM16/PM8			
Phenanthrene	733	204	96	<10	107	5763	173	<10	ug/kg	TM16/PM8			
Anthracene	30	14	<10	<10	<10	65	31	<10	ug/kg	TM16/PM8			
Fluoranthene	636	66	19	<10	24	767	153	<10	ug/kg	TM16/PM8			
Pyrene	464	66	21	<10	29	917	142	<10	ug/kg	TM16/PM8			
Benzo(a)anthracene	240	59	38	<10	49	237	89	<10	ug/kg	TM16/PM8			
Chrysene	380	66	26	<10	30	663	68	<10	ug/kg	TM16/PM8			
Benzo(bk)fluoranthene	466	69	32	<10	31	222	91	<10	ug/kg	TM16/PM8			
Benzo(a)pyrene	153	36	19	<10	22	86	56	<10	ug/kg	TM16/PM8			
Indeno(123cd)pyrene	110	14	<10	<10	<10	22	25	<10	ug/kg	TM16/PM8			
Dibenzo(ah)anthracene	36	<10	<10	<10	<10	19	11	<10	ug/kg	TM16/PM8			
Benzo(ghi)perylene	160	26	15	<10	13	73	36	<10	ug/kg	TM16/PM8			
Benzo(b)fluoranthene	336	50	23	<10	22	160	66	<10	ug/kg	TM16/PM8			
Benzo(k)fluoranthene	130	19	<10	<10	<10	62	25	<10	ug/kg	TM16/PM8			
Phthalates													
Bis(2-ethylhexyl) phthalate	431	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8			
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8			
Di-n-butyl phthalate	319	<100	<100	<100	<100	146	<100	<100	ug/kg	TM16/PM8			
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8			
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8			
Dimethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8			
										</			

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Jamie Parr
EMT Job No: 22/5105

Please see attached notes for all abbreviations and acronyms

QF-PM 3.1.3 v11

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Jamie Parr
EMT Job No: 22/5105

VOC Report : Solid

EMT Sample No.	1-3	4-6	13-15	19-21	22-24	25-27	28-30				Please see attached notes for all abbreviations and acronyms		
Sample ID	BH501	BH501	BH502	BH502	BH505	BH505	BH508						
Depth	0.60	1.50	0.80	2.10	5.50	7.00	1.00						
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	23/03/2022	23/03/2022	25/03/2022	25/03/2022	24/03/2022	24/03/2022	27/03/2022						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	29/03/2022	29/03/2022	29/03/2022	29/03/2022	29/03/2022	29/03/2022	29/03/2022				LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2 ^{SV}	<2	<2	<2	<2 ^{SV}	<2 ^{SV}	<2				<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether	<2 ^{SV}	<2	<2	<2	<2 ^{SV}	<2 ^{SV}	<2				<2	ug/kg	TM15/PM10
Chloromethane	5 ^{SV}	<3	<3	<3	<3 ^{SV}	20 ^{SV}	<3				<3	ug/kg	TM15/PM10
Vinyl Chloride	<2 ^{SV}	<2	<2	<2	<2 ^{SV}	<2 ^{SV}	<2				<2	ug/kg	TM15_A/PM10
Bromomethane	<1 ^{SV}	<1	<1	<1	<1 ^{SV}	<1 ^{SV}	<1				<1	ug/kg	TM15/PM10
Chloroethane	6 ^{SV}	<2	<2	<2	<2 ^{SV}	16 ^{SV}	<2				<2	ug/kg	TM15/PM10
Trichlorofluoromethane	3 ^{SV}	7	<2	<2	2 ^{SV}	<2 ^{SV}	<2				<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE)	<6 ^{SV}	<6	<6	<6	<6 ^{SV}	<6 ^{SV}	<6				<6	ug/kg	TM15/PM10
Dichloromethane (DCM)	13 ^{SV}	9	<7	<7	<7 ^{SV}	31 ^{SV}	<7				<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene	<3 ^{SV}	<3	7	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
1,1-Dichloroethane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene	<3 ^{SV}	<3	41	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4 ^{SV}	<4	<4	<4	<4 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
Bromochloromethane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Chloroform	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
1,1-Dichloropropene	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Carbon tetrachloride	<4 ^{SV}	<4	<4	<4	<4 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
1,2-Dichloroethane	<4 ^{SV}	<4	<4	<4	<4 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
Benzene	<3 ^{SV}	<3	<3	<3	6 ^{SV}	7 ^{SV}	<3				<3	ug/kg	TM15/PM10
Trichloroethene (TCE)	<3 ^{SV}	<3	194	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
1,2-Dichloropropane	<6 ^{SV}	<6	<6	<6	<6 ^{SV}	<6 ^{SV}	<6				<6	ug/kg	TM15/PM10
Dibromomethane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Bromodichloromethane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4 ^{SV}	<4	<4	<4	<4 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
Toluene	288 ^{SV}	31	28	<3	12 ^{SV}	28 ^{SV}	<3				<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE)	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
1,3-Dichloropropane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Dibromochloromethane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
1,2-Dibromoethane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Chlorobenzene	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Ethylbenzene	22 ^{SV}	6	22	10	11 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
m/p-Xylene	151 ^{SV}	26	116	41	41 ^{SV}	<5 ^{SV}	<5				<5	ug/kg	TM15/PM10
o-Xylene	140 ^{SV}	33	31	<3	23 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Styrene	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15_A/PM10
Bromoform	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Isopropylbenzene	9 ^{SV}	<3	<3	129	8 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
Bromobenzene	<2 ^{SV}	<2	<2	<2	<2 ^{SV}	<2 ^{SV}	<2				<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane	<4 ^{SV}	<4	<4	<4	<4 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
Propylbenzene	7 ^{SV}	<4	7	353	5 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene	190 ^{SV}	36	26	49	14 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
4-Chlorotoluene	5 ^{SV}	<3	<3	<3	<3 ^{SV}	<3 ^{SV}	<3				<3	ug/kg	TM15/PM10
tert-Butylbenzene	<5 ^{SV}	<5	<5	94	<5 ^{SV}	22 ^{SV}	<5				<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene	288 ^{SV}	63	173	>>4638	117 ^{SV}	36 ^{SV}	<6				<6	ug/kg	TM15/PM10
sec-Butylbenzene	21 ^{SV}	7	7	449	17 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
4-Isopropyltoluene	15 ^{SV}	<4	11	329	12 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene	<4 ^{SV}	<4	<4	<4	<4 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene	<4 ^{SV}	<4	<4	<4	<4 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
n-Butylbenzene	<4 ^{SV}	<4	14	503	7 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene	<4 ^{SV}	<4	<4	<4	<4 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4 ^{SV}	<4	<4	<4	<4 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7 ^{SV}	<7	<7	<7	<7 ^{SV}	<7 ^{SV}	<7				<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4 ^{SV}	<4	<4	<4	<4 ^{SV}	<4 ^{SV}	<4				<4	ug/kg	TM15/PM10
Naphthalene	<27 ^{SV}	<27	<27	54	<27 ^{SV}	<27 ^{SV}	<27				<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7 ^{SV}	<7	<7	<7	<7 ^{SV}	<7 ^{SV}	<7				<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	55 ^{SV}	75	72	96	51 ^{SV}	21 ^{SV}	81				<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	45 ^{SV}	56	57	87	43 ^{SV}	42 ^{SV}	75				<0	%	TM15/PM10

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/5105

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/5105

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GC/FID. 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.			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			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.			AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			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 GC/FID 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 GC/FID 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
TM179	Determination of Glycols using LCMS	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes

EMT Job No: 22/5105

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



Attention : Luke Harrison
Date : 21st June, 2022
Your reference : GRO-21459
Our reference : Test Report 22/5456 Batch 1
Location : Tetrosyl
Date samples received : 2nd April, 2022
Status : Final Report
Issue : 2

Twenty five samples were received for analysis on 2nd April, 2022 of which ten 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:



Phil Sommerton BSc

Senior Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/5456

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	19-21	28-30	31-33	34-36	37-39	40-42	Please see attached notes for all abbreviations and acronyms		
Sample ID	BH503	BH503	BH504	BH504	BH506	BH507	BH509	BH509	BH514	BH514			
Depth	0.25	0.75	0.30	1.80	8.00	9.50	0.50	1.00	0.50	2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/03/2022	29/03/2022	29/03/2022	29/03/2022	31/03/2022	01/04/2022	27/03/2022	27/03/2022	01/04/2022	01/04/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Toluene	<3	<3	47	<3	4	5	24	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene	6	<3	103	<3	<3	4	39	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene	<5	<5	32	<5	7	7	23	<5	<5	<5	<5	ug/kg	TM15/PM10
o-Xylene	<3	<3	<12 ^{AA}	<3	<3	<3	9	<3	<3	<3	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	85	94	87	100	97	95	87	100	100	102	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	71	91	82	100	94	86	74	93	98	101	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	8.7	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	3.5	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)	<4	<4	<4	<4	<4	<4	16	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)	<7	<7	19	<7	<7	<7	34	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)	<7	<7	103	<7	<7	<7	88	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	<19	<19	131	<19	<19	<19	142	<19	<19	<19	<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Aromatics													
>C5-EC7 (HS_1D_AR)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)	<4	<4	7	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)	45	<7	28	<7	<7	<7	23	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)	149	<7	124	<7	<7	<7	97	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR)	194	<19	159	<19	<19	<19	120	<19	<19	<19	<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Total aliphatics and aromatics (C5-35) (EH+HS_CU_1D_Total)	194	<38	290	<38	<38	<38	262	<38	<38	<38	<38	mg/kg	TM5/PM8/PM16/PM12/PM10
PCB 28	-	-	-	-	-	-	<5	<5	-	-	<5	ug/kg	TM17/PM8
PCB 52	-	-	-	-	-	-	<5	<5	-	-	<5	ug/kg	TM17/PM8
PCB 101	-	-	-	-	-	-	<5	<5	-	-	<5	ug/kg	TM17/PM8
PCB 118	-	-	-	-	-	-	<5	<5	-	-	<5	ug/kg	TM17/PM8
PCB 138	-	-	-	-	-	-	<5	<5	-	-	<5	ug/kg	TM17/PM8
PCB 153	-	-	-	-	-	-	<5	<5	-	-	<5	ug/kg	TM17/PM8
PCB 180	-	-	-	-	-	-	<5	<5	-	-	<5	ug/kg	TM17/PM8
Total 7 PCBs	-	-	-	-	-	-	<35	<35	-	-	<35	ug/kg	TM17/PM8
Monoethylene glycol	<50	<50	<50	<50	347	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Propylene glycol	344	<50	114	<50	<50	<50	1354	<50	<50	<50	<50	ug/kg	TM179/PM8
Diethylene glycol	5220 ^{AB}	182	1565	<50	<50	<50	200	<50	<50	<50	<50	ug/kg	TM179/PM8
Triethylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Thiodiglycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/5456

VOC Report : Solid

EMT Sample No.	1-3	4-6	7-9	10-12	19-21	28-30	31-33	34-36	37-39	40-42	Please see attached notes for all abbreviations and acronyms		
Sample ID	BH503	BH503	BH504	BH504	BH506	BH507	BH509	BH509	BH514	BH514			
Depth	0.25	0.75	0.30	1.80	8.00	9.50	0.50	1.00	0.50	2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	29/03/2022	29/03/2022	29/03/2022	29/03/2022	31/03/2022	01/04/2022	27/03/2022	27/03/2022	01/04/2022	01/04/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method No.
Date of Receipt	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022	02/04/2022			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	3	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Chloromethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Trichlorofluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE)	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chloroform	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Benzene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Trichloroethene (TCE)	18	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dichloropropane	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dibromomethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromodichloromethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene	<3	<3	47	<3	4	5	24	<3	<3	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE)	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dibromochloromethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dibromoethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene	6	<3	103	<3	<3	4	39	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene	<5	<5	32	<5	7	7	23	<5	<5	<5	<5	ug/kg	TM15/PM10
o-Xylene	<3	<3	<12 ^{AA}	<3	<3	<3	9	<3	<3	<3	<3	ug/kg	TM15/PM10
Styrene	49	57	>>8377	<3	18	38	63	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene	<3	<3	3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene	<6	<6	14	<6	<6	<6	10	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	54	<27	<27	<27	<27	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	85	94	87	100	97	95	87	100	100	102	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	71	91	82	100	94	86	74	93	98	101	<0	%	TM15/PM10

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/5456

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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	x4 Dilution
AB	x10 Dilution

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/5456

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.			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			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.			AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			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.			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.			AR	Yes

EMT Job No: 22/5456

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM179	Determination of Glycols using LCMS	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	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

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



Attention : Luke Harrison
Date : 19th April, 2022
Your reference : GRO-21459
Our reference : Test Report 22/5878 Batch 1
Location : Tetrosyl
Date samples received : 8th April, 2022
Status : Final Report
Issue : 1

Forty four samples were received for analysis on 8th April, 2022 of which one was 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:



Liza Klebe

Project Co-ordinator

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/5878

Report : Solid

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

[illegible]

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/5878

SVOC Report : Solid

EMT Sample No.	4-6										Please see attached notes for all abbreviations and acronyms				
Sample ID	BH510														
Depth	2.80														
COC No / misc															
Containers	V J T														
Sample Date	06/04/2022														
Sample Type	Soil														
Batch Number	1														
Date of Receipt	08/04/2022											LOD/LOR	Units	Method No.	
SVOC MS															
Phenols															
2-Chlorophenol #	<10										<10	ug/kg	TM16/PM8		
2-Methylphenol	<10										<10	ug/kg	TM16/PM8		
2-Nitrophenol	<10										<10	ug/kg	TM16/PM8		
2,4-Dichlorophenol #	<10										<10	ug/kg	TM16/PM8		
2,4-Dimethylphenol	<10										<10	ug/kg	TM16/PM8		
2,4,5-Trichlorophenol	<10										<10	ug/kg	TM16/PM8		
2,4,6-Trichlorophenol	<10										<10	ug/kg	TM16/PM8		
4-Chloro-3-methylphenol	<10										<10	ug/kg	TM16/PM8		
4-Methylphenol	<10										<10	ug/kg	TM16/PM8		
4-Nitrophenol	<10										<10	ug/kg	TM16/PM8		
Pentachlorophenol	<10										<10	ug/kg	TM16/PM8		
Phenol #	<10										<10	ug/kg	TM16/PM8		
PAHs															
2-Chloronaphthalene #	<10										<10	ug/kg	TM16/PM8		
2-Methylnaphthalene #	<10										<10	ug/kg	TM16/PM8		
Naphthalene	<10										<10	ug/kg	TM16/PM8		
Acenaphthylene	<10										<10	ug/kg	TM16/PM8		
Acenaphthene	<10										<10	ug/kg	TM16/PM8		
Fluorene	<10										<10	ug/kg	TM16/PM8		
Phenanthrene #	<10										<10	ug/kg	TM16/PM8		
Anthracene	<10										<10	ug/kg	TM16/PM8		
Fluoranthene #	<10										<10	ug/kg	TM16/PM8		
Pyrene #	<10										<10	ug/kg	TM16/PM8		
Benzo(a)anthracene	<10										<10	ug/kg	TM16/PM8		
Chrysene	<10										<10	ug/kg	TM16/PM8		
Benzo(bk)fluoranthene	<10										<10	ug/kg	TM16/PM8		
Benzo(a)pyrene	<10										<10	ug/kg	TM16/PM8		
Indeno(123cd)pyrene	<10										<10	ug/kg	TM16/PM8		
Dibenzo(ah)anthracene	<10										<10	ug/kg	TM16/PM8		
Benzo(ghi)perylene	<10										<10	ug/kg	TM16/PM8		
Benzo(b)fluoranthene	<10										<10	ug/kg	TM16/PM8		
Benzo(k)fluoranthene	<10										<10	ug/kg	TM16/PM8		
Phthalates															
Bis(2-ethylhexyl) phthalate	<100										<100	ug/kg	TM16/PM8		
Butylbenzyl phthalate	<100										<100	ug/kg	TM16/PM8		
Di-n-butyl phthalate	<100										<100	ug/kg	TM16/PM8		
Di-n-Octyl phthalate	<100										<100	ug/kg	TM16/PM8		
Diethyl phthalate	<100										<100	ug/kg	TM16/PM8		
Dimethyl phthalate #	<100										<100	ug/kg	TM16/PM8		

[illegible]

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/5878

VOC Report : Solid

EMT Sample No.	4-6												
Sample ID	BH510												
Depth	2.80												
COC No / misc													
Containers	V J T												
Sample Date	06/04/2022												
Sample Type	Soil												
Batch Number	1												
Date of Receipt	08/04/2022												
											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2										<2	ug/kg	TM15/PM10
Chloromethane #	<3										<3	ug/kg	TM15/PM10
Vinyl Chloride	<2										<2	ug/kg	TM15_A/PM10
Bromomethane	<1										<1	ug/kg	TM15/PM10
Chloroethane #	<2										<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2										<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6										<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7										<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3										<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	9										<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3										<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4										<4	ug/kg	TM15/PM10
Bromochloromethane #	<3										<3	ug/kg	TM15/PM10
Chloroform #	<3										<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3										<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3										<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4										<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4										<4	ug/kg	TM15/PM10
Benzene #	<3										<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3										<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6										<6	ug/kg	TM15/PM10
Dibromomethane #	<3										<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3										<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4										<4	ug/kg	TM15/PM10
Toluene #	<3										<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3										<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3										<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3										<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3										<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3										<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3										<3	ug/kg	TM15/PM10
Chlorobenzene #	<3										<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3										<3	ug/kg	TM15/PM10
Ethylbenzene #	<3										<3	ug/kg	TM15/PM10
m/p-Xylene #	<5										<5	ug/kg	TM15/PM10
o-Xylene #	<3										<3	ug/kg	TM15/PM10
Styrene	<3										<3	ug/kg	TM15_A/PM10
Bromoform	<3										<3	ug/kg	TM15/PM10
Isopropylbenzene #	5										<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3										<3	ug/kg	TM15/PM10
Bromobenzene	<2										<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4										<4	ug/kg	TM15/PM10
Propylbenzene #	<4										<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3										<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3										<3	ug/kg	TM15/PM10
tert-Butylbenzene #	14										<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	10										<6	ug/kg	TM15/PM10
sec-Butylbenzene #	11										<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4										<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4										<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4										<4	ug/kg	TM15/PM10
n-Butylbenzene	<4										<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4										<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4										<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7										<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4										<4	ug/kg	TM15/PM10
Naphthalene	<27										<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7										<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	84										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	69										<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

[illegible]

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.: 22/5878

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/5878

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GC/FID. 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
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) 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
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 GC/FID 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 GC/FID 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
TM179	Determination of Glycols using LCMS	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes

EMT Job No: 22/5878

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



Attention : Luke Harrison
Date : 6th May, 2022
Your reference : Tetrosyl
Our reference : Test Report 22/6851 Batch 1
Location :
Date samples received : 27th April, 2022
Status : Final Report
Issue : 1

Thirteen samples were received for analysis on 27th April, 2022 of which thirteen 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:



Liza Klebe

Project Co-ordinator

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: Tetrosyl
Location:
Contact: Luke Harrison
EMT Job No: 22/6851

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	13-15	16-18	19-21	22-24	25-27	28-30	Please see attached notes for all abbreviations and acronyms		
Sample ID	BH519	BH519	BH519	BH519	BH519	BH520	BH520	BH520	BH520	BH521			
Depth	0.50	3.00	6.00	8.00	12.00	1.00	5.00	8.00	12.50	1.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method No.
Date of Receipt	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022			
Arsenic #	42.0	52.1	93.1	33.3	-	3.1	10.8	37.3	-	8.7	<0.5	mg/kg	TM30/PM15
Cadmium #	0.2	0.2	<0.1	<0.1	-	0.6	0.5	0.5	-	0.5	<0.1	mg/kg	TM30/PM15
Chromium #	116.0	57.3	54.7	85.7	-	83.7	94.3	52.5	-	103.6	<0.5	mg/kg	TM30/PM15
Copper #	146	130	124	94	-	16	39	121	-	51	<1	mg/kg	TM30/PM15
Lead #	123	201	103	60	-	20	103	159	-	106	<5	mg/kg	TM30/PM15
Mercury #	0.2	0.5	0.3	0.1	-	<0.1	0.2	0.2	-	0.2	<0.1	mg/kg	TM30/PM15
Nickel #	104.0	43.7	49.9	57.5	-	24.0	24.9	62.2	-	24.0	<0.7	mg/kg	TM30/PM15
Sulphur as S	-	0.21	1.15	-	0.04	-	-	0.15	0.05	-	<0.01	%	TM30/PM15
Total Sulphate as SO4 BRE	-	0.42	2.65 ^{AB}	-	0.02	-	-	0.14	0.03	-	<0.01	%	TM50/PM29
Zinc #	109	110	89	61	-	63	362	242	-	103	<5	mg/kg	TM30/PM15
Magnesium	-	0.0086	0.0209	-	0.0695	-	-	0.0040	0.0020	-	<0.0001	g/l	TM30/PM20
PAH MS													
Naphthalene #	0.56	0.27	0.52	0.31	-	0.07	0.07	0.66	-	0.18	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.04	0.05	0.06	0.03	-	<0.03	<0.03	0.05	-	0.17	<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	-	<0.05	0.07	<0.05	-	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	0.04	0.05	0.07	0.06	-	<0.04	0.09	<0.04	-	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.71	0.95	1.04	0.77	-	0.17	0.86	1.71	-	0.52	<0.03	mg/kg	TM4/PM8
Anthracene #	0.10	0.19	0.09	0.10	-	<0.04	0.18	0.09	-	0.20	<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.57	1.12	0.26	0.31	-	0.08	1.03	1.14	-	0.93	<0.03	mg/kg	TM4/PM8
Pyrene #	0.56	1.00	0.26	0.33	-	0.11	1.05	0.96	-	0.99	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.29	0.49	0.16	0.26	-	<0.06	0.47	0.25	-	0.58	<0.06	mg/kg	TM4/PM8
Chrysene #	0.37	0.59	0.21	0.22	-	0.08	0.54	0.49	-	0.68	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	0.51	0.88	0.16	0.22	-	0.13	0.74	0.63	-	1.25	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.27	0.47	0.09	0.12	-	0.07	0.43	0.31	-	0.65	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	0.22	0.33	<0.04	0.07	-	0.07	0.31	0.25	-	0.65	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.06	0.08	<0.04	<0.04	-	<0.04	0.07	<0.04	-	0.13	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.25	0.33	0.07	0.08	-	0.07	0.28	0.26	-	0.64	<0.04	mg/kg	TM4/PM8
PAH 16 Total	4.6	6.8	3.0	2.9	-	0.9	6.2	6.8	-	7.6	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.37	0.63	0.12	0.16	-	0.09	0.53	0.45	-	0.90	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.14	0.25	0.04	0.06	-	0.04	0.21	0.18	-	0.35	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	87	87	87	92	-	87	92	91	-	90	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	-	<2 ^{SV}	<2	<2 ^{SV}	-	<2 ^{SV}	<2	ug/kg	TM15/PM10
Benzene #	5 ^{SV}	4 ^{SV}	<3 ^{SV}	<3 ^{SV}	-	<3 ^{SV}	<3	<3 ^{SV}	-	<3 ^{SV}	<3	ug/kg	TM15/PM10
Toluene #	25 ^{SV}	19 ^{SV}	5 ^{SV}	9 ^{SV}	-	10 ^{SV}	6	8 ^{SV}	-	5 ^{SV}	<3	ug/kg	TM15/PM10
Ethylbenzene #	5 ^{SV}	4 ^{SV}	<3 ^{SV}	<3 ^{SV}	-	4 ^{SV}	<3	<3 ^{SV}	-	<3 ^{SV}	<3	ug/kg	TM15/PM10
m/p-Xylene #	24 ^{SV}	21 ^{SV}	<5 ^{SV}	9 ^{SV}	-	18 ^{SV}	<5	13 ^{SV}	-	<5 ^{SV}	<5	ug/kg	TM15/PM10
o-Xylene #	9 ^{SV}	10 ^{SV}	<3 ^{SV}	<3 ^{SV}	-	6 ^{SV}	<3	<3 ^{SV}	-	<3 ^{SV}	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	74 ^{SV}	76 ^{SV}	95 ^{SV}	73 ^{SV}	-	89 ^{SV}	94	64 ^{SV}	-	71 ^{SV}	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	44 ^{SV}	41 ^{SV}	49 ^{SV}	41 ^{SV}	-	46 ^{SV}	51	37 ^{SV}	-	40 ^{SV}	<0	%	TM15/PM10

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: Tetrosyl
Location:
Contact: Luke Harrison
EMT Job No: 22/6851

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	13-15	16-18	19-21	22-24	25-27	28-30	Please see attached notes for all abbreviations and acronyms		
Sample ID	BH519	BH519	BH519	BH519	BH519	BH520	BH520	BH520	BH520	BH521			
Depth	0.50	3.00	6.00	8.00	12.00	1.00	5.00	8.00	12.50	1.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	-	<0.1	<0.1	<0.1 ^{SV}	-	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	-	<0.1	<0.1	<0.1 ^{SV}	-	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	-	<0.1	<0.1	<0.1 ^{SV}	-	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	1.4	<0.2	<0.2	<0.2	-	<0.2	<0.2	2.8	-	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	9	4	<4	<4	-	<4	<4	9	-	7	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	60	18	<7	<7	-	25	<7	19	-	35	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	171	61	<7	<7	-	69	<7	33	-	133	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	241	83	<19	<19	-	94	<19	64	-	175	<19	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	-	<0.1	<0.1	<0.1 ^{SV}	-	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	-	<0.1	<0.1	<0.1 ^{SV}	-	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	<0.1 ^{SV}	-	<0.1	<0.1	<0.1 ^{SV}	-	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	4.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	-	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	17	13	8	<4	-	<4	<4	26	-	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	71	55	38	<7	-	<7	<7	50	-	13	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	396	162	<7	<7	-	<7	<7	15	-	133	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	488	230	46	<19	-	<19	<19	91	-	146	<19	mg/kg	TM5/PM8/PM16
Total aliphatics and aromatics (C5-35) (EH+HS_CU_1D_Total)	729	313	46	<38	-	94	<38	155	-	321	<38	mg/kg	TM5/PM8/PM16
Ammoniacal Nitrogen as NH4	-	1.0	1.0	-	1.1	-	-	3.0	8.9	-	<0.6	mg/kg	TM38/PM20
Chloride (2:1 Ext BRE) #	-	0.006	0.024	-	0.004	-	-	0.008	0.010	-	<0.002	g/l	TM38/PM20
Nitrate as NO3 (2:1 Ext BRE)	-	<0.0025	<0.0025	-	<0.0025	-	-	<0.0025	<0.0025	-	<0.0025	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	-	0.1137	1.5148	-	0.0488	-	-	0.0852	0.0265	-	<0.0015	g/l	TM38/PM20
Organic Matter	16.6	11.3	13.3	28.3	-	0.9	5.1	22.0	-	4.7	<0.2	%	TM21/PM24
pH #	-	9.10	7.75	-	8.25	-	-	8.26	7.07	-	<0.01	pH units	TM73/PM11

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: Tetrosyl
Location:
Contact: Luke Harrison
EMT Job No: 22/6851

Report : Solid

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

EMT Sample No.	31-33	34-36	37-39								Please see attached notes for all abbreviations and acronyms		
Sample ID	BH521	BH521	BH521										
Depth	5.00	10.00	13.20										
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	25/04/2022	25/04/2022	25/04/2022										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1										
Date of Receipt	27/04/2022	27/04/2022	27/04/2022								LOD/LOR	Units	Method No.
Arsenic #	677.8 ^{AA}	-	-								<0.5	mg/kg	TM30/PM15
Cadmium #	0.2	-	-								<0.1	mg/kg	TM30/PM15
Chromium #	103.8	-	-								<0.5	mg/kg	TM30/PM15
Copper #	710 ^{AA}	-	-								<1	mg/kg	TM30/PM15
Lead #	863	-	-								<5	mg/kg	TM30/PM15
Mercury #	1.1	-	-								<0.1	mg/kg	TM30/PM15
Nickel #	169.5	-	-								<0.7	mg/kg	TM30/PM15
Sulphur as S	0.21	0.91	0.03								<0.01	%	TM30/PM15
Total Sulphate as SO4 BRE	0.35	2.42 ^{AB}	0.08								<0.01	%	TM50/PM29
Zinc #	1324	-	-								<5	mg/kg	TM30/PM15
Magnesium	<0.0001	0.0072	0.0017								<0.0001	g/l	TM30/PM20
PAH MS													
Naphthalene #	0.44	-	-								<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.04	-	-								<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	-	-								<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	-	-								<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.91	-	-								<0.03	mg/kg	TM4/PM8
Anthracene #	0.10	-	-								<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.52	-	-								<0.03	mg/kg	TM4/PM8
Pyrene #	0.50	-	-								<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.27	-	-								<0.06	mg/kg	TM4/PM8
Chrysene #	0.29	-	-								<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	0.41	-	-								<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.21	-	-								<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	0.16	-	-								<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	-	-								<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.15	-	-								<0.04	mg/kg	TM4/PM8
PAH 16 Total	4.0	-	-								<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.30	-	-								<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.11	-	-								<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	98	-	-								<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #	<2 ^{SV}	-	-								<2	ug/kg	TM15/PM10
Benzene #	<3 ^{SV}	-	-								<3	ug/kg	TM15/PM10
Toluene #	15 ^{SV}	-	-								<3	ug/kg	TM15/PM10
Ethylbenzene #	<3 ^{SV}	-	-								<3	ug/kg	TM15/PM10
m/p-Xylene #	<5 ^{SV}	-	-								<5	ug/kg	TM15/PM10
o-Xylene #	<3 ^{SV}	-	-								<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	62 ^{SV}	-	-								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	38 ^{SV}	-	-								<0	%	TM15/PM10

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: Tetrosyl
Location:
Contact: Luke Harrison
EMT Job No: 22/6851

Report : Solid

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

EMT Sample No.	31-33	34-36	37-39								Please see attached notes for all abbreviations and acronyms		
Sample ID	BH521	BH521	BH521										
Depth	5.00	10.00	13.20										
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	25/04/2022	25/04/2022	25/04/2022										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1										
Date of Receipt	27/04/2022	27/04/2022	27/04/2022								LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1 ^{SV}	-	-								<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1 ^{SV}	-	-								<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1 ^{SV}	-	-								<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	1.9	-	-								<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	6	-	-								<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	22	-	-								<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	75	-	-								<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	105	-	-								<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1 ^{SV}	-	-								<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1 ^{SV}	-	-								<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1 ^{SV}	-	-								<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	-	-								<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	-	-								<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	-	-								<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	-	-								<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	-	-								<19	mg/kg	TM5/PM8/PM16/PM12/PM10
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	105	-	-								<38	mg/kg	TM5/PM8/PM16/PM12/PM10
Ammoniacal Nitrogen as NH4	<0.6	1.2	1.5								<0.6	mg/kg	TM38/PM20
Chloride (2:1 Ext BRE) #	0.004	0.004	0.004								<0.002	g/l	TM38/PM20
Nitrate as NO3 (2:1 Ext BRE)	0.0089	<0.0025	<0.0025								<0.0025	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	0.0646	1.5258	0.3254								<0.0015	g/l	TM38/PM20
Organic Matter	19.3	-	-								<0.2	%	TM21/PM24
pH #	7.95	7.69	7.96								<0.01	pH units	TM73/PM11

Client Name: Groundtech Consulting Limited
Reference: Tetrosyl
Location:
Contact: Luke Harrison
EMT Job No: 22/6851

VOC Report : Solid

EMT Sample No.	1-3	4-6	7-9	10-12	16-18	19-21	22-24	28-30	31-33		Please see attached notes for all abbreviations and acronyms		
Sample ID	BH519	BH519	BH519	BH519	BH520	BH520	BH520	BH521	BH521				
Depth	0.50	3.00	6.00	8.00	1.00	5.00	8.00	1.00	5.00				
COC No / misc Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022	25/04/2022				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022	27/04/2022		LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	ug/kg	TM15/PM10	
Methyl Tertiary Butyl Ether #	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	ug/kg	TM15/PM10	
Chloromethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	6 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Vinyl Chloride	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	ug/kg	TM15_A/PM10	
Bromomethane	<1 ^{SV}	<1 ^{SV}	<1 ^{SV}	<1 ^{SV}	<1 ^{SV}	<1	<1 ^{SV}	<1 ^{SV}	<1 ^{SV}	<1	ug/kg	TM15/PM10	
Chloroethane #	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	ug/kg	TM15/PM10	
Trichlorofluoromethane #	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	ug/kg	TM15/PM10	
1,1-Dichloroethene (1,1 DCE) #	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6	ug/kg	TM15/PM10	
Dichloromethane (DCM) #	8 ^{SV}	9 ^{SV}	<7 ^{SV}	<7 ^{SV}	<7 ^{SV}	<7	<7 ^{SV}	<7 ^{SV}	16 ^{SV}	<7	ug/kg	TM15/PM10	
trans-1-2-Dichloroethene #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
1,1-Dichloroethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
cis-1-2-Dichloroethene #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
2,2-Dichloropropane	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
Bromochloromethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Chloroform #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
1,1,1-Trichloroethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
1,1-Dichloropropene #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Carbon tetrachloride #	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
1,2-Dichloroethane #	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
Benzene #	5 ^{SV}	4 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Trichloroethene (TCE) #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	20 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
1,2-Dichloropropane #	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6	ug/kg	TM15/PM10	
Dibromomethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Bromodichloromethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
cis-1-3-Dichloropropene	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
Toluene #	25 ^{SV}	19 ^{SV}	5 ^{SV}	9 ^{SV}	10 ^{SV}	6	8 ^{SV}	5 ^{SV}	15 ^{SV}	<3	ug/kg	TM15/PM10	
trans-1-3-Dichloropropene	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
1,1,2-Trichloroethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Tetrachloroethene (PCE) #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
1,3-Dichloropropane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Dibromochloromethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
1,2-Dibromoethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Chlorobenzene #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
1,1,1,2-Tetrachloroethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Ethylbenzene #	5 ^{SV}	4 ^{SV}	<3 ^{SV}	<3 ^{SV}	4 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
m/p-Xylene #	24 ^{SV}	21 ^{SV}	<5 ^{SV}	9 ^{SV}	18 ^{SV}	<5	13 ^{SV}	<5 ^{SV}	<5 ^{SV}	<5	ug/kg	TM15/PM10	
o-Xylene #	9 ^{SV}	10 ^{SV}	<3 ^{SV}	<3 ^{SV}	6 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Styrene	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15_A/PM10	
Bromoform	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Isopropylbenzene #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
1,1,2,2-Tetrachloroethane #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
Bromobenzene	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	<2 ^{SV}	<2 ^{SV}	<2 ^{SV}	<2	ug/kg	TM15/PM10	
1,2,3-Trichloropropane #	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
Propylbenzene #	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
2-Chlorotoluene	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
1,3,5-Trimethylbenzene #	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
4-Chlorotoluene	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	<3 ^{SV}	<3 ^{SV}	<3 ^{SV}	<3	ug/kg	TM15/PM10	
tert-Butylbenzene #	<5 ^{SV}	<5 ^{SV}	<5 ^{SV}	<5 ^{SV}	<5 ^{SV}	<5	<5 ^{SV}	<5 ^{SV}	<5 ^{SV}	<5	ug/kg	TM15/PM10	
1,2,4-Trimethylbenzene #	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6	<6 ^{SV}	<6 ^{SV}	<6 ^{SV}	<6	ug/kg	TM15/PM10	
sec-Butylbenzene #	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
4-Isopropyltoluene	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
1,3-Dichlorobenzene #	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
1,4-Dichlorobenzene #	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
n-Butylbenzene	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
1,2-Dichlorobenzene #	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
1,2-Dibromo-3-chloropropane	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
1,2,4-Trichlorobenzene	<7 ^{SV}	<7 ^{SV}	<7 ^{SV}	<7 ^{SV}	<7 ^{SV}	<7	<7 ^{SV}	<7 ^{SV}	<7 ^{SV}	<7	ug/kg	TM15/PM10	
Hexachlorobutadiene	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	<4 ^{SV}	<4 ^{SV}	<4 ^{SV}	<4	ug/kg	TM15/PM10	
Naphthalene	<27 ^{SV}	<27 ^{SV}	<27 ^{SV}	<27 ^{SV}	<27 ^{SV}	<27	<27 ^{SV}	<27 ^{SV}	<27 ^{SV}	<27	ug/kg	TM15/PM10	
1,2,3-Trichlorobenzene	<7 ^{SV}	<7 ^{SV}	&										

Please include all sections of this report if it is reproduced

Client Name: Groundtech Consulting Limited

Reference: Tetrosyl

Location:

Contact: Luke Harrison

[illegible]

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.: 22/6851

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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
AB	x20 Dilution

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/6851

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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 CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			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.			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

EMT Job No: 22/6851

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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 USEPA Method 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	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.			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 GC/FID 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 GC/FID 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.			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		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.			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.			AD	Yes
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
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 4 - Groundwater Testing Results (February 2022)

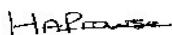
Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE

Attention : Luke Harrison
Date : 17th February, 2022
Your reference : GRO-21459
Our reference : Test Report 22/2077 Batch 1
Location : Tetrosyl
Date samples received : 10th February, 2022
Status : Final Report
Issue : 1

Twenty samples were received for analysis on 10th February, 2022 of which twenty 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:



Hayley Prowse
Project Manager

Please include all sections of this report if it is reproduced

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/2077

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/2077

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

[illegible]

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/2077

Report : Liquid (Duplicate results)

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

[illegible]

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/2077

Report : Liquid (Duplicate results)

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

[illegible]

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/2077

Report : Product

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

[illegible]

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/2077

Report : Product

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

[illegible]

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 8
Sample Identity: 327R
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 16
Sample Identity: RBH329
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 24
Sample Identity: RBH326
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 32
Sample Identity: RBH325
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 40
Sample Identity: RBH324
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 48
Sample Identity: 401
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 56
Sample Identity: RBH321
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 57
Sample Identity: 402
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 72
Sample Identity: RBH330
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 80
Sample Identity: 403
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

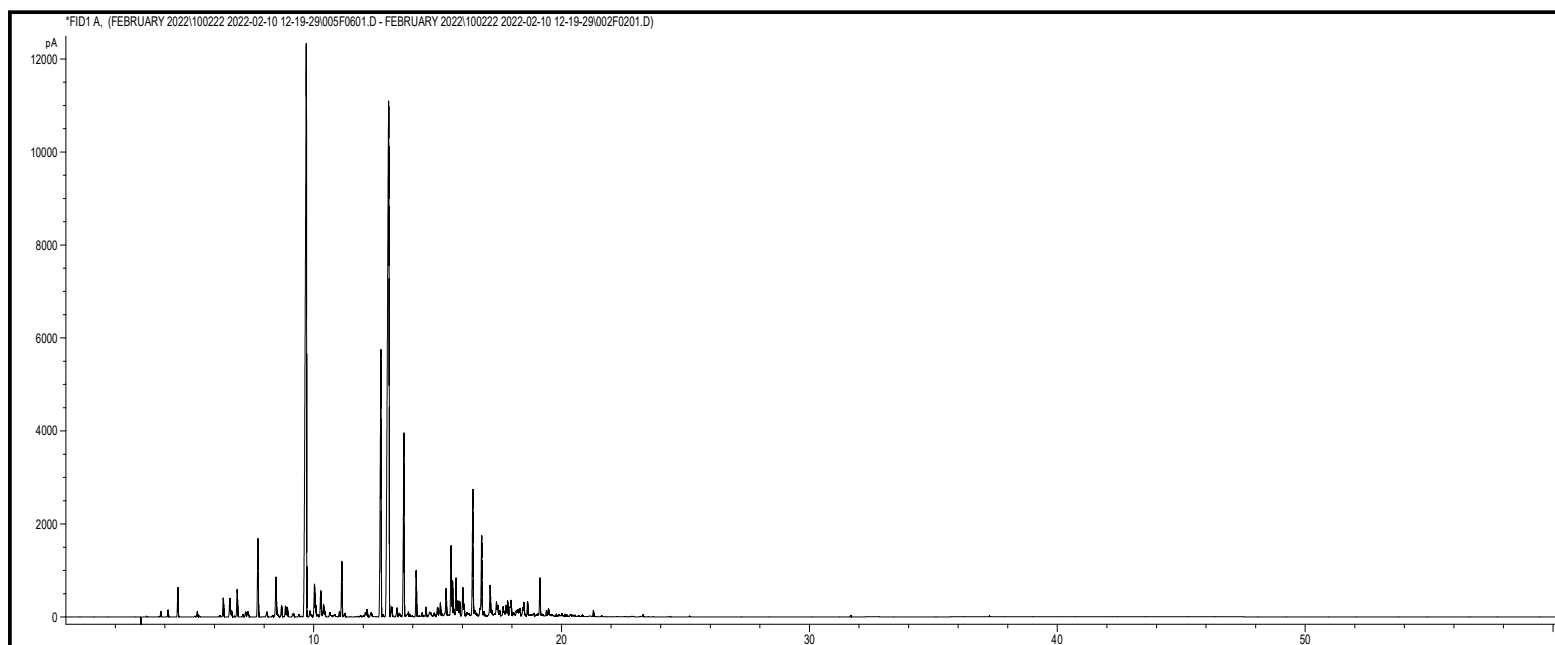
EMT Job No.: 22/2077
EMT Sample No.: 88
Sample Identity: RBH319
Depth:

Description: Black Oil on Water
Carbon Range: 5-14
Boiling Point Range (°C): 36-253
Pristane/Phytane Ratio: N/A
nC₁₇/Pristane Ratio: N/A
Age of Diesel (+/- 2 years)*: N/A

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Interpretation: Degraded Gasoline

Chromatogram:



*The age of release estimated in this report is based on the nC₁₇/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996). Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 96
Sample Identity: RBH320
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 97
Sample Identity: RBH316
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 112
Sample Identity: 328R
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 120
Sample Identity: 323R
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 128
Sample Identity: 322R
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 136
Sample Identity: 317R
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 144
Sample Identity: 318R
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 151
Sample Identity: 315R
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.: 22/2077
EMT Sample No.: 158
Sample Identity: 314R
Depth:

Description: NDP
Carbon Range: NDP
Boiling Point Range (°C): NDP
Pristane/Phytane Ratio: NDP
nC₁₇/Pristane Ratio: NDP
Age of Diesel (+/- 2 years)*: NDP
Interpretation: NDP

% Diesel: -
% Petrol: -
Estimated % Weathering of Petrol: -
Toluene/nC₈ ratio of Petrol: -
Age of Petrol (years) (schmidt et al 2002): -

Chromatogram:

*The age of release estimated in this report is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
 Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory is not aware.

Matrix : Product

QF-PM 3.1.7 v10 Please include all sections of this report if it is reproduced 28 of 35

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

[illegible]

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.: 22/2077

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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
AB	x10 Dilution
AC	x20 Dilution
AD	x100 Dilution
AE	x200 Dilution
AF	x1000 Dilution

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/2077

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM1	Modified USEPA 8015B v2:1996 method for the determination of carbon banding in oil and product samples by GC-FID.	PM0	No preparation is required.			AR	
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.				
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.				

APPENDIX 5 - Groundwater Testing Results (May/June 2022)

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE

Attention : Bradley Massey
Date : 13th May, 2022
Your reference : GRO-21459
Our reference : Test Report 22/7246 Batch 1
Location : Tetrosyl
Date samples received : 5th May, 2022
Status : Final Report
Issue : 1

Nine samples were received for analysis on 5th May, 2022 of which nine 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

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Bradley Massey
EMT Job No: 22/7246

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
 H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36		Please see attached notes for all abbreviations and acronyms		
Sample ID	BH502	BH503	BH504	BH505	BH508	BH509	BH513	BH516	BH517				
Depth													
COC No / misc													
Containers	V P G	V P G	V P G	V P G	V P G	V P G	V P G	V P G	V P G				
Sample Date	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022				
Sample Type	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022		LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	ug/l	TM15/PM10
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM15/PM10
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM15/PM10
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM15/PM10
m/p-Xylene	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
o-Xylene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	103	106	109	108	113	110	104	107	110		<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	103	99	103	102	117	104	83	100	104		<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6	<10	<10	<10	<10	<10	<10	<10 ^{SV}	<10	<10		<10	ug/l	TM36/PM12
>C6-C8	<10	<10	<10	<10	<10	<10	33 ^{SV}	<10	<10		<10	ug/l	TM36/PM12
>C8-C10	61	<10	<10	<10	<10	<10	25 ^{SV}	<10	<10		<10	ug/l	TM36/PM12
>C10-C12	34	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM5/PM16/PM30
>C12-C16	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM16/PM30
>C16-C21	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM16/PM30
>C21-C35	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35	95	<10	<10	<10	<10	<10	58	<10	<10		<10	ug/l	TM5/PM16/PM30
Aromatics													
>C5-EC7	<10	<10	<10	<10	<10	<10	<10 ^{SV}	<10	<10		<10	ug/l	TM36/PM12
>EC7-EC8	<10	<10	<10	<10	<10	<10	<10 ^{SV}	<10	<10		<10	ug/l	TM36/PM12
>EC8-EC10	<10	<10	<10	<10	<10	<10	<10 ^{SV}	<10	<10		<10	ug/l	TM36/PM12
>EC10-EC12	34	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM5/PM16/PM30
>EC12-EC16	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM16/PM30
>EC16-EC21	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM16/PM30
>EC21-EC35	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35	34	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM5/PM16/PM30
Total aliphatics and aromatics(C5-35)	129	<10	<10	<10	<10	<10	58	<10	<10		<10	ug/l	TM5/PM16/PM30
Monoethylene glycol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM179/PM0
Propylene glycol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM179/PM0
Diethylene glycol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM179/PM0
Triethylene glycol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM179/PM0
Thiodiglycol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/l	TM179/PM0

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Bradley Massey
EMT Job No: 22/7246

Liquid

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Bradley Massey
EMT Job No: 22/7246

SVOC Report : Liquid

EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36		Please see attached notes for all abbreviations and acronyms		
Sample ID	BH502	BH503	BH504	BH505	BH508	BH509	BH513	BH516	BH517				
Depth													
COC No / misc													
Containers	V P G	V P G	V P G	V P G	V P G	V P G	V P G	V P G	V P G				
Sample Date	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022				
Sample Type	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022		LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
1,3-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
1,4-Dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
2-Nitroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
2,4-Dinitrotoluene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
3-Nitroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
4-Bromophenylphenylether	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
4-Chloroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
4-Chlorophenylphenylether	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
4-Nitroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Azobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Carbazole	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Dibenzofuran	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Hexachlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Hexachlorobutadiene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Hexachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Isophorone	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM16/PM30
Nitrobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	96	102	106	92	100	116	105	103	114		<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	97	103	108	92	112	120	105	103	117		<0	%	TM16/PM30

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Bradley Massey
EMT Job No: 22/7246

VOC Report : Liquid

EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36		Please see attached notes for all abbreviations and acronyms		
Sample ID	BH502	BH503	BH504	BH505	BH508	BH509	BH513	BH516	BH517				
Depth													
COC No / misc													
Containers	V P G	V P G	V P G	V P G	V P G	V P G	V P G	V P G	V P G				
Sample Date	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022				
Sample Type	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022		LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	10	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	ug/l	TM15/PM10
Chloromethane	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM15/PM10
Chloroethane	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
Trichlorofluoromethane	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE)	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
Dichloromethane (DCM)	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,1-Dichloroethane	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM15/PM10
Bromochloromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Chloroform	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
1,1,1-Trichloroethane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
1,1-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
Carbon tetrachloride	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
1,2-Dichloroethane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	ug/l	TM15/PM10
Trichloroethene (TCE)	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,2-Dichloropropane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Dibromomethane	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
Bromodichloromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
1,1,2-Trichloroethane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Tetrachloroethene (PCE)	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,3-Dichloropropane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Dibromochloromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
1,2-Dibromoethane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Chlorobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM15/PM10
m/p-Xylene	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
o-Xylene	<1	<1	<1	<1	<1	<1	<1	<1	<1		<1	ug/l	TM15/PM10
Styrene	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Bromoform	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
Isopropylbenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	<4	<4	<4	<4	<4	<4	<4		<4	ug/l	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
1,2,3-Trichloropropane	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
Propylbenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
tert-Butylbenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene	17	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
sec-Butylbenzene	3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
4-Isopropyltoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,3-Dichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,4-Dichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
n-Butylbenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,2-Dichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
Naphthalene	<2	<2	<2	<2	<2	<2	<2	<2	<2		<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3		<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	103	106	109	108	113	110	104	107	110		<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	103	99	103	102	117	104	83	100	104		<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Bradley Massey

[illegible]

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.: 22/7246

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/7246

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details				
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.				
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
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.				
TM179	Determination of Glycols using LCMS	PM0	No preparation is required.				

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



Attention : Luke Harrison
Date : 23rd May, 2022
Your reference :
Our reference : Test Report 22/7430 Batch 1
Location : Tetrosyl
Date samples received : 7th May, 2022
Status : Final Report
Issue : 1

Eight samples were received for analysis on 7th May, 2022 of which eight 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:



Liza Klebe

Project Co-ordinator

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7430

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

EMT Sample No.	1-4	5-8	9-11	12-14	15-17	18-20	21-24	25-28			Please see attached notes for all abbreviations and acronyms		
Sample ID	RBH304	RBH305	BH501	BH511	BH514	BH518	BH519	BH521					
Depth													
COC No / misc													
Containers	V P G	V P G	V G	V G	V G	V G	V P G	V P G					
Sample Date	05/05/2022	05/05/2022	05/05/2022	04/05/2022	04/05/2022	04/05/2022	05/05/2022	05/05/2022					
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water					
Batch Number	1	1	1	1	1	1	1	1					
Date of Receipt	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022			LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	ug/l	TM15/PM10
Benzene #	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM15/PM10
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/l	TM15/PM10
Ethylbenzene #	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM15/PM10
m/p-Xylene #	<2	50	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
o-Xylene #	<1	2	<1	<1	<1	<1	<1	<1			<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	99	103	102	104	109	112	96	96			<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	99	101	103	104	100	101	103	99			<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 #	<10	11	<10	<10	<10	<10	<10	<10			<10	ug/l	TM36/PM12
>C6-C8 #	90	133	<10	<10	<10	50	<10	<10			<10	ug/l	TM36/PM12
>C8-C10 #	17	113	<10	<10	<10	<10	<10	<10			<10	ug/l	TM36/PM12
>C10-C12 #	<5	12	<5	<5	<5	<5	<5	<5			<5	ug/l	TM5/PM16/PM30
>C12-C16 #	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM16/PM30
>C16-C21 #	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM16/PM30
>C21-C35 #	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35 #	107	269	<10	<10	<10	50	<10	<10			<10	ug/l	TM5/PM16/PM30
Aromatics													
>C5-EC7 #	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	59	<10	<10	<10	<10	<10	<10			<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	83	<5	<5	<5	<5	<5	<5			<5	ug/l	TM5/PM16/PM30
>EC12-EC16 #	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM16/PM30
>EC16-EC21 #	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM16/PM30
>EC21-EC35 #	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35 #	<10	142	<10	<10	<10	<10	<10	<10			<10	ug/l	TM5/PM16/PM30
Total aliphatics and aromatics(C5-35) #	107	411	<10	<10	<10	50	<10	<10			<10	ug/l	TM5/PM16/PM30
Monoethylene glycol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM179/PM0
Propylene glycol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM179/PM0
Diethylene glycol	18	64	<10	<10	<10	<10	<10	<10			<10	ug/l	TM179/PM0
Triethylene glycol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM179/PM0
Thiodiglycol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM179/PM0

Client Name: Groundtech Consulting Limited

SVOC Report : Liquid

Reference:

Location: Tetrosyl

Contact: Luke Harrison

EMT Job No: 22/7430

EMT Sample No.	1-4	5-8	9-11	12-14	15-17	18-20	21-24	25-28			Please see attached notes for all abbreviations and acronyms		
Sample ID	RBH304	RBH305	BH501	BH511	BH514	BH518	BH519	BH521					
Depth													
COC No / misc													
Containers	V P G	V P G	V G	V G	V G	V G	V P G	V P G					
Sample Date	05/05/2022	05/05/2022	05/05/2022	04/05/2022	04/05/2022	04/05/2022	05/05/2022	05/05/2022					
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water					
Batch Number	1	1	1	1	1	1	1	1			LOD/LOR	Units	Method No.
Date of Receipt	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022					
SVOC MS													
Phenols													
2-Chlorophenol #	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
2-Methylphenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
2-Nitrophenol	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	<1	1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
2,4,5-Trichlorophenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
4-Methylphenol	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/l	TM16/PM30
Pentachlorophenol	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
Phenol	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
PAHs													
2-Chloronaphthalene #	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
2-Methylnaphthalene #	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
Naphthalene #	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
Acenaphthylene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
Acenaphthene #	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
Fluorene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
Phenanthrene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
Anthracene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
Fluoranthene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
Pyrene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
Benzo(a)anthracene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
Chrysene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
Benzo(bk)fluoranthene #	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
Benzo(a)pyrene	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
Indeno(123cd)pyrene	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
Dibenzo(ah)anthracene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
Benzo(ghi)perylene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM16/PM30
Phthalates													
Bis(2-ethylhexyl) phthalate	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
Di-n-butyl phthalate #	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5			<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
Diethyl phthalate #	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30
Dimethyl phthalate	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM16/PM30

Client Name:	Groundtech Consulting Limited
Reference:	
Location:	Tetrosyl
Contact:	Luke Harrison
EMT Job No:	22/7430

Reference:

Location: Tetrosyl

Contact: Luke Harrison

EMT Job No: 22/7430

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited

VOC Report : Liquid

Reference:

Location: Tetrosyl

Contact: Luke Harrison

EMT Job No: 22/7430

EMT Sample No.	1-4	5-8	9-11	12-14	15-17	18-20	21-24	25-28			Please see attached notes for all abbreviations and acronyms		
Sample ID	RBH304	RBH305	BH501	BH511	BH514	BH518	BH519	BH521					
Depth													
COC No / misc													
Containers	V P G	V P G	V G	V G	V G	V G	V P G	V P G					
Sample Date	05/05/2022	05/05/2022	05/05/2022	04/05/2022	04/05/2022	04/05/2022	05/05/2022	05/05/2022					
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water					
Batch Number	1	1	1	1	1	1	1	1			LOD/LOR	Units	Method No.
Date of Receipt	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022					
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	ug/l	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM15/PM10
Chloroethane #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
Trichlorofluoromethane #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	<3	<3	<3	<3	<3	5	<3	<3			<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM15/PM10
Bromochloromethane #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Chloroform #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
Carbon tetrachloride #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
1,2-Dichloroethane #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Benzene #	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	ug/l	TM15/PM10
Trichloroethene (TCE) #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,2-Dichloropropane #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Dibromomethane #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
Bromodichloromethane #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,3-Dichloropropane #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Dibromochloromethane #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
1,2-Dibromoethane #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Chlorobenzene #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Ethylbenzene #	<1	<1	<1	<1	<1	<1	<1	<1			<1	ug/l	TM15/PM10
m/p-Xylene #	<2	50	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
o-Xylene #	<1	2	<1	<1	<1	<1	<1	<1			<1	ug/l	TM15/PM10
Styrene	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Bromoform #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
Isopropylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	<4	<4	<4	<4	<4	<4			<4	ug/l	TM15/PM10
Bromobenzene #	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
1,2,3-Trichloropropane #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
Propylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3	6	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3	5	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	<3	12	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
sec-Butylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
4-Isopropyltoluene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,3-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,4-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
n-Butylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,2-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
Naphthalene	<2	<2	<2	<2	<2	<2	<2	<2			<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3			<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	99	103	102	104	109	112	96	96			<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	99	101	103	104	100	101	103	99			<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited

Reference:

Location: Tetrosyl

Contact: Luke Harrison

[illegible]

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.: 22/7430

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/7430

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details	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.				
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			
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	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			
TM179	Determination of Glycols using LCMS	PM0	No preparation is required.				

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



Attention :	Luke Harrison
Date :	16th May, 2022
Your reference :	GRO-21459
Our reference :	Test Report 22/7605 Batch 1
Location :	Tetrosyl
Date samples received :	11th May, 2022
Status :	Final Report
Issue :	1

Twelve samples were received for analysis on 11th May, 2022 of which twelve 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:

A handwritten signature in black ink, appearing to read 'B. Leslie'.

Bruce Leslie
Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7605

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

[illegible]

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7605

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

[illegible]

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

Matrix : Liquid

[illegible]

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.: 22/7605

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

STACK EMISSIONS

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DEVIATING SAMPLES

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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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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	x20 Dilution

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/7605

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.				
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			
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			

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



Attention :	Luke Harrison
Date :	19th May, 2022
Your reference :	GRO-21459
Our reference :	Test Report 22/7828 Batch 1
Location :	Tetrosyl
Date samples received :	13th May, 2022
Status :	Final Report
Issue :	1

Five samples were received for analysis on 13th May, 2022 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:



Liza Klebe

Project Co-ordinator

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7828

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HN0₃

[illegible]

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

[illegible]

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.: 22/7828

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/7828

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.				
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			
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			

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE

Attention : Luke Harrison
Date : 28th June, 2022
Your reference : GRO-21459
Our reference : Test Report 22/9619 Batch 1
Location : Tetrosyl
Date samples received : 11th June, 2022
Status : Final Report
Issue : 1

Five samples were received for analysis on 11th June, 2022 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:



Phil Sommerton BSc

Senior Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/9619

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HN₃

EMT Sample No.	1-3	4-6	7-9	12							Please see attached notes for all abbreviations and acronyms		
Sample ID	RBH321	BH506	BH515	BH520									
Depth													
COC No / misc													
Containers	V P G	V P G	V P G	G									
Sample Date	08/06/2022	08/06/2022	08/06/2022	08/06/2022									
Sample Type	Liquid	Liquid	Liquid	Liquid									
Batch Number	1	1	1	1									
Date of Receipt	11/06/2022	11/06/2022	11/06/2022	11/06/2022							LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether	<0.1	0.3	<0.1	<0.1							<0.1	ug/l	TM15/PM10
Benzene	<0.5	<0.5	<0.5	<0.5							<0.5	ug/l	TM15/PM10
Toluene	<5	<5	<5	<5							<5	ug/l	TM15/PM10
Ethylbenzene	<1	1	<1	<1							<1	ug/l	TM15/PM10
m/p-Xylene	<2	<2	<2	<2							<2	ug/l	TM15/PM10
o-Xylene	<1	<1	<1	<1							<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	104	104	106	90							<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	100	100	100	86							<0	%	TM15/PM10
GRO (>C4-C8)	<10	-	-	-							<10	ug/l	TM36/PM12
GRO (>C8-C12)	<10	-	-	-							<10	ug/l	TM36/PM12
GRO (>C4-C12)	<10	-	-	-							<10	ug/l	TM36/PM12
TPH CWG													
Aliphatics													
>C5-C6	-	43	<10	<10							<10	ug/l	TM36/PM12
>C6-C8	-	<10	<10	<10							<10	ug/l	TM36/PM12
>C8-C10	-	<10	<10	<10							<10	ug/l	TM36/PM12
>C10-C12	-	<5	<5	NDP							<5	ug/l	TM5/PM16/PM30
>C12-C16	-	<10	<10	NDP							<10	ug/l	TM5/PM16/PM30
>C16-C21	-	<10	<10	NDP							<10	ug/l	TM5/PM16/PM30
>C21-C35	-	<10	<10	NDP							<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35	-	43	<10	NDP							<10	ug/l	TM5/PM16/PM30
Aromatics													
>C5-EC7	-	<10	<10	<10							<10	ug/l	TM36/PM12
>EC7-EC8	-	<10	<10	<10							<10	ug/l	TM36/PM12
>EC8-EC10	-	<10	<10	<10							<10	ug/l	TM36/PM12
>EC10-EC12	-	<5	<5	NDP							<5	ug/l	TM5/PM16/PM30
>EC12-EC16	-	<10	<10	NDP							<10	ug/l	TM5/PM16/PM30
>EC16-EC21	-	<10	<10	NDP							<10	ug/l	TM5/PM16/PM30
>EC21-EC35	-	<10	<10	NDP							<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35	-	<10	<10	NDP							<10	ug/l	TM5/PM16/PM30
Total aliphatics and aromatics(C5-35)	-	43	<10	NDP							<10	ug/l	TM5/PM16/PM30
Monoethylene glycol	-	<10	<10	<10							<10	ug/l	TM179/PM0
Propylene glycol	-	<10	<10	<10							<10	ug/l	TM179/PM0
Diethylene glycol	-	16	<10	<10							<10	ug/l	TM179/PM0
Triethylene glycol	-	<10	<10	<10							<10	ug/l	TM179/PM0
Thiodiglycol	-	<10	<10	<10							<10	ug/l	TM179/PM0

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/9619

SVOC Report : Liquid

EMT Sample No.	4-6	7-9	12									
Sample ID	BH506	BH515	BH520									
Depth												
COC No / misc												
Containers	V P G	V P G	G									
Sample Date	08/06/2022	08/06/2022	08/06/2022									
Sample Type	Liquid	Liquid	Liquid									
Batch Number	1	1	1									
Date of Receipt	11/06/2022	11/06/2022	11/06/2022									
										LOD/LOR	Units	Method No.
SVOC MS												
Phenols												
2-Chlorophenol	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
2-Methylphenol	2.7 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
2-Nitrophenol	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
2,4,5-Trichlorophenol	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
4-Methylphenol	7 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
4-Nitrophenol	<20 _{AA}	<10	NDP							<10	ug/l	TM16/PM30
Pentachlorophenol	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
Phenol	131 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
PAHs												
2-Chloronaphthalene	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
2-Methylnaphthalene	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
Naphthalene	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
Acenaphthylene	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Acenaphthene	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
Fluorene	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Phenanthrene	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Anthracene	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Fluoranthene	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Pyrene	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Benzo(a)anthracene	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Chrysene	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Benzo(bk)fluoranthene	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
Benzo(a)pyrene	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
Indeno(123cd)pyrene	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
Dibenzo(ah)anthracene	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Benzo(ghi)perylene	<1.0 _{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Phthalates												
Bis(2-ethylhexyl) phthalate	<10 _{AA}	<5	NDP							<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
Di-n-butyl phthalate	<3.0 _{AA}	<1.5	NDP							<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
Diethyl phthalate	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30
Dimethyl phthalate	<2 _{AA}	<1	NDP							<1	ug/l	TM16/PM30

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/9619

SVOC Report : Liquid

EMT Sample No.	4-6	7-9	12									
Sample ID	BH506	BH515	BH520									
Depth												
COC No / misc												
Containers	V P G	V P G	G									
Sample Date	08/06/2022	08/06/2022	08/06/2022									
Sample Type	Liquid	Liquid	Liquid									
Batch Number	1	1	1									
Date of Receipt	11/06/2022	11/06/2022	11/06/2022									
										LOD/LOR	Units	Method No.
SVOC MS												
Other SVOCs												
1,2-Dichlorobenzene	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
1,3-Dichlorobenzene	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
1,4-Dichlorobenzene	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
2-Nitroaniline	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
2,4-Dinitrotoluene	<1.0 ^{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
3-Nitroaniline	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
4-Bromophenylphenylether	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
4-Chloroaniline	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
4-Chlorophenylphenylether	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
4-Nitroaniline	<1.0 ^{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Azobenzene	<1.0 ^{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane	<1.0 ^{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
Carbazole	<1.0 ^{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Dibenzofuran	<1.0 ^{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Hexachlorobenzene	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
Hexachlorobutadiene	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
Hexachloroethane	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
Isophorone	<1.0 ^{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine	<1.0 ^{AA}	<0.5	NDP							<0.5	ug/l	TM16/PM30
Nitrobenzene	<2 ^{AA}	<1	NDP							<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	127 ^{AA}	100	NDP							<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	137 ^{SV AA}	105	NDP							<0	%	TM16/PM30

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/9619

VOC Report : Liquid

EMT Sample No.	4-6	7-9	12									
Sample ID	BH506	BH515	BH520									
Depth												
COC No / misc												
Containers	V P G	V P G	G									
Sample Date	08/06/2022	08/06/2022	08/06/2022									
Sample Type	Liquid	Liquid	Liquid									
Batch Number	1	1	1									
Date of Receipt	11/06/2022	11/06/2022	11/06/2022									
										LOD/LOR	Units	Method No.
VOC MS												
Dichlorodifluoromethane	<2	<2	<2							<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	0.3	<0.1	<0.1							<0.1	ug/l	TM15/PM10
Chloromethane	<3	<3	<3							<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1	<0.1	<0.1							<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	<1							<1	ug/l	TM15/PM10
Chloroethane	<3	<3	<3							<3	ug/l	TM15/PM10
Trichlorofluoromethane	<3	<3	<3							<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE)	<3	<3	<3							<3	ug/l	TM15/PM10
Dichloromethane (DCM)	<3	<3	<3							<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene	<3	<3	<3							<3	ug/l	TM15/PM10
1,1-Dichloroethane	<3	<3	<3							<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene	<3	<3	<3							<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	<1							<1	ug/l	TM15/PM10
Bromochloromethane	<2	<2	<2							<2	ug/l	TM15/PM10
Chloroform	<2	<2	<2							<2	ug/l	TM15/PM10
1,1,1-Trichloroethane	<2	<2	<2							<2	ug/l	TM15/PM10
1,1-Dichloropropene	<3	<3	<3							<3	ug/l	TM15/PM10
Carbon tetrachloride	<2	<2	<2							<2	ug/l	TM15/PM10
1,2-Dichloroethane	<2	<2	<2							<2	ug/l	TM15/PM10
Benzene	<0.5	<0.5	<0.5							<0.5	ug/l	TM15/PM10
Trichloroethene (TCE)	<3	<3	<3							<3	ug/l	TM15/PM10
1,2-Dichloropropane	<2	<2	<2							<2	ug/l	TM15/PM10
Dibromomethane	<3	<3	<3							<3	ug/l	TM15/PM10
Bromodichloromethane	<2	<2	<2							<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2	<2							<2	ug/l	TM15/PM10
Toluene	<5	<5	<5							<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2	<2							<2	ug/l	TM15/PM10
1,1,2-Trichloroethane	<2	<2	<2							<2	ug/l	TM15/PM10
Tetrachloroethene (PCE)	<3	<3	<3							<3	ug/l	TM15/PM10
1,3-Dichloropropane	<2	<2	<2							<2	ug/l	TM15/PM10
Dibromochloromethane	<2	<2	<2							<2	ug/l	TM15/PM10
1,2-Dibromoethane	<2	<2	<2							<2	ug/l	TM15/PM10
Chlorobenzene	<2	<2	<2							<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane	<2	<2	<2							<2	ug/l	TM15/PM10
Ethylbenzene	1	<1	<1							<1	ug/l	TM15/PM10
m/p-Xylene	<2	<2	<2							<2	ug/l	TM15/PM10
o-Xylene	<1	<1	<1							<1	ug/l	TM15/PM10
Styrene	5	<2	<2							<2	ug/l	TM15/PM10
Bromoform	<2	<2	<2							<2	ug/l	TM15/PM10
Isopropylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	<4							<4	ug/l	TM15/PM10
Bromobenzene	<2	<2	<2							<2	ug/l	TM15/PM10
1,2,3-Trichloropropane	<3	<3	<3							<3	ug/l	TM15/PM10
Propylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
2-Chlorotoluene	<3	<3	<3							<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
4-Chlorotoluene	<3	<3	<3							<3	ug/l	TM15/PM10
tert-Butylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
sec-Butylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
4-Isopropyltoluene	<3	<3	<3							<3	ug/l	TM15/PM10
1,3-Dichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
1,4-Dichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
n-Butylbenzene	<3	<3	<3							<3	ug/l	TM15/PM10
1,2-Dichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2	<2							<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3	<3							<3	ug/l	TM15/PM10
Naphthalene	<2	<2	<2							<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3	<3							<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	104	106	90							<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	100	100	86							<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Matrix : Liquid

6 of 12

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

[illegible]

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.: 22/9619

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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	x2 Dilution

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/9619

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details				
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.				
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
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.				
TM179	Determination of Glycols using LCMS	PM0	No preparation is required.				

APPENDIX 6 - Groundwater Testing Results (October 2022)

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



Attention : Luke Harrison
Date : 31st October, 2022
Your reference : GRO-21459
Our reference : Test Report 22/16914 Batch 1
Location : Tetrosyl
Date samples received : 15th October, 2022
Status : Final Report
Issue : 1

Ten samples were received for analysis on 15th October, 2022 of which ten 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

Please include all sections of this report if it is reproduced

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/16914

Liquid

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/16914

Liquid

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/16914

VOC Report : Liquid

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	Please see attached notes for all abbreviations and acronyms		
Sample ID	BH502	BH503	BH504	BH509	BH511	BH513	BH515	BH517	BH519	BH521			
Depth													
COC No / misc Containers	V G	V G	V G	V G	V G	V G	V G	V G	V G	V G			
Sample Date	13/10/2022	13/10/2022	13/10/2022	13/10/2022	13/10/2022	13/10/2022	13/10/2022	13/10/2022	13/10/2022	13/10/2022			
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water			
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method No.
Date of Receipt	15/10/2022	15/10/2022	15/10/2022	15/10/2022	15/10/2022	15/10/2022	15/10/2022	15/10/2022	15/10/2022	15/10/2022			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ug/l	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM15/PM10
Chloroethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Trichlorofluoromethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM15/PM10
Bromochloromethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Chloroform #	<2	<2	<2	<2	5	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Carbon tetrachloride #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2-Dichloroethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Benzene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM15/PM10
Trichloroethene (TCE) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,2-Dichloropropane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Dibromomethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Bromodichloromethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,3-Dichloropropane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Dibromochloromethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2-Dibromoethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Chlorobenzene #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Ethylbenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM15/PM10
m/p-Xylene #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
o-Xylene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM15/PM10
Styrene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Bromoform #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Isopropylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/l	TM15/PM10
Bromobenzene #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2,3-Trichloropropane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Propylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
sec-Butylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
4-Isopropyltoluene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,3-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,4-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
n-Butylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,2-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Naphthalene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	103	102	107	106	107	112	112	112	110	113	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	109	105	112	112	114	119	117	116	113	117	<0	%	TM15/PM10

Matrix : Liquid

6 of 14

Matrix : Liquid

[illegible]

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

[illegible]

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.: 22/16914

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/16914

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	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.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details	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.				
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			
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	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			
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060A (2002), APHA SMEWW 5310B:1999 22nd Edition, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.	Yes			
TM75	Modified US EPA method 310.1 (1978). Determination of Alkalinity by Metrohm automated titration analyser.	PM0	No preparation is required.	Yes			

EMT Job No: 22/16914

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM179	Determination of Glycols using LCMS	PM0	No preparation is required.				

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



Attention : Luke Harrison
Date : 2nd November, 2022
Your reference : GRO-21459
Our reference : Test Report 22/17061 Batch 1
Location : Tetrosyl
Date samples received : 18th October, 2022
Status : Final Report
Issue : 1

Twenty one samples were received for analysis on 18th October, 2022 of which twenty one 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

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/17061

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-30	31-36	Please see attached notes for all abbreviations and acronyms		
Sample ID	BH505	BH506	BH507	BH508	BH518	RBH301	RBH304	RBH305	RBH315	RBH316			
Depth													
COC No / misc													
Containers	V G	V G	V G	V G	V G	V G	V G	V G	V HN Z P G	V HN Z P G			
Sample Date	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	18/10/2022	17/10/2022			
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	8.9	<0.1	ug/l	TM15/PM10
Benzene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5	ug/l	TM15/PM10
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	498	<5	<5	ug/l	TM15/PM10
Ethylbenzene #	<1	4	<1	<1	<1	<1	<1	3	60	<1	<1	ug/l	TM15/PM10
m/p-Xylene #	<2	<2	<2	<2	<2	<2	<2	254	256	<2	<2	ug/l	TM15/PM10
o-Xylene #	<1	<1	<1	<1	<1	<1	<1	48	58	<1	<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	94	93	104	104	103	101	103	106	99	99	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	96	94	102	102	101	99	102	104	99	98	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 #	<10	12	<10	<10	<10	<10	<10	<10	<10	79	<10	ug/l	TM36/PM12
>C6-C8 #	<10	<10	<10	<10	15	<10	81	119	94	24	<10	ug/l	TM36/PM12
>C8-C10 #	<10	<10	<10	<10	<10	<10	<10	1013	61	11	<10	ug/l	TM36/PM12
>C10-C12 #	<5	<5	<5	<5	<5	<5	<5	5982	<5	<5	<5	ug/l	TM5/PM16/PM30
>C12-C16 #	<10	<10	<10	<10	<10	<10	<10	1210	<10	<10	<10	ug/l	TM5/PM16/PM30
>C16-C21 #	<10	<10	<10	<10	<10	<10	<10	310	<10	<10	<10	ug/l	TM5/PM16/PM30
>C21-C35 #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35 #	<10	12	<10	<10	15	<10	81	8634	155	114	<10	ug/l	TM5/PM16/PM30
Aromatics													
>C5-EC7 #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM36/PM12
>EC7-EC8 #	<10	<10	<10	<10	<10	<10	<10	<10	365	<10	<10	ug/l	TM36/PM12
>EC8-EC10 #	<10	<10	<10	<10	<10	<10	<10	274	295	<10	<10	ug/l	TM36/PM12
>EC10-EC12 #	<5	<5 ^{SV}	<5	<5	<5	<5	23	1278	<5	22	<5	ug/l	TM5/PM16/PM30
>EC12-EC16 #	<10	<10 ^{SV}	<10	<10	<10	<10	<10	550	<10	<10	<10	ug/l	TM5/PM16/PM30
>EC16-EC21 #	<10	<10 ^{SV}	<10	<10	<10	<10	<10	80	<10	<10	<10	ug/l	TM5/PM16/PM30
>EC21-EC35 #	<10	<10 ^{SV}	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35 #	<10	<10 ^{SV}	<10	<10	<10	<10	23	2182	660	22	<10	ug/l	TM5/PM16/PM30
Total aliphatics and aromatics(C5-35) #	<10	12 ^{SV}	<10	<10	15	<10	104	10816	815	136	<10	ug/l	TM5/PM16/PM30
Sulphate as SO ₄ #	-	-	-	-	-	-	-	-	84.4	30.0	<0.5	mg/l	TM38/PM0
Nitrate as NO ₃ #	-	-	-	-	-	-	-	-	0.3	0.2	<0.2	mg/l	TM38/PM0
Monoethylene glycol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM179/PM0
Propylene glycol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM179/PM0
Diethylene glycol	<10	<10	<10	<10	<10	<10	10	<10	<10	<10	<10	ug/l	TM179/PM0
Triethylene glycol	10	<10	14	<10	<10	22	<10	<10	<10	<10	<10	ug/l	TM179/PM0
Thiodiglycol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM179/PM0
Dissolved Methane #	-	-	-	-	-	-	-	-	189	>>9278	<1	ug/l	TM25/PM0
Dissolved Ethane #	-	-	-	-	-	-	-	-	<1	20	<1	ug/l	TM25/PM0
Dissolved Carbon Dioxide	-	-	-	-	-	-	-	-	>>234374	>>140760	<1	ug/l	TM25/PM0
Total Alkalinity as CaCO ₃ #	148	2866	134	230	252	144	198	274	134	166	<1	mg/l	TM75/PM0

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/17061

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

[illegible]

Element Materials Technology

Client Name: Groundtech Consulting Limited
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Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
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EMT Sample No.	37-39	40-45	46-51	52-54	55-57	58-60	61-63	64-66	67-72	73-75	Please see attached notes for all abbreviations and acronyms		
Sample ID	RBH317R	RBH319	RBH320	RBH321	RBH322R	RBH323R	RBH324	RBH325	RBH326	RBH329			
Depth													
COC No / misc													
Containers	V G	V HN Z P G	V HN Z P G	V G	V G	V G	V G	V G	V HN Z P G	V G			
Sample Date	18/10/2022	17/10/2022	17/10/2022	17/10/2022	18/10/2022	18/10/2022	17/10/2022	17/10/2022	17/10/2022	18/10/2022			
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	1.6	17.0	87.7	75.8	1.6	0.3	12.4	23.7	0.4	0.3	<0.1	ug/l	TM15/PM10
Benzene #	16.5	39.3	256.6	171.2	15.5	5.1	32.1	81.7	1.2	4.9	<0.5	ug/l	TM15/PM10
Toluene #	155	>>7297	127711 ^{AD}	183633 ^{AD}	223	300	23379 ^{AD}	88626 ^{AD}	1744	236	<5	ug/l	TM15/PM10
Ethylbenzene #	32	207	>>5310	>>7980	24	205	>>3620	3556	98	153	<1	ug/l	TM15/PM10
m/p-Xylene #	152	>>4044	21852 ^{AD}	35666 ^{AD}	143	645	19039 ^{AD}	16774 ^{AD}	376	476	<2	ug/l	TM15/PM10
o-Xylene #	30	>>1093	>>4875	>>7591	34	87	>>3900	3773	100	64	<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	104	105	92	90	106	107	107	105	104	108	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	103	106	78	90	104	106	106	86	98	100	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 #	93	35	764 ^{AA}	756 ^{AA}	93	37	<10	330 ^{AA}	<10	34	<10	ug/l	TM36/PM12
>C6-C8 #	70	2991	31929 ^{AA}	46897 ^{AA}	63	67	6278	22075 ^{AA}	329	71	<10	ug/l	TM36/PM12
>C8-C10 #	107	1521	6385 ^{AA}	10383 ^{AA}	96	183	5602	5054 ^{AA}	78	145	<10	ug/l	TM36/PM12
>C10-C12 #	<5	399	<5	160	<5	<5	<5	12	<5	<5	<5	ug/l	TM5/PM16/PM30
>C12-C16 #	<10	70	<10	<10	<10	<10	<10	1260	<10	<10	<10	ug/l	TM5/PM16/PM30
>C16-C21 #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM5/PM16/PM30
>C21-C35 #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM5/PM16/PM30
Total aliphatics C5-35 #	270	5016	39078	58196	252	287	11880	28731	407	250	<10	ug/l	TM5/PM16/PM30
Aromatics													
>C5-EC7 #	14	31	189 ^{AA}	106 ^{AA}	13	<10	27	<100 ^{AA}	<10	<10	<10	ug/l	TM36/PM12
>EC7-EC8 #	123	9647	111645 ^{AA}	164626 ^{AA}	152	225	21679	78077 ^{AA}	1207	198	<10	ug/l	TM36/PM12
>EC8-EC10 #	185	5334	33056 ^{AA}	53897 ^{AA}	176	785	26165	25667 ^{AA}	426	630	<10	ug/l	TM36/PM12
>EC10-EC12 #	88	810	526	694	105	35	818	492	<5	26	<5	ug/l	TM5/PM16/PM30
>EC12-EC16 #	70	40	30	40	120	<10	10	20	<10	<10	<10	ug/l	TM5/PM16/PM30
>EC16-EC21 #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM5/PM16/PM30
>EC21-EC35 #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM5/PM16/PM30
Total aromatics C5-35 #	480	15862	145446	219363	566	1045	48699	104256	1633	854	<10	ug/l	TM5/PM16/PM30
Total aliphatics and aromatics(C5-35) #	750	20878	184524	277559	818	1332	60579	132987	2040	1104	<10	ug/l	TM5/PM16/PM30
Sulphate as SO ₄ #	-	12.2	43.1	-	-	-	-	-	51.4	-	<0.5	mg/l	TM38/PM0
Nitrate as NO ₃ #	-	<0.2	<0.2	-	-	-	-	-	<0.2	-	<0.2	mg/l	TM38/PM0
Monoethylene glycol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM179/PM0
Propylene glycol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM179/PM0
Diethylene glycol	<10	<10	<10	12	<10	<10	<10	<10	<10	<10	<10	ug/l	TM179/PM0
Triethylene glycol	<10	48	<10	20	<10	16	46	22	16	<10	<10	ug/l	TM179/PM0
Thiodiglycol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/l	TM179/PM0
Dissolved Methane #	-	>>6552	>>2838	-	-	-	-	-	>>6747	-	<1	ug/l	TM25/PM0
Dissolved Ethane #	-	15	7	-	-	-	-	-	<1	-	<1	ug/l	TM25/PM0
Dissolved Carbon Dioxide	-	>>281574	>>212255	-	-	-	-	-	>>358539	-	<1	ug/l	TM25/PM0
Total Alkalinity as CaCO ₃ #	372	156	254	162	372	168	180	164	96	172	<1	mg/l	TM75/PM0

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/17061

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

[illegible]

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/17061

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

EMT Sample No.	76-78									Please see attached notes for all abbreviations and acronyms				
Sample ID	RBH330													
Depth														
COC No / misc														
Containers	V G													
Sample Date	17/10/2022													
Sample Type	Ground Water													
Batch Number	1													
Date of Receipt	18/10/2022										LOD/LOR	Units	Method No.	
Methyl Tertiary Butyl Ether #	4.2										<0.1	ug/l	TM15/PM10	
Benzene #	12.9										<0.5	ug/l	TM15/PM10	
Toluene #	1098										<5	ug/l	TM15/PM10	
Ethylbenzene #	2233										<1	ug/l	TM15/PM10	
m/p-Xylene #	650										<2	ug/l	TM15/PM10	
o-Xylene #	122										<1	ug/l	TM15/PM10	
Surrogate Recovery Toluene D8	109										<0	%	TM15/PM10	
Surrogate Recovery 4-Bromofluorobenzene	100										<0	%	TM15/PM10	
TPH CWG														
Aliphatics														
>C5-C6 #	62										<10	ug/l	TM36/PM12	
>C6-C8 #	333										<10	ug/l	TM36/PM12	
>C8-C10 #	647										<10	ug/l	TM36/PM12	
>C10-C12 #	77										<5	ug/l	TM5/PM16/PM30	
>C12-C16 #	110										<10	ug/l	TM5/PM16/PM30	
>C16-C21 #	50										<10	ug/l	TM5/PM16/PM30	
>C21-C35 #	<10										<10	ug/l	TM5/PM16/PM30	
Total aliphatics C5-35 #	1279										<10	ug/l	TM5/PM16/PM30	
Aromatics														
>C5-EC7 #	11										<10	ug/l	TM36/PM12	
>EC7-EC8 #	1147										<10	ug/l	TM36/PM12	
>EC8-EC10 #	3067										<10	ug/l	TM36/PM12	
>EC10-EC12 #	87										<5	ug/l	TM5/PM16/PM30	
>EC12-EC16 #	<10										<10	ug/l	TM5/PM16/PM30	
>EC16-EC21 #	70										<10	ug/l	TM5/PM16/PM30	
>EC21-EC35 #	40										<10	ug/l	TM5/PM16/PM30	
Total aromatics C5-35 #	4422										<10	ug/l	TM5/PM16/PM30	
Total aliphatics and aromatics(C5-35) #	5701										<10	ug/l	TM5/PM16/PM30	
Sulphate as SO4 #	-										<0.5	mg/l	TM38/PM0	
Nitrate as NO3 #	-										<0.2	mg/l	TM38/PM0	
Monoethylene glycol	<10										<10	ug/l	TM179/PM0	
Propylene glycol	<10										<10	ug/l	TM179/PM0	
Diethylene glycol	27										<10	ug/l	TM179/PM0	
Triethylene glycol	<10										<10	ug/l	TM179/PM0	
Thiodiglycol	<10										<10	ug/l	TM179/PM0	
Dissolved Methane #	-										<1	ug/l	TM25/PM0	
Dissolved Ethane #	-										<1	ug/l	TM25/PM0	
Dissolved Carbon Dioxide	-										<1	ug/l	TM25/PM0	
Total Alkalinity as CaCO3 #	576										<1	mg/l	TM75/PM0	

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H=H₂SO₄, Z=ZnAc, N=NaOH, HN=HNO₃

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Contact: Luke Harrison
EMT Job No: 22/17061

Liquid

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/17061

SVOC Report : Liquid

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-30	31-36	Please see attached notes for all abbreviations and acronyms		
Sample ID	BH505	BH506	BH507	BH508	BH518	RBH301	RBH304	RBH305	RBH315	RBH316			
Depth													
COC No / misc Containers	V G	V G	V G	V G	V G	V G	V G	V G	V H N Z P G	V H N Z P G			
Sample Date	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	18/10/2022	17/10/2022			
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
1,3-Dichlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
1,4-Dichlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
2-Nitroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
2,4-Dinitrotoluene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 ⁺	<0.5	<0.5 ⁺	<0.5 ⁺	<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
3-Nitroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
4-Chloroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
4-Chlorophenylphenylether #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
4-Nitroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Azobenzene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Carbazole #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Dibenzofuran #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.8	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Hexachlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Hexachlorobutadiene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Hexachloroethane #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Isophorone #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Nitrobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	103	104	108	106	114	103	129	106	112	122	<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	114	105	119	115	117	121	130	123	126	132 ^{sv}	<0	%	TM16/PM30

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EMT Job No: 22/17061

Liquid

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Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/17061

SVOC Report : Liquid

EMT Sample No.	37-39	40-45	46-51	52-54	55-57	58-60	61-63	64-66	67-72	73-75	Please see attached notes for all abbreviations and acronyms		
Sample ID	RBH317R	RBH319	RBH320	RBH321	RBH322R	RBH323R	RBH324	RBH325	RBH326	RBH329			
Depth													
COC No / misc													
Containers	V G	V H N Z P G	V H N Z P G	V G	V G	V G	V G	V G	V H N Z P G	V G			
Sample Date	18/10/2022	17/10/2022	17/10/2022	17/10/2022	18/10/2022	18/10/2022	17/10/2022	17/10/2022	17/10/2022	18/10/2022			
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene #	<1	<1	3	4	<1	<1	2	2	<1	<1	<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
1,3-Dichlorobenzene #	<1	<1	1	2	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
1,4-Dichlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
2-Nitroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
2,4-Dinitrotoluene #	<0.5	<0.5 ⁺	<0.5 ⁺	<0.5 ⁺	<0.5	<0.5 ⁺	<0.5 ⁺	<0.5 ⁺	<0.5 ⁺	<0.5 ⁺	<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
3-Nitroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
4-Chloroaniline	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
4-Chlorophenylphenylether #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
4-Nitroaniline	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Azobenzene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Carbazole #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Dibenzofuran #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Hexachlorobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Hexachlorobutadiene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Hexachloroethane #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Isophorone #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ug/l	TM16/PM30
Nitrobenzene #	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	129 ^{SV}	143 ^{SV}	135 ^{SV}	167 ^{SV}	114	93	122	114	126	123	<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	141 ^{SV}	135 ^{SV}	130	154 ^{SV}	125	107	124	137 ^{SV}	130	124	<0	%	TM16/PM30

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EMT Job No: 22/17061

SVOC Report : Liquid

EMT Sample No.	76-78										Please see attached notes for all abbreviations and acronyms		
Sample ID	RBH330												
Depth													
COC No / misc													
Containers	V G												
Sample Date	17/10/2022												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	18/10/2022										LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<1										<1	ug/l	TM16/PM30
2-Methylphenol #	6.9										<0.5	ug/l	TM16/PM30
2-Nitrophenol	<0.5										<0.5	ug/l	TM16/PM30
2,4-Dichlorophenol #	<0.5										<0.5	ug/l	TM16/PM30
2,4-Dimethylphenol	11										<1	ug/l	TM16/PM30
2,4,5-Trichlorophenol #	<0.5										<0.5	ug/l	TM16/PM30
2,4,6-Trichlorophenol	<1										<1	ug/l	TM16/PM30
4-Chloro-3-methylphenol #	<0.5										<0.5	ug/l	TM16/PM30
4-Methylphenol	17										<1	ug/l	TM16/PM30
4-Nitrophenol	<10										<10	ug/l	TM16/PM30
Pentachlorophenol	<1										<1	ug/l	TM16/PM30
Phenol	<1										<1	ug/l	TM16/PM30
PAHs													
2-Chloronaphthalene #	<1										<1	ug/l	TM16/PM30
2-Methylnaphthalene #	3										<1	ug/l	TM16/PM30
Naphthalene #	5										<1	ug/l	TM16/PM30
Acenaphthylene #	3.0										<0.5	ug/l	TM16/PM30
Acenaphthene #	5										<1	ug/l	TM16/PM30
Fluorene #	4.2										<0.5	ug/l	TM16/PM30
Phenanthrene #	16.9										<0.5	ug/l	TM16/PM30
Anthracene #	6.3										<0.5	ug/l	TM16/PM30
Fluoranthene #	24.1										<0.5	ug/l	TM16/PM30
Pyrene #	20.6										<0.5	ug/l	TM16/PM30
Benzo(a)anthracene #	9.5										<0.5	ug/l	TM16/PM30
Chrysene #	8.2										<0.5	ug/l	TM16/PM30
Benzo(bk)fluoranthene #	16										<1	ug/l	TM16/PM30
Benzo(a)pyrene	11										<1	ug/l	TM16/PM30
Indeno(123cd)pyrene	6										<1	ug/l	TM16/PM30
Dibenzo(ah)anthracene #	2.1										<0.5	ug/l	TM16/PM30
Benzo(ghi)perylene #	6.3										<0.5	ug/l	TM16/PM30
Phthalates													
Bis(2-ethylhexyl) phthalate	<5										<5	ug/l	TM16/PM30
Butylbenzyl phthalate	<1										<1	ug/l	TM16/PM30
Di-n-butyl phthalate #	14.8										<1.5	ug/l	TM16/PM30
Di-n-Octyl phthalate	<1										<1	ug/l	TM16/PM30
Diethyl phthalate #	<1										<1	ug/l	TM16/PM30
Dimethyl phthalate	<1										<1	ug/l	TM16/PM30

Please see attached notes for all abbreviations and acronyms

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VOC Report : Liquid

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-30	31-36	Please see attached notes for all abbreviations and acronyms		
Sample ID	BH505	BH506	BH507	BH508	BH518	RBH301	RBH304	RBH305	RBH315	RBH316			
Depth													
COC No / misc Containers	V G	V G	V G	V G	V G	V G	V G	V G	V H N Z P G	V H N Z P G			
Sample Date	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	14/10/2022	18/10/2022	17/10/2022			
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water			
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method No.
Date of Receipt	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022			
VOC MS													
Dichlorodifluoromethane	9	<2	<2	<2	<2	<2	<2	<2	18	497	<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	8.9	<0.1	ug/l	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.5	<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM15/PM10
Chloroethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Trichlorofluoromethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM15/PM10
Bromochloromethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Chloroform #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Carbon tetrachloride #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2-Dichloroethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Benzene #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5	ug/l	TM15/PM10
Trichloroethene (TCE) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,2-Dichloropropane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Dibromomethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Bromodichloromethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
cis-1-3-Dichloropropene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	498	<5	<5	ug/l	TM15/PM10
trans-1-3-Dichloropropene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,3-Dichloropropane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Dibromochloromethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2-Dibromoethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Chlorobenzene #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Ethylbenzene #	<1	4	<1	<1	<1	<1	<1	3	60	<1	<1	ug/l	TM15/PM10
m/p-Xylene #	<2	<2	<2	<2	<2	<2	<2	254	256	<2	<2	ug/l	TM15/PM10
o-Xylene #	<1	<1	<1	<1	<1	<1	<1	48	58	<1	<1	ug/l	TM15/PM10
Styrene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Bromoform #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Isopropylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/l	TM15/PM10
Bromobenzene #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2,3-Trichloropropane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Propylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3	<3	<3	<3	<3	157	<3	<3	<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3	<3	<3	<3	<3	<3	<3	9	<3	<3	<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	<3	<3	<3	<3	<3	<3	<3	93	10	<3	<3	ug/l	TM15/PM10
sec-Butylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
4-Isopropyltoluene #	<3	<3	<3	<3	<3	<3	<3	10	<3	<3	<3	ug/l	TM15/PM10
1,3-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,4-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
n-Butylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,2-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Naphthalene	<2	<2	<2	<2	<2	<2	<2	22	<2	<2	<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	94	93	104	104	103	101	103	106	99	99	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	96	94	102	102	101	99	102	104	99	98	<0	%	TM15/PM10

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/17061

VOC Report : Liquid

EMT Sample No.	37-39	40-45	46-51	52-54	55-57	58-60	61-63	64-66	67-72	73-75	Please see attached notes for all abbreviations and acronyms		
Sample ID	RBH317R	RBH319	RBH320	RBH321	RBH322R	RBH323R	RBH324	RBH325	RBH326	RBH329			
Depth													
COC No / misc													
Containers	V G	V HN Z P G	V HN Z P G	V G	V G	V G	V G	V G	V HN Z P G	V G			
Sample Date	18/10/2022	17/10/2022	17/10/2022	17/10/2022	18/10/2022	18/10/2022	17/10/2022	17/10/2022	17/10/2022	18/10/2022			
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	143	242	30	15	132	597	2	3	4	687	<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	1.6	17.0	87.7	75.8	1.6	0.3	12.4	23.7	0.4	0.3	<0.1	ug/l	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Vinyl Chloride #	0.3	2.4	9.3	6.4	0.3	<0.1	2.2	3.9	<0.1	<0.1	<0.1	ug/l	TM15/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM15/PM10
Chloroethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Trichlorofluoromethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Dichloromethane (DCM) #	<3	<3	20	30	<3	<3	<3	6	<3	<3	<3	ug/l	TM15/PM10
trans-1,2-Dichloroethene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,1-Dichloroethane #	<3	<3	7	5	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
cis-1,2-Dichloroethene #	<3	9	169	194	<3	<3	15	73	<3	<3	<3	ug/l	TM15/PM10
2,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/l	TM15/PM10
Bromochloromethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Chloroform #	<2	2	21	10	<2	<2	<2	6	<2	<2	<2	ug/l	TM15/PM10
1,1,1-Trichloroethane #	<2	<2	5	6	<2	<2	<2	3	<2	<2	<2	ug/l	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Carbon tetrachloride #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2-Dichloroethane #	<2	3	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Benzene #	16.5	39.3	256.6	171.2	15.5	5.1	32.1	81.7	1.2	4.9	<0.5	ug/l	TM15/PM10
Trichloroethene (TCE) #	<3	6	48	54	<3	<3	<3	32	<3	<3	<3	ug/l	TM15/PM10
1,2-Dichloropropane #	<2	<2	4	7	<2	<2	2	<2	<2	<2	<2	ug/l	TM15/PM10
Dibromomethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Bromodichloromethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
cis-1,3-Dichloropropene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Toluene #	155	>>7297	127711 ^{AD}	183633 ^{AD}	223	300	23379 ^{AD}	88626 ^{AD}	1744	236	<5	ug/l	TM15/PM10
trans-1,3-Dichloropropene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,1,2-Trichloroethane #	<2	19	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Tetrachloroethene (PCE) #	<3	6	18	29	<3	<3	4	16	<3	<3	<3	ug/l	TM15/PM10
1,3-Dichloropropane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Dibromochloromethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2-Dibromoethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Chlorobenzene #	<2	9	89	142	<2	<2	24	95	3	<2	<2	ug/l	TM15/PM10
1,1,1,2-Tetrachloroethane #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Ethylbenzene #	32	207	>>5310	>>7980	24	205	>>3620	3556	98	153	<1	ug/l	TM15/PM10
m/p-Xylene #	152	>>4044	21852 ^{AD}	35666 ^{AD}	143	645	19039 ^{AD}	16774 ^{AD}	376	476	<2	ug/l	TM15/PM10
o-Xylene #	30	>>1093	>>4875	>>7591	34	87	>>3900	3773	100	64	<1	ug/l	TM15/PM10
Styrene	<2	<2	<2	172	<2	<2	<2	87	2	<2	<2	ug/l	TM15/PM10
Bromoform #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
Isopropylbenzene #	7	4	37	76	6	4	63	24	<3	<3	<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/l	TM15/PM10
Bromobenzene #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2,3-Trichloropropane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Propylbenzene #	4	<3	51	144	3	5	82	28	<3	3	<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	24	158	215	377	21	9	392	205	<3	6	<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3	7	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,2,4-Trimethylbenzene #	33	522	939	>>1480	25	21	>>1421	767	7	13	<3	ug/l	TM15/PM10
sec-Butylbenzene #	<3	<3	4	9	<3	<3	7	<3	<3	<3	<3	ug/l	TM15/PM10
4-Isopropyltoluene #	<3	12	5	9	<3	8	12	<3	<3	4	<3	ug/l	TM15/PM10
1,3-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,4-Dichlorobenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
n-Butylbenzene #	<3	<3	<3	8	<3	<3	5	<3	<3	<3	<3	ug/l	TM15/PM10
1,2-Dichlorobenzene #	<3	<3	4	4	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
1,2-Dibromo-3-chloropropane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/l	TM15/PM10
1,2,4-Trichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Hexachlorobutadiene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Naphthalene	<2	7	30	26	<2	<2	26	6	<2	<2	<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	104	105	92	90	106	107	107	105	104	108	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	103	106	78	90	104	106	106	86	98	100	<0	%	TM15/PM10

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/17061

VOC Report : **Liquid**

EMT Sample No.	76-78										Please see attached notes for all abbreviations and acronyms				
Sample ID	RBH330														
Depth															
COC No / misc															
Containers	V G														
Sample Date	17/10/2022														
Sample Type	Ground Water														
Batch Number	1														
Date of Receipt	18/10/2022											LOD/LOR	Units	Method No.	
VOC MS															
Dichlorodifluoromethane	184											<2	ug/l	TM15/PM10	
Methyl Tertiary Butyl Ether #	4.2											<0.1	ug/l	TM15/PM10	
Chloromethane #	<3											<3	ug/l	TM15/PM10	
Vinyl Chloride #	0.5											<0.1	ug/l	TM15/PM10	
Bromomethane	<1											<1	ug/l	TM15/PM10	
Chloroethane #	<3											<3	ug/l	TM15/PM10	
Trichlorofluoromethane #	<3											<3	ug/l	TM15/PM10	
1,1-Dichloroethene (1,1 DCE) #	<3											<3	ug/l	TM15/PM10	
Dichloromethane (DCM) #	<3											<3	ug/l	TM15/PM10	
trans-1-2-Dichloroethene #	<3											<3	ug/l	TM15/PM10	
1,1-Dichloroethane #	<3											<3	ug/l	TM15/PM10	
cis-1-2-Dichloroethene #	<3											<3	ug/l	TM15/PM10	
2,2-Dichloropropane	<1											<1	ug/l	TM15/PM10	
Bromochloromethane #	<2											<2	ug/l	TM15/PM10	
Chloroform #	<2											<2	ug/l	TM15/PM10	
1,1,1-Trichloroethane #	<2											<2	ug/l	TM15/PM10	
1,1-Dichloropropene #	<3											<3	ug/l	TM15/PM10	
Carbon tetrachloride #	<2											<2	ug/l	TM15/PM10	
1,2-Dichloroethane #	<2											<2	ug/l	TM15/PM10	
Benzene #	12.9											<0.5	ug/l	TM15/PM10	
Trichloroethene (TCE) #	<3											<3	ug/l	TM15/PM10	
1,2-Dichloropropane #	<2											<2	ug/l	TM15/PM10	
Dibromomethane #	<3											<3	ug/l	TM15/PM10	
Bromodichloromethane #	<2											<2	ug/l	TM15/PM10	
cis-1-3-Dichloropropene	<2											<2	ug/l	TM15/PM10	
Toluene #	1098											<5	ug/l	TM15/PM10	
trans-1-3-Dichloropropene	<2											<2	ug/l	TM15/PM10	
1,1,2-Trichloroethane #	<2											<2	ug/l	TM15/PM10	
Tetrachloroethene (PCE) #	<3											<3	ug/l	TM15/PM10	
1,3-Dichloropropane #	<2											<2	ug/l	TM15/PM10	
Dibromochloromethane #	<2											<2	ug/l	TM15/PM10	
1,2-Dibromoethane #	<2											<2	ug/l	TM15/PM10	
Chlorobenzene #	<2											<2	ug/l	TM15/PM10	
1,1,1,2-Tetrachloroethane #	<2											<2	ug/l	TM15/PM10	
Ethylbenzene #	2233											<1	ug/l	TM15/PM10	
m/p-Xylene #	650											<2	ug/l	TM15/PM10	
o-Xylene #	122											<1	ug/l	TM15/PM10	
Styrene	<2											<2	ug/l	TM15/PM10	
Bromoform #	<2											<2	ug/l	TM15/PM10	
Isopropylbenzene #	7											<3	ug/l	TM15/PM10	
1,1,1,2,2-Tetrachloroethane	<4											<4	ug/l	TM15/PM10	
Bromobenzene #	<2											<2	ug/l	TM15/PM10	
1,2,3-Trichloropropane #	<3											<3	ug/l	TM15/PM10	
Propylbenzene #	6											<3	ug/l	TM15/PM10	
2-Chlorotoluene #	<3											<3	ug/l	TM15/PM10	
1,3,5-Trimethylbenzene #	20											<3	ug/l	TM15/PM10	
4-Chlorotoluene #	<3											<3	ug/l	TM15/PM10	
tert-Butylbenzene #	<3											<3	ug/l	TM15/PM10	
1,2,4-Trimethylbenzene #	53											<3	ug/l	TM15/PM10	
sec-Butylbenzene #	<3											<3	ug/l	TM15/PM10	
4-Isopropyltoluene #	<3											<3	ug/l	TM15/PM10	
1,3-Dichlorobenzene #	<3											<3	ug/l	TM15/PM10	
1,4-Dichlorobenzene #	<3											<3	ug/l	TM15/PM10	
n-Butylbenzene #	<3											<3	ug/l	TM15/PM10	
1,2-Dichlorobenzene #	<3											<3	ug/l	TM15/PM10	
1,2-Dibromo-3-chloropropane	<2											<2	ug/l	TM15/PM10	
1,2,4-Trichlorobenzene	<3											<3	ug/l	TM15/PM10	
Hexachlorobutadiene	<3											<3	ug/l	TM15/PM10	
Naphthalene	3											<2	ug/l	TM15/PM10	
1,2,3-Trichlorobenzene	<3											<3	ug/l	TM15/PM10	
Surrogate Recovery Toluene D8	109											<0	%	TM15/PM10	
Surrogate Recovery 4-Bromofluorobenzene	100											<0	%	TM15/PM10	

Matrix : Liquid

17 of 24

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

Matrix : Liquid

[illegible]

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.: 22/17061

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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	x10 Dilution
AB	x25 Dilution
AC	x50 Dilution
AD	x200 Dilution

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/17061

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.	PM16/PM30	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE/Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	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.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5/TM36	please refer to TM5 and TM36 for method details	PM12/PM16/PM30	please refer to PM16/PM30 and PM12 for method details	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.				
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			
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM25	Determinaion of Dissolved Methane, Ethane and Ethene by Headspace GC-FID	PM0	No preparation is required.				
TM25	Determinaion of Dissolved Methane, Ethane and Ethene by Headspace GC-FID	PM0	No preparation is required.	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			

EMT Job No: 22/17061

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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: 2013	PM0	No preparation is required.	Yes			
TM48	Determination of Ferrous Iron by reaction with Sodium Carbonate and Morfamquat Sulphate which is analysed spectrophotometrically.	PM0	No preparation is required.				
TM58	APHA SMEWW 5210B:1999 22nd Edition. Comparable with ISO 5815:1989. Measurement of Biochemical Oxygen Demand. When cBOD (Carbonaceous BOD) is requested a nitrification inhibitor is added which prevents the oxidation of reduced forms of nitrogen, such as am	PM0	No preparation is required.				
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060A (2002), APHA SMEWW 5310B:1999 22nd Edition, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.	Yes			
TM62	Determination of Manganese (II) by reaction with Formaldoxime in ammoniacal solution to form a manganese complex which is analysed spectrophotometrically.	PM0	No preparation is required.				
TM75	Modified US EPA method 310.1 (1978). Determination of Alkalinity by Metrohm automated titration analyser.	PM0	No preparation is required.	Yes			
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM0	No preparation is required.				
TM179	Determination of Glycols using LCMS	PM0	No preparation is required.				

APPENDIX 7 - Bulk Gas Testing Results (April 2022)

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



Attention : Luke Harrison
Date : 29th April, 2022
Your reference : GRO-21459
Our reference : Test Report 22/6236 Batch 1
Location : Tetrosyl
Date samples received : 14th April, 2022
Status : Final Report
Issue : 1

Fourteen samples were received for analysis on 14th April, 2022 of which thirteen 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:



Simon Gomery BSc

Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS01
Depth:
EMT Job No: 22/6236
EMT Sample No: 1
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 2409 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		49458.7 _{AA}	244573.9 _{AA}	<125.0	<2.5	<620.0	<12.4
74-87-3	50.49	Chloromethane		3.4	7	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		20.8	116.9	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		<1	<4	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		2.5	13.6	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		56.9	181.8	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		4.7	25.3	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		5.3	20	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		3.3	22.4	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		2.9	12.6	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		7.2	31.3	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		2.7	11.7	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		3.8	16.2	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		10	49.2	<1.5	<1.5	<7.4	<7.4

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Canister Serial number: QT 2409 0.45
Sample Train Serial number: -

MDL	Method Detection Limit
RL	Reporting Limit
#	ISO 17025 (UKAS) accredited

QF-PM 3.1.13 v6 Please include all sections of this report if it is reproduced 3 of 33

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS02
Depth:
EMT Job No: 22/6236
EMT Sample No: 2
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 831 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		4450.5 _{AA}	22007.8 _{AA}	<125.0	<2.5	<620.0	<12.4
74-87-3	50.49	Chloromethane		1.9	3.9	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		3.3	18.5	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		2	8	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		8	25.6	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		5.3	28.5	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		12.5	47.1	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		<1.5	<10.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		8.8	38.2	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		22.9	99.4	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		8.5	36.9	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		12	51.1	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		2.8	13.8	<1.5	<1.5	<7.4	<7.4

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Canister Serial number: QT 831 0.45
Sample Train Serial number: -

MDL	Method Detection Limit
RL	Reporting Limit
#	ISO 17025 (UKAS) accredited

QF-PM 3.1.13 v6 Please include all sections of this report if it is reproduced 5 of 33

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS03
Depth:
EMT Job No: 22/6236
EMT Sample No: 3
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 1543 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		20.3	51.9	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)	>>	75489.1 _{AB}	373294.5 _{AB}	<250.0	<2.5	<1240.0	<12.4
74-87-3	50.49	Chloromethane		5.1	10.5	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		2.4	6.3	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		4.5	25.3	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		5	20	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		19.2	61.3	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		4.9	26.3	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		55.9	210.6	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		<1.5	<10.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		25.2	109.4	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		33.3	144.6	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		16.9	73.4	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		14.4	61.3	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		5.2	25.6	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS03
Depth:
EMT Job No: 22/6236
EMT Sample No: 3
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 1543 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT	RESULT	RL	MDL	RL	MDL
				ppbv	ug/m ³	ppbv	ppbv	ug/m ³	ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		2.4	11.8	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		5	24.6	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		2.3	11.3	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		2.4	13.2	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		1.7	9.3	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		<0.32	<1.7	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		75715.2	374191.2				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		93%		0%	0%		
	81	Aliphatic >C4-C6		4076	13503	<10	<10	<33	<33
	100	Aliphatic >C6-C8		7432	30396	<10	<10	<41	<41
	130	Aliphatic >C8-C10		5964	31709	<10	<10	<53	<53
	160	Aliphatic >C10-C12		1128	7381	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		19.2	61.3	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		55.9	210.6	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		44	216	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		87	463	<10	<10	<53	<53

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS04
Depth:
EMT Job No: 22/6236
EMT Sample No: 4
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: SQT 586 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		8047.7 _{AA}	39796.0 _{AA}	<125.0	<2.5	<620.0	<12.4
74-87-3	50.49	Chloromethane		3.4	7	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		2.2	12.4	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		<1	<4	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		17.2	54.9	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		3.3	17.7	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		16.7	62.9	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		1.5	<10.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		7.7	33.4	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		18	78.2	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		7.5	32.6	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		15.3	65.2	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		4.4	21.6	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS04
Depth:
EMT Job No: 22/6236
EMT Sample No: 4
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: SQT 586 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT	RESULT	RL	MDL	RL	MDL
				ppbv	ug/m ³	ppbv	ppbv	ug/m ³	ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		2.8	13.8	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		1.5	<7.4	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		<0.32	<1.7	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		8149.2	40195.7				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		96%		0%	0%		
	81	Aliphatic >C4-C6		13138 _{AA}	43523 _{AA}	<500	<10	<1650	<33
	100	Aliphatic >C6-C8		8408 _{AA}	34387 _{AA}	<500	<10	<2050	<41
	130	Aliphatic >C8-C10		<500 _{AA}	<2650 _{AA}	<500	<10	<2650	<53
	160	Aliphatic >C10-C12		<500 _{AA}	<3250 _{AA}	<500	<10	<3250	<65
	78.11	Aromatic >C5-EC7 (Benzene)		17.2	54.9	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		16.7	62.9	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		3980 _{AA}	19533 _{AA}	<500	<10	<2450	<49
	130	Aromatic >EC10-EC12		<500 _{AA}	<2650 _{AA}	<500	<10	<2650	<53

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS05
Depth:
EMT Job No: 22/6236
EMT Sample No: 5
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 2420 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		32.9	84.1	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)	>>	68623.0 _{AB}	339341.6 _{AB}	<250.0	<2.5	<1240.0	<12.4
74-87-3	50.49	Chloromethane		4	8.3	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		2.9	16.3	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		3.4	13.5	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		12	48	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		22.7	72.5	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		4	21.5	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		39.8	150	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		<1.5	<10.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		81.7	354.7	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		61.9	268.8	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		13.8	59.9	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		16.1	68.6	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		5.5	27	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS05
Depth:
EMT Job No: 22/6236
EMT Sample No: 5
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 2420 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		2.2	10.8	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		5.8	28.5	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		2	9.8	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		1.9	10.4	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		23.1	126.8	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		<0.32	<1.7	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		68958.7	340721.1				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		92%		0%	0%		
	81	Aliphatic >C4-C6		2109	6987	<10	<10	<33	<33
	100	Aliphatic >C6-C8		3558	14552	<10	<10	<41	<41
	130	Aliphatic >C8-C10		9755	51865	<10	<10	<53	<53
	160	Aliphatic >C10-C12		1891	12374	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		22.7	72.5	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		39.8	150	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		432	2120	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		238	1265	<10	<10	<53	<53

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS06
Depth:
EMT Job No: 22/6236
EMT Sample No: 6
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: SQT 1186 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		4869.4 _{AA}	24079.2 _{AA}	<125.0	<2.5	<620.0	<12.4
74-87-3	50.49	Chloromethane		5.5	11.4	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		<1.5	<8.4	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		<1	<4	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		28.3	90.4	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		<1.5	<8.1	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		8.6	32.4	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		<1.5	<10.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		14.4	62.5	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		18.2	79	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		5.3	23	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		11.1	47.3	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		8.9	43.7	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS06
Depth:
EMT Job No: 22/6236
EMT Sample No: 6
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: SQT 1186 0.45
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT	RESULT	RL	MDL	RL	MDL
				ppbv	ug/m ³	ppbv	ppbv	ug/m ³	ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		2.3	11.3	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		8.2	45	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		<0.32	<1.7	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		4980.2	24525.2				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		96%		0%	0%		
	81	Aliphatic >C4-C6		14417 _{AA}	47760 _{AA}	<500	<10	<1650	<33
	100	Aliphatic >C6-C8		1802 _{AA}	7370 _{AA}	<500	<10	<2050	<41
	130	Aliphatic >C8-C10		23795 _{AA}	126513 _{AA}	<500	<10	<2650	<53
	160	Aliphatic >C10-C12		3134 _{AA}	20508 _{AA}	<500	<10	<3250	<65
	78.11	Aromatic >C5-EC7 (Benzene)		28.3	90.4	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		8.6	32.4	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		7721 _{AA}	37893 _{AA}	<500	<10	<2450	<49
	130	Aromatic >EC10-EC12		<500 _{AA}	<2650 _{AA}	<500	<10	<2650	<53

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS07
Depth:
EMT Job No: 22/6236
EMT Sample No: 7
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 814 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		156.2	399.3	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		91066.0 _{AB}	450322.5 _{AB}	<250.0	<2.5	<1240.0	<12.4
74-87-3	50.49	Chloromethane		4.3	8.9	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		4	22.5	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		2.1	8.3	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		2.7	10.7	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		5.2	21	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		4	16	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		34.9	111.5	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		<1.5	<8.1	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		28.3	130.8	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		25.7	96.8	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		5.6	38	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		66.4	288.3	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		137.6	597.5	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		11.5	49.9	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		13.8	58.8	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		19.7	96.8	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS08
Depth:
EMT Job No: 22/6236
EMT Sample No: 8
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: SQT 576 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT	RESULT	RL	MDL	RL	MDL
				ppbv	ug/m ³	ppbv	ppbv	ug/m ³	ug/m ³
75-01-4	62.5	# Vinyl Chloride		46	117.6	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		56956.2 _{AB}	281649.1 _{AB}	<250.0	<2.5	<1240.0	<12.4
74-87-3	50.49	Chloromethane		12	24.8	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		1.6	4.2	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		29.9	168	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		8.5	33.7	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		28.2	98	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		15.9	64.4	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		9	36	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		144.9	790.7	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		7	28.3	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		290.4	927.7	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		4.3	23.1	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		20116.9 _{AA}	75799.7 _{AA}	<75.0	<1.5	<285.0	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		175	954.8	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		11.3	76.6	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		667.4	2897.7	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		1303.2	5658.7	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		207.1	899.3	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		24.6	104.8	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		14	68.8	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 26 Apr 2022

Sample ID: WS08
Depth:
EMT Job No: 22/6236
EMT Sample No: 8
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: SQT 576 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		10.8	53.1	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		12.5	61.4	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		9	44.2	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		1.8	9.9	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		3.3	18.1	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		1.16	6.1	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		80111.96	370618.8				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		99%		0%	0%		
	81	Aliphatic >C4-C6		2931440 _{AA}	9711162 _{AA}	<500	<10	<1650	<33
	100	Aliphatic >C6-C8		11281383 _{AA}	46138927 _{AA}	<500	<10	<2050	<41
	130	Aliphatic >C8-C10		17247 _{AA}	91698 _{AA}	<500	<10	<2650	<53
	160	Aliphatic >C10-C12		2281 _{AA}	14926 _{AA}	<500	<10	<3250	<65
	78.11	Aromatic >C5-EC7 (Benzene)		290.4	927.7	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		20116.9 _{AA}	75799.7 _{AA}	<75.0	<1.5	<285.0	<5.7
	120	Aromatic >EC8-EC10		132819 _{AA}	651848 _{AA}	<500	<10	<2450	<49
	130	Aromatic >EC10-EC12		<500 _{AA}	<2650 _{AA}	<500	<10	<2650	<53

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 27 Apr 2022

Sample ID: WS09
Depth:
EMT Job No: 22/6236
EMT Sample No: 9
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: SQT 650 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		182.6	466.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		3510.9 _{AA}	17361.4 _{AA}	<125.0	<2.5	<620.0	<12.4
74-87-3	50.49	Chloromethane		5.7	11.8	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		5.9	15.6	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		3	16.9	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		2.5	9.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		6.5	26.3	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		4	16	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		7.6	41.5	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		3.4	13.8	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		139.7	446.3	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		<1.5	<8.1	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		12397.1 _{AA}	46711.8 _{AA}	<75.0	<1.5	<285.0	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		140.1	764.4	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		10.3	69.9	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		7.4	34.1	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		1251.8 _{AA}	5435.0 _{AA}	<75.0	<1.5	<325.0	<6.5
179601-23-1	106.17	# m/p-Xylene		6945.9 _{AA}	30160.3 _{AA}	<75.0	<1.5	<325.0	<6.5
95-47-6	106.17	# o-Xylene		1318.6 _{AA}	5725.6 _{AA}	<75.0	<1.5	<325.0	<6.5
100-42-5	104.14	# Styrene		20.4	86.9	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		47.2	232	<1.5	<1.5	<7.4	<7.4

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 27 Apr 2022

Canister Serial number: SQT 650 0.45
Sample Train Serial number: -

MDL	Method Detection Limit
RL	Reporting Limit
#	ISO 17025 (UKAS) accredited

QF-PM 3.1.13 v6 Please include all sections of this report if it is reproduced 19 of 33

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 27 Apr 2022

Sample ID: WS10
Depth:
EMT Job No: 22/6236
EMT Sample No: 10
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 2402 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT	RESULT	RL	MDL	RL	MDL
				ppbv	ug/m ³	ppbv	ppbv	ug/m ³	ug/m ³
75-01-4	62.5	# Vinyl Chloride		96.4	246.4	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		560.9	2773.7	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		4	8.3	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		33.7	88.9	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		5	28.1	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		2.1	8.3	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		61.1	212	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		9.4	37.3	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		51.7	209.3	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		66	262	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		1.6	8.7	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		22.7	91.9	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		791.6	2528.8	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		192.1	1032.4	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		73873.0 _{AB}	278350.5 _{AB}	<150.0	<1.5	<570.0	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		252.9	1379.8	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		28.1	190.6	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		2286.9 _{AA}	9929.2 _{AA}	<75.0	<1.5	<325.0	<6.5
179601-23-1	106.17	# m/p-Xylene		8967.1 _{AA}	38936.7 _{AA}	<75.0	<1.5	<325.0	<6.5
95-47-6	106.17	# o-Xylene		1454.7 _{AA}	6316.6 _{AA}	<75.0	<1.5	<325.0	<6.5
100-42-5	104.14	# Styrene		21.6	92	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		69.9	343.6	<1.5	<1.5	<7.4	<7.4

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 27 Apr 2022

Canister Serial number: QT 2402 0.45
Sample Train Serial number: -

MDL	Method Detection Limit
RL	Reporting Limit
#	ISO 17025 (UKAS) accredited

QF-PM 3.1.13 v6 Please include all sections of this report if it is reproduced 21 of 33

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 27 Apr 2022

Sample ID: WS11
Depth:
EMT Job No: 22/6236
EMT Sample No: 11
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 792 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		4.3	11	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		54.2	268	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		3	6.2	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		1.9	5	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		<1.5	<8.4	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		2.7	10.9	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		3	12	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		85.1	271.9	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		23.4	125.8	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		10290.9 _{AA}	38775.7 _{AA}	<75.0	<1.5	<285.0	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		22.6	123.3	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		8.2	55.6	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		2.3	10.6	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		717.3	3114.3	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		3134.9 _{AA}	13612.3 _{AA}	<75.0	<1.5	<325.0	<6.5
95-47-6	106.17	# o-Xylene		447.4	1942.7	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		22.8	97.1	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		23.4	115	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 27 Apr 2022

Sample ID: WS11
Depth:
EMT Job No: 22/6236
EMT Sample No: 11
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 792 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT	RESULT	RL	MDL	RL	MDL
				ppbv	ug/m ³	ppbv	ppbv	ug/m ³	ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		2.9	19.9	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		23	113.1	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		54.5	267.9	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		37.9	186.3	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		4.6	25.3	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		5.4	29.6	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		1.18	6.2	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		14976.88	59205.7				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		99%		0%	0%		
	81	Aliphatic >C4-C6		303447 _{AA}	1005248 _{AA}	<500	<10	<1650	<33
	100	Aliphatic >C6-C8		895942 _{AA}	3664250 _{AA}	<500	<10	<2050	<41
	130	Aliphatic >C8-C10		163678 _{AA}	870240 _{AA}	<500	<10	<2650	<53
	160	Aliphatic >C10-C12		2235 _{AA}	14625 _{AA}	<500	<10	<3250	<65
	78.11	Aromatic >C5-EC7 (Benzene)		85.1	271.9	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		10290.9 _{AA}	38775.7 _{AA}	<75.0	<1.5	<285.0	<5.7
	120	Aromatic >EC8-EC10		273727 _{AA}	1343396 _{AA}	<500	<10	<2450	<49
	130	Aromatic >EC10-EC12		2564 _{AA}	13632 _{AA}	<500	<10	<2650	<53

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 27 Apr 2022

Sample ID: WS12
Depth:
EMT Job No: 22/6236
EMT Sample No: 12
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 624 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		65.4	323.4	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		3.8	7.8	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		1.8	10.1	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		1.6	6.3	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		2	8	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		37.3	119.2	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		34.2	183.8	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		13.1	49.4	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		7.1	48.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		9.7	42.1	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		19.8	86	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		7.1	30.8	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		4.8	20.4	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		6.7	32.9	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 27 Apr 2022

Sample ID: WS12
Depth:
EMT Job No: 22/6236
EMT Sample No: 12
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 624 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT	RESULT	RL	MDL	RL	MDL
				ppbv	ug/m ³	ppbv	ppbv	ug/m ³	ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		<0.32	<1.7	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		214.4	968.4				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		98%		0%	0%		
	81	Aliphatic >C4-C6		16	53	<10	<10	<33	<33
	100	Aliphatic >C6-C8		86	352	<10	<10	<41	<41
	130	Aliphatic >C8-C10		<10	<53	<10	<10	<53	<53
	160	Aliphatic >C10-C12		<10	<65	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		37.3	119.2	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		13.1	49.4	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		59	290	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		<10	<53	<10	<10	<53	<53

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 27 Apr 2022

Sample ID: WS13
Depth:
EMT Job No: 22/6236
EMT Sample No: 13
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 1558 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		65.1	321.9	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		1.8	3.7	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		<1.5	<8.4	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		1	<4	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		12.3	39.3	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		5.9	31.7	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		2138.4 _{AA}	8057.4 _{AA}	<75.0	<1.5	<285.0	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		1.7	11.5	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		139.2	604.4	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		647.8	2812.9	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		115.4	501.1	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		9.8	41.7	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		6.1	30	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 14 Apr 2022
Date of Receipt: 14 Apr 2022
Date Analysed: 27 Apr 2022

Sample ID: WS13
Depth:
EMT Job No: 22/6236
EMT Sample No: 13
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: QT 1558 0.45

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		6.9	33.9	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		20.1	98.8	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		13.8	67.8	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		2	11	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		2.5	13.7	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		<0.32	<1.7	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		3189.8	12680.8				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		97%		0%	0%		
	81	Aliphatic >C4-C6		659	2183	<10	<10	<33	<33
	100	Aliphatic >C6-C8		2382	9742	<10	<10	<41	<41
	130	Aliphatic >C8-C10		1302	6922	<10	<10	<53	<53
	160	Aliphatic >C10-C12		762	4986	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		12.3	39.3	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		2138.4 _{AA}	8057.4 _{AA}	<75.0	<1.5	<285.0	<5.7
	120	Aromatic >EC8-EC10		1184	5811	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		69	367	<10	<10	<53	<53

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

[illegible]

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.: 22/6236

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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	x50 Dilution
AB	x100 Dilution

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/6236

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM68	Modified TO-15 method. Volatile Organic Compounds (VOCs) sampled using Gas Canisters, BottleVacs or Tedlar bags and analysed using Entech GC-MS.	PM0	No preparation is required.				
TM68	Modified TO-15 method. Volatile Organic Compounds (VOCs) sampled using Gas Canisters, BottleVacs or Tedlar bags and analysed using Entech GC-MS.	PM0	No preparation is required.	Yes			

APPENDIX 8 - Bulk Gas Testing Results (October 2022)

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE



4225

Attention : Luke Harrison
Date : 27th October, 2022
Your reference : GRO-21459
Our reference : Test Report 22/16941 Batch 1
Location : Tetrosyl
Date samples received : 15th October, 2022
Status : Final Report
Issue : 1

Eight samples were received for analysis on 15th October, 2022 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:



Simon Gomery BSc

Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 13 Oct 2022
Date of Receipt: 15 Oct 2022
Date Analysed: 25 Oct 2022

Sample ID: WS514
Depth:
EMT Job No: 22/16941
EMT Sample No: 1
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: V 1156 0.55

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
>> Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		35.8	177	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		<1.5	<3.1	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		<1.5	<8.4	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		<1	<4	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		14.5	46.3	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		<1.5	<8.1	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene	>>	2460.7 _{AA}	9271.8 _{AA}	<3.0	<1.5	<11.4	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		<1.5	<10.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		109.6	475.9	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		240.1	1042.6	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		21.2	92.1	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		<1.5	<6.4	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		2.4	11.8	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 13 Oct 2022
Date of Receipt: 15 Oct 2022
Date Analysed: 25 Oct 2022

Sample ID: WS514
Depth:
EMT Job No: 22/16941
EMT Sample No: 1
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: V 1156 0.55

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
>> Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT	RESULT	RL	MDL	RL	MDL
				ppbv	ug/m ³	ppbv	ppbv	ug/m ³	ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		<0.32	<1.7	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		2884.3	11117.5				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		92%		0%	0%		
	81	Aliphatic >C4-C6		78	258	<10	<10	<33	<33
	100	Aliphatic >C6-C8		820	3354	<10	<10	<41	<41
	130	Aliphatic >C8-C10		838	4455	<10	<10	<53	<53
	160	Aliphatic >C10-C12		12	79	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		14.5	46.3	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)	>>	2460.7 _{AA}	9271.8 _{AA}	<3.0	<1.5	<11.4	<5.7
	120	Aromatic >EC8-EC10		471	2312	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		<10	<53	<10	<10	<53	<53

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 13 Oct 2022
Date of Receipt: 15 Oct 2022
Date Analysed: 25 Oct 2022

Sample ID: WS515
Depth:
EMT Job No: 22/16941
EMT Sample No: 2
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: V 1014 0.55

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
>> Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		353	1745.6	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		<1.5	<3.1	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		<1.5	<8.4	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		<1	<4	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		3.6	11.5	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		<1.5	<8.1	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		777	2927.7	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		<1.5	<10.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		14.7	63.8	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		53.6	232.7	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		8.9	38.6	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		<1.5	<6.4	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		1.9	9.3	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 13 Oct 2022
Date of Receipt: 15 Oct 2022
Date Analysed: 25 Oct 2022

Sample ID: WS515
Depth:
EMT Job No: 22/16941
EMT Sample No: 2
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: V 1014 0.55

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
>> Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT	RESULT	RL	MDL	RL	MDL
				ppbv	ug/m ³	ppbv	ppbv	ug/m ³	ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		1.7	8.4	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		2.3	11.3	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		1.7	8.4	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		<0.32	<1.7	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		1218.4	5057.3				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		91%		0%	0%		
	81	Aliphatic >C4-C6		<10	<33	<10	<10	<33	<33
	100	Aliphatic >C6-C8		10	<41	<10	<10	<41	<41
	130	Aliphatic >C8-C10		<10	<53	<10	<10	<53	<53
	160	Aliphatic >C10-C12		20	131	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		3.6	11.5	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		777	2927.7	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		110	540	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		31	165	<10	<10	<53	<53

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 13 Oct 2022
Date of Receipt: 15 Oct 2022
Date Analysed: 25 Oct 2022

Sample ID: WS516
Depth:
EMT Job No: 22/16941
EMT Sample No: 3
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: V 1227 0.55

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
>> Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		6729.6 _{AB}	33278.0 _{AB}	<250.0	<2.5	<1240.0	<12.4
74-87-3	50.49	Chloromethane		<1.5	<3.1	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		<1.5	<8.4	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		2.1	8.5	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		<1	<4	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		5.1	27.8	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		8.6	27.5	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		1.8	9.7	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		367.6	1385.1	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		<1.5	<10.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		25.6	111.1	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		89	386.5	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		10.2	44.3	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		2.1	8.9	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		5.1	25.1	<1.5	<1.5	<7.4	<7.4

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 13 Oct 2022
Date of Receipt: 15 Oct 2022
Date Analysed: 25 Oct 2022

Sample ID: WS516
Depth:
EMT Job No: 22/16941
EMT Sample No: 3
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: V 1227 0.55

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
>> Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT	RESULT	RL	MDL	RL	MDL
				ppbv	ug/m ³	ppbv	ppbv	ug/m ³	ug/m ³
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		<1.5	<9.6	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		<1.5	<7.8	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		<1.5	<9.0	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		<1.5	<14.5	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		<1.5	<16.0	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		<0.32	<1.7	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		<1.5	<11.1	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		<1.5	<5.4	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		7246.8	35312.5				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		91%		0%	0%		
	81	Aliphatic >C4-C6		36	119	<10	<10	<33	<33
	100	Aliphatic >C6-C8		14	57	<10	<10	<41	<41
	130	Aliphatic >C8-C10		72	383	<10	<10	<53	<53
	160	Aliphatic >C10-C12		20	131	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		8.6	27.5	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		367.6	1385.1	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		171	839	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		<10	<53	<10	<10	<53	<53

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

Sample Date: 13 Oct 2022
Date of Receipt: 15 Oct 2022
Date Analysed: 25 Oct 2022

Sample ID: WS517
Depth:
EMT Job No: 22/16941
EMT Sample No: 4
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: V 259 0.55

Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
>> Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m ³	RL ppbv	MDL ppbv	RL ug/m ³	MDL ug/m ³
75-01-4	62.5	# Vinyl Chloride		<1.5	<3.8	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		79	390.7	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		<1.5	<3.1	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	# Bromomethane		<1.5	<5.8	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		<1.5	<4.0	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		<1.5	<8.4	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	# Dichloromethane (DCM)		<14.4	<50	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		<1.5	<5.9	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		<1	<4	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		NA	NA	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		<1.5	<7.3	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		<1.5	<9.4	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		<1.5	<6.1	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		1.6	5.1	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		5.6	30.1	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		<1.5	<10.7	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		<1.5	<10.1	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	cis-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		632.9	2384.7	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		<1.5	<6.8	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		<1.5	<8.2	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		<1.5	<10.2	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		<1.5	<12.8	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		<1.5	<11.5	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		<1.5	<6.9	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		<1.5	<10.3	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		13.1	56.9	<1.5	<1.5	<6.5	<6.5
179601-23-1	106.17	# m/p-Xylene		48	208.4	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		7.5	32.6	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		<1.5	<6.4	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		<1.5	<15.5	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		<1.5	<7.4	<1.5	<1.5	<7.4	<7.4

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

[illegible]

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.: 22/16941

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 overestimate 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 UKAS requirement 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 calibration range, the result should be considered the minimum value. 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	x2 Dilution
AB	x100 Dilution

HWOL ACRONYMS AND OPERATORS USED

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	EU_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.

EMT Job No: 22/16941

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM68	Modified TO-15 method. Volatile Organic Compounds (VOCs) sampled using Gas Canisters, BottleVacs or Tedlar bags and analysed using Entech GC-MS.	PM0	No preparation is required.				
TM68	Modified TO-15 method. Volatile Organic Compounds (VOCs) sampled using Gas Canisters, BottleVacs or Tedlar bags and analysed using Entech GC-MS.	PM0	No preparation is required.	Yes			

APPENDIX 9 - Limitations

Limitations

This contract was completed by Groundtech Consulting on the basis of a defined programme and scope of works and terms and conditions agreed with the client. This report was compiled with due skill and care, taking into consideration the project brief provided, project objectives, agreed scope of works, prevailing site conditions and budget allocation.

Other than that defined in the paragraph above, Groundtech Consulting provides no other accountability or warranty whether express or implied, is made in relation to the services. Unless otherwise agreed this report has been prepared exclusively for the use and reliance of the client in accordance with generally accepted industry practices and for the intended purposes as stated in the agreement under which this work was completed. This report may not be relied upon, or transferred to, by any other party without the written agreement of a Director of Groundtech Consulting. A third party who relies on this report, does so at their own and sole risk and no liability to such parties is provided by Groundtech Consulting.

It is the understanding of Groundtech Consulting that this report is to be used for the intended purpose as set out in the introduction. The purpose was instrumental in determining the scope and level of the services provided. Should the purpose of the report or the proposed end use of the site change, this report will no longer be directly applicable, and its validity readdressed. No reliance upon the report in the revised situation should be assumed by the client without the permission of Groundtech Consulting.

The report was written in 2020, later changes in legislation, statutory requirements and industry best practices have not been considered and this should be allowed for. Ground conditions can also change and should be investigated if there is any significant delay in acting on the findings of this report. The period of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions in this report should not be relied upon in the future without the written confirmation from Groundtech Consulting that it is safe to do so.

The observations and conclusions outlined in this report are based exclusively on the services that were provided as set out in the agreement between the client and Groundtech Consulting.

Groundtech Consulting are not liable for the existence of any condition, the discovery of which would require additional investigation outside the agreed scope of works or core competency. The services provided are based upon Groundtech Consulting observations of existing physical conditions at the site gained from site reconnaissance together with interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. The findings and recommendations contained in this report are based in part upon information provided by third parties, and Groundtech Consulting assume the information to be correct.

No responsibility can be accepted for errors for third party information presented in this report. Groundtech Consulting were not authorised to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the services. Groundtech Consulting are not liable for any inaccurate information, misrepresentation of data or conclusions, which may inform the scope of investigation undertaken by Groundtech Consulting and forms the contract with the client.

Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions can also be variable due to its heterogeneous

properties and as investigation exploratory locations only allow examination of the ground at discrete locations. The potential exists for ground conditions to be encountered which are different to those considered in this report, particularly between exploratory holes. The extent of the limited area depends on the soil and groundwater conditions, together with other constraints such as the position of any existing structures and underground utilities. Geo-Environmental testing was carried out for a limited number of parameters [as stipulated in the contract] based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

The groundwater conditions entered on the exploratory hole records are those observed at the time of investigation. The groundwater level often has not had time to reach equilibrium and a monitoring period is required. Furthermore, groundwater levels are subject to seasonal variation or changes in local drainage conditions and higher groundwater levels may occur at other times of the year than were recorded during this investigation.

Any site drawings provided in this report are not meant to be an accurate base plan, but are preliminary and used to present the general relative locations of features on, and surrounding, the site.

