

GROUNDTECH
CONSULTING

TETROSYL BEVIS GREEN WORKS, BURY

REMEDIATION VERIFICATION REPORT – PHASE 2 (EXCLUDING PHASE 2A/2B)

URBAN REGEN

JUNE 2024

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Plans

Plan Reference	*Revision*	*Title*
GRO-21459-P01	-	*Coverage Plan*
GRO-21459-P02	*1.1*	*Phase Plan*
GRO-21459-P14	-	*Hotspot 1 Verification Plan*
GRO-21459-P15	-	*Hotspot 8 Verification Plan*
GRO-21459-P16	-	*Hotspot 3 Verification Plan*
GRO-21459-P17	-	*Hotspot 4 Verification Plan*
GRO-21459-P18	-	*Hotspot 5 Verification Plan*
GRO-21459-P19	-	*Hotspot 6 Verification Plan*
GRO-21459-P20	-	*Hotspot 7 Verification Plan*
GRO-21459-P21	-	*Hotspot BH502 Verification Plan*
GRO-21459-P22	-	*Hotspot BH506 Verification Plan*
R2174.002	-	*Potential Contamination Hotspots & Previous SI*
R2174.005	-	*Area of Dedicated Inspections*
R2174.006	-	*Post Remediation Gas Monitoring (Deep Fill Areas Only)*
333/10/05/24	-	*Stockpile Location Plan*

1.0 INTRODUCTION

1.1 Objectives

This verification report has been produced by Groundtech Consulting on behalf of Urban Regen. The report focuses on the remediation validation works undertaken at Tetrosyl Bevis Green Works in Phase 2 in accordance with the approved remediation strategy undertaken by Smith Grant, referenced *R2174-R11-V6 dated October 2023* which is summarised *in Section 2.0*.

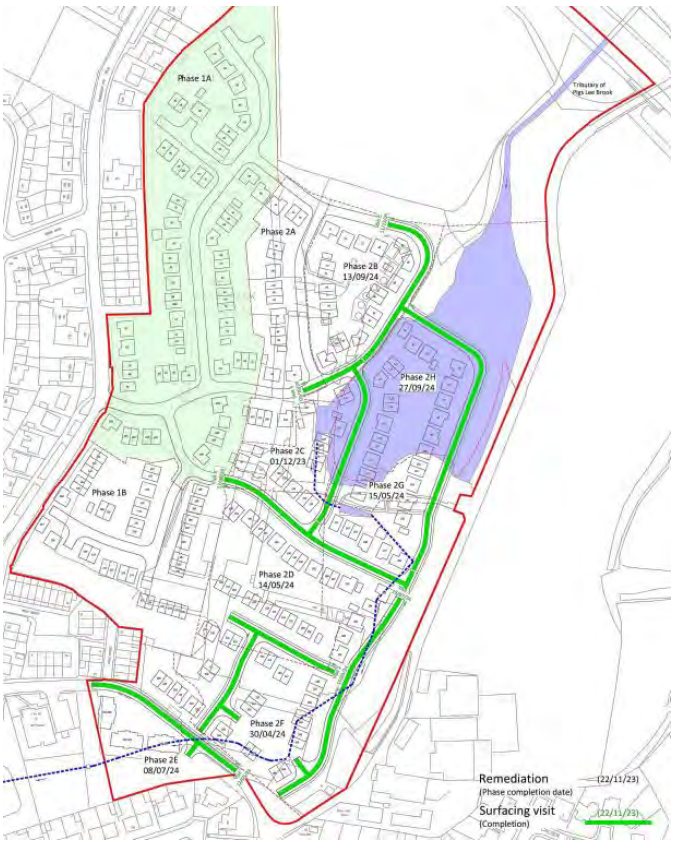
The remediation validation works undertaken by Groundtech discussed in the report are outlined below:

- *Phase 2 Hotspot Validation*
- *Phase 2 Product Decomissioning/Removal*
- *Surface Water Monitoring (Pig Lee Brook)*
- *Phase 2 Crushed Aggregate Asbestos Monitoring/Testing*

Groundtech Consulting have received the recent comments made by the EA (*Ref. SO/2020/120065/06-L01*) and Bury Council Planning Department (*Ref. CL584.140224.1*) and can confirm this report aims to satisfy the validation requirements outlined. The correspondence is discussed further in *Section 3.0*.

1.2 Proposed Development

The proposed development of Phase 2 is residential end use comprising the construction of residential dwellings with private gardens, driveways and hardsurfacing as part of the Barratt Homes development.



Phase Plan

1.3 Previous work

Smith Grant LLP have previously undertaken a Detailed Remedial Strategy referenced *R2174-R11-V6 dated October 2023* which should be read in conjunction with this verification report. Furthermore, SGP have previously produced a Supplementary Site Investigation Report (*Ref. R2714c-R06-V1*, *dated April 2021*) which is relevant to this report and summarised in *Section 2.0*.

2.0 SUMMARY OF REMEDIAL SPECIFICATION

A detailed Remedial Strategy has been produced by Smith Grant LLP for the Phase 2 Area (Excluding Phase 2A & 2B), *referenced R2174-R11-V6 dated October 2023*. A summary of the relevant remedial specification information is provided below.

2.1 Remediation Objectives

The remediation objectives relevant to Phase 2 comprise the following:

1. *Break significant or potentially significant future pollutant linkages resulting from the change of land use.*
2. *Remove/remediate significant pollution sources if identified during the works that pose a risk to humans and/or the environment. With respect to groundwater protection, the sources will be defined by exceedance of the approved soil RTVs .*
3. *Recover materials with the potential for reuse within the development which may be used in gardens, engineering fill materials required to achieve the planned development levels, and aggregates for use in construction.*
4. *Minimise the generation of wastes requiring disposal off-site by maximising the reuse of soils and demolition materials.*
5. *Respond appropriately to contingencies in particular any discovery of currently uncharacterised contamination.*
6. *Manage all emissions to air and water to protect local-residents (including current/future occupants of Phase 1), surface waters and groundwater, and the atmosphere during the remediation works.*
7. *Provide appropriate secondary protection measures to be implemented during construction, including building gas barriers, water mains protection, and garden/open space cover soils of specified quality and thickness.*

2.2 Remediation Criteria/Strategy

Soils

The remediation criteria for soils are discussed in *Section 4.2.3* and *5.1* of the approved SGP Remediation Strategy.

A human health risk associated with general contaminants of concern is present in areas of soft landscaping. The risk is proposed to be mitigated through the installation of a suitably thick cover system in accordance with the SGP remedial strategy during the construction phase.

Vapours

The remediation criteria for vapours are discussed in *Section 4.2.4* and *5.1* of the approved SGP Remediation Strategy.

Inhalation of vapours is considered to be the other exposure pathway with potential to impact human health. The volatilisation, migration and indoor inhalation of volatile petroleum hydrocarbons associated with fuel, white spirit or other solvent spills or leaks is considered to remain a risk. The remedial specification specified that post-remediation vapour monitoring will be undertaken to confirm whether VOC protection measures are required within dwellings overlying the remediated hotspot areas. The monitoring and subsequent report is to be undertaken during the construction phase of works by a suitably qualified environmental engineer.

Remediation of any elevated hydrocarbon or volatile contaminants identified during the vapour/gas monitoring programme is required, which will include combines methods of source reduction and construction barriers such as a VOC membrane.

It is expected that all new buildings on hydrocarbon-impacted parts of the site will utilise passive gas protection measures including methane/VOC resistant membranes and ventilated sub-floors. The protection measures are to be validated by a third party in the construction phase.

Controlled Waters

There is no requirement for groundwater remediation in the Phase 2 Area with the exception of historic contamination recorded within Phase 2B. However, the soils are to be remediated to the Level 3 Remedial Target Values to protect Controlled Waters, as discussed in this report.

No impaction of Phase 2 to the south and south west has been identified from Phase 2B and the groundwater plume is localised to Phase 2B.

The culvert removal and realignment of the surface watercourse will further reduce potential risks to the Pig Lee Brook tributary.

A surface water monitoring programme is ongoing to aid classification of the risk to controlled waters from Phase 2B to surface waters and to also demonstrate wider site works are not causing pollution by the Contaminants of Concern (CoC) identified on the wider site.

3.0 REGULATORS INFORMATION

The above Detailed Remediation Strategy provided by Smith Grant has been submitted to the EA and Bury Council and their responses are listed below:

- *Environmental Agency (SO/2020/120065/06-L01, dated 19 February 2024)*
- *Bury Council (CL584.140224.1)*

3.1 Summary of Environment Agency (EA) Correspondence

A summary of the relevant information from the Environmental Agency is provided below:

- *The EA have requested confirmation on the measures to be undertaken at the site to prevent recontamination of the wider Phase 2 area, from Phase 2B.*
- *The EA have requested confirmation on the previous requirement for additional investigation of boxed areas in SGP dig.005. This plan references the additional hotspot locations included in this report.*
- *The EA have no objection with the outline remedial proposals solely in Phase 2.*
- *The EA have requested for confirmation on the duration and frequency of surface water monitoring to be undertaken during the remediation period.*
- *The EA have asked to confirm if additional monitoring of the ground along the northern boundary of Phase 2 is to be undertaken, to confirm no adverse contamination from Phase 2B is present.*
- *Overall, the EA has accepted the Remedial Proposals with reference to contamination issues present in Phase 2 and have accepted the L3 soil RTVs will lessen the risks to controlled waters.*

The supplementary investigation requested with relation to Hotspot Validation Plan (Ref. dig.005) is provided in this report.

3.2 Summary of Bury Council Correspondence

A summary of the regulator comments, relevant to Phase 2 only, are provided below:

- *No further information has been received with regards to the removal of bulk storage tanks at site including HS1.*
- *The CLO has no further comments with regards to logs for the groundwater treatment wells in Phase 2B.*
- *The CLO has generally accepted the remedial requirements in SGP report ref. R2174-R01-v2 Final, May 2019 and confirm the requirements in R2714c-R11-v6 Final, October 2023 are reasonable.*
- *The CLO have requested copied of the dust management plan and communications plan.*
- *The CLO understands Urben Regen is in discussion with EA regarding the remediation strategy.*
- *No further information is available regarding MMP.*
- *The CLO has requested that the outline proposals in the most recent remediation strategy has not been updated to reflect comments (CL120123.1) and these still stand. These include the requirement of a plot validation frequency of one pit per plot, a minimum of 600mm cover in all areas, a watching brief during all enabling works and further details for the build phase of the development including foundation drawings and vapour specification.*
- *The CLO has requested verification reports will be required to validate the enabling works and build phase works comply with the remediation specification.*

The information requested by the CLO with regards to the product disposal and bulk storage at the site including HS1, is provided in this report.

4.0 TANK DECOMISSIONING AND DISPOSAL

4.1 Introduction

The approved Remedial Stratergy highlights the requirements for removal/disposal of any residual solvents/hydrocarbons uncovered from the site.

The majority of the tanks historically located on the site were Aboveground Storage Tanks (ASTs) that have now been removed and do not contain product. The highest volumes of product onsite were recorded in the ASTs in Phase 2B, with limited amounts of product identified in various parts of site. All of the ASTs and associated product were removed from site prior to commencement of the site and Urban Regen mobilisation.

The Underground Storage Tanks (USTs) located in the south eastern section of site (HS1) had not been emptied of product and disposal of this product was undertaken. The products stored within HS1 are briefly discussed in *Section 5.0,* however are fully summarised in SGP Supplementary Site Investigation (*Ref. R2714c-R06-v1*).

In addition to HS1, any observable product or free phase evidence of contamination would be required to be stored securely prior to transportation from site. This included general relict pipework and historical ASTs as well as during the excavation of HS1, when small amounts of NAPL impacted perched water was present in containment bunds. No groundwater was pumped during the hotspot validation works.

No other requirement for product removal was necessary with the exception of a small number of oil drums uncovered during the excavation of HS8 area near the reservoir, as discussed in *Section 4.4*.

4.2 Hotspot 1

The product recorded in HS1 is discussed in SGP Supplementary Site Investigation (*Ref. R2714c-R06-v1 dated April 2021*). A summary of the relevant information is provided below:

- *A total of 15 No. tanks were present in HS1, accessed via removal of cast iron covers and caps.*
- *Bailers were used to sample the USTs and were categorised as 'Product' or 'Aqueous'.*
- *The sample positions at the USTs are provided on SGP Drawing Ref. R2174C R06-002.*
- *IC2 to IC5 and IC7 were dry however the rest of the USTs were scheduled for a range of CoC including Total Petroleum Hydrocarbons (TPH CWG), Volatile Organic Compounds (VOCs) and Semi Volatile Organic Compounds (SVOCs).*
- *The analysis of both the aqueous and product substances generally determined the presence of TPH CWG across all fractions and SVOCs/VOCs were generally recorded at much lower concentrations. Alcohols, ketones, acetals, carboxylic acids, aldehydes, ethers and esters were also detected at low concentrations. Glycols represented the only non-hydrocarbon product present a less than 1% of product mass.*

The product removal of the tanks at HS1 was undertaken between 22nd March and 23rd March 2023. The majority of the USTs were dry, however IC12 and IC14 located in the north western end of HS1, were generally filled with rainwater, some residual product was present. The product was extracted from the USTs (IC12, IC14) and placed in a secure bulk storge container for transportation offsite.

Approximately 22,840kg of product was removed from USTs in HS1 into the bulk tanker and disposed from site. As indicated in the waste consignment note, the waste removed from the USTs containing residual product, comprised white kerosene and white spirit as highlighted in the Photograph below.



Photograph 1 – HS1 Removal of Product/water (24th March 2022)

All work was undertaken in accordance with the approved Remedial Strategy.

The waste consignment notes are provided in *Appendix 3*.

4.3 General Site Product Removal

In addition to the product removal at HS1, approximately 4,100kg of product was removed from the general site area during the enabling works period. The hazardous waste consignment note appended indicates that the bulk of the product removed comprises constituents related to fuels/oils including Decanes, Nonanes and Benzenes.

This work was predominantly undertaken by Urban Regen under liaison with Groundtech Consulting. The product was generally obtained from IBCs and drums storage areas across the site as well as small volumes of perched water and associated product contained within the UST bunds, pipework and associated substructures at HS1.

The photograph below displays the volume of product obtained during the enabling work activities.



Photograph 2 - 4,100kg of product stored in IBCs

4.4 Reservoir Drum Removal

Evidence of product was noted in 3 No. oil drums discovered during the excavation of soils in HS8 in Phase 3G.

The drums were analysed for a suite of Polycyclic Aromatic Hydrocarbons (PAHs), SVOCs, VOCs and Whole Trace Oil on 15th February 2024. Testing has indicated that the constituents were generally related to fuels/oils as well as volatile ranged hydrocarbons including traces of white spirit. The testing results are provided in *Appendix 3*.

Approximately 60kg of product was removed from the drums and no significant visual or olfactory evidence of impaction was identified in the immediately area.

The mostly intact drums are displayed in the Photograph below. A small amount of leakage was present which was scrapped up by UR and included in the contaminated material stockpile.

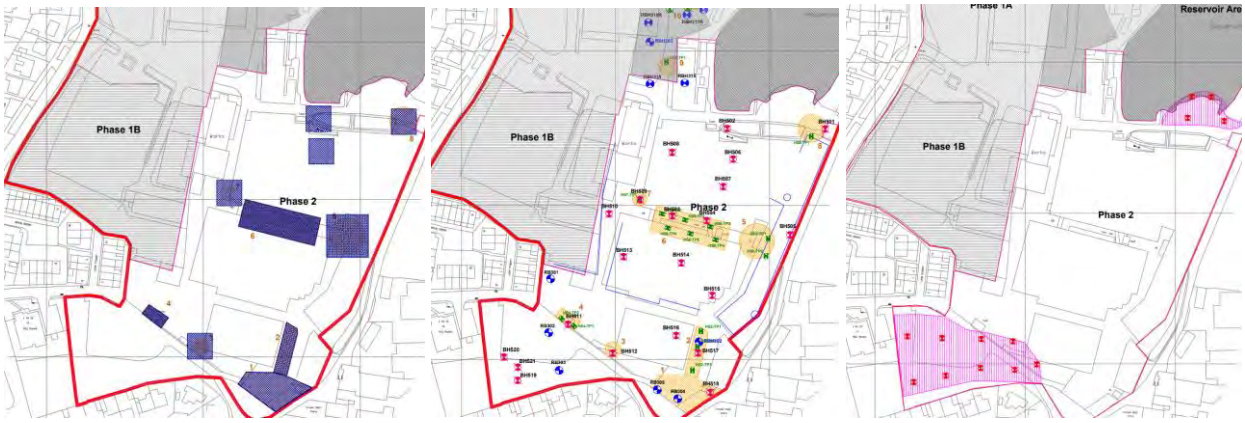


Photograph 3 – Oil drums near HS8.

The waste consignment notes in *Appendix 3* confirms the removal of solvent/fuel waste from the oil drums.

5.0 HOTSPOTS

Smith Grant LLP have produced a Remediation Strategy (*Ref. r2174-r11-v6 dated October 2023*) highlighting the remediation validation requirements of the Phase 2 Hotspots, as provided on *SGP Drawing Ref. 005*. It should be noted that additional potential hotspots, based on groundwater monitoring results, were identified near the position of BH502 and BH506 during the enabling works watching brief and have been included in the Phase 2 hotspot validation works.



Hotspot Plan (SGP Dig .002, .005 & .006)

Groundwater Remedial targets have been produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) which were approved in principle by the Environment Agency (EA). It is important to consider that the L3 RTVs are inherently conservative based on zero distance to the compliance point and no degradation. The values have subsequently been included in the SGP Remedial Strategy and approved by the EA in letter *ref. SO/2020/120065/06-L01 dated 19 February 2024*. The following values have been used to remediate the hotspots.

Compound	L3 RTV (mg/kg)
Benzene	*0.19*
Toluene	*4.23*
Ethylbenzene	*4.64*
Xylene	*3.84*
Aliphatic (C5-C6)	*331*
Aliphatic (C6-C8)	*1680*
Aliphatic (C8-C10)	*300*
Aliphatic (C10-C12)	*60800000*
Aromatic (EC10-EC12)	*62.9*
PCE	*0.754*
TCE	*0.396*
Dichloromethane	*0.0682*
1-2 Dichloroethane	*0.503*
Phenol	*0.18*

A detailed record of the remediation validation works at the identified hotspots in Phase 2 are provided in the following sections.

It is important to note that some of the hotspots were classified as such due to being a potential source of contamination rather than being an actual source of contamination, such as HS3, HS4 and HS5. Due to the presence of the existing Tetrosyl works, access was restricted during the previous investigation and based on the presence of ATS/transformers, were assumed to be hotspots.

5.1 Hotspot 1 (HS1)

Hotspot 1 is the largest hotspot and located in the south eastern section of Phase 2, in Phase 2F. The hotspot comprises 15 No. USTs with previously sampled fluid indicated to contain diesel, white spirit hydrocarbons, alcohols and glycols.

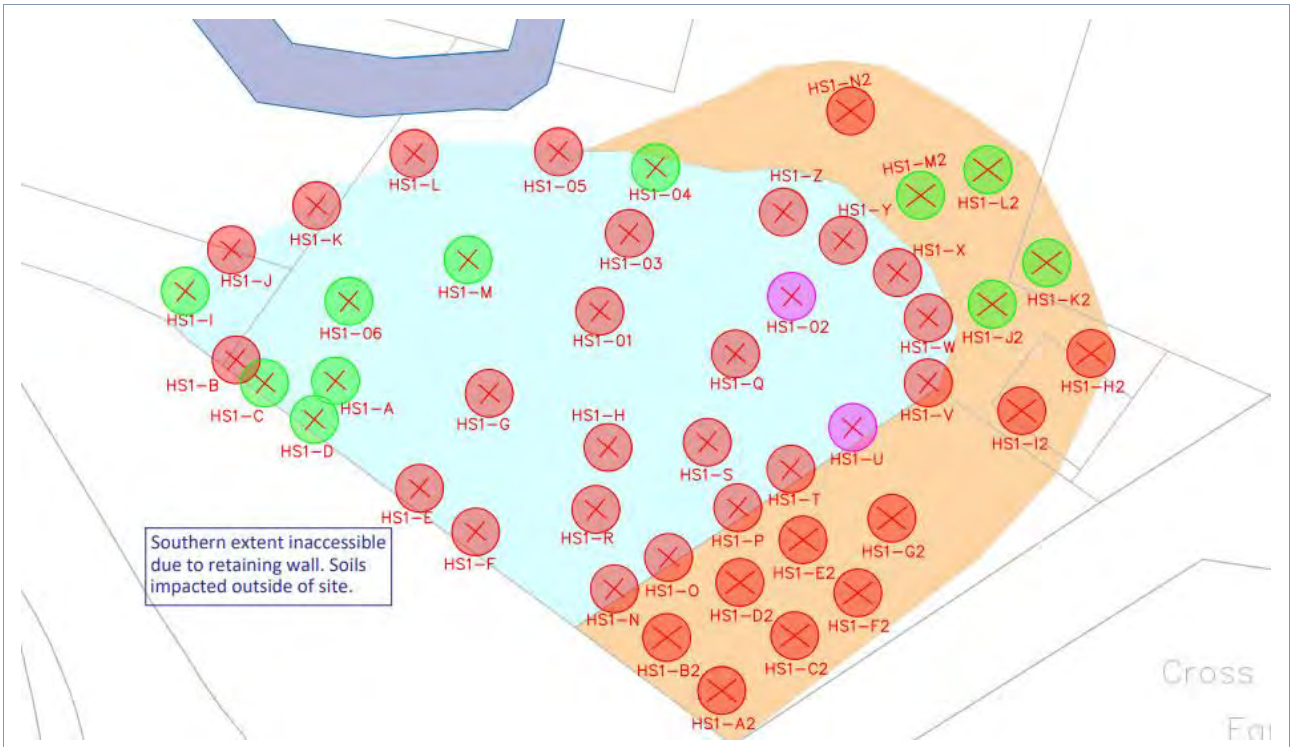
The product recorded in HS1 is discussed in SGP Supplementary Site Investigation (*Ref. R2714c-R06-v1 and dated April 2021*). A summary of the relevant information is provided in Section 4.0.

The validation works for this hotspot have been caried out by Groundtech Consulting during the enabling phase between the dates of 3rd May 2022 and 12th December 2023. The hotspot validation works were undertaken in phases, with the areas that have 'failed' (i.e levels recorded above the RTVs), being remediated at a later date and additional impacted soils being removed. The dates of the visits are provided below:

- *26th April 2022 to 5th May 2022*
- *12th December 2023*

As discussed in *Section 4.0*, the approved RTVs were adopted to validate the hotspot with respect to controlled waters, which are more stringent than the LQM screening values. Specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health. As detailed in the approved Remedial Strategy, risk associated with general contaminants of concern including metals, asbestos, speciated PAHs and non-volatile hydrocarbons will be managed by the isolation of soils from end users. It is indicated that a cover system will be utilised in garden areas to break the linkage. HS1 is proposed to be occupied by Public Open Space (POS) and a hardsurfacing road. With respect to volatile contamination, additional vapour monitoring at the nearest planned dwellings is to be undertaken by Geo-Environmental Consultants during construction phase to determine the risk to end users. Vapour protection measures such as a vapour resistant membrane will be utilised where required based on the findings of the monitoring.

An extract of the hotspot and validation samples is presented below:



Hotspot 1 Verification Plan

5.1.1 26th April 2022 to 27th April 2022

Groundtech Consulting visited site between 26th April 2022 and 27th April 2022 for the commencement of the removal of tanks and breaking out of concrete in Hotspot 1, in the south eastern section of site.

The tanks were initially exposed and concrete encasing was observed surrounding the tanks, acting as cradles for the tanks. Excavation of the tanks and breaking out of the concrete cradles were undertaken between 26th April and 27th April 2022, prior to the excavation of the contaminated soils. No free product was noted in the tanks, with this being removed in March 2022 as discussed in *Section 4.0*.



Photograph 4 – Removal of tanks in southern end of HS1



Photograph 5 – Removal of steel tanks.



Photograph 6 – Breaking out of concrete surrounding tanks.



Photograph 7 – Excavated tanks stored near HS1.

Visual evidence of contamination was noted within the immediate surrounding soils in the form of black oily staining as shown on *Photograph 1*. Evidence of coal tar was also noted in the ashy Made Ground. Olfactory evidence of contamination was recorded in the tanks where PID readings of greater than 2000ppm were recorded during the excavation. The PID readings immediately dropped to below 400ppm when these were decommissioned, excavated and stored and later dropped to below 1ppm.

5.1.2 28th April 2022

Groundtech visited the site between the dates of 28th April and 5th May 2022 to undertake the excavation of the contaminated soils previously observed and the validation of HS1.

The validation works comprised the excavation of contaminated soils in HS1 based on the criteria outlined in the approved SGP Remedial Strategy, summarised below:

- *Visual evidence of contamination (Black staining, oil, free phase)*
- *Olfactory evidence of contamination (PID >50ppm)*

Made Ground varied between a granular ashy sand matrix and cohesive gravelly clay with minor constituents of brick, concrete, clinker, ceramic and metal to depths of between 1.5m and 4.5m bgl. Concrete substructure was occasionally present throughout the matrix associated with the cradle/bunds for the USTs. The underlying natural ground consisted of firm to stiff gravelly Clay (Glacial Till). Bedrock was not encountered during the investigation. Perched groundwater was encountered locally in the Made Ground and is discussed in the following sections.

Visual evidence of contamination in the form of black hydrocarbon staining was noted in the Made Ground in the southern extent of the hotspot to a maximum depth of 2.0m bgl. Ash and clinker were commonly observed in the sand Made Ground matrix. Olfactory evidence of contamination was also commonly recorded in the Made Ground in the immediate vicinity of the tanks consisting of a moderate to strong hydrocarbon odour. PID readings of greater than 5,000ppm were recorded in the granular and cohesive Made Ground surrounding the USTs. The PID readings typically reduced to less than 1,000ppm in the general ashy sand Made Ground matrix encountered away from the immediate vicinity of the USTs.

Initially, excavation of the contaminated soils surrounding the USTs was undertaken, with the excavation progressing from the southern extent northwards. The contaminated soils were excavated from the hotspot

and placed in a 25 tonne dumper. The contaminated material was transported to the central area of Phase 2 and stored in a secure quarantine area, which comprised a visqueen bund overlying concrete hardsurfacing. The concrete that was not impacted was removed using a separate bucket and stockpiled with the crush material for reuse onsite. All impacted concrete was removed alongside the excavated material to the contaminated stockpile, displayed in *Photograph 8*.



Photograph 8 – Excavation at south western extent



Photograph 9 – Concrete base of USTs



Photograph 10 – Removal of contaminated soils in HS1



Photograph 11 – Visqueen bunded area in Phase 2.

5.1.3 29th April 2022

The excavation progressed downwards in the southern extent until the natural Glacial Till was encountered at depths of between 3.5m and 4.5m bgl. PID readings of less than 40ppm were recorded in the clay immediately underlying the contaminated Made Ground, this material was retained in place and sampled for validation purposes. The excavation was progressed laterally into the Made Ground from the top of the Glacial Till until PID readings of less than 50ppm were recorded.

Small volumes of perched groundwater were encountered locally within the granular Made Ground associated with precipitation and was pumped into a secure container for removal from site. The contaminated groundwater was removed off-site by Urban Regen to a licensed waste disposal facility. The Waste tickets are provided in *Appendix 3*.



Photograph 12 – Pumping of perched water



Photograph 13 – Breaking out of concrete cradle at HS1

5.1.4 3rd May 2022

Groundtech visited site on 3rd May 2022 to obtain samples of the Made Ground on the southern extent of the hotspot and natural firm to stiff Glacial Till deposits at the base of the excavation. The excavation terminated circa 2.0m north of the retaining wall to the south to ensure the wall is not undermined and the integrity is retained. A moderate hydrocarbon odour was recorded within the Made Ground at the southern extent of the excavation and PID values of up to 150ppm were noted however due to constraints associated with the existing retaining wall, this material was left in-situ.

Natural clean site won material obtained from the reduced level dig in Phase 1B was utilised to backfill the hotspot in accordance with the Remedial Strategy, initially in the southern extent to ensure stability of the existing retaining wall.



Photograph 14 – Retained Made Ground along retaining wall



Photograph 15 – Ashy matrix along western extent



Photograph 16 – Southern extent of hotspot excavation (right)



Photograph 17 – Contaminated stockpile in Phase 2.

5.1.5 4th May 2022

Groundtech Consulting visited site on 4th May 2022 to continue with the excavation of HS1. The eastern extent of the hotspot was excavated and validated during this visit. Due to the size of the excavation, the hotspot was backfilled in stages with the southern and eastern extent validated and backfilled first.

During this visit, ongoing vapour air monitoring was undertaken to ensure the maximum workplace guideline values were not exceeded during the hotspot validation exercise. PID concentrations of up to 0.8ppm were recorded in the immediate vicinity of the exposed tanks, positioned along the southern boundary near Mill Road. A maximum PID level of 2ppm was recorded at HS1. The PID air levels fall below the workplace standards of air quality of 20ppm.



Photograph 18 – Backfilling of southern extent of HS1 after sampling



Photograph 19 – Eastern excavation.



Photograph 20 – Brick cradle for UST.



Photograph 21 – North eastern side wall.

The excavation along the eastern extent was limited due to the presence of an existing slab associated with a retaining wall along the eastern site boundary. It was determined that the removal of the concrete slab is to be undertaken at a later date by UR under a watching brief by Groundtech Consulting.

5.1.6 5th May 2022

The excavation was progressed and finalised in the northern and western extent during the visit on 5th May 2022.

Strong hydrocarbon odours were noted in the Made Ground and Glacial Till, with PID readings greater than 5,000ppm recorded in both stratum in the surrounding the USTs. The excavations were extended into the natural firm to stiff Clay until no/little evidence of contamination was noted and PID readings of less than 50ppm were present. The side walls were also extended until no visual or olfactory evidence of contamination was present and low PID readings were recorded.

It was not possible to completely validate the northern extent due to the presence of a cast iron hydrant which was in use at the time of the excavation. The western extent of the excavation was limited due to the presence of the existing culvert. PID readings of between 1,000ppm and 2,000ppm remained locally in the shallow Made Ground and natural Clay in this area and were sampled for validation purposes.



Photograph 22 – Northern extent of hotspot excavation.



Photograph 23 – Evidence of impacted clay beneath UST in northern extent of hotspot prior to excavation.



Photograph 24 – Natural clay in eastern extent of excavation.



Photograph 25 – North western extent of excavation.

The ashy sandy Made Ground matrix appeared to be less impacted than the Made Ground clay situated at the base of the tanks. PID readings of less than 100ppm were typically recorded within the ash matrix and was generally retained in the western and northern end of the excavation. Areas with PID readings greater than 50ppm were removed. The Made Ground clay typically displayed PID readings greater than 2,000ppm and were also removed. The Made Ground containing high PID readings was generally visually impacted also.



Photograph 26 – HS1 backfilled following validation works.



Photograph 27 – Quarantine area of contaminated material from HS1.

The excavation was approximately square in shape and approximately 400m^2 in area. Circa 200m^3 of contaminated material was excavated and stockpiled in Phase 2. The extent of the hotspot excavation and location of the samples is presented on *GRO-21459-P16.*

The hotspot was backfilled using clean naturally occurring material obtained during the reduced level dig in Phase 1B. All contaminated material was placed on a visqueen bunded, concrete surfaced area in Phase 2.

5.1.7 Laboratory Testing Results - May 2022

Geo-Environmental validation testing was initially scheduled on 37 No. samples of the base and sidewalls of the HS1 excavation in Phase 2. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P14.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to protection of controlled waters.

A summary of the validation testing results (*EMT 22/7435*) is presented below and the screening values are in *Appendix 4*.

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*5 to 1,375ug/kg*	*190ug/kg*	*9*	*HS1-(O, Q, T, W, X, 01, 03, P, T)*
Toluene	*111 to 143,525ug/kg*	*4,230ug/kg*	*21*	*HS1-(B, E, F, G, H, L, N, O, Q)*
Ethylbenzene	*8 to 60,865ug/kg*	*4,640ug/kg*	*11*	*HS1-(B, F, N, O, Q, T, V, W,*
Xylene	*21 to 155,227ug/kg*	*3,840ug/kg*	*17*	*HS1-(B, E, I, J, N, O, Q, T, V, W, X, Y, X, 01, 05)*
Aliphatic (C5-C6)	*0.1 to 10.1*	*331*	-	-
Aliphatic (C6-C8)	*0.1 to 98.6*	*1,680*	-	-
Aliphatic (C8-C10)	*0.1 to 197.6*	*300*	-	-
Aliphatic (C10-C12)	*0.2 to 258.3*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*0.2 to 78.8*	*62.9*	*1*	*HS1-(L)*
Tetrachloroethene (PCE)	*3 to 88*	*745ug/kg*	-	-
Trichloroethene (TCE)	*3 to 426*	*396ug/kg*	*1*	*HS1-(O)*
Dichloromethane	*7 to 40817 ug/kg*	*68.2ug/kg*	*19*	*HS1-(E, G, H, J, K, L, N, O, Q, R, S, T, V, W, X, Y, Z)*
1-2 Dichloroethane	*4 to 136*	*503ug/kg*	-	-
Phenol	*n/a*	*180ug/kg*	*n/a*	*n/a*

BTEX

Elevated concentrations of BTEX and Dichloromethane (DCM) have been recorded in the footprint of the hotspot, at the base and sides of the excavation. The highest concentrations have been recorded in the eastern area of the excavation with concentrations of Benzene, Toluene and Ethylbenzene being recorded at 10 to 100 times the screening value. Concentrations of xylene have also been recorded at concentrations greater than 1000 times the screening value in the eastern area. Both of the elevated concentrations are indicated to be linked to the White Spirit tank storage.

In addition, minor elevated concentrations of Aromatic (EC10-EC12) have been recorded locally in western and eastern sides of the excavation respectively. These are associated with the heavier ranged BTEX recorded.

Glycols

High concentrations of glycols have been recorded in the central and western section of the hotspot within the granular Made Ground and natural cohesive deposits. Although there are no L3 RTVs for glycols, it is anticipated that these concentrations are above acceptable concentrations. The bulk of the glycol contamination has been excavated based on visual and olfactory evidence of contamination. The glycols were present at large concentrations within the former USTs.

Halogenated Hydrocarbons

Elevated levels of DCM have been recorded in the validation samples screened, generally at levels of between 1 to 10 times the screening value. The elevations are not localised and generally widespread throughout the HS1 area. TCE has been recorded locally to the west. The source is considered to be localised spills and leakage while filling the USTs with white spirit and associated chemicals.

Summary

Based on the widespread elevations in HS1, it was proposed to revisit site when the floor slab in the eastern area had been removed to address the residual exceedances in the verification samples recorded during the initial hotspot exercise and further delineate and removal of the hotspot.

Further excavation in the southern section of the hotspot was not possible due to constraints associated with the existing retaining wall. Elevated concentrations of Toluene, Ethylbenzene, Xylene and DCM were recorded locally along the southern extent at depths of between 1.5m and 3.0m begl, with elevations typically being recorded less than 10 times the screening value.

5.1.8 12th December 2023

Groundtech Consulting visited site on 12th December 2023 to validate the areas of HS1 that were not possible to validate during the previous visit due to access constraints and remove further soils where previous significant exceedances of the RTVs had been recorded.

Excavation took place along the eastern section where the previous floor slab had been grubbed up as part of the enabling works undertaken by Urban Regen (UR). A bund abutment had been constructed to support the retaining wall along the eastern boundary to allow for further excavation and validation in this area.

The excavation was commenced from the south approximately 2.0m further east than the previous extent. A thin veneer of Made Ground was present in this location generally to depths of less than 0.5m bgl underlain by stiff Clay (Glacial Till). A strong hydrocarbon odour was noted at the top of the Clay deposits (>2,000ppm) which reduced to a faint odour with further excavation of c.1.0m deep (<20ppm). The excavation was progressed in the southern area to a maximum depth of 2.0m begl and samples were acquired for validation purposes. It should be noted that the depth was limited to circa 2.0m begl at a 1 in 1 gradient due to the potential for undermining the eastern wall, PID values of up to 3,000ppm were recorded in the remaining strata and were sampled for validation purposes.

The Made Ground thickened in the northern section of the excavation to depths greater than 2.0m begl, with drainage services associated with the former USTs encountered. The Made Ground in this area comprised an ashy sand matrix with minor constituents of brick, concrete, metal and ceramics. No obvious visual evidence of contamination was noted in this northern area, however PID readings of up to 2,000ppm were identified in this population. The Made Ground was excavated northwards and material containing PID values of less than 50ppm was retained. The base and sides of the excavation were sampled for validation purposes.



Photograph 28 – Eastern section of HS1 following removal of historic floor slab and bunding of eastern retaining wall.



Photograph 29 – Beginning of excavation facing north.



Photograph 30 – North eastern area.



Photograph 31 – Relict drainage in eastern area.

5.1.9 Laboratory Testing

Geo-Environmental testing was undertaken on an additional 14 No. samples of the base and sides of HS1 following excavation of the eastern area. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Specification and the positions are provided on *GRO-21459-P14.*

The groundwater Remedial Target Values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have selected as the remediation criteria for the hotspot with respect to protection of controlled waters.

A summary of the Geo-Environmental testing results is presented below and the screening values are in *Appendix 4.*

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*3 to 778ug/kg*	*190ug/kg*	*5*	*HS1-(A2, D2, E2, G2, H2)*
Toluene	*303 to 204,064ug/kg*	*4,230ug/kg*	*7*	*HS1-(A2, B2, C2, D2, E2, F2, G2)*

Ethylbenzene	*31 to 92,569ug/kg*	*4,640ug/kg*	*7*	*HS1-(A2, B2, C2, D2, E2, F2, G2)*
Xylene	*126 to 208,722ug/kg*	*3,840ug/kg*	*10*	*HS1-(A2, B2, C2, D2, E2, F2, G2, H2, I2, N2)*
Aliphatic (C5-C6)	*0.1 to 0.5*	*331*	-	-
Aliphatic (C6-C8)	*0.1 to 88.9*	*1,680*	-	-
Aliphatic (C8-C10)	*0.1 to 141.9*	*300*	-	-
Aliphatic (C10-C12)	*0.2 to 58.5*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*0.2 to 16.3*	*62.9*	-	-
Tetrachloroethene (PCE)	*3 to 589*	*745ug/kg*	-	-
Trichloroethene (TCE)	*4 to 4,447*	*396ug/kg*	*3*	*HS1-(C2, D2, F2)*
Dichloromethane	*7 to 293*	*68.2ug/kg*	*2*	*HS1-(C2, D2)*
1-2 Dichloroethane	*<4*	*503ug/kg*	*0*	-
Phenol	*n/a*	*180ug/kg*	*n/a*	*n/a*

BTEX

Concentrations of BTEX have been recorded above the screening values in the majority of the samples from the southern area of the excavation and the south eastern area of HS1. The elevations of Benzene and Ethylbenzene have typically been recorded at levels between 1 and 10 times the screening value however levels of Toluene and Xylene have been recorded greater than 10 times the screening value on the same samples.

Minor Xylene concentrations have also been recorded above the L3 RTVs locally in the northern area of HS1 (HS1 to N2), no other BTEX elevations have been detected in this area.

Total Petroleum Hydrocarbons (TPH CWG)

No elevated concentrations of TPH have been detected through laboratory testing when screened against the L3 RTVs with very low concentrations being recorded within the most volatile (Aliphatic) CWG range.

Halogenated Hydrocarbons

Elevated concentrations of Dichloromethane (DCM) and Trichloroethene (TCE) have been recorded in the south eastern section of the excavation beneath the position of the former slab. The elevations were recorded in the natural stiff Glacial Till. Deepening of the excavation in this location was not considered to be possible at the time of the investigation due to the existing retaining wall being undermined. The source is likely to be the mixing area associated with the USTs in this area of site.

No other elevated levels of halogenated hydrocarbons were recorded indicating the contamination is localised as has been largely removed.

Verification Plan

The extent of the hotspot validation and sampling locations is provided on *GRO-21459-P15_1.3.*

Summary

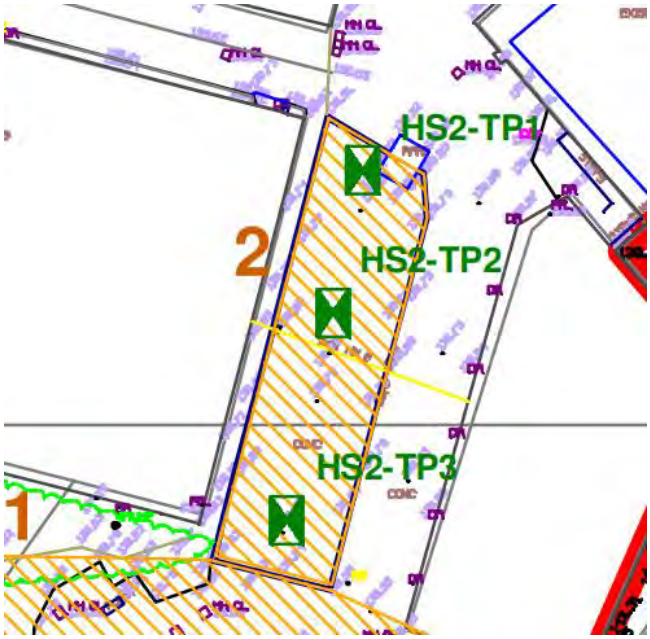
The contaminated material within HS1 has predominantly been removed, with a total of approximately 280m^3 of contaminated material being stockpiled in a secure bunded area in the wider Phase 2 area.

The extent of the contamination has not been fully excavated due to several limiting factors which include the presence of a retaining wall to the south and east and the culvert existing to the west. Therefore, the existing levels of BTEX, TCM and DCM are present at levels higher than the L3 RTVs with levels of Toluene, Ethylbenzene and Xylene being recorded at levels up to 100 times the RTVs. Given the presence of firm to stiff impermeable Clay beneath the hotspot, the removal of the primary source and bulk of secondary sources and the limited detectable CoC through receptor surface water monitoring - it was to determine that the hotspot had been remediated sufficiently with respect to controlled waters, subject to EA approval.

The risk to human health from direct impact will be managed through a clean cover system and the gas/vapour risk will be assessed through vapour/gas monitoring. If required, a vapour resistant membrane will be installed alongside the necessary gas precautions. The VOC monitoring is to be undertaken by a different consultant. The specific remedial measures are discussed in the SGP Remedial Specification. Furthermore, the site levels in this area are to be raised by c.3.0-5.0m bgl which will mitigate the risks.

5.2 Hotspot 2 (HS2)

Hotspot 2 is located in the south eastern area of site immediately north of HS1, in Phase 2F. The hotspot relates to a former above ground drum compound and historic investigation has recorded elevated hydrocarbons and alcohols, specifically glycol, chlorinated solvents were detected at lower levels.



Hotspot 2 Plan

Remediation verification works at HS2 were unable to take place due to the presence of the culvert. Significant contamination has generally not been recorded in HS2 with the bulk of the contamination in the south eastern section of the site being sourced from HS1. It is recommended that a watching brief for visual or olfactory evidence of contamination is undertaken following the culvert diversion works. Nevertheless, the ground conditions in this area consist of a clay aquitard which will significantly reduce the downwards migration of contaminants into the Rough Rock. The contaminants of concern recorded within HS2 are of a lower level than HS1 and pose a lesser risk to Pig Lee Brook. This is noted as no odours were noted during previous trial pitting undertaken by SGP and PID readings of maximum 10.8ppm were recorded. It is anticipated that following remediation of HS1 and chasing out of contamination - no gross contamination will

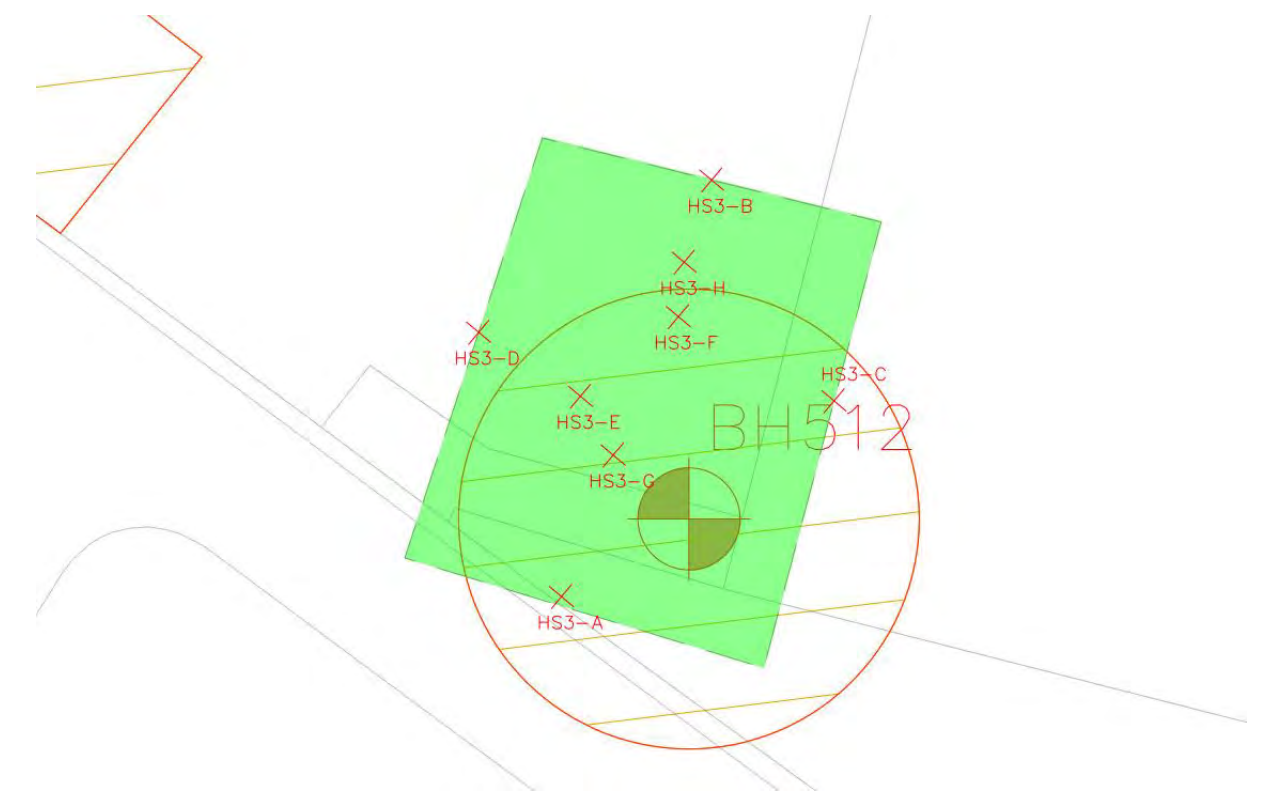
exist in HS2 and no specific remedial measures with respect to controlled waters will be required. A watching brief is prudent during the enabling works following culvert diversion.

Specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health. HS2 will be covered by roads, POS/infrastructure and driveways - not residential dwellings. Health risks associated with general contaminants of concern including metals, asbestos, PAHs and non-volatile hydrocarbons will be managed by the construction of a cover system in garden areas. With respect to volatile contamination, additional vapour monitoring is to be undertaken to determine the risk to end users. Vapour protection measures such as a vapour resistant membrane will be utilised where required based on the findings of the monitoring.

5.3 Hotspot 3 (HS3)

Hotspot 3 situates in the central southern area of Phase 2, in Phase 2F and consisted of a Above Ground Storage Tank (AST), indicated to be a store of fuel oils.

The validation works for this hotspot have been caried out by Groundtech Consulting during the Remediation Enabling works phase on 0th April 2022.



Hotspot 3 Verification Plan

As discussed in Section 4.0, the approved RTVs were used to validate the hotspot with respect to controlled waters and specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health. The Remedial Techniques are to be assessed by a different Geo-Environmental Consultant.

The remediation validation works are discussed in the following sections.

5.3.1 7th April 2022

The AST located in HS3 was removed prior to the mobilisation of UR to site and prior to the remediation works of the hotspot.

Groundtech visited site on 7th April 2022 to undertaken supervision during the removal of concrete slab and excavation of the hotspot. An existing concrete slab surfaced the HS3 area which was grubbed up and the soils immediately beneath the slab were inspected for visual and olfactory evidence of contamination. No evidence of olfactory contamination was noted, black ash and clinker was noted in the granular Made Ground.

The Made Ground comprised black slightly sandy slightly gravelly ash with minor constituents of brick, clinker and concrete to a maximum depth of 0.9m bgl. Brick cobbles and boulders were encountered locally to the eastern sidewall, associated with the substructure/foundations of the former warehouse building. A moderate hydrocarbon odour was present with maximum PID reading of 15ppm being recorded immediately beneath the slab. These soils were excavated and stockpiled in a bunded area in Phase 2. The excavation progressed beneath the granular Made Ground into the natural Glacial Till. Groundwater was not encountered during the validation works.

The excavation was approximately 3m wide, 6m long and progressed to a depth of 2.0m begl. Limited contaminated material (circa 10m^3) was removed from the excavation and suitably clean material sourced from Phase 1B was utilised as backfill material. Validation samples were taken of the natural Clay at the base of the excavation as well as the ashy Made Ground population at the sidewalls prior to backfill.



Photograph 32 – HS3 soils immediately beneath concrete slab.



Photograph 33 – Eastern sidewall of HS3.



Photograph 34 – Western sidewall and natural clay at base.



Photograph 35 – Natural clay in southern section of HS3.

5.3.2 Laboratory Testing

Validation samples were taken at the base and sides of the excavation and Geo-Environmental testing was scheduled on six samples following excavation of HS3. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Specification and the positions are provided on *GRO-21459-P16.* It should be noted that samples HS3-E & F were obtained from the Made Ground and following detectable PID concentrations, excavation deepened into the natural Clay and samples HS3-G & H were taken.

The groundwater Remedial Target Values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have selected as the remediation criteria for the hotspot with respect to protection of controlled waters.

The testing results (*EMT 22/5878*) are provided in *Appendix 6*. A summary of the Geo-Environmental testing results is presented below and the screening values are in *Appendix 4.*

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*<5ug/kg*	*190ug/kg*	-	-
Toluene	*<5 to 70ug/kg*	*4,230ug/kg*	-	-
Ethylbenzene	*<5 to 8ug/kg*	*4,640ug/kg*	-	-
Xylene	*<5 – 26ug/kg*	*3,840 ug/kg*	-	-
Aliphatic (C5-C6)	*<0.1*	*331*	-	-
Aliphatic (C6-C8)	*<0.1*	*1,680*	-	-
Aliphatic (C8-C10)	*<0.1*	*300*	-	-
Aliphatic (C10-C12)	*<0.2*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*<0.2*	*62.9*	-	-

BTEX

No elevated concentrations of BTEX were recorded in any of the six validation samples screened with the majority being recorded below the laboratory detection limits.

Total Petroleum Hydrocarbons (TPH CWG)

All of the samples screened for TPH were recorded at levels below the laboratory detection limits and fall below the L3 RTVs.

Summary

The samples were scheduled for TPH CWG and BTEX based on the former use as an above ground fuel tank. No olfactory evidence of contamination was noted, and no VOC testing was deemed necessary as the contamination could be quantified through hydrocarbon testing.

As no levels of TPH were detected and no elevated concentrations of BTEX were recorded, no further remedial action is required at HS3 with respect to controlled waters.

The risk to human health is not considered to be significant based on no elevations of TPH or BTEX being recorded. General contamination testing has not been undertaken at this location due to access restrictions during previous phases of Ground Investigation and a potential pollution linkage to human health may still exist. Therefore, it is appropriate to mitigate the linkage between contaminated soils and end site users through the installation of a suitably thick cover system in accordance with the SGP remedial strategy. The

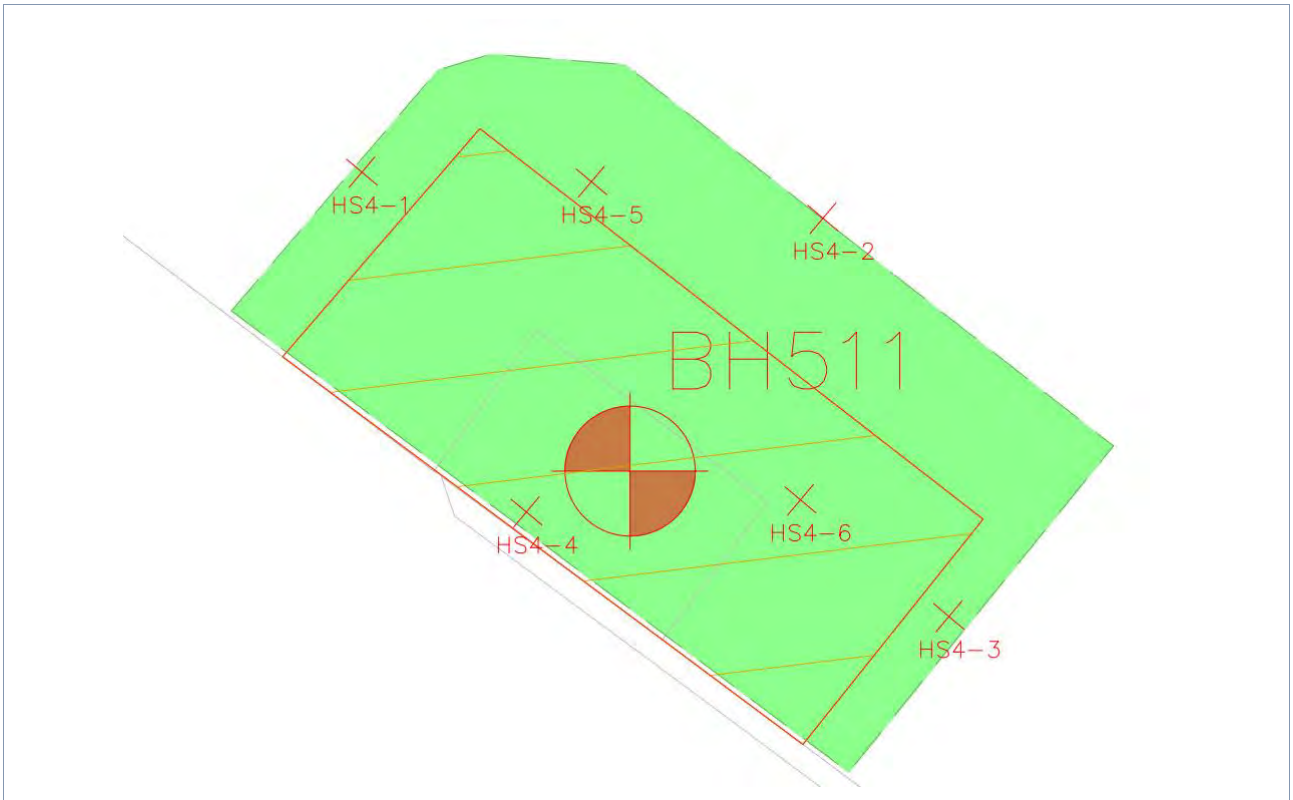
remedial measures and verification is to be undertaken by others. Furthermore, site levels are to be slightly raised in this area of site.

In addition, based on the close proximity to HS1, a vapour risk may exist, and vapour monitoring should be undertaken in the vicinity to determine the risk. If a vapour risk exists, suitable mitigation measures such as a vapour resistant membrane should be installed and validated. The vapour monitoring and validation is t be undertaken by others. Site levels are to be raised and filled with suitable material which will mitigate the risk.

5.4 Hotspot 4 (HS4)

Hotspot 4 is located in the south western area of site along the southern boundary of Phase 2, in Phase 2E. Similar to HS3, the hotspot relates to a former Aboveground Storage Tank (AST). The AST is indicated to have previously been utilised as a store of diesel for filling of plant onsite.

The validation works for this hotspot have been caried out by Groundtech Consulting during the Remediation Enabling works phase on 19th May 2022.



Hotspot 4 Verification Plan

As discussed in Section 4.0, the approved RTVs were used to validate the hotspot with respect to protection of controlled waters and specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health.

The remediation validation works are discussed in the following sections.

5.4.1 19th May 2022

The AST was removed from site prior to UR mobilisation. The hotspot validation works involved the excavation of contaminated soils in the vicinity of HS3 based on the required indicators provided in the SGP remedial Stratergy. A watching brief was undertaken for visual evidence of contamination such as black staining and olfactory evidence of contamination which includes PID concentrations of above 50ppm.

A thin concrete slab (circa 200mm) was present beneath the former AST, associated with the service yard which surfaces the surrounding area. The concrete was unreinforced and was generally well maintained, minimal cracking was observed prior to breaking out. The underlying Made Ground comprised black slightly sandy ash with minor constituents of brick, ceramic, clinker and concrete to a maximum of depth of 1.8m begl. A cohesive matrix Made Ground was identified immediately beneath the granular ash Made Ground to pit termination depth of 2.5m bgl. Natural strata was not encountered during the investigation.

A black oily coating was noted within the granular ashy Made Ground within the top 1.0m of the population, no staining or oil coating was noted within the cohesive material. Perched groundwater was recorded in the top 1.0m of the ashy matrix and a black oil staining was present (less than 1mm thick). No free phase or product was observed in the perched groundwater during the excavation. The oil coating was likely related to perched water.

Moderate hydrocarbon odours were observed in the shallow granular ash deposits with PID values of up to 200ppm being recorded. Excavation of this material was undertaken to the cohesive Made Ground at the base. The excavation was extended laterally until PID concentrations of less than 50ppm were recorded in the ashy Made Ground matrix.

Due to the presence of the existing retaining wall along the southern boundary, excavation of all material containing visual evidence of contamination in this area was not undertaken. Samples were obtained of the sidewalls and base of the excavation, including the southern sidewall.



Photograph 36 – Slab grubbing up at HS4



Photograph 37 – HS4 excavation



Photograph 38 – HS4 excavation



Photograph 39 – HS4 ash spoil

The excavation covered an area of approximately 50m^2 and approximately 35m^3 of contaminated material was excavated during the validation works.

5.4.2 Validation Laboratory Testing

Geo-Environmental testing was undertaken on 6 No. samples of the base and sides of HS4. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Stratergy and the positions are provided on *GRO-21459-P17.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The testing results (*EMT 22/8294*) are provided in *Appendix 7*. A summary of the Geo-Environmental testing results is presented below and the screening values are in *Appendix 5.*

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*<5ug/kg*	*190ug/kg*	-	-
Toluene	*<5ug/kg*	*4,230ug/kg*	-	-
Ethylbenzene	*<5ug/kg*	*4,640ug/kg*	-	-
Xylene	*<5ug/kg*	*3,840ug/kg*	-	-
Aliphatic (C5-C6)	*<0.1*	*331*	-	-
Aliphatic (C6-C8)	*<0.1*	*1,680*	-	-
Aliphatic (C8-C10)	*<0.1*	*300*	-	-
Aliphatic (C10-C12)	*<0.2*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*<0.1*	*62.9*	-	-

No visual or olfactory evidence of contamination was recorded in any of the ashy Made Ground or cohesive Made Ground samples screened.

BTEX

No elevated concentrations of BTEX were recorded in any of the six validation samples screened based on the L3 RTVs. All concentrations of BTEX fall below the laboratory detection limits.

Total Petroleum Hydrocarbons (TPH CWG)

In addition to BTEX, all of the samples screened for TPH were recorded at levels below the laboratory detection limits and also fall below the L3 RTVs.

Summary

The samples were scheduled for TPH CWG and BTEX based on the former use as an above ground diesel tank. As no levels of TPH were detected and no elevated concentrations of BTEX were recorded, no further remedial action is required at HS3 with respect to controlled waters.

Following the completion of the excavations, clean site won material from Phase 1 was used as backfill material which will act as a capping layer. In addition, a clean cover system is to be placed which will be sufficient to mitigate the risk to site end users. Although, previous testing has not recorded any contaminants of concern above human health screening values.

Additional vapour monitoring is to be undertaken at this location to assess the vapour risk. Completion monitoring of the shallow soils is required to confirm any requirement for VOC protection to buildings and to provide reassurance that there are no further potentially significant exposure pathways for future residents (i.e. via outdoor inhalation). The vapour remediation measures are to be assessed by others.

5.5 Hotspot 5 (HS5)

Hotspot 5 is located in the central eastern section of Phase 2, in Phase 2F and comprises a former kerosene Aboveground Storage Tank (AST). The validation works for this hotspot have been caried out by Groundtech Consulting during the Remediation Enabling works phase on 25th January 2022. The works were undertaken in accordance with the SGP Remedial Strategy.



Hotspot 5 Verification Plan

As discussed in *Section 4.0*, the approved RTVs were used to validate the hotspot with respect to protection of controlled waters and specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health. This is to be assessed by others.

The remediation validation works are discussed in the following sections.

5.5.1 25th January 2022

Groundtech Consulting attended site on 25th January 2022 to supervise and validate the removal of impacted soils at HS5. The AST was removed as part of the enabling works prior to the hotspot validation works being undertaken. The hotspot was located in the vicinity of the existing culvert and existing pipes associated with the reservoir.

The excavation was conducted at the position of HS5, which was set out by UR prior to excavation. The excavation progressed through the Made Ground which comprised granular ashy sand which was encountered to a maximum depth of 1.7m bgl. Superficial deposits were not present at this location and the Made Ground was underlain by extremely weak Sandstone bedrock and black bituminous Coal to hole termination depths. No groundwater was encountered during the excavation.

Gross contamination was not encountered during the excavation of the granular Made Ground or the underlying weathered bedrock deposits. No hydrocarbon staining was noted in the soils and no substantial hydrocarbon odours were noted. PID values of less than 10ppm were generally recorded, the material with PID values of greater than 50ppm were removed and stockpiled on a concrete floor slab for temporary storage.

The excavation was roughly rectangular in shape and covered an area of 61m^2 (4.0m wide, 9.0m length and 1.7m deep). Approximately 8m^3 of contaminated material was removed from the HS5 area and stockpiled as presented in *Photograph 40.* The sidewalls and base of the excavation were sampled for validation purposes.



Photograph 40 – Temporary stockpile of material excavated from HS5

5.5.2 25th January 2022

Geo-Environmental testing was undertaken on 6 No. samples of the base and sides of HS5. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Stratergy and the positions are provided on *GRO-21459-P18.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have selected as the remediation criteria for the hotspot with respect to protection of controlled waters.

The testing results (*22-36095*) are provided in *Appendix 8*. A summary of the Geo-Environmental testing results is presented below and the screening values are in *Appendix 5.*

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*<1ug/kg*	*190ug/kg*		
Toluene	*<1ug/kg*	*4,230ug/kg*		
Ethylbenzene	*<1ug/kg*	*4,640ug/kg*		
Xylene	*<1ug/kg*	*3,840ug/kg*		
Aliphatic (C5-C6)	*<0.1*	*331*		
Aliphatic (C6-C8)	*<0.1*	*1680*		
Aliphatic (C8-C10)	*<0.1*	*300*		
Aliphatic (C10-C12)	*<0.2*	*60,800,000*		
Aromatic (EC10-EC12)	*<0.1*	*62.9*		

BTEX

No concentrations of BTEX have been recorded above the L3 RTVs in any of the six samples taken from the base and sidewalls of the excavation. In addition, all of the samples were below the laboratory detection limits of 1.0ug/kg.

Total Petroleum Hydrocarbons (TPH CWG)

No concentrations of TPH CWG have been recorded above the L3 RTVs and all of the samples were recorded below laboratory detection limits.

Summary

TPH CWG and BTEX were scheduled on six samples based on the former usage as a Kerosene AST. As no elevated levels of TPH CWG and BTEX were recorded above the L3 RTVs, no risk to controlled waters exists and specific remedial action is not required at HS5.

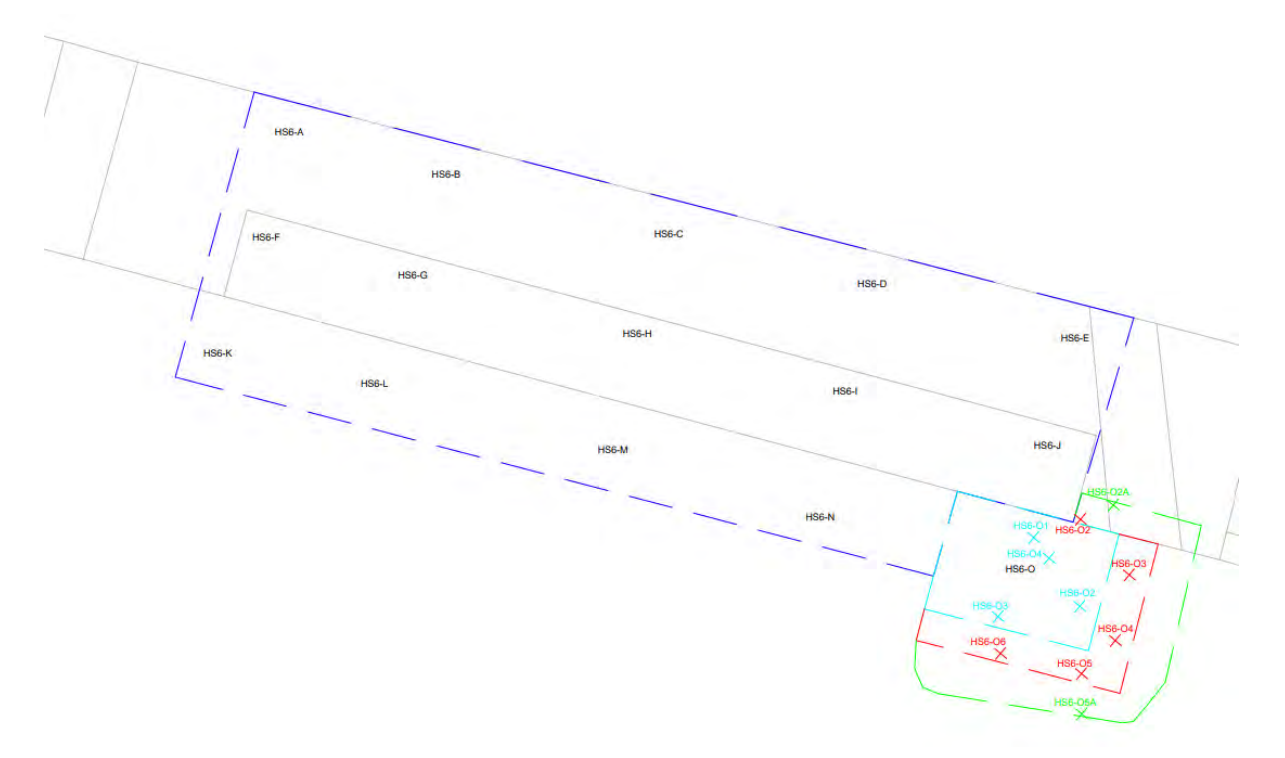
As discussed in Section 4.0, specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health, these are to be installed and assessed by others. Health risks associated with general contaminants of concern including metals, asbestos, speciated PAHs and hydrocarbons will be managed by the construction of a cover system in garden areas. The raising of levels will be complicit with the cover system. With respect to volatile contamination, additional vapour monitoring is to be undertaken to determine the risk to end users. Vapour protection measures such as a vapour resistant membrane will be utilised where required based on the findings of the monitoring. The specific human health remediation measures implementation and validation is to be undertaken by others.

5.6 Hotspot 6 (HS6)

Hotspot 6 is situated central section of Phase 2, in Phase 2D and 2F and consists of several ASTs previously located between to main warehouse buildings. The ASTs have previously been indicated to be a store of DCM, white spirit, kerosene, sodium silicate and heating oils.

The validation works for this hotspot have been caried out by Groundtech Consulting during the Remediation Enabling works phase between the dates of 30th March 2023 and 12th January 2024. The hotspot validation works were undertaken in phases, with the areas that have 'failed' (i.e levels recorded above the RTVs), being validated at a later date. The dates of the visits are provided below:

- *30th March 2023*
- *1st November 2023*
- *12th December 2023*
- *12th January 2024*



Hotspot 6 Verification Plan

As discussed in Section 4.0, the approved RTVs were used to validate the hotspot with respect to the protection of controlled waters and specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health. The specific human health remediation measures implementation and validation is to be undertaken by others.

The validation works comprised the excavation of contaminated soils in HS6 based on the criteria outlined in the approved SGP Remedial Strategy, summarised below:

- *Visual evidence of contamination (Black staining, oil, free phase)*
- *Olfactory evidence of contamination (PID >50ppm)*

The remediation validation works are discussed in the following sections.

5.6.1 30th March 2023

Groundtech Consulting attended site on 30th March 2023 to supervise and validate the removal of impact soils at HS6. The Aboveground Storage Tanks (ASTs) were removed as part of the enabling works prior to the hotspot validation works being undertaken, the extent of the hotspot was set out by UR and verified by Groundtech.

Reinforced concrete hardsurfacing covered the majority of the footprint of HS6 to depths of between 0.15m and 0.25m bgl. The breaking out of the concrete was undertaken on a 10m x 25m grid prior to the validation of the hotspot. No visual or olfactory evidence of contamination, such as black staining, was noted within the concrete during excavation and the material was stockpiled with the crush material for reuse. The underlying Made Ground consisted of black ashy gravelly sand with minor constituents of brick, concrete, ceramic, clinker and metal to a maximum depth of 0.7m bgl. The Made Ground generally thickened in the southern area of the excavation. No superficial deposits were identified during the excavation and the Made Ground was underlain by weathered Sandstone. The excavation was generally terminated at depths of between 0.6m and 0.8m bgl in the weathered sandstone bedrock.

Visual evidence of contamination was encountered in the ashy granular Made Ground matrix immediately beneath the slab. Moderate hydrocarbon odours were encountered locally in the Made Ground and strong hydrocarbon odours were noted in the top of the weathered Sandstone bedrock. PID readings up to 1,000ppm were recorded in the granular Made Ground and PID readings of up to 300ppm were noted in the immediate weathered sandstone deposits. The excavation was deepened by approximately 200mm in the Sandstone bedrock until no hydrocarbon odour or other evidence of visual/olfactory contamination was noted. Samples were collected from the base and sides of the excavation for validation purposes.

The total area of excavation was 250m^2 and approximately 75m^3 of contaminated material was excavated. The excavated material was placed in a quarantine area which comprised a concrete slab surface separated from other stockpiles.

Groundwater was not encountered during the validation works, previous excavations in this area indicate that the groundwater is present at depths of between 2.3m and 4.0m bgl in the weathered Sandstone.



Photograph 41 – Southern extent of excavation



Photograph 42 – Western area of excavation



Photograph 43 – Granular Made Ground matrix with black staining



Photograph 44 – Eastern area of excavation

5.6.2 Laboratory Testing

Geo-Environmental testing was initially scheduled on 13 No. samples of the base and sidewalls of the HS6 excavation in Phase 2. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P19.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The Geo-Environmental testing results (*EMT 23/5156*) are in *Appendix 9*. A summary of the Geo-Environmental testing results is presented below and the screening values are below.

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*3 to 42ug/kg*	*190ug/kg*	-	-
Toluene	*5 to 8,735ug/kg*	*4,230ug/kg*	*1*	*HS6-O*
Ethylbenzene	*3 to 7,935ug/kg*	*4,640ug/kg*	*1*	*HS6-O*
Xylene	*8 to 108,182ug/kg*	*3,840ug/kg*	*1*	*HS6-O*
Aliphatic (C5-C6)	*0.1*	*331*	-	-
Aliphatic (C6-C8)	*0.1 to 7.4*	*1680*	-	-
Aliphatic (C8-C10)	*0.1 to 563.5*	*300*	*1*	*HS6-O*
Aliphatic (C10-C12)	*0.2 to 6,489.1*	*60,800,000*	*0*	-
Aromatic (EC10-EC12)	*0.2 to 1,334.9*	*62.9*	*1*	*HS6-O*
Tetrachloroethene (PCE)	*3 to 5ug/kg*	*745ug/kg*	-	-
Trichloroethene (TCE)	*3 to 44ug/kg*	*396ug/kg*	-	-
Dichloromethane	*7 to 15ug/kg*	*68.2ug/kg*	-	-
1-2 Dichloroethane	*4ug/kg*	*503ug/kg*	-	-
Phenol	*<10ug/kg*	*180ug/kg*	-	-

BTEX

Elevated concentrations of Toluene, Ethylbenzene and Total Xylene have been detected in one of the six samples screened. The elevations were recorded in HS6-O in the Sandstone, which was sampled from the south eastern extent of the excavation and are sourced from spills/leakages of the ASTs which held white spirit and associated chemicals. No other elevated concentrations were noted in any of the other samples screened, indicating that the majority of the contamination has been excavated and the remaining contamination is localised to the south eastern section of the hotspot. The highest concentrations were Xylenes with concentrations of between 10 to 100 times the screening value being recorded, indicating that the source is predominantly white spirit.

Total Petroleum Hydrocarbons (TPH CWG)

Slightly elevated concentrations (1 to 10 times) of Aliphatic (C8 to 10) and significantly elevated concentrations (10 to 100 times) of Aliphatic (EC10 to EC12) were recorded in HS6-O, located in the south eastern section of hotspot. The elevated TPH was recorded in the same sample as the elevated concentrations of BTEX, which was obtained from the weathered Sandstone. No significant visual or olfactory evidence of contamination was noted at this position however PID values of up to 10ppm were noted. The source is considered to be the larger AST in the eastern section of HS6, which is likely a store of fuel oils.

Halogenated Hydrocarbons

No elevated concentrations of PCE, DCM, TCE, Dichloroethane and Phenol were detected above the L3 RTVs with the majority of the substances being recorded beneath the laboratory detection limits.

Summary

Based on the localised elevations of Toluene, Ethylbenzene, Xylene, Aliphatic 8 to 10 and Aromatic 10 to 12, a risk still exists to controlled waters and further validation of this hotspot is required. It was proposed to revisit site when access has been rearranged to delineate the contamination in the south eastern area and validate the hotspot to the L3 RTVs.

The risk to human health is discussed in the following section following the excavation and removal of contaminated soils in the south eastern area of the excavation.

5.6.3 1st November 2023

Groundtech revisited site on 1st November 2023 to further excavate the south eastern extent of HS6 and to delineate the elevated concentrations of BTEX and TPHs in weathered Sandstone in this area.

The south eastern extent of HS6 was set out by UR and the excavation was undertaken at HS6-O.



Photograph 45 – HS6-O

Granular Made Ground was encountered to a maximum depth of 0.6m bgl underlain by extremely weak residually weathered Sandstone. Visual evidence of hydrocarbon contamination was noted in the form of a dark oily staining and strong hydrocarbon odours were noted at the top of the rock. PID concentrations of up to 150ppm were detected in the Sandstone. Samples of the Sandstone were taken at the base and the sidewalls, however PID concentrations of greater than 50ppm remained, the excavation was difficult where the rock became more competent and remained in-situ. The excavated material was placed in the same stockpile as the previous HS6 excavation.



Photograph 46 – Base of HS6 excavation in south eastern area

5.6.4 Laboratory Testing

Geo-Environmental testing was initially scheduled on 4 No. samples of the base and sidewalls of the Sandstone at the position of HS6-O in the south eastern section of the excavation. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P19.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The Geo-Environmental testing results (*EMT 23/18362*) are in *Appendix 9*. A summary of the Geo-Environmental testing results and the screening values are presented below.

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*<3ug/kg*	*190ug/kg*	-	-
Toluene	*<3 to 181ug/kg*	*4,230ug/kg*	-	-
Ethylbenzene	*23 to 74916ug/kg*	*4,640ug/kg*	*3*	*HS6-O1, HS6-O2, HS6-O4*
Xylene	*8 to 6868ug/kg*	*3,840ug/kg*	*1*	*HS6-O1*
Aliphatic (C5-C6)	*0.1 to 1*	*331*	-	-
Aliphatic (C6-C8)	*0.1 to 0.2*	*1,680*	-	-
Aliphatic (C8-C10)	*0.1 to 35.3*	*300*	-	-
Aliphatic (C10-C12)	*0.2*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*0.2 to 3.9*	*62.9*	-	-
Tetrachloroethene (PCE)	*3*	*745ug/kg*	-	-
Trichloroethene (TCE)	*3*	*396ug/kg*	-	-
Dichloromethane	*7*	*68.2ug/kg*	-	-
1-2 Dichloroethane	*4*	*503ug/kg*	-	-
Phenol	*10*	*180ug/kg*	-	-

BTEX

Contrary to the previous testing results of HS6-O, no elevations of Toluene have been recorded. However, elevated concentrations of Ethylbenzene have been recorded in samples obtained of the sidewall of the excavation in addition to a single elevation of Xylene. The concentrations have slightly reduced indicating that a large proportion of the contamination has been excavated, however elevated concentrations remain in the top layer of Sandstone associated with spills/leakages or the larger AST in this area.

Total Petroleum Hydrocarbons (TPH CWG)

No concentrations have been recorded above the L3 RTVs and the majority are below laboratory detection limits.

Halogenated Hydrocarbons

In conformity with the previous testing results for HS6, no elevated concentrations of PCE, DCM, TCE, Dichloroethane and Phenol were detected above the L3 RTVs, with the majority of the substances being recorded beneath the laboratory detection limits.

Summary

The majority of contamination has been removed including the elevated levels of TPH CWG fractions encountered during the previous visit, however based on the exceedances of Ethylbenzene and Xylene being recorded in the permeable Sandstone, further work is required to delineate the hotspot and eliminate the risk to controlled waters.

As discussed earlier, the human health risk from HS6 will be assessed following the excavation and removal of contaminated soils in HS6-O.

5.6.5 12th December 2023

Additional hotspot validation work was undertaken by Groundtech Consulting in the position of HS6-O1, O2 and O4 where elevations of Ethylbenzene and Xylene have been detected in the weathered Sandstone.

Excavation was undertaken into the natural Sandstone and no significant visual or olfactory evidence of contamination was noted, with the exception of a fain hydrocarbon odour. PID values of between 1.8ppm and 24.9ppm were detected in the Sandstone. Samples were taken of the natural Sandstone with a faint hydrocarbon odour, as excavation of the bedrock with the machinery onsite was limited and slow.



Photograph 47 – HS6

5.6.6 Laboratory Testing

Geo-Environmental testing was initially scheduled on an addition 4 No. samples of sidewalls of the Sandstone at the position of HS6-O in the south eastern section of the excavation. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P19.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The Geo-Environmental testing results (*EMT 23/21487*) are in *Appendix 9*. A summary of the Geo-Environmental testing results is and the screening values are presented below.

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*3ug/kg*	*190ug/kg*	-	-
Toluene	*7 to 335ug/kg*	*4,230ug/kg*	-	-
Ethylbenzene	*6 to 40,489ug/kg*	*4,640ug/kg*	*2*	*HS6-O2, HS6-O5*
Xylene	*8 to 958ug/kg*	*3,840ug/kg*	-	-
Aliphatic (C5-C6)	*0.1*	*331*	-	-
Aliphatic (C6-C8)	*0.1 to 0.2*	*1,680*	-	-
Aliphatic (C8-C10)	*0.1 to 4.4*	*300*	-	-
Aliphatic (C10-C12)	*0.1*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*0.2 to 125.9*	*62.9*	*1*	*HS6-O3*
Tetrachloroethene (PCE)	*3ug/kg*	*745ug/kg*	-	-
Trichloroethene (TCE)	*3 to 9ug/kg*	*396ug/kg*	-	-
Dichloromethane	*7ug/kg*	*68.2ug/kg*	-	-
1-2 Dichloroethane	*4ug/kg*	*503ug/kg*	-	-
Phenol	*10ug/kg*	*180ug/kg*	-	-

BTEX

No elevations of Xylene have been recorded in any of the samples tested, indicating this has now been removed. However, significant elevation concentrations of Ethylbenzene have been detected in two of the samples screened from the weathered Sandstone. No other elevated concentrations have been recorded above the relevant L3 RTVs.

Total Petroleum Hydrocarbons (TPH CWG)

A single minor elevation of Aromatic EC10 to EC12 has been recorded in one of the samples screened in the weathered Sandstone.

Summary

Based on the remaining concentrations of Xylene and TPH in the weathered bedrock in the south eastern end of HS6, heavy plant and breaking equipment was identified as being the most effective remedial option.

5.6.7 12th January 2024

Groundtech Consulting carried out the final validation visit on 12th January 2024 to excavate into the Sandstone which contained elevated concentrations of Xylene and Aromatic 10 to 12.

Excavation was undertaken in the south eastern extent of HS6 at the position of the former recorded elevations (HS6-02, 03 and 05). The ground model was consistent with the previous dig and minor hydrocarbon odours were noted in the sandstone with PID readings up to 50ppm. This material was excavated using a bucket with teeth to break through the top layer of sandstone with the PID readings, until no olfactory evidence of contamination was noted and PID readings of less than 1ppm were present. Samples were obtained of the weathered Sandstone to confirm the removal of the contaminated material.



Photograph 48 – Area of previous recorded elevations



Photograph 49 – South eastern extent of HS6



Photograph 50 – HS6



Photograph 51 – HS6

5.6.8 Laboratory Testing

Geo-Environmental testing was scheduled on an additional 2 No. samples. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P19.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The Geo-Environmental testing results (*EMT 24/602*) are in *Appendix 9*. A summary of the Geo-Environmental testing results and RTV screening values are presented below.

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*5ug/kg*	*190ug/kg*	-	-
Toluene	*5ug/kg*	*4,230ug/kg*	-	-
Ethylbenzene	*54 to 55ug/kg*	*4,640ug/kg*	-	-
Xylene	*23 to 65ug/kg*	*3,840ug/kg*	-	-
Aliphatic (C5-C6)	*0.1*	*331*	-	-
Aliphatic (C6-C8)	*0.1*	*1,680*	-	-
Aliphatic (C8-C10)	*0.1*	*300*	-	-
Aliphatic (C10-C12)	*0.2*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*0.2*	*62.9*	-	-
Tetrachloroethene (PCE)	-	*745ug/kg*	-	-
Trichloroethene (TCE)	-	*396ug/kg*	-	-
Dichloromethane	-	*68.2ug/kg*	-	-
1-2 Dichloroethane	-	*503ug/kg*	-	-
Phenol	-	*180ug/kg*	-	-

BTEX

No elevated concentrations of BTEX were recorded in the two samples screened of the natural weathered Sandstone, Benzene and Toluene were recorded below the laboratory detection limits. Detectable concentrations of Ethylbenzene and Xylene have been recorded, however these were significantly below the L3 RTVs, confirming the contamination has been removed at the position of the former elevations.

Total Petroleum Hydrocarbons (TPH CWG)

All the concentrations of hydrocarbons were below the range of laboratory detection and therefore fall below the L3 RTVs.

Halogenated Hydrocarbons

Testing was not undertaken on other volatiles based on no elevated concentrations being recorded by the previous testing regime.

Summary

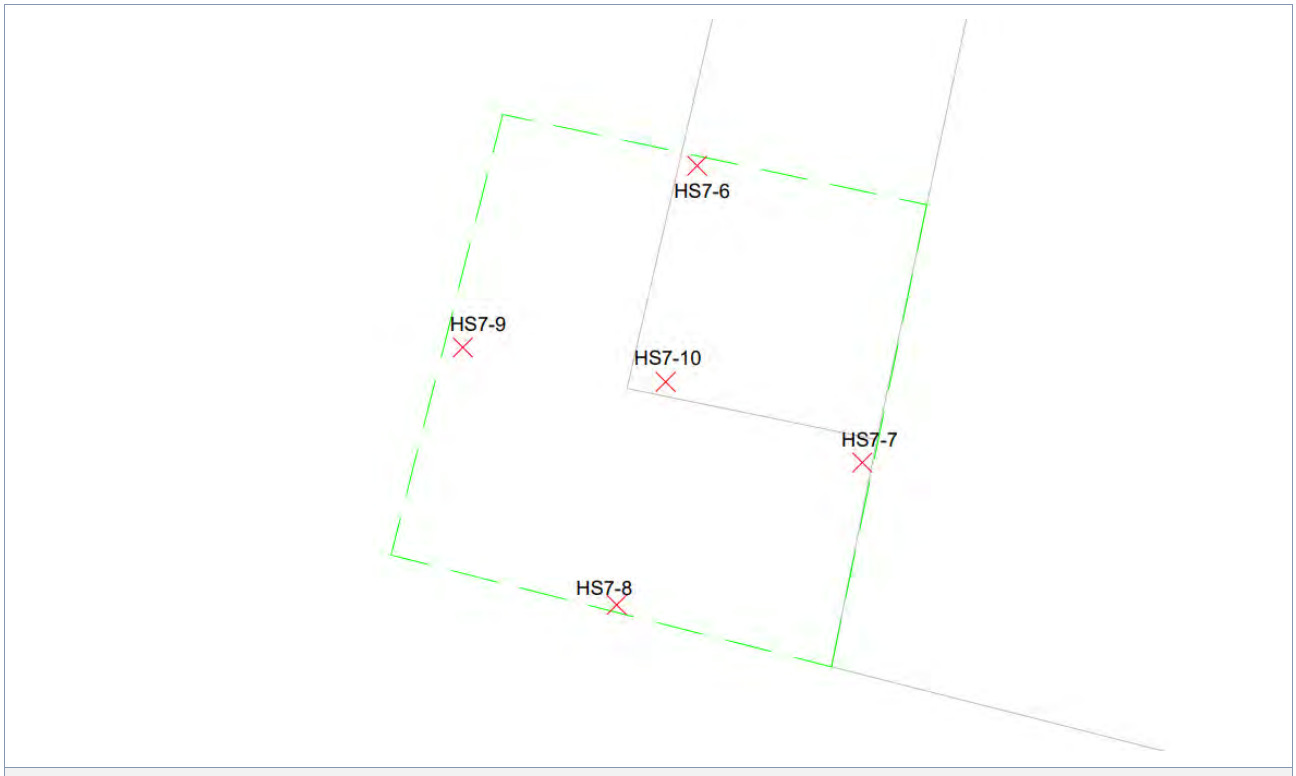
The remaining areas of contamination have been excavated during the final visit on 12th December 2023, with the excavation being undertaken to remove any material with levels above the L3 RTVs. Based on the Hotspot being remediated to L3 RTVs, no risk to controlled waters exists with respect to HS6 and further action is not required.

The risk to human health is to be mitigated through remedial measures proposed in the SGP Remedial Specification, which will include a cover system and additional vapour monitoring. This will break any linkages from contaminated soils to human health and is considered sufficient based on the secondary source of contamination being removed from the HS6 area. The specific human health remediation measures implementation and validation is to be undertaken by others.

5.7 Hotspot 7 (HS7)

Hotspot 7 is located in the central western section of Phase 2, in Phase 2D immediately west of HS6 and comprises a former electrical transformer and diesel AST. SGP have previously inspected the hotspot on 8th December 2020 and found no odours present and a corresponding PID value of 9.3ppm. The analysis recorded the presence of PCBs at low concentrations and detectable concentrations of heavy ranged TPH.

The validation works for this hotspot have been carried out by Groundtech Consulting during the Remediation Enabling works phase on 30th March 2023. The works were undertaken in accordance with the SGP Remedial Strategy.



Hotspot 7 Verification Plan

As discussed in *Section 4.0*, the approved RTVs were used to validate the hotspot with respect to the protection of controlled waters and specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health.

The validation works comprised the excavation of contaminated soils in HS6 based on the criteria outlined in the approved SGP Remedial Strategy, summarised below:

- *Visual evidence of contamination (Black staining, oil, free phase)*
- *Olfactory evidence of contamination (PID >50ppm)*

The remediation validation works are discussed in the following sections.

5.7.1 30th March 2023

Groundtech Consulting visited the site on 30th March 2023 to excavate and delineate the contamination associated with the former diesel AST and transformer at HS7.

The circa 0.2m thick concrete had previously been broken out during the works undertaken by SGP in December 2020. The Made Ground was approximately 1.0m deep and predominantly granular with minor constituents of brick, ash, clinker, ceramic and concrete. No superficial deposits were present and the Made Ground was underlain by weathered Sandstone (Rough Rock) to the base of the excavation. The excavation progressed through the weathered Sandstone until competent rock was encountered. The total excavated area was approximately 16m^2 and approximately 15m^3 of contaminated material was excavated and stockpiled in a secure, visqueen bunded area.

Visual evidence of contamination was noted within the shallow granular Made Ground with a slight oily staining being present locally. Olfactory evidence was generally not present and low PIDs of less than 100ppm were recorded in the granular Made Ground and weathered bedrock. No groundwater or perched water was encountered during the excavation.

Redundant land drains were noted within the top of the weathered Sandstone as displayed in *Photograph 52*. No evidence of free product or groundwater was recorded in the pipes, it is likely that these have been blocked and damaged during current enabling works.



Photograph 52 – Western and northern sidewall



Photograph 53 – Redundant services northern area of excavation.



Photograph 54 – Southern sidewall



Photograph 55 – Local black staining removed from HS7

5.7.2 Laboratory Testing

Geo-Environmental testing was scheduled on 8 No. samples of the Sandstone base and Made Ground side walls of the excavation. The samples were obtained in accordance with the testing frequency outlined in the

Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P20.* The Geo-Environmental testing results (*EMT 24/602*) are presented in *Appendix 10*. A summary of the Geo-Environmental testing results is presented below and the screening values are in *Appendix 4*.

Summary

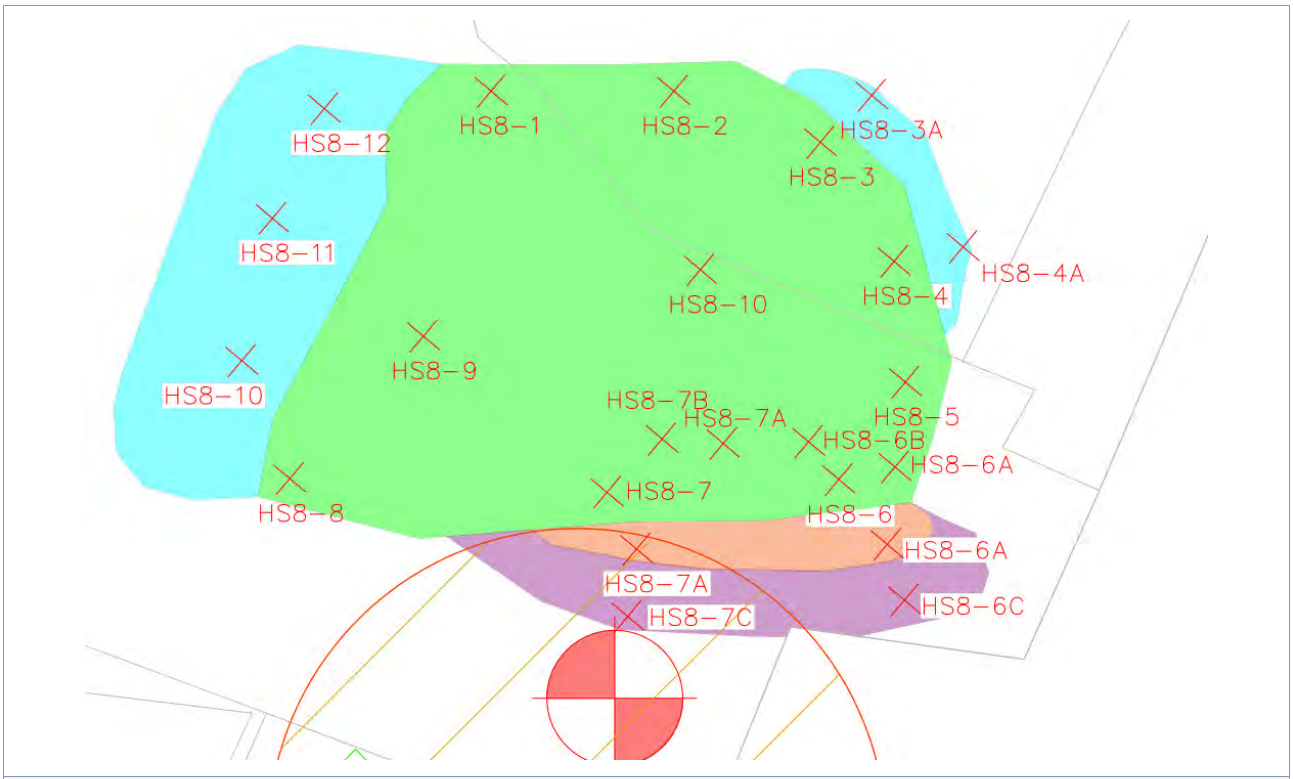
The testing results indicate that all of the samples tested for PCBs fall below the laboratory limit of detection and therefore does not pose a risk to controlled waters. Furthermore, no evidence of significant contamination has been recorded during the excavation of the hotspot.

No detectable levels of PCBs have been recorded and no visual or olfactory evidence of contamination was noted. A risk to human health from other general CoC may still exist. Previous testing by SGP has indicated elevated PCBs however these have now been removed through the validation exercise. Specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health. Health risks associated with general contaminants of concern including metals, asbestos, speciated PAHs and hydrocarbons will be managed by the construction of a cover system in garden areas. The specific remedial measures are to be incorporated and validated by others.

With respect to volatile contamination, additional vapour monitoring is to be undertaken to determine the risk to end users. Vapour protection measures such as a vapour resistant membrane will be utilised where required based on the findings of the monitoring.

5.8 Hotspot 8 (HS8)

Hotspot 8 is located in the north eastern section of Phase 2, in Phase 2G and consists of an AST and associated oil drums. Previous investigation undertaken by ESNR (2003) identified elevated levels of hydrocarbons were detected, this was not repeated in any further investigations. It should be noted that these elevations were screened against human health screening values which are generally less stringent than the L3 RTVs.



Hotspot 8 Verification Plan

The validation works for this hotspot have been caried out by Groundtech Consulting during the Remediation Enabling works phase between the dates of 3rd October 2023 and 12th January 2024. The hotspot validation works were undertaken in phases, with the areas that have 'failed' (i.e levels recorded above the RTVs), being validated at a later date. The dates of the visits are provided below:

- *3rd October 2023*
- *1st November 2023*
- *13th December 2023*
- *12th January 2024*

As discussed in Section 4.0, the approved RTVs were used to validate the hotspot with respect to the protection of controlled waters and specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health.

The validation works comprised the excavation of contaminated soils in HS6 based on the criteria outlined in the approved SGP Remedial Strategy, summarised below:

- *Visual evidence of contamination (Black staining, oil, free phase)*
- *Olfactory evidence of contamination (PID >50ppm)*

The remediation validation works are discussed in the following sections.

5.8.1 3rd October 2023

Groundtech Consulting initially visited site on 3rd October 2023 to supervise and validate the removal of impacted soils associated with HS8.

Made Ground was present to depths of between 0.5m and 1.5m bgl and was generally deeper in the northern end of the excavation. The Made Ground comprised brown black gravelly sand/gravelly sand with constituents of metal, brick, ceramic, sandstone and concrete. A thin band of cohesive Made Ground (circa 200mm) underlain the granular Made Ground and comprised firm gravelly clay with minor constituents of brick and sandstone. The natural ground comprised firm to stiff clay (Glacial Till) with sand bands and occasional gravel of mudstone and sandstone. Bedrock was not encountered during the excavation. Perched groundwater was encountered in the granular Made Ground, entering the excavation from the south west which was at a higher level than HS8 during excavation. UR indicated that this area was filled with 6F2 at the time of the excavation as it was utilised as a temporary roadway to the former reservoir.

Impacted material was generally encountered in the southern and eastern section of the site although the Made Ground thickened in the north. Significant visual or olfactory evidence of contamination was not encountered in the northern areas of the HS8 excavation. The perched water contained a black staining after it was exposed in the impacted soils. The coating was less than 1mm in thickness associated with the perched groundwater. Moderate to strong hydrocarbon odours were recorded in the granular Made Ground and cohesive Made Ground. The natural Sand and Clay encountered at a minimum depth of 0.5m bgl, did not demonstrate any visual or olfactory evidence of contamination. PID readings of up to 500ppm were recorded in the granular and cohesive Made Ground deposits, however PID values of less than 10ppm were recorded in the natural strata, indicating the cohesive Made Ground has acted as an impermeable barrier.

During excavation on the southern area, blue dye and purple coloured stained gravel was noted locally in the granular Made Ground, indicating former solvent storage and leakages. It is possible that the leakages occurred during the removal of the ASTs as the impacted material was encountered in the top 0.5m.

Validation samples were obtained of the base and sidewalls in the northern, eastern and southern area of the excavation. Due to the standing water present in the western area, the excavation was terminated. Urban Regen were made aware that the standing water should be moved to a different part of site prior to the remediation of this proportion of the hotspot.



Photograph 56 – North eastern end of excavation. Natural clay at base.



Photograph 57 – HS8



Photograph 58 – Black oily staining, excavated with soils.



Photograph 59 – Purple dye coloured staining.

The impacted material was temporarily stockpiled in the HS8 area prior to removal to a securely bunded area. At the time of the hotspot validation exercise, there were no feasible long term stockpile storage areas and it was determined that following backfilling of the reservoir, this will be the quarantine area. The excavation was filled using site won material from Phase 1B.

5.8.2 Laboratory Testing

Geo-Environmental testing was initially scheduled on 7 No. samples of the base and sidewalls of the HS8 excavation in the north eastern area of Phase 2. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P15.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The Geo-Environmental testing results (*EMT 23/16466*) are in *Appendix 11*. A summary of the Geo-Environmental testing results and the RTVs are below.

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*3 to 25ug/kg*	*190ug/kg*	-	-
Toluene	*16 to 10,305ug/kg*	*4,230ug/kg*	*2*	*HS8-3 & 4*
Ethylbenzene	*50 to 76,847ug/kg*	*4,640ug/kg*	*2*	*HS8-3 & 4*
Xylene	*8 to 47,516ug/kg*	*3,840ug/kg*	*3*	*HS8-3, 4 & 9*
Aliphatic (C5-C6)	*0.1*	*331*	-	-
Aliphatic (C6-C8)	*0.1 to 14.5*	*1,680*	-	-
Aliphatic (C8-C10)	*0.1 to 4.9*	*300*	-	-
Aliphatic (C10-C12)	*0.2 to 2,815*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*0.2 to 363.5*	*62.9*	*1*	*HS8-4*
Tetrachloroethene (PCE)	*3ug/kg*	*745ug/kg*	-	-
Trichloroethene (TCE)	*3ug/kg*	*396ug/kg*	-	-
Dichloromethane	*7ug/kg*	*68.2ug/kg*	-	-
1-2 Dichloroethane	*4ug/kg*	*503ug/kg*	-	-
Phenol	*10ug/kg*	*180ug/kg*	-	-

BTEX

Elevated concentrations of Toluene, Ethylbenzene and Total Xylene were recorded in HS8-3 and HS8-4 located along the eastern granular and cohesive sidewall of the excavation. In addition, an elevated concentration of Xylene was recorded in HS8-9 within the top of the natural Glacial Till at the base of the excavation. The source of the contamination is indicated to be poor housekeeping of the former ASTs through their removal by others, or historic spillages while filling the drums based on the limited contamination encountered.

Total Petroleum Hydrocarbons (TPH CWG)

A single elevated concentration of Aromatic EC 10 to 12 was recorded within HS8-4 in the eastern proportion of the excavation in the granular Made Ground. No other elevated concentrations were recorded indicating the majority of TPH has been delineated up by the PID and has been excavated.

Halogenated Hydrocarbons

No other elevated volatiles have been recorded above the L3 RTVs.

Summary

Based on the elevated concentrations of BTEX in the central and eastern section of the excavation and minor elevated concentrations of Aromatics 10-12 in the east, further delineation and remediation of the hotspot is required with respect to controlled waters, as discussed below.

With regards to human health, specific remedial measures will be put in place by others to mitigate the risk. This will include the construction of a cover system to break the linkage between contaminated soils and end site users and the commencement of a vapour monitoring programme to determine the inhalation risk. A vapour resistant membrane is likely to be required in addition to specific measures such as a sub floor void and structural floor slab, which alongside hotspot removal of the bulk of contamination, will mitigate any

vapour/inhalation risk. Site levels are to be raised in this area which will increase capping between contaminated soils and end site users.

5.8.3 1st November 2024

Groundtech revisited site on 1st November 2024 to delineate the elevated concentrations of BTEX and TPH recorded locally to the eastern sidewall and base of central area of the hotspot, and to validate the western section. In addition, samples previously obtained but not scheduled (HS8-2, 6, 7) were resampled and scheduled to meet the frequency requirements of the SGP Remedial Strategy.

The Made Ground in the eastern area was excavated and localised pockets of olfactory contamination was removed from the pit. PID values of between 20ppm and 50ppm were common and were excavated for stockpiling in a quarantine area prior to disposal. No visual evidence of contamination was noted and the granular (HS8-4) and cohesive (HS8-3) Made Ground sidewalls were sampled for validation purposes. As presented in *Photograph 61*, the central area of the hotspot was excavated at the base into the natural Clay as a single slight elevation of Xylene was recorded at this position. No significant visual or olfactory evidence of contamination was noted during the excavation, nevertheless the material excavated was removed. A validation sample was taken of the natural Clay at the base beneath (HS8-9A) to validate the position of the former elevation.

In addition to the resampling, excavation commenced in the western end of site following removal of the groundwater to validate the western sidewalls. Made Ground was encountered in this area typically to a depth of 1.0m begl, underlain by natural firm to stiff Clay. PID readings up to 200ppm were recorded in the Made Ground of this position and no evidence of impaction of the natural Clay was noted. Validation samples were obtained of the natural Clay following removal of the impacted Made Ground.



Photograph 60 – Excavation of Made Ground in eastern area.



Photograph 61 – Central excavation of base at HS8-9.



Photograph 62 – Western excavation at HS8-11 to 13



Photograph 63 – Glacial Till at base after removal of impacted material

5.8.4 Laboratory Testing

Geo-Environmental testing was scheduled on 9 No. samples of the base and sidewalls of the HS8 excavation, in the western area, previously unscheduled sampled area and area of previous elevations. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P15.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The Geo-Environmental testing results (*EMT 23/18362*) are in *Appendix 11*. A summary of the Geo-Environmental testing results is presented below and the RTV screening values are in *Appendix 4.*

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*3 to 27ug/kg*	*190ug/kg*	-	-
Toluene	*13 to 63,930ug/kg*	*4,230ug/kg*	*2*	*HS8-6, 7*
Ethylbenzene	*3 to 26,419ug/kg*	*4,64ug/kg*	*2*	*HS8-6, 7*
Xylene	*8 to 47,516ug/kg*	*3,840ug/kg*	*2*	*HS8-6, 7*
Aliphatic (C5-C6)	*0.1 to 0.6*	*331*	-	-
Aliphatic (C6-C8)	*0.1 to 11.5*	*1,680*	-	-
Aliphatic (C8-C10)	*0.1 to 7*	*300*	-	-
Aliphatic (C10-C12)	*0.2 to 5.4*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*0.2 to 1.1*	*62.9*	-	-
Tetrachloroethene (PCE)	*3ug/kg*	*745ug/kg*	-	-
Trichloroethene (TCE)	*3ug/kg*	*396ug/kg*	-	-
Dichloromethane	*7 to 13ug/kg*	*68.2ug/kg*	-	-
1-2 Dichloroethane	*4ug/kg*	*503ug/kg*	-	-
Phenol	*10 to 44ug/kg*	*180ug/kg*	*1*	*HS8-7*

BTEX

No elevated concentrations of BTEX have been detected in HS8-3, 4, 9 in the position of the former elevations, confirming the contamination material has been excavated and removed from the eastern section and central area of the excavation. Furthermore, no elevated concentrations of BTEX have been detected in the western section of the hotspot. Significant elevations of Toluene, Ethylbenzene and Xylene have been detected in the southern end of the excavation immediately beneath the position of the former ASTs.

Total Petroleum Hydrocarbons (TPH CWG)

The majority of the samples screened fall below the laboratory detection limit and no elevations have been noted.

Halogenated Hydrocarbons

A minor (1 to 10 times) elevation of Phenol has been detected within HS8-7 located in the southern end of the excavation.

Summary

Based on the elevated levels of Toluene, Ethylbenzene, Xylene and Phenol - a risk to controlled waters remains and further remedial action was required. It was proposed to revisit site and excavate the soils in the southern end of the excavation where the elevations were recorded using increasingly stringent remediation criteria (i.e PID readings of less than 10ppm).

5.8.5 13th December 2023

Groundtech visited the site on 13th December 2023 to excavate the area based on the elevated CoC recorded along the southern sidewall of HS8-6 and 7.

The granular Made Ground was excavated as well as the top of the natural Glacial Till. No significant evidence of contamination was noted during the excavation, some black staining was observed in the granular Made Ground however this was limited and no high PID values were detected. The highest PID reading was 136ppm, this material was removed from the excavation and PID values of less than 10ppm remained in the natural Clay and granular Made Ground. Samples were obtained of the sidewall of the excavation in the same position of the formerly sampled HS8-6 and 7.



Photograph 64 – Excavation of MG to natural clay in SE area



Photograph 65 – Removal of contaminated soils to temporary stockpile

5.8.6 Laboratory Testing

Geo-Environmental testing was scheduled on 2 No. samples of the base and sidewalls of the southern extent of HS8 at the position of the former elevations (HS8-6, 7). The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P15.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The Geo-Environmental testing results (*EMT 23/21487*) are in *Appendix 11*. A summary of the Geo-Environmental testing results is presented below and the screening values are in *Appendix 4*.

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*6 to 19ug/kg*	*190ug/kg*	-	-
Toluene	*17,603 to 26,106ug/kg*	*4,230ug/kg*	*2*	*HS8-6A, 7A*
Ethylbenzene	*5,543 to 20,751ug/kg*	*4,640ug/kg*	*2*	*HS8-6A, 7A*
Xylene	*4,620 to 33,079ug/kg*	*3,840ug/kg*	*2*	*HS8-6A, 7A*
Aliphatic (C5-C6)	*0.1 to 0.5*	*331*	-	-
Aliphatic (C6-C8)	*6 to 12.5*	*1680*	-	-
Aliphatic (C8-C10)	*3 to 7.8*	*300*	-	-
Aliphatic (C10-C12)	*0.2 to 1.4*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*0.2*	*62.9*	-	-
Tetrachloroethene (PCE)	*3ug/kg*	*745ug/kg*	-	-
Trichloroethene (TCE)	*3ug/kg*	*396ug/kg*	-	-
Dichloromethane	*3ug/kg*	*68.2ug/kg*	-	-
1-2 Dichloroethane	*4ug/kg*	*503ug/kg*	-	-
Phenol	*10ug/kg*	*180ug/kg*	-	-

BTEX

Elevated concentrations of Toluene, Ethylbenzene and Xylene have been recorded in both of the samples screened at levels of between 1 to 10 times the L3 RTVs. However, these elevated concentrations are at much lower levels than previously indicated due to the majority of the contamination being excavated along the southern extent.

Total Petroleum Hydrocarbons (TPH CWG)

No concentrations of TPH were recorded above the L3 RTVs.

Halogenated Hydrocarbons

No concentrations of other VOCs have been detected above the L3 RTVs, including phenol indicting the secondary sources have now been removed.

Summary

A final validation visit was proposed to remove the remaining BTEX contamination in the southern extent of the hotspot remedial excavation. At this stage, a viable pollution linkage to controlled waters was still considered to exist.

5.8.7 12th January 2024

Groundtech Consulting visited the site on 12th January 2024 to validate the southern area of HS8.

The pit was extended southwards and the Made Ground was excavated and stockpiled with the remainder of the HS8 stockpile material. PID readings of 0ppm were present in the natural Clay and readings of less than 3.8ppm were noted in the Made Ground which was sampled for validation purposes.



Photograph 66 – Southern end of HS8



Photograph 67 – Excavated material stockpiled near HS8

It should be noted than immediately south of HS8 is a steep downwards drop (c.>15m) towards the southern area of site where previous and proposed levels are much lower than at HS8. This limited the progression of the hotspot excavation, however the hotspot was fully delineated during the final visit.

5.8.8 Laboratory Testing

Geo-Environmental testing was scheduled on 2 No. samples of the base and sidewalls of the southern extent of HS8 at the position of the former elevations (HS8-6A, 7A). The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P15.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The Geo-Environmental testing results (*EMT 24/602*) are in *Appendix 11*. A summary of the Geo-Environmental testing results is presented below and the screening values are in *Appendix 4*.

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*5ug/kg*	*190ug/kg*	-	-
Toluene	*21 to 47ug/kg*	*4,230ug/kg*	-	-
Ethylbenzene	*5 to 6ug/kg*	*4,640ug/kg*	-	-
Xylene	*10 to 18ug/kg*	*3,840ug/kg*	-	-
Aliphatic (C5-C6)	*0.1*	*331*	-	-
Aliphatic (C6-C8)	*0.4 to 0.6*	*1,680*	-	-
Aliphatic (C8-C10)	*0.1*	*300*	-	-
Aliphatic (C10-C12)	*0.2*	*60,80,0000*	-	-

Aromatic (EC10-EC12)	*0.2*	*62.9*	*-*	*-*
Tetrachloroethene (PCE)	*n/a*	*745ug/kg*	*n/a*	*n/a*
Trichloroethene (TCE)	*n/a*	*396ug/kg*	*n/a*	*n/a*
Dichloromethane	*n/a*	*68.2ug/kg*	*n/a*	*n/a*
1-2 Dichloroethane	*n/a*	*503ug/kg*	*n/a*	*n/a*
Phenol	*10ug/kg*	*180ug/kg*	*-*	*-*

BTEX

No elevated concentrations of BTEX were recorded in either of the samples of the Made Ground screened from the sidewalls of the southern end of the hotspot.

TPH CWG

No concentrations of TPH were recorded above the L3 RTVs with the majority being present at levels beneath the laboratory detection limits.

Halogenated Hydrocarbons

VOC testing was outside the scope as typically no detectable levels were encountered through previous testing and no elevations have previously been recorded in these positions. SVOCs were scheduled to target phenol and no elevations of phenol was detected in either of the samples.

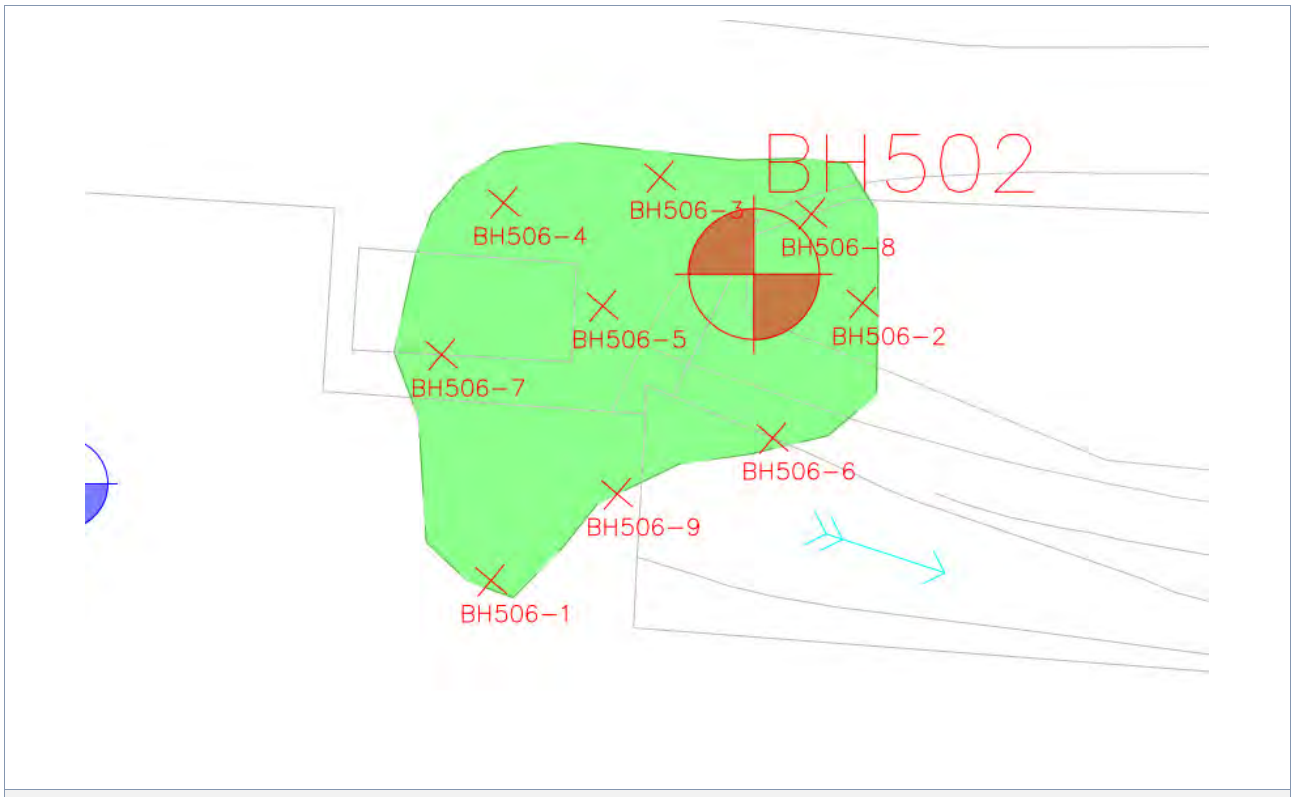
Summary

No elevated Contaminants of Concern (CoC) are present at the position of HS8 as the hotspot has been remediated to the L3 RTVs. Based on this, no further remedial measures are deemed necessary with respect to controlled waters.

There are no significant elevated CoC remaining in the hotspot which has been remediated to the 'more stringent' groundwater RTVs, however a human health risk may still exist. The risk to human health should be managed and mitigated by others in accordance with Section 4.2 of the SGP Remediation Strategy. Site levels are to be raised which will increase capping.

5.9 Hotspot BH502

Hotspot BH502 is located in the northern section of Phase 2 in Phase 2G, nearby USTs in the south of Phase 2A. Previous investigation undertaken by Groundtech Consulting (*EMT 22/5105*) did not detect any elevated Contaminants of Concern (CoC) based on the L3 RTVs, however minor exceedances of TPH CWG (Aliphatic EC8 to 10) were detected in subsequent groundwater testing (*EMT 22/16914*) compared to EQS levels. In addition, during enabling works, UR had noted a odour in the vicinity of the former AST. Based on the elevated levels of TPH in the groundwater, this area was considered to be treated as a hotspot to delineate any impacted soils.



Hotspot BH502 - Verification Plan

The validation works for this hotspot have been caried out by Groundtech Consulting during the Remediation Enabling works phase on 1st November 2023.

As discussed in Section 4.0, the approved RTVs were used to validate the hotspot with respect to the protection of controlled waters and specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health.

The validation works comprised the excavation of contaminated soils in BH502 based on the criteria outlined in the approved SGP Remedial Strategy, summarised below:

- *Visual evidence of contamination (Black staining, oil, free phase)*
- *Olfactory evidence of contamination (PID >50ppm)*

The remediation validation works are discussed in the following section.

5.9.1 1st November 2023

Groundtech supervised the commencement of the excavation in the area of BH502. The monitoring well of BH502 was visible at the time of excavation. UR also set out a perimeter around the hotspot where the olfactory evidence of contamination was encountered.

Shallow cohesive Made Ground was recorded generally to a maximum depth of 1.0m begl and comprised black ashy gravelly sand with minor constituents of brick, clinker, ceramic, sandstone and metal. No evidence of the former tank or tank base was identified during the excavation of the Made Ground. Superficial deposits were not recorded and weathered Sandstone was encountered immediately beneath the Made Ground. The Sandstone was generally extremely weak, residually weathered recovered as sand and became more

competent with depth being very weak to weak distinctly weathered, recovered as slightly sandy cobbles c.200mm into the Rough Rock.

Locally to the eastern area of excavation, black staining was noted during excavation of the Made Ground. No visual evidence of contamination was found in the underlying natural weathered bedrock. A moderate to strong hydrocarbon odour was noted in the Made Ground with PID readings up to 5000ppm being recorded. Strong chemical and hydrocarbon odours were noted at the surface of the weathered Sandstone bedrock detecting PID readings of between 1000ppm and 3500ppm.



Photograph 68 – Weathered sandstone (PID >3000ppm)



Photograph 69 – Black staining and redundant drains present



Photograph 70 – BH502 area, excavated material stockpiled behind



Photograph 71 – Northern area of excavation

The impacted material was excavated and samples were taken at the base and sidewalls of the excavation for validation purposes. The contaminated Made Ground and weathered Sandstone was excavated and stockpiled temporarily in the vicinity of the hotspot, as pictured in *Photograph 71*. The hotspot was backfilled with natural site won material from Phase 1B. The source of the leakages is considered to be the site drainage as pictured above.

5.9.2 Laboratory Testing

Geo-Environmental testing was scheduled on 9 No. samples of the base and sidewalls of Hotspot BH502. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P21.*

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The Geo-Environmental testing results (*EMT 23/18362*) are in *Appendix 12*. A summary of the Geo-Environmental testing results and the RTV screening values are below.

Contaminant	Range (mg/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*<3ug/kg*	*190ug/kg*	-	-
Toluene	*<3 to 11ug/kg*	*4,23ug/kg*	-	-
Ethylbenzene	*<3 to 107ug/kg*	*4,640 ug/kg*	-	-
Xylene	*<8 to 70ug/kg*	*3,840ug/kg*	-	-
Aliphatic (C5-C6)	*<0.1*	*331*	-	-
Aliphatic (C6-C8)	*<0.1*	*1,680*	-	-
Aliphatic (C8-C10)	*<0.1 to 1.9*	*300*	-	-
Aliphatic (C10-C12)	*<0.2 to 25*	*60,800,000*	-	-
Aromatic (EC10-EC12)	*<0.2 to 11.4*	*62.9*	-	-
Tetrachloroethene (PCE)	*<3 ug/kg*	*745ug/kg*	-	-
Trichloroethene (TCE)	*<3ug/kg*	*396ug/kg*	-	-
Dichloromethane	*<7ug/kg*	*68.2ug/kg*	-	-
1-2 Dichloroethane	*<4ug/kg*	*503ug/kg*	-	-
Phenol	*<10ug/kg*	*180ug/kg*	-	-

BTEX

No elevated concentrations of BTEX have been detected based on the L3 RTVs.

Total Petroleum Hydrocarbons (TPH CWG)

No elevated concentrations of TPH have been recorded with the majority being present at levels below laboratory detection limits.

Halogenated Hydrocarbons

All levels of PCE, TCE, Dichloromethane, 1-2 Dichloroethane and Phenol have been recorded beneath the laboratory detection limit.

Further Testing

Since validation works have been undertaken, olfactory evidence of contamination was noted during the installation of the vapour monitoring wells in the vicinity of BH502. A sample of the soils containing a hydrocarbon odour was obtained by SGP and scheduled for a suite of hydrocarbons, glycols and VOCs. No elevated levels of BTEX, TPH CWG or other volatiles were recorded above the L3 RTVs indicating that the area had been successfully remediated. The testing results (*24/012685*) are in *Appendix 12.*

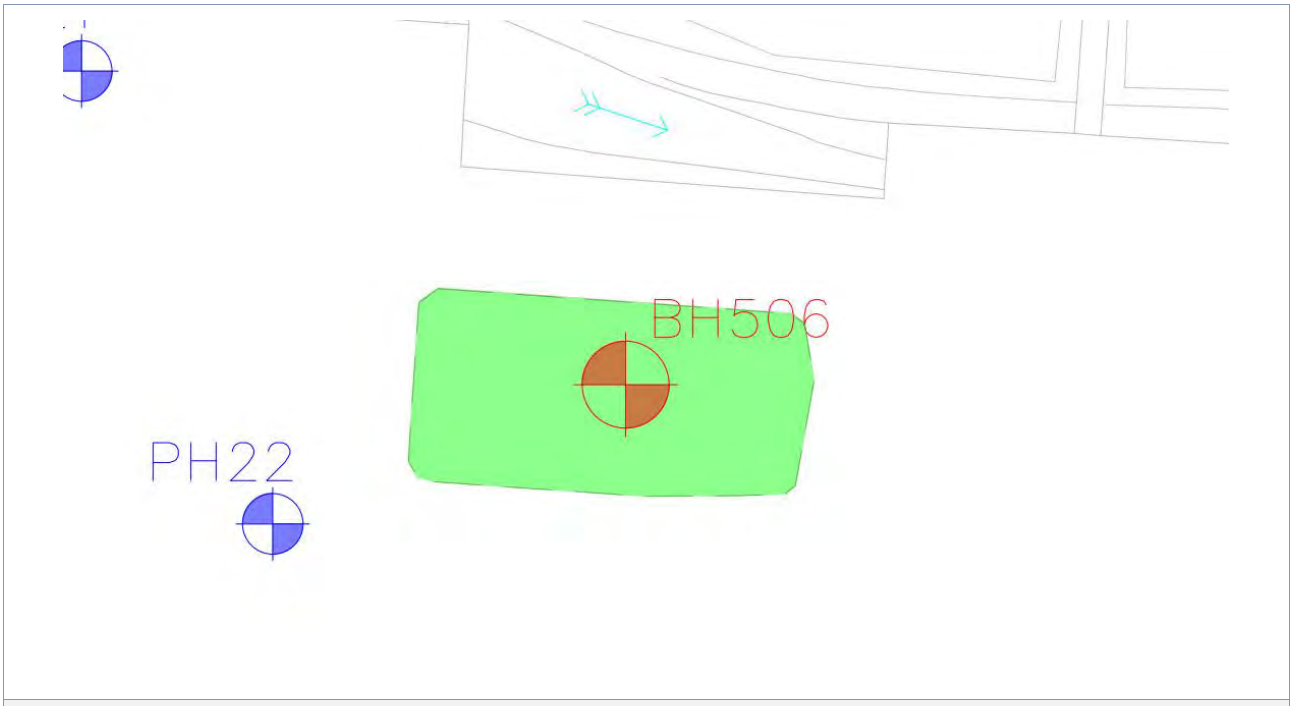
Summary

All impacted material has been removed during the hotspot delineation exercise and no elevated Contaminants of Concern (CoC) have been recorded above the L3 RTVs. Therefore, no further remedial action is required with respect to controlled waters at hotspot BH502.

There are no significant elevated CoC remaining in the hotspot which has been remediated to the 'more stringent' groundwater RTVs, however a human health risk may still exist. The risk to human health should be managed and mitigated by others in accordance with Section 4.2 of the SGP Remediation Strategy.

5.10 Hotspot BH506

Hotspot BH506 is located in the central northern section of Phase 2, in Phase 2F. Previous testing undertaken by Groundtech Consulting (*EMT 22/5456*) did not detect any elevated contaminants of concern based on the L3 RTVs and no elevated CoC were recorded above EQS values in subsequent groundwater testing (*EMT 22/17061*). However, during monitoring, limited evidence of a black staining was noted in the groundwater, attributed to the small Phenol presence. Based on the possible presence of impaction of the groundwater, delineation of Phenol was required.



Hotspot BH506 - Verification Plan

The validation works for this hotspot have been caried out by Groundtech Consulting during the Remediation Enabling works phase on 1st November 2023.

As discussed in Section 4.0, the approved RTVs were used to validate the hotspot with respect to the protection of controlled waters and specific remedial techniques will be incorporated in the proposed development to reduce the risk to human health.

The validation works comprised the excavation of contaminated soils in BH506 based on the criteria outlined in the approved SGP Remedial Strategy, summarised below:

- *Visual evidence of contamination (Black staining, oil, free phase)*
- *Olfactory evidence of contamination (PID >50ppm)*

The remediation validation works are discussed in the following section.

5.10.1 01st November 2023

The position of BH506 was set out by UR as previous enabling works had resulted in the monitoring well being buried and inaccessible.

Excavation was undertaken at BH506 and the ground model comprised cohesive Made Ground to a minimum depth of 2.0m begl whereby the excavation was terminated. At this position, Made Ground has previously been recorded to 7.5m bgl and therefore it was not possible to excavate with a tracked excavator. However, samples of the Made Ground were obtained at variable depths to assess the Phenol concentrations in the secondary source of contamination. Potentially in the Made Ground It should be noted that no visual or olfactory evidence of contamination was recorded and PID concentrations of less than 10ppm were present.



Photograph 72 – Hotspot BH506



Photograph 73 – Hotspot BH506

5.10.2 Laboratory Testing

Geo-Environmental testing was scheduled on 5 No. samples of the Made Ground of Hotspot BH506. The samples were obtained in accordance with the testing frequency outlined in the Smith Grant Remedial Strategy and the positions are provided on *GRO-21459-P22*. The samples were obtained at 0.5m intervals to 2.5m bgl.

The groundwater remedial target values produced by Groundtech Consulting (*Ref. GRO-21459-3710_1.2, dated November 2023*) have been selected as the remediation criteria for the hotspot with respect to the protection of controlled waters.

The Geo-Environmental testing results (*EMT 23/18362*) are presented in *Appendix 13*. A summary of the Geo-Environmental testing results and the RTV screening values are below.

Contaminant	Range (ug/kg)	Screening Value (mg/kg)	Exceedances	Locations
Benzene	*n/a*	*190ug/kg*	-	-
Toluene	*n/a*	*4,230ug/kg*	-	-
Ethylbenzene	*n/a*	*4,640ug/kg*	-	-
Xylene	*n/a*	*3,840ug/kg*	-	-
Aliphatic (C5-C6)	*n/a*	*331*	-	-
Aliphatic (C6-C8)	*n/a*	*1,680*	-	-
Aliphatic (C8-C10)	*n/a*	*300*	-	-
Aliphatic (C10-C12)	*n/a*	*60,800,000*	-	-

Aromatic (EC10-EC12)	*n/a*	*62.9*	-	-
Tetrachloroethene (PCE)	*n/a*	*745ug/kg*	-	-
Trichloroethene (TCE)	*n/a*	*396ug/kg*	-	-
Dichloromethane	*n/a*	*68.2ug/kg*	-	-
1-2 Dichloroethane	*n/a*	*503ug/kg*	-	-
Phenol	*<10*	*180ug/kg*	-	-

Phenol

No elevated concentrations of Phenol were recorded in any of the 5 No. samples screened. Furthermore, all of the concentrations were below laboratory detection limits.

Summary

No visual or olfactory evidence of contamination was identified in the shallow Made Ground excavated during the validation of Hotspot BH506 and no detectable concentrations of Phenol were recorded in the Made Ground. The samples were obtained at 0.5m intervals to a depth of 2.5m bgl. Therefore, no remedial measures are required with respect to controlled waters at Hotspot BH506. The previous anecdotal evidence of product in this area is likely to be a sheen on the groundwater surface. No phenol contamination is present at this location.

Nevertheless, remedial measures should be incorporated with respect to human health as generic contaminants are likely to be present associated with the past industrial usage. The risk to human health should be managed and mitigated by others in accordance with *Section 4.2* of the SGP Remediation Strategy, which includes additional vapour monitoring and the installation of a clean cover system.

6.0 PHASE 2H/RESERVOIR AREA

The Hotspot verification discussed in *Section 5.0* focus solely on Phases 2C to 2G as no potential hotspots have been previously identified in Phase 2H, which comprises the reservoir area, HS8 falls was located in Phase 2G. At present, the Phase 2B boundary is not definitely defined and may increase to the east depending on the findings of the Phase 2B groundwater remediation programme. Therefore, the western boundary of the Phase 2H area may be amended slightly.

Phase 2H has been previously occupied by a reservoir and associated silts beneath. A significant phase of work has been undertaken at this phase to develop a development level platform for the proposed residential development. In this phase, Plots 92 to 100 and 113 to 123 are proposed.

The following sequence of works below was undertaken:

1. *Fish rescue*
2. *Temporary diversion of watercourse (west)*
3. *Primary drain of watercourse (Syphon to spillway)*
4. *Secondary drain by cutting channel to spillway via silt filters*
5. *Draining of reservoir and drying out*
6. *Phased removal and replacement of silts (starting in east at haul road)*
7. *Stockpiling of silts in southern area of site (Phase 2D/2F)*
8. *Removal of 4,536m^3 of silt as waste*

A summary of the sequence of works is provided in the Photographs below.



Photograph 74 – Primary drain by syphon prior to diversion



Photograph 75 – Secondary Drain via channel to spillway



Photograph 76 – Draining by gravity



Photograph 77 – Diversion established



Photograph 78 – Establishment of Haul Road



Photograph 79 – Gradual replacement of excavated silts with fill



Photograph 80 – Silt excavation



Photograph 81 – Silt removal/reservoir upfill (circa 80% complete)



Photograph 82 – Compacting of fill in reservoir



Photograph 83 – Compacted reservoir fill.



Photograph 84 – Compacting of fill in reservoir



Photograph 85 – Compacted reservoir fill.



Photograph 86 – Temporary silt stockpile



Photograph 87 – Temporary silt stockpile

Removal of silts

It was initially suggested that the silts could be used in conjunction with other materials to be stabilised and used as general fill. Following the stockpiling of the silt material in the southern end of Phase 2, Urban Regen obtained samples on 19th October 2023 to determine the suitability of reuse.

Testing undertaken by Urban Regen (*23-64439*) has confirmed that the silts are not geotechnically suitable for reuse onsite, the testing results are provided in *Appendix 14*. Urban Regen stockpiled the silt in the southern end of Phase 2 and Barrats have undertaken works to remove the silts from site based on them being wet and unstable with Total Organic Carbon levels of consistently between 10 and 20%.

Approximately 4,536m^3 of unsuitable silt material has been removed from site by Barratts. The waste tickets have been requested from Barratts and will forwarded on receipt.

Human Health

The risk to human health will be mitigate through specific remedial measures implemented by others, in accordance with the SGP Remedial Specification. A significant upfill programme has been undertaken at the reservoir, Made Ground from other excavations across Phase 2 have been utilised as fill here. Therefore, the presence of a significant thickness cover system will be required in all garden areas unless further testing and assessment is carried out.

SGP are currently undertaking a vapour monitoring programme to assess the vapour inhalation risk from the underlying soils to the proposed dwellings. If the findings of the programme indicate there is a vapour risk, vapour protection measures such as the installation of a suitable vapour membrane will be required.

Controlled Waters

The risk to controlled waters is to be assessed by SGP following completion of the groundwater monitoring programme. It is not anticipated that specific remedial techniques will be required in Phase 2H as part of the development.

7.0 SURFACE WATER MONITORING

Following receipt of the Environmental Agency comments referenced *SO/2020/120065/06-L01 dated 16 May 2023*, the ongoing surface water monitoring of Pig Lee Brook immediately south of the main Tetrosyl site was continued during the remedial works and initial enabling works phase of development. The monitoring was undertaken at an agreed compliance point, south of the main Tetrosyl development, at the outfall of the culvert.

The current groundwater monitoring programme commenced on 19th June 2023 and the monitoring has been ongoing to date (May 2024). The surface water monitoring programme has been undertaken regularly on a fortnightly basis to satisfy the EA requirements.

The monitoring programme consisted obtaining surface water samples of the watercourse (Pig Lee Brook) for laboratory testing analysis and visual inspection for free phase contamination. The following analysis scheduled to target the high concentrations recorded in the main hotspot plume onsite (Phase 2B) as well as recorded CoC in the general Phase 2 area:

- *GRO Banded (C4-C12)*
- *BTEX*
- *Volatile Organic Compounds (VOCs)*

The approved Surface Water Discharge Target Values (EQS) are provided below.

Compound	Discharge Target Value (µg/l)
General Hydrocarbons	*No visible sheen (i.e solubility limit less than 100 µg/l)*
Benzene	*10*
Toluene	*74*
Ethylbenzene	*300*
Xylene	*30*
Vinyl Chloride	*0.5*
Dichloromethane	*20*
Chloroform (Trichloromethane)	*2.5*
1, 1 Dichloroethane	*30*
1,1,1 Trichloroethane	*100*
1, 2 cis Dichloroethene	*50*
TCE	*10*
PCE	*10*
Chlorobenzene	*300*
1, 2 Dichlorobenzene	*20*
Phenols	*7.7*
Di-n Butyl Phthalate	*8*
Glycols	*14,000*
Total Suspended Solids	*100,000*

It should be noted that the contaminants in the hatched area above were generally not scheduled during the monitoring. This was due to the limited levels of the main contaminants in the remedial works encountered during the monitoring period.

The results of the surface monitoring are provided *in Appendix 15* and a summary of the results is provided below.

BTEX

No elevated levels of Benzene, Toluene, Ethylbenzene or Xylene have been recorded over the monitoring period of the Pig Lee Brook tributary.

All the levels of BTEX have been recorded at levels below laboratory detection limit of 5ug/l, a single sample obtained on 26th February 2024, consisted of a detectable level of Toluene of 8ug/l. In addition, a single detectable level of Ethylbenzene of 1ug/l was recorded on 10th July 2023.

No other detectable concentrations of BTEX were recorded during the monitoring period.

GRO Hydrocarbons

Based on the approved surface water screening values, no elevated concentrations of hydrocarbons (GRO Aliphatic C4 to C8) have been detected over the monitoring period, with the vast majority being recorded at levels beneath the laboratory detection limits.

Detectable levels of GRO C8 to C12 of up to 100ug/l were recorded during the surface water sampling visit on 31st January 2024, and minor detectable levels of up to 12ug/l were recorded on 26th February 2024. The detectable levels were noted during the general site turnover in Phase 2, approximately 20 days following the final hotspot verification works and is not considered to be linked.

Volatile Organic Compounds (VOC) and Semi Volatile Organic Compounds (SVOCs)

No elevated VOCs or SVOCs were recorded during the surface water monitoring/sampling.

SVOCs were generally not screened, based on the bulk of the contamination from Tetrosyl being Volatile Compounds and falling within the GRO Aliphatic C4 to C8 range. Nevertheless, no elevated SVOCs were noted on any of the visits whereby SVOCs were screened.

Summary

At the time of the detectable levels of BTEX and GRO, a turnover programme was being undertaken in the southern section of the site under a part-time watching brief by Groundtech Consulting. No sources of contamination were noted during this activity.

No elevated contaminants of concern have been recorded at levels above the Surface Water Discharge Target Values (EQS) during the entire monitoring period. The period has included significant enabling works in the southern section of the site as well as the majority of the hotspot excavation works in the wider Phase 2 area, including the remediation and verification of HS1.

It is also important to note that the enabling works in Phase 2B and soil treatment have not yet been undertaken and additional monitoring is required.

Based on no elevated Contaminants of Concern being recorded and infrequent detectable levels of BTEX/GRO recorded, the results confirm Phase 2 is not impacting Pigg Lee Brook.

The monitoring focused on the secondary sources of contamination in the shallow soils and Sandstone bedrock, as the primary sources of contamination have been removed from the site. The non-detectable monitoring results over a sustained period indicate the wider Phase 2 area poses a negligible risk to surface

waters downgradient of the site, which will be further reduced following the diversion of the watercourse to an engineered channel and new culverts.

8.0 ASBESTOS MONITORING

Asbestos containing materials (ACMs) were indicated to be used at the site, including structural cement boarding and insulation. These ACMs were removed from buildings, however a working assumption that asbestos impacts to the Made Ground could be widespread has been maintained.

Previous asbestos testing undertaken at the wider Phase 2 area with localised detections of amosite board fragments, chrysotile fabric and chrysotile fibres being present. Anthophyllite fibres, chrysotile and crocidolite lagging of up to 0.093mass% were recorded in subbase to the car maintenance shed.

Urban Regen have indicated that imported material is not required for the proposed development and the aggregate utilised will be sourced from the demolition material onsite. Previous testing undertaken for aggregate generated in Phase 1 and Phase 1B (*EMT-22/7432*) did not detect asbestos fibres.

Testing of aggregate for reuse in Phase 2 is also required in accordance with the SGP Remedial Strategy. The Remedial Specification indicates that the limit of detection (0.001mass%) should be used for the screening value, however this is typically limited to residential soils and assessment should be undertaken for slightly higher concentrations. For aggregate material proposed to be reused onsite for haul routes, as a subbase for hardstanding and in the construction of roads, testing should be undertaken at a frequency of 1 sample per 500m^3 or 1kg bulk sample per 500m^3. As the proposed material is not to be used in the cover system, only asbestos testing is required as per the approved Remedial Strategy.

The material was crushed aggregate (6f2) generated through crushing material onsite. Testing of the aggregate material was undertaken comprising 6 No. samples of the crush aggregate stockpile being screened for asbestos. Five of the six samples have detectable levels of asbestos in the form of predominantly chrysotile, and rare amosite and crocidolite fibres of up to 0.007mass%.

Since the initial testing, Urban Regen have indicated that approximately 3,500m^3 of crushed aggregate material has been generated onsite and is to be reused in Phase 2. Therefore, an approximate 7kg bulk sample of the stockpile is required for asbestos testing.

Groundtech visited site on 31st January 2024 to obtain the bulk sample for analysis and no concentrations of asbestos were detected through the bulk analysis testing. The asbestos testing results (*EMT 22/20342*) and bulk asbestos testing results (*DETS 24-02575*) are in *Appendix 16*.

Asbestos air monitoring has also been undertaken during the utilisation of the aggregate material as part of the enabling works (civils) in the southern proportion of Phase 2. Two airborne dust samples were obtained from a gridded MCE membrane filer during the monitoring and were analysed for ACMs. The dust particles indicated a mass of 0.001% total fibres and the asbestos (XMX & CMX) were less than 0.001%. The certification of analysis and dust particle testing results are in *Appendix 17*.



Photograph 88 – Crushed aggregate stockpile.



Photograph 89 – Crushed aggregate stockpile in soutof Phase 2.



Photograph 90 – Asbestos air monitoring (Phase 2)



Photograph 91 – Asbestos air monitoring (Phase 2)

The remediation and construction activities have a low to medium receptor ranking and a medium to high pathway ranking, according to JiWG. This is based on the materials having potential for high levels of disturbance at or near the surface by operatives working in close proximity. However, once complete there is negligible pathway ranking for the residents due to being present beneath hardsurfacing.

In accordance with the Joint Industry Working Group (JIWG) decision support tool for CAR2012 work categories, the bulk asbestos concentration (non-detect) is indicative of a less than 0.001mass% concentration and the hazard is *Negligible*. It should be considered that this is excluding the very low, detectable levels of asbestos encountered in the smaller sample fractions (less than 20mm) which are not entirely representative of the general 6F2 stockpile.

The JIWG ranking to end site users is *Very Low* and the ranking to construction workers is *Low* based on JiWG receptor tool. Therefore, CAR requirements do not apply, and remedial measures are not necessary.

The JIWG receptor ranking results are provided in *Appendix 18*. It is the responsibility of contractor to implement control measures to their satisfaction.

A watching brief should be undertaken by a suitably qualified consultant for suspect materials during the enabling works phase. This should consist of supervision during future crushing exercises to manage the risks and advise on the requirement of further testing and monitoring. Furthermore, it is prudent that an additional

phase of asbestos air monitoring is undertaken during the next phase of work with the aggregate material, to confirm the recommendations of this risk assessment.

As mentioned above, the crushed aggregate will not be placed in residential soils and garden areas. The hardsurfacing roadways and floor slabs will break the linkage between soils containing trace asbestos and end site users. Furthermore, a sufficient cover system is to be installed in garden areas which will mitigate against any possible asbestos fibres in garden areas.

The testing demonstrates the asbestos removal in previous structures was done to a high level.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The remediation works in Phase 2 (except Phase 2B) have been completed with the hotspots and potential hotspots identified onsite (*SGP Drawing Ref. 005*) being validated successfully to the approved stringent controlled Remedial Target Values and do not pose a controlled waters risk. The controlled waters screening levels are more stringent than the human health screening values and further remedial measures to mitigate the human health risk are to be implemented by others as discussed below. The remediation works also demonstrate that the free product encountered during the remediation enabling works in HS1, HS8 and associated pipework (predominantly in HS1) has been suitably removed from site.

As discussed in *Section 5.0*, additional consideration into HS2 is required prior to the progression of the development in this area, which includes Plots 258 to 264. This is based on the limited investigation due to the presence of the culvert in the vicinity of the potential hotspot area.

Contaminated material to the volume of 503.967m^3 has been excavated from the hotspots during the remediation works in Phase 2. The total volumes are summarised in the table below.

Hotspot Ref.	Approx Volume of Material Excavated
HS1	*280m^3*
HS3	*10m^3*
HS4	*35m^3*
HS5	*8m^3*
HS6	*75m^3*
HS7	*15m^3*
HS8	*40m^3*
HS BH502	*25m^3*
HS BH506	*10m^3*
Total	*c.498m^3*

The contaminated material has been stockpiled in Phase 2H at the position of the former reservoir. The stockpile is located on the opposite site of site to allow for the commencement of the development in the south western extent of site in Phase 2D, 2E & 2F. The stockpile location is provided below.



Stockpile Location Plan (Contaminated arisings in blue)

The disposal and treatment of the contaminated stockpile is to be undertaken by Urban Regen and the waste transfer notes are be provided to Bury Council.

Further Remediation - Human Health

Specific remedial techniques will be incorporated in the proposed development, in accordance with the SGP Remedial Specification, to reduce the risk to human health. Health risks associated with general contaminants of concern including metals, asbestos, speciated PAHs and non-volatile hydrocarbons will be managed by the construction of a cover system in garden areas. In addition, additional vapour monitoring is to be undertaken to quantify the risk to end users. Vapour protection measures such as a vapour resistant membrane will be installed where required based on the findings of the monitoring.

In general, especially in the southern and central areas of Phase 2, site levels are to undergo significant level changes in the form of a fill to reach the finished levels. The material currently in stockpiles will be used for this in accordance with the site MMP. There is an overall surplus of fill materials once the site has been regraded to accept the 600mm cover system to isolate residents from residual low-level contamination. Surplus materials will be removed from the site by Barratt Manchester.

The asbestos risk to human health has been indicated as Very Low however the risk should be mitigated with the appropriately designed remedial measures.

Further Remediation – Controlled Waters

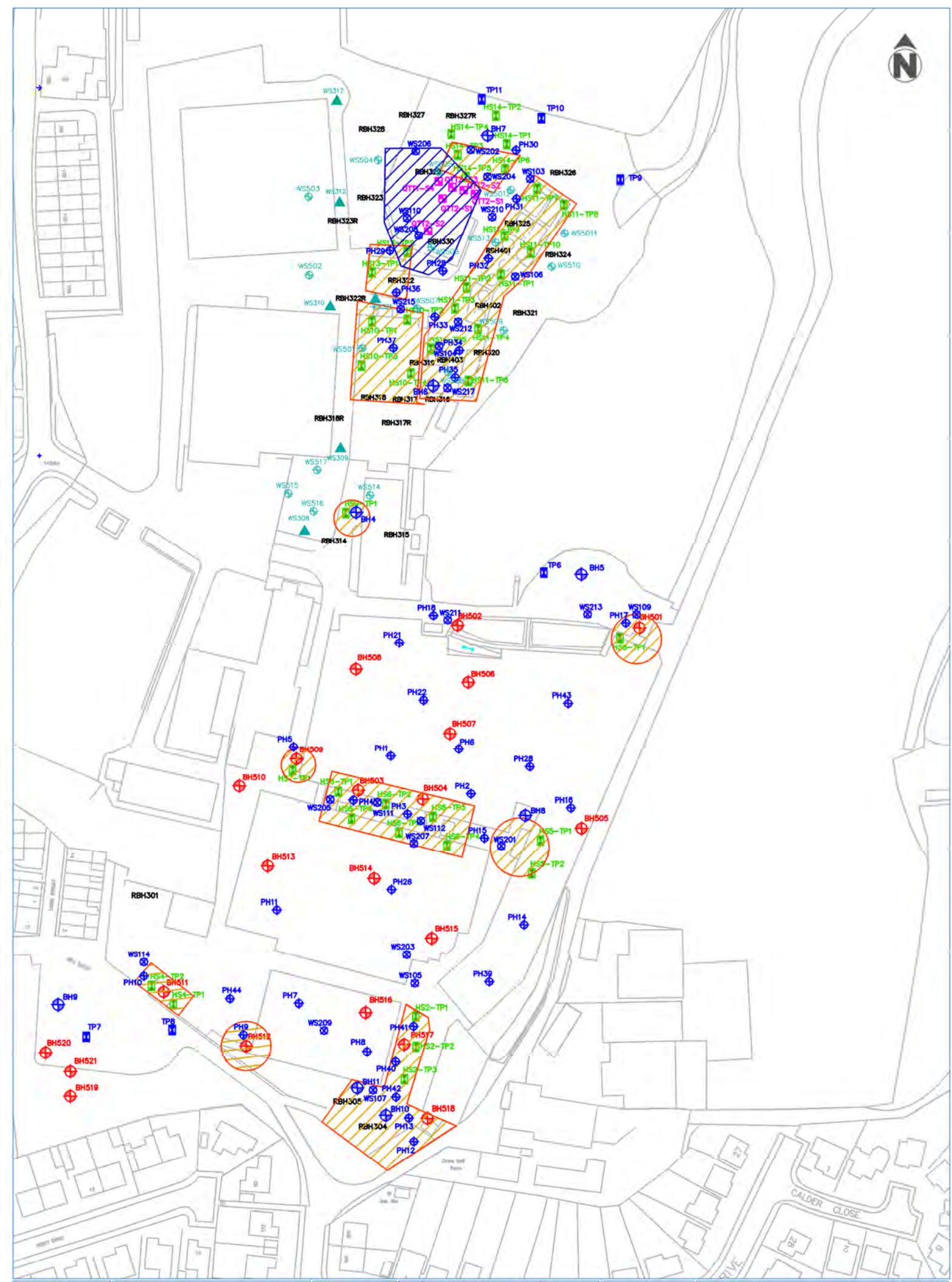
Based on the remediation works of the Phase 2 hotspots, the Phase 2 areas has been validated to the approved L3 RTVs in accordance with the approved Remedial Specification and no further remediation measures are required with respect to controlled waters. The L3 RTVs have not been fully met in HS1 and further liaison with the Environment Agency is likely to be required.

The watching brief implemented at HS2 will determine the requirement for further remediation.

Phase 2 has been successfully remediated to the approved RTVs and development can progress subject to approval from the regulators. Further remediation is required in Phase 2B however these works are to be undertaken independently and are not covered in this document.

The surface water testing undertaken during the remedial works indicate that there is no risk from the secondary sources in the wider Phase 2 area.

APPENDIX 1 - Plans



GROUNDTECH CONSULTING	CLIENT: URBAN REGEN	DATE: NOVEMBER 2022				Status:	Notes:
	PROJECT TITLE: TETROSYL BEVIS GREEN WORKS, BURY	SCALE: A3				Preliminary	Hospot Areas
	PLAN TITLE: COVERAGE PLAN	PLAN NUMBER: GRO-21458-P01				Draft	Quarry Area
			Rev.	Details	Date	Issued	
						For Comment	
						Approved	

Programme to complete Rev 10 - Layout

29th Nov 2023

Phase 1A

Phase 1B

Phase 2A

Phase 2B
13/09/24

Phase 2C
01/12/23

Phase 2D
14/05/24

Phase 2E
08/07/24

Phase 2F
30/04/24

Phase 2G
15/05/24

Phase 2H
27/09/24

Tributary of
Pigs Lee Brook

Visit 1
12/03/24

Visit 2
15/05/24

Visit 3
15/07/24

Visit 4
27/08/24

Visit 5
03/10/24

Visit 6
11/12/24

Remediation (22/11/23)
(Phase completion date)

Surfacing visit (22/11/23)
(Completion)

GROUNDTECH CONSULTING	CLIENT: URBAN REGEN	DATE: MARCH 2023
	PROJECT TITLE: TETROSYL BEVIS GREEN WORKS, BURY	SCALE: NTS
	PLAN TITLE: PHASE PLAN	PLAN NUMBER: GRO-21459-P02

Rev.	Details	Date
1.1	Phase 2C, 2D, 2E, 2F, 2G & 2H included.	11th June 2024

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

Approximate extent of culvert

Southern extent inaccessible due to retaining wall. Soils impacted outside of site.

HS1–N2
HS1–L
HS1–05
HS1–04
HS1–Z
HS1–M2
HS1–L2
HS1–K
HS1–Y
HS1–J
HS1–03
HS1–X
HS1–M
HS1–K2
HS1–I
HS1–06
HS1–02
HS1–J2
HS1–01
HS1–W
HS1–B
HS1–Q
HS1–H2
HS1–C
HS1–A
HS1–V
HS1–G
HS1–H
HS1–I2
HS1–D
HS1–U
HS1–S
HS1–T
HS1–E
HS1–P
HS1–G2
HS1–R
HS1–E2
HS1–F
HS1–O
HS1–D2
HS1–N
HS1–F2
HS1–B2
HS1–C2
HS1–A2

Cross Hall Farm

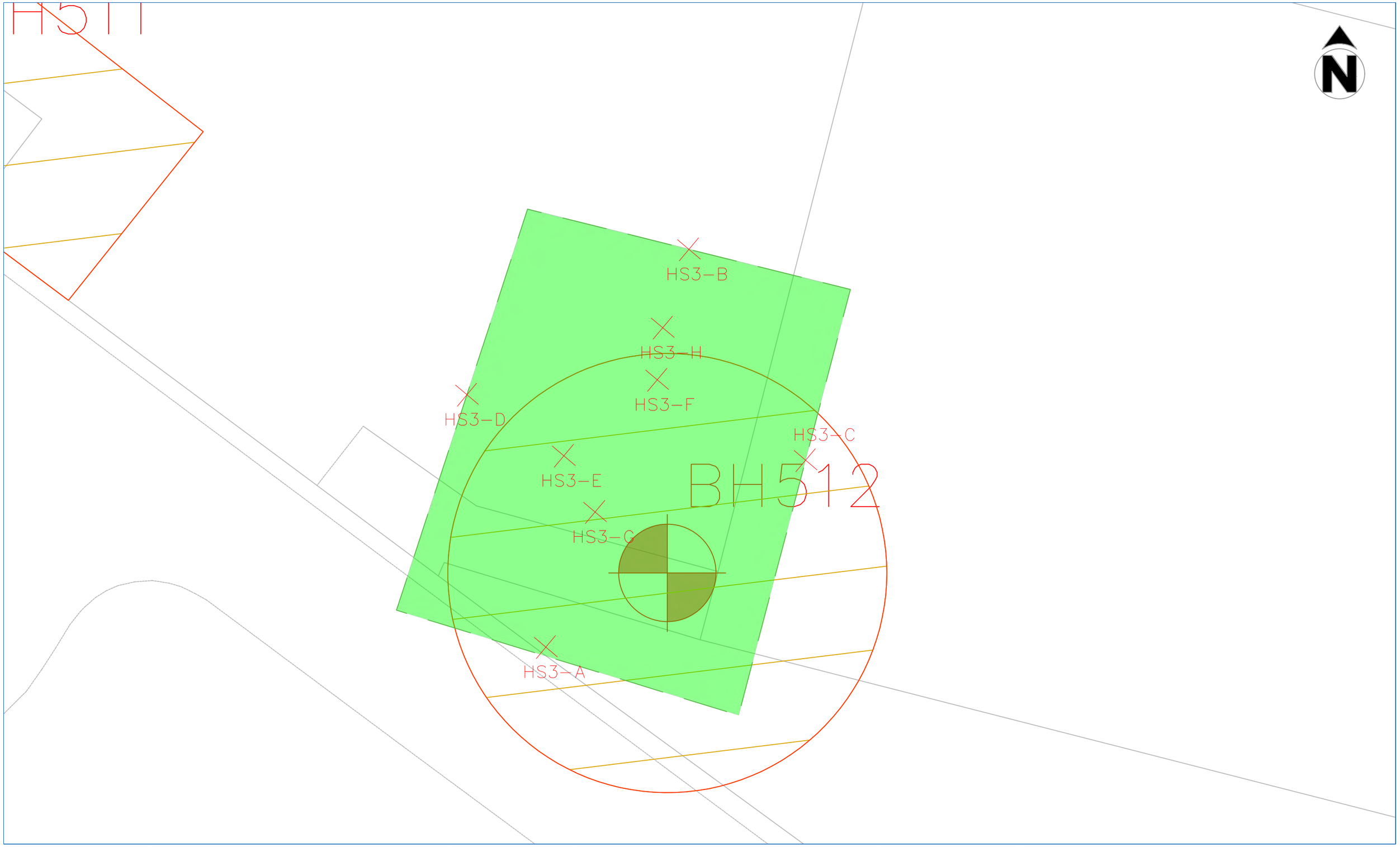
GROUNDTECH CONSULTING

CLIENT	URBAN REGEN
PROJECT TITLE	TETROSYL BEVIS GREEN WORKS, BURY
PLAN TITLE	HOTSPOT VERIFICATION PLAN - HS1
DATE	DECEMBER 2023
SCALE	NTS
PLAN NUMBER	GRO-21459-P14

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes
- Sampling Locations
- Extent of hotspot validation pit - May 2022
- Extent of hotspot validation pit - December 2023
- CoCs elevated above approved RTVs
- No elevations recorded
- Testing not undertaken



GROUNDTECH CONSULTING

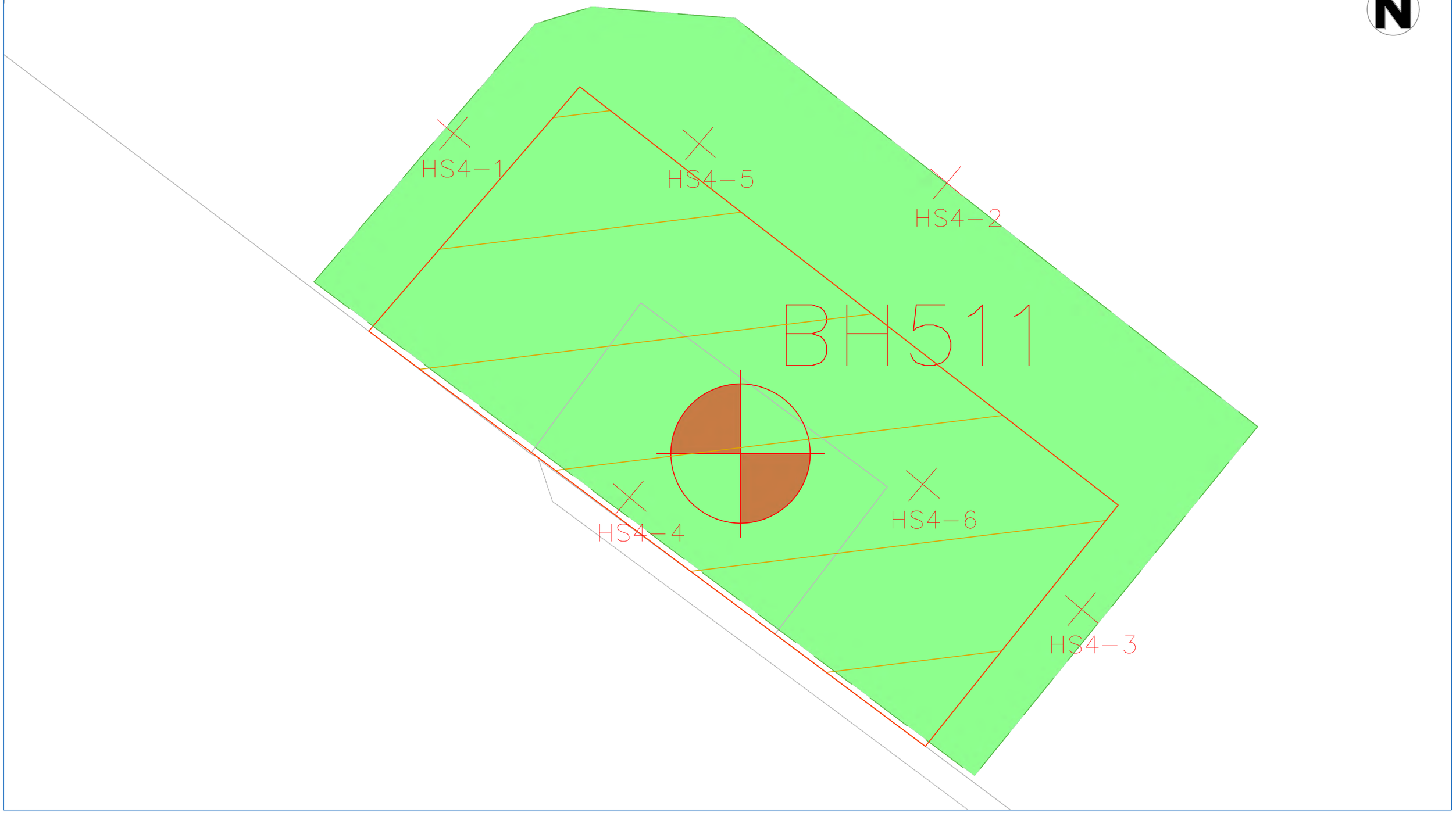
CLIENT	URBAN REGEN
PROJECT TITLE	TETROSYL BEVIS GREEN WORKS, BURY
PLAN TITLE	HOTSPOT VERIFICATION PLAN - HS3
DATE	MAY 2024
SCALE	NTS
PLAN NUMBER	GRO-21459-P16

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

- Location of Groundtech boreholes
- Hotspot validation sampling location
- Hotspot area validated to specification
- Approximate area of Hotspot 3



GROUNDTECH CONSULTING

CLIENT	URBAN REGEN
PROJECT TITLE	TETROSYL BEVIS GREEN WORKS, BURY
PLAN TITLE	HOTSPOT VERIFICATION PLAN - HS4
DATE	MAY 2024
SCALE	NTS
PLAN NUMBER	GRO-21459-P17

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

- Location of Groundtech boreholes
- Hotspot validation sampling location
- Hotspot area validated to specification
- Approximate area of Hotspot 4



GROUNDTECH CONSULTING

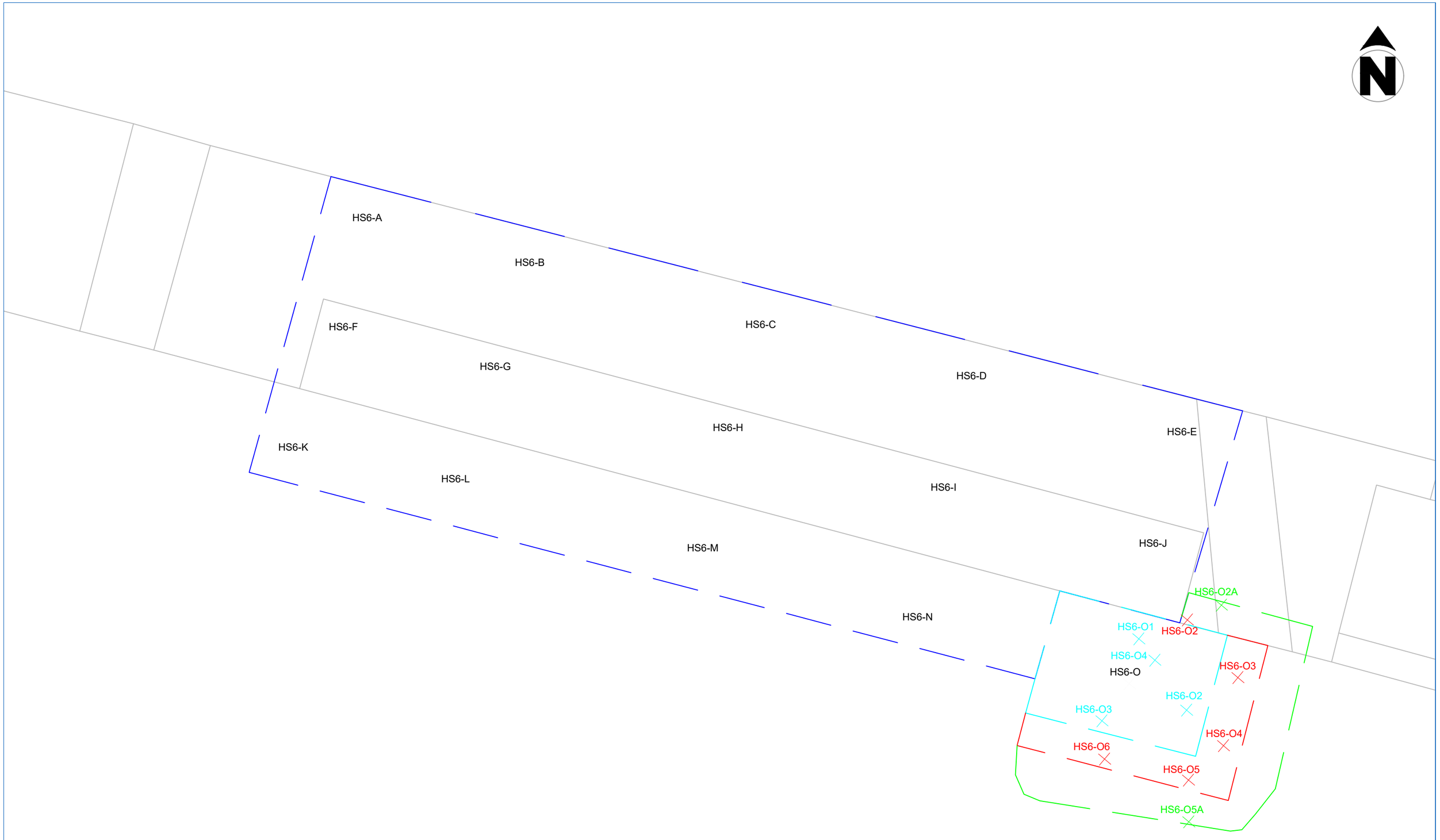
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PROJECT TITLE	TETROSYL BEVIS GREEN WORKS, BURY
PLAN TITLE	HOTSPOT VERIFICATION PLAN - HS5
DATE	MAY 2024
SCALE	NTS
PLAN NUMBER	GRO-20392-P18

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

- Location of Groundtech boreholes
- Hotspot validation sampling location
- Hotspot area validated to specification
- Approximate area of Hotspot 5



GROUNDTECH CONSULTING

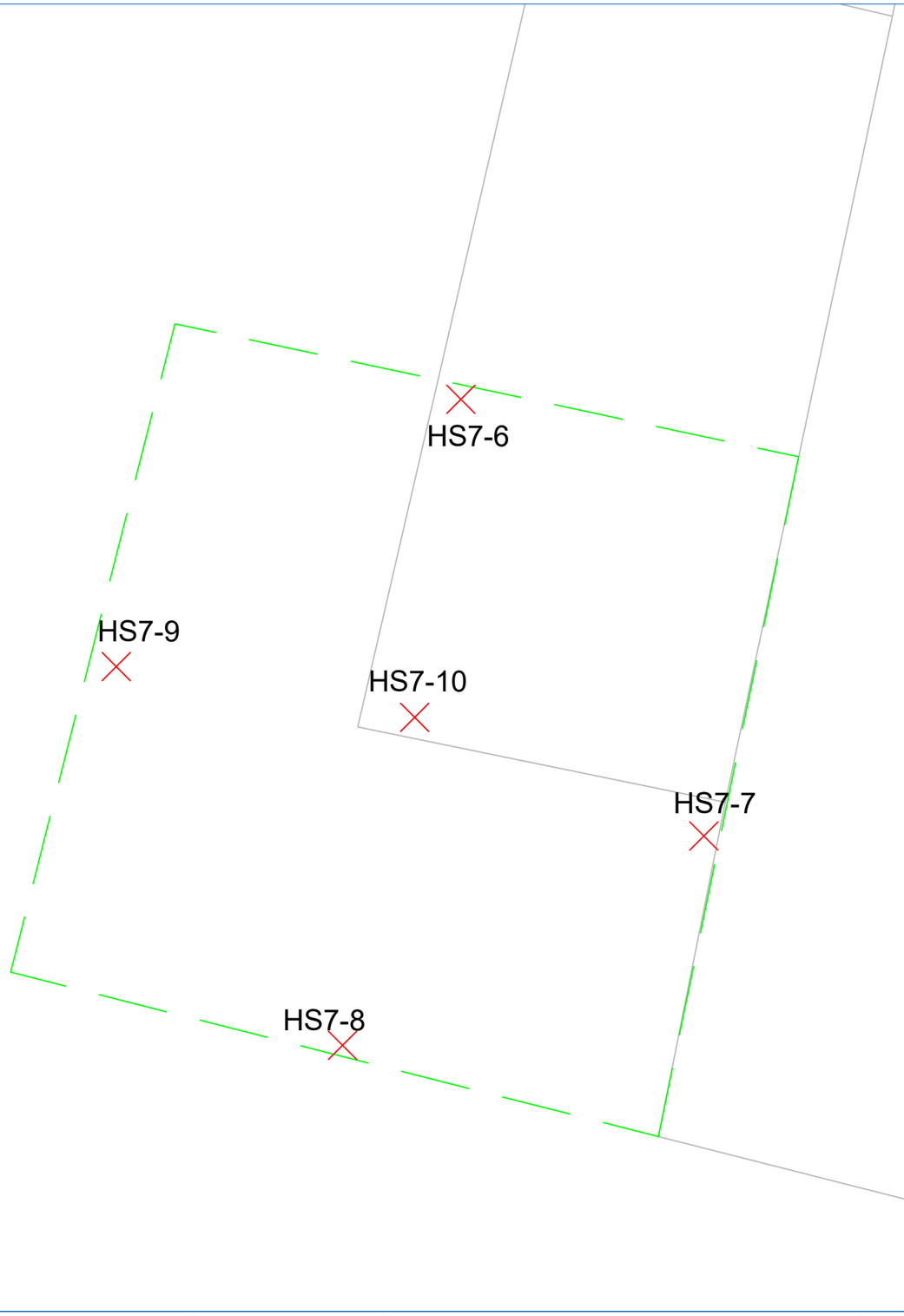
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PROJECT TITLE	TETROSYL BEVIS GREEN WORKS, BURY
PLAN TITLE	HS6 HOTSPOT SAMPLING PLAN - HS6
DATE	JANUARY 2024
SCALE	NTS
PLAN NUMBER	GRO-21459-P19

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

- Approximate extent of hotspot excavation - 30th March 2023
- Approximate extent of hotspot excavation - 1st November 2023
- Approximate extent of hotspot excavation - 12th December 2023
- Approximate extent of hotspot excavation - 12th January 2024



GROUNDTECH CONSULTING

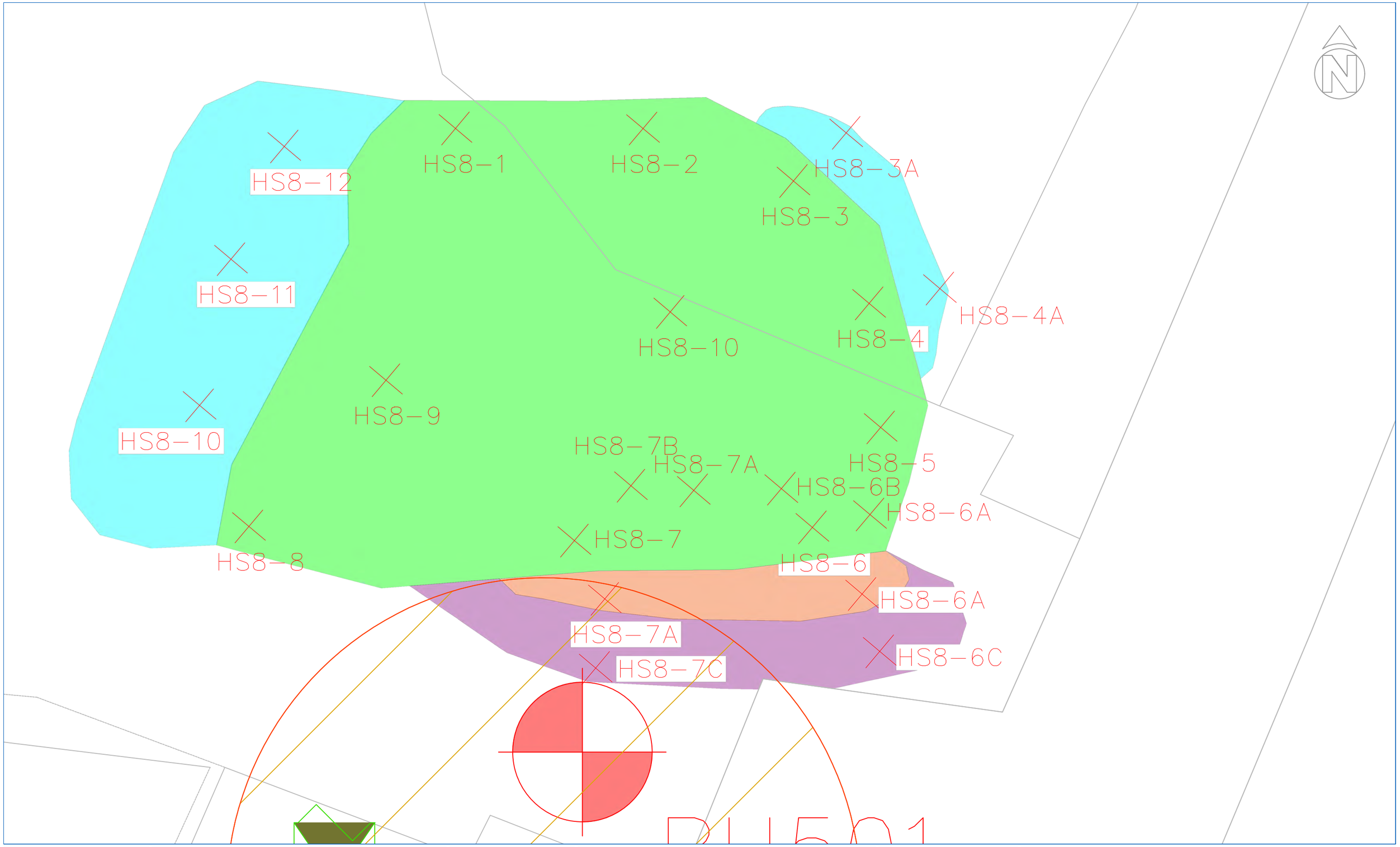
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PROJECT TITLE	TETROSYL BEVIS GREEN WORKS, BURY
PLAN TITLE	HOTSPOT VERIFICATION PLAN - HOTSPOT 7
DATE	JANUARY 2024
SCALE	NTS
PLAN NUMBER	GRO-21459-P20

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

- Approximate extent of hotspot excavation
- Verification sampling location



GROUNDTECH CONSULTING

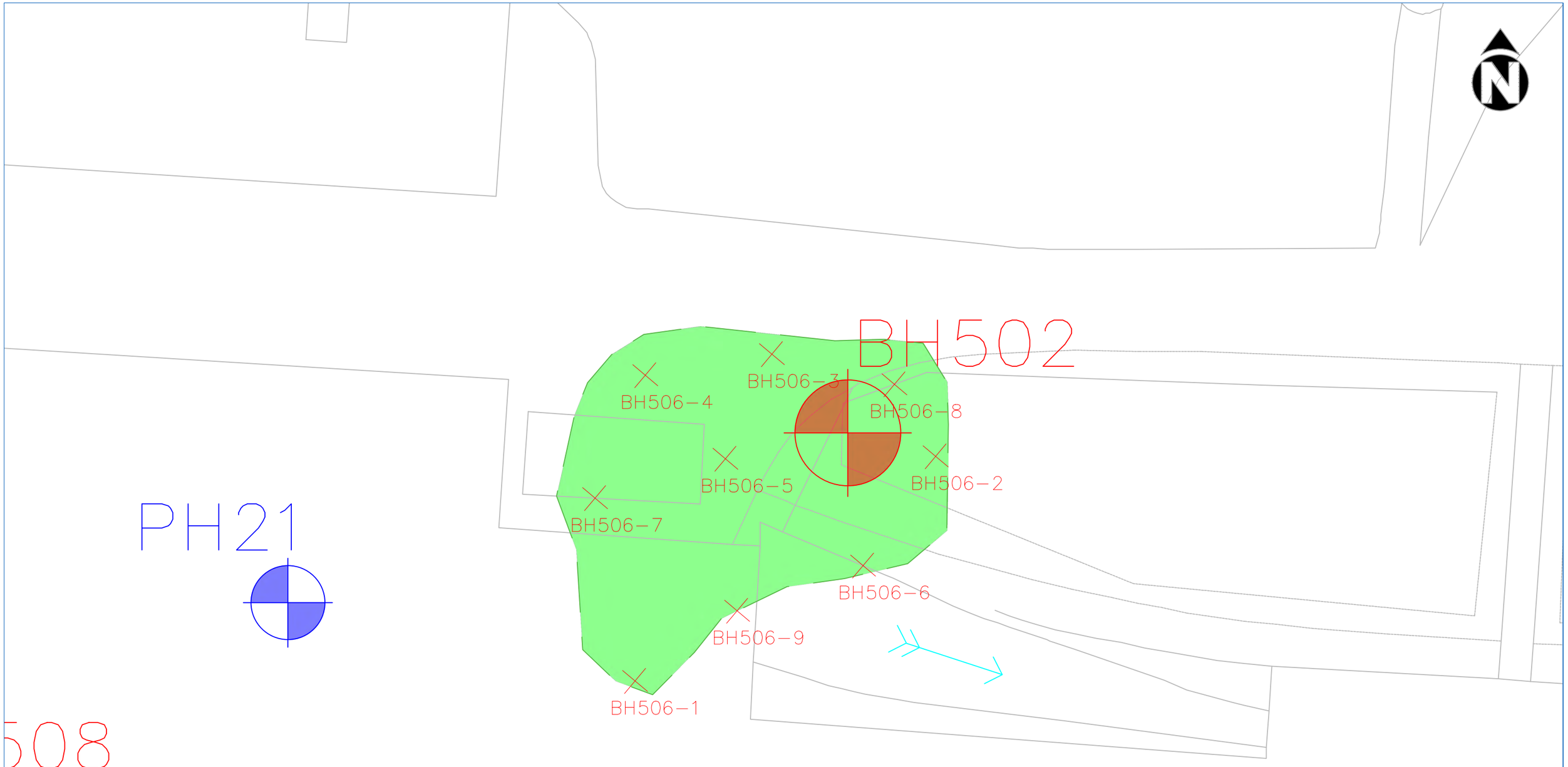
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PROJECT TITLE	TETROSYL BEVIS GREEN WORKS, BURY
PLAN TITLE	HOTSPOT VERIFICATION PLAN - HS8
DATE	MAY 2024
SCALE	NTS
PLAN NUMBER	GRO-21459-P15

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

- Approximate extent of hotspot excavation - October 2023
- Approximate extent of hotspot excavation - November 2023
- Approximate extent of hotspot excavation - December 2023
- Approximate extent of hotspot excavation - January 2024



GROUNDTECH CONSULTING

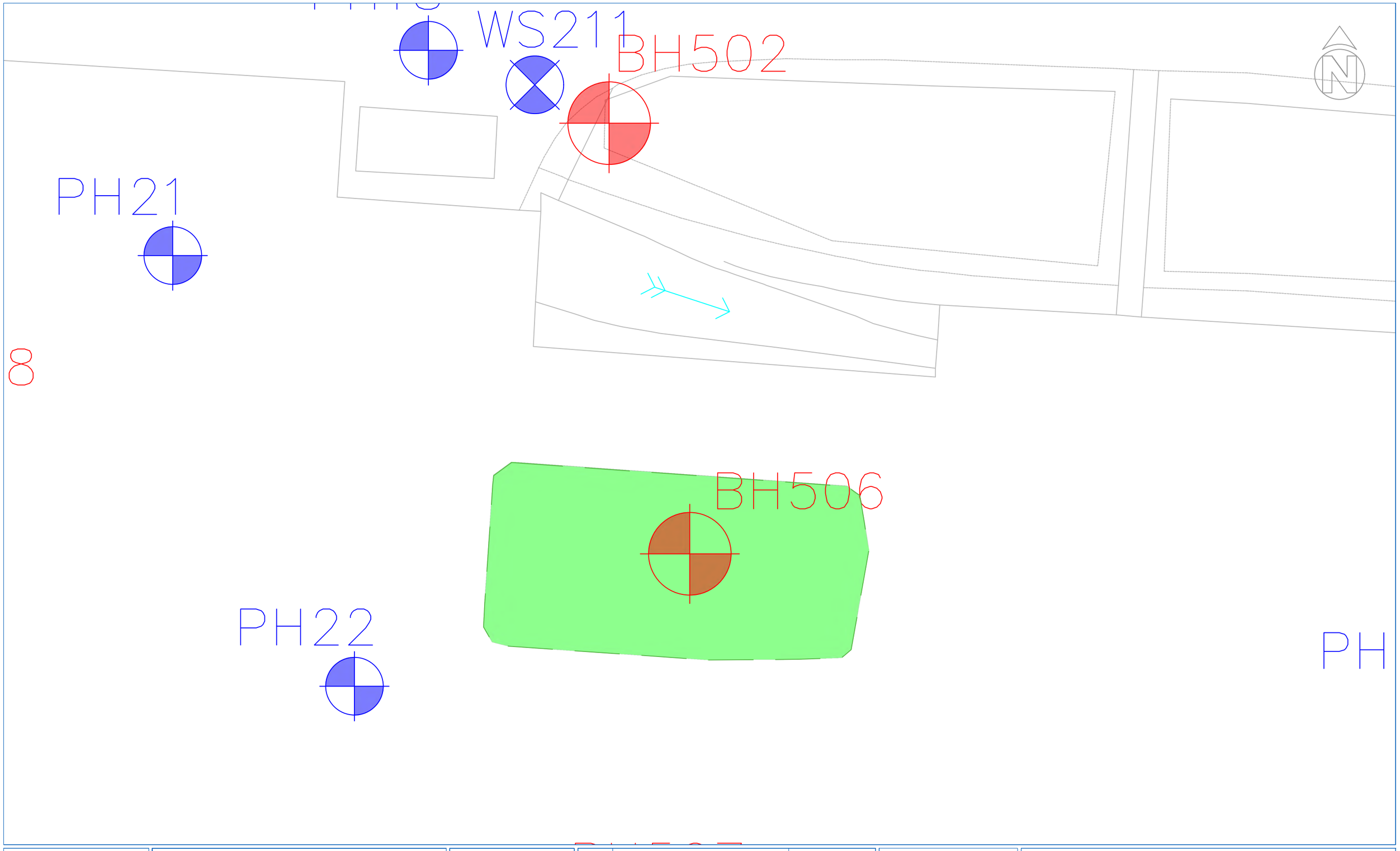
CLIENT	URBAN REGEN
PROJECT TITLE	TETROSYL BEVIS GREEN WORKS, BURY
PLAN TITLE	HOTSPOT VERIFICATION PLAN - BH502
DATE	NOVEMBER 2023
SCALE	NTS
PLAN NUMBER	GRO-21459-P21

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

Approximate extent of hotspot excavation



GROUNDTECH CONSULTING

CLIENT	URBAN REGEN
PROJECT TITLE	TETROSYL BEVIS GREEN WORKS, BURY
PLAN TITLE	HOTSPOT VERIFICATION PLAN - BH506
DATE	NOVEMBER 2023
SCALE	NTS
PLAN NUMBER	GRO-21459-P22

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

Approximate extent of hotspot excavation

*Samples obtained at 0.5m intervals from centre of excavation

Ph2 - SGP (2020) GW Monitoring Well (ref. R2174-R05 & R09)

Ph2 - SGP (2020) Destroyed GW Monitoring Well

Groundtech (2022) Monitoring Well (ref. GRO-21459-3627)

SGP (2021) Trial-Pit (ref. R2174-R06)

Potential or Identified Contamination Hotspot

N

BALDINGSTONE

WALMERSLEY OLD ROAD

RIBBLE DRIVE

CARR BANK

Reservoir

Works

Tank

Cross Hall Farm

BEVIS GREEN

LUMN STREET

Mill House

Phase 1A

Phase 1B

Phase 2a

Phase 2b

Phase 2

Reservoir Area

RBH327 RBH328 RBH326 RBH323 RBH323R RBH330 RBH325 RBH401 RBH322 RBH322R RBH402 RBH321 RBH320 RBH319 RBH316 RBH403 RBH318 RBH317 RBH318R RBH317R RBH203 RBH314 RBH315

BH502 BH501 BH508 BH506 BH507 BH509 BH510 BH503 BH504 BH505 BH513 BH514 BH515 BH516 BH512 BH517 BH518 BH520 BH521 BH519

RB301 RB302 RB303 RB304 RB305

HS14-TP2 HS14-TP4 HS14-TP1 HS14-TP3 HS14-TP6 HS14-TP5 HS11-TP7 HS11-TP8 HS11-TP9 HS11-TP1 HS11-TP2 HS11-TP3 HS11-TP4 HS11-TP5 HS11-TP6 HS13-TP2 HS13-TP1 HS10-TP2 HS10-TP1 HS10-TP3 HS9-TP1 HS8-TP1 HS7-TP1 HS6-TP2 HS6-TP3 HS6-TP6 HS6-TP5 HS6-TP4 HS5-TP1 HS5-TP2 HS4-TP2 HS4-TP1 HS2-TP1 HS2-TP3

14 13 12 11 10 9 8 7 6 5 4 3 2 1

QTT1 QTT1-S1 (Log 1) QTT2-S1 QTT2-S2 Single Log

*Phasing boundary shown is derived from Former Tetrosyl Works - Phase Layout 19.05.2023 - as provided by Urban Regen Ltd.

Phase 1A

Phase 1B

Phase 2 Boundary

Reservoir Area

Phase 2a

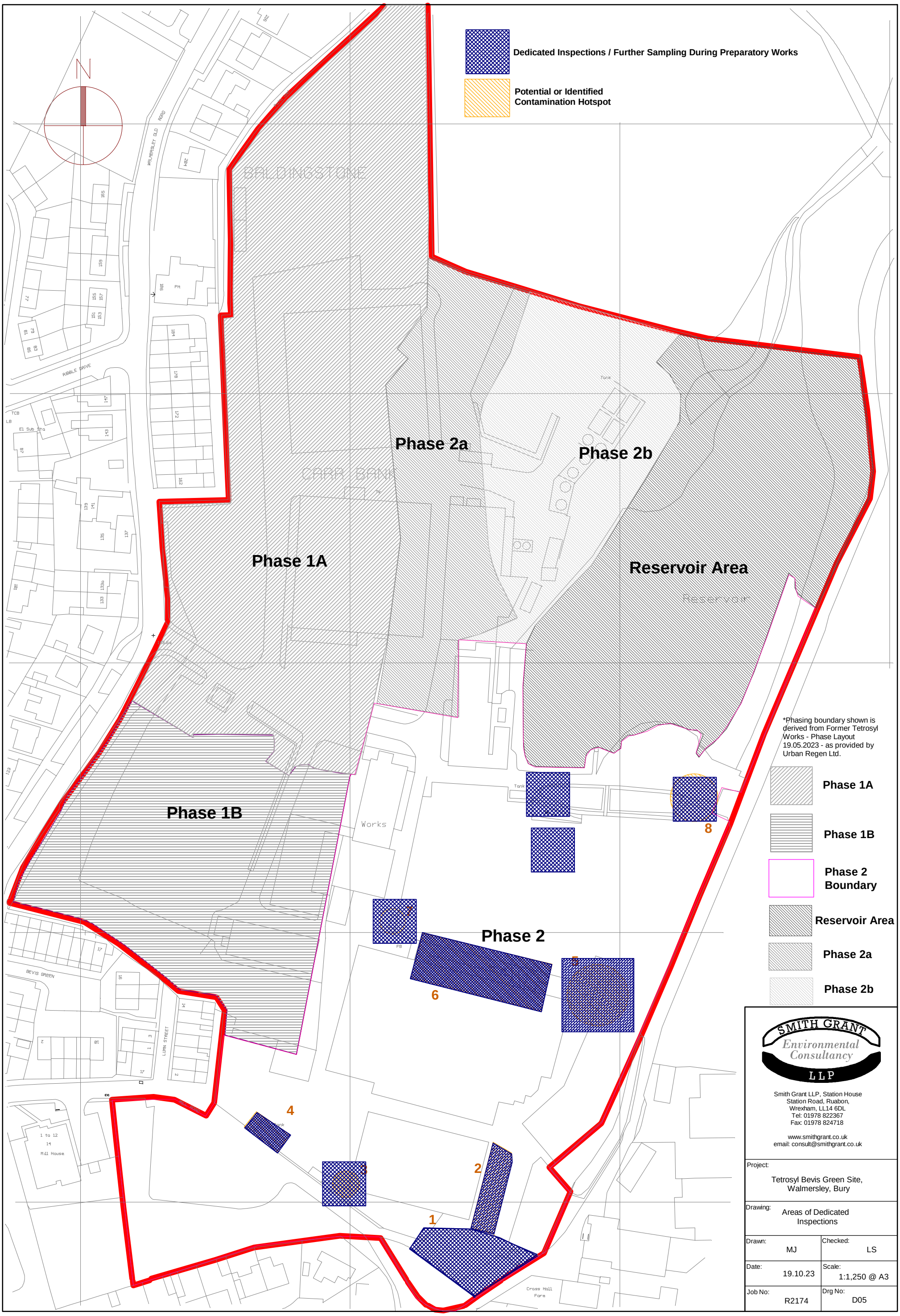
Phase 2b

SMITH GRANT Environmental Consultancy LLP

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Tel: 01978 822367
Fax: 01978 824718

www.smithgrant.co.uk
email: consult@smithgrant.co.uk

Project: Tetrosyl Bevis Green Site, Walmersley, Bury	
Drawing: Potential Contamination Hotspots & Previous SI	
Drawn: MJ	Checked: LS
Date: 19.10.23	Scale: 1:1,250 @ A3
Job No: R2174	Drg No: D02



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Fax: 01978 824718

www.smithgrant.co.uk
email: consult@smithgrant.co.uk

Project: Tetrosyl Bevis Green Site, Walmersley, Bury	
Drawing: Areas of Dedicated Inspections	
Drawn: MJ	Checked: LS
Date: 19.10.23	Scale: 1:1,250 @ A3
Job No: R2174	Drg No: D05

Gas Monitoring Wells (50m spacing)

Approximate areas of deep fills (>2m)

BALDINGSTONE

CARR BANK

Phase 1A

Phase 1B

Phase 2a

Phase 2b

Phase 2

Reservoir Area

Reservoir

Works

Tank

WALMERSLEY OLD ROAD

RIBBLE DRIVE

BEVIS GREEN

LUMN STREET

Mill House

Cross Hall Farm

*Phasing boundary shown is derived from Former Tetrosyl Works - Phase Layout 19.05.2023 - as provided by Urban Regen Ltd.

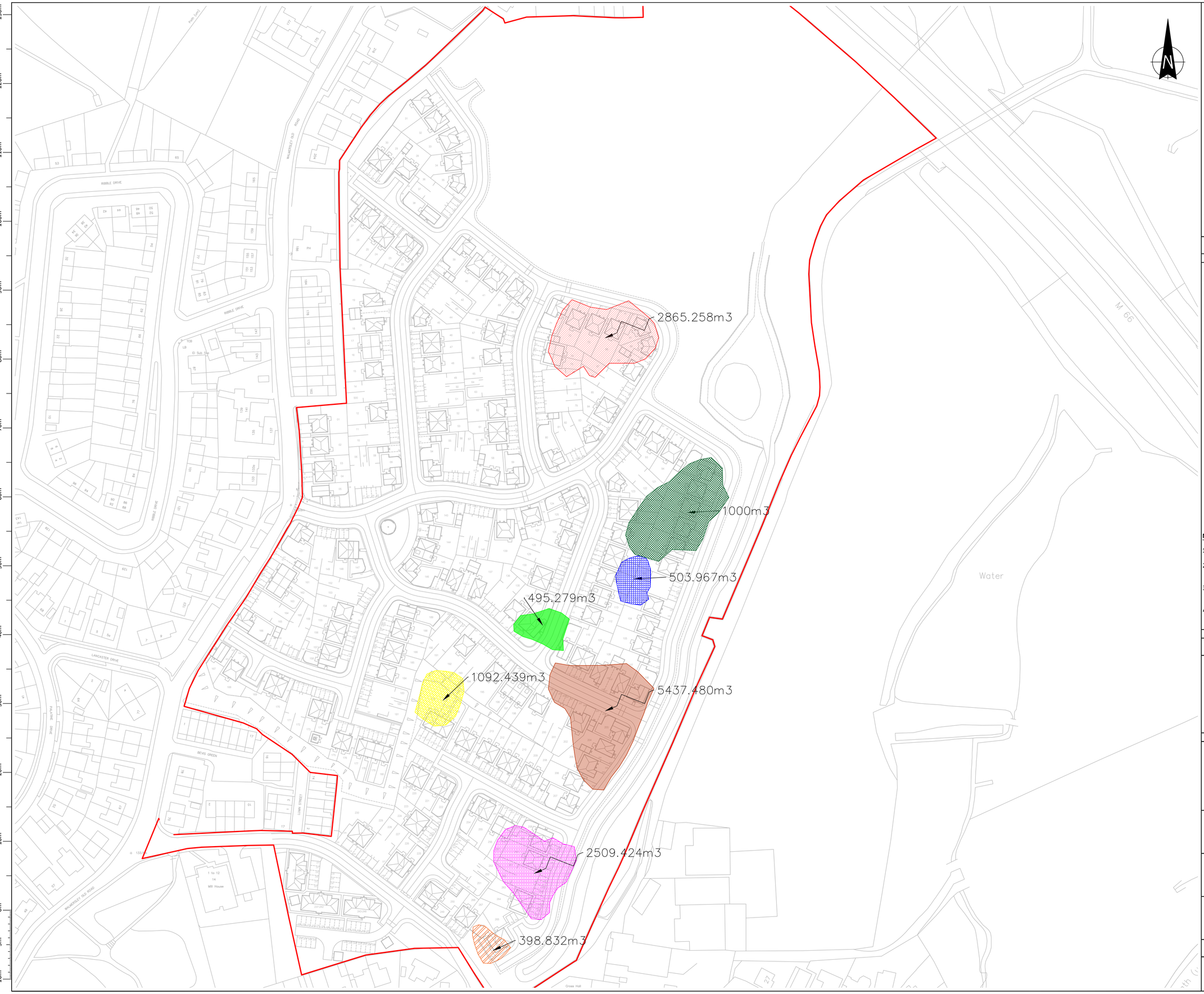
- Phase 1A
- Phase 1B
- Phase 2 Boundary
- Reservoir Area
- Phase 2a
- Phase 2b

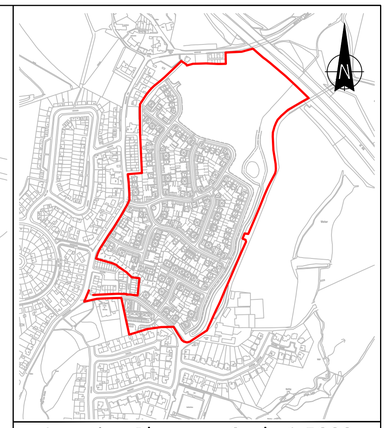
SMITH GRANT Environmental Consultancy LLP

Smith Grant LLP, Station House
Station Road, Ruabon,
Wrexham, LL14 6DL
Tel: 01978 822367
Fax: 01978 824718

www.smithgrant.co.uk
email: consult@smithgrant.co.uk

Project: Tetrosyl Bevis Green Site, Walmersley, Bury	
Drawing: Post Remediation Gas Monitoring (Deep Fill Areas Only)	
Drawn: MJ	Checked: LS
Date: 19.10.23	Scale: 1:1,250 @ A3
Job No: R2174	Drg No: D06





Location Plan Scale 1:5000

Notes:

Site boundary	
Barratts Stockpile	
Silts	
Contaminated Stockpile	
2C Cut (Haul Road)	
Watercourse Channel Cut	
2C Cut (Compound)	
Box Culvert / Road & Sewers Horizons	
Watercourse Channel Cut	

Notes

1. This plan is to be read in conjunction with the associated Completion Report.
2. The residential layout depicted on this plan is extracted from drawing ***'491-ED-08'*** supplied digitally by Barrat Homes Manchester.
3. Due to potential live services and issues associated with withdrawal of support; remediation works have been carried out to within circa 1m of the site boundary unless otherwise detailed.
4. All CBR tests were carried out by Murray Rix.

Survey Information:

Co-ord System:	Co-ord Type:	Primary Survey Control:	Secondary Survey Control:
OS(15)	Grid	Leica SmartNet	

Rev	Date	Amendment	Drawn	Checked

Urban Regen
ESTABLISHED 2001

Client:
Barratt Homes
Manchester

Project:
Waldmers Wood
Former Tetrosyl Works

Title:
Stockpiles

Scale:	First Issue:	Drawn:	Checked:
1:200	10/05/2024	R.Corrigan	R.Parry

Drawing No: 333/10/05/24

Revision:

APPENDIX 2 - Images



Photograph 92 – Surface Water Sample (31st January 2024)



Photograph 93 – Surface Water Sample (26th February 2024)



Photograph 94 – Surface Water Sample (12th March 2024)



Photograph 95 – HS1 (Product removed)



Photograph 96 – Residual product contained in base of tank in HS1 (Removed).



Photograph 97 – Product in HS1



Photograph 98 – HS1 – IC8



Photograph 99 – Removal Of product in HS1



Photograph 100 – UST in HS1



Photograph 101 – HS1



Photograph 102 – HS1 Removal of Product/water (24th March 2022)



Photograph 103 – HS1 Removal of Product/water (24th March 2022) – Mostly accumulated ranwater



Photograph 104 – HS1 Removal of Product/water (24th March 2022)



Photograph 105 – Residual product at base of UST in HS1

APPENDIX 3 - Product Disposal Consignment Notes

Reid Waste Ltd

Work Completion Note

Date: 5-Jul-22

Ticket No:

Quote Ref: RW21-2870

Reid Waste Ltd.
Formula House, Bridges Road, Ellesmere Port
Cheshire CH65 4LB
Company Registration No. 4582758
VAT Registration No. 798 3501 87
Tel: 0151 245 0248

Collection Address

Customer: Urban Regen Ltd
Site Address: Ex Tetrosyl,
Mill Road
Walmersley
Bury
Lancs Postcode: BL9 6RE
Site Contact: Ben Thomas
Contact Tel:

Work Instructions

Description of Work: Collect waste as previously listed for disposal at BIP Ltd

Special Requirements

PPE	Tick	PPE	Tick
Gloves	☐	Overalls	☐
Glasses	☐	Respirator	☐
Boots	☐	High Vis	☐

Packaging Required?	Tick	Packaging Required?	Tick
Overdrum	☐		
Bands	☐	Pallets	☐
Lids	☐	Vermiculite	☐

Invoice Address: Enviroclear Site Services Ltd,
Hafod Industrial Estate,
Ruabon,
Wrexham,
Postcode: LL14 6HF
Invoice Contact:
Contact Tel:

Order No.

Ref No.	Size	Qty	Proper Shipping Name	EWC Code	U.N. No.	Class	Sec Haz	Packing Group	Hazard Code
RW21-2870/1	1000-ltrs	5	FLAMMABLE LIQUID,N.O.S- Solvent based residues	16-07-09	1993	3	N/A	III	HP3

Consigner's Declaration:
I declare that the load has been prepared in accordance with The Carriage of Dangerous Goods by Road Regulations 1996 and the Carriage of Dangerous Goods (Classification, Packaging and Labelling) and use o
Transportable Pressure Receptacles Regulations 1996 (CPL), in particular that: a) the dangerous goods as presented may be carried; b) the dangerous goods and any packaging, intermediate bulk container or tank in whic
they are contained are in a fit condition for carriage and are properly labelled and; c) where several packages are packed together in an overpack or in a single container, that this packaging is not prohibited,

Customer Signature:
Customer Print Name: Shaun Eccles
Time on Site: 15.00
Time off Site: 15.45

Booking Time:
Anticipated Duration of Work:
Haulier: Reid Waste ☐ Sub Con ☐
HWCW No.:
Waste Transfer Note No.:

Disposal Details:
Site:
Address:

Middle Copy: Reid Waste Office Bottom Copy: Customer Deposit

Form HWCN01v051

The Hazardous Waste Regulations 2005: Consignment Note

Reid Waste Ltd.
Formula House, Bridges Road, Ellesmere Port, Cheshire, CH65 4LB
Tel 0151 245 0248 www.reidwaste.com

PART A Notification details

1 Consignment note code: URBANR/RW001

2 The waste described below is to be removed from (name, address, postcode, telephone, e-mail, facsimile):
Urban Regen ex Tetrosyl
Mill Road, Walmersley
Bury, Lancs, BL9 6RE

3 Premises code (where applicable): URBANR

4 The waste will be taken to (name, address and postcode):
BIP Organics Limited, Site 2, Waste Division
Road Beta, Brooks Lane, Middlewich,
[illegible]

5 The waste producer was (if different from 2) (name, address, postcode, telephone, e-mail, facsimile):
As A2

PART B Description of the waste

If continuation sheet used, tick here ☐

1 The process giving rise to the waste(s) was: Activities of head offices

2 SIC for the process giving rise to the waste: 70.10/

3 WASTE DETAILS (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC Code) (6 digits)	Quantity (kg)	The chemical/biological components of the waste and their concentrations are: Component	Concentration (% or mg/kg)	Physical form (gas, liquid, solid powder, sludge or mixed)	Hazard code(s)	Container type, number and size
Solvent based storage tank residues	160709		See Attached list	100%	Liquid	HP3,4,7,10,14	5 x IBCs

The information given below is to be completed for each EWC identified

EWC code	Packing group(s) number(s)	UN identification requirements	Proper shipping name(s)	UN class(es)	Special handling
160709	III	1993	FLAMMABLE LIQUID, N.O.S.	3	See Transport Documents

PART C Carrier's certificate

(If more than one carrier is used, please attach schedule for subsequent carriers. If a schedule of carriers is attached tick here. ☐)

I certify that I today collected the consignment and that the details in A2, A4 and B3 are correct and I have been advised of any specific handling requirements.

1 Carrier name: Ross Foxton

On behalf of (name, address, postcode, telephone, e-mail, facsimile):
Reid Waste Limited, Formula House, Bridges Road, Ellesmere Port,
Cheshire, CH65 4LB - Tel 0151 245 0248 www.reidwaste.com

2 Carrier registration no./reason for exemption: CBDU 204115

3 Vehicle registration no. (or mode of transport, if not road):

Signature

Date 08/07/2014 Time 1530

PART D Consignor's certificate

I certify that the information in A, B and C above is correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011. ☑

1 Consignor name:

On behalf of (name, address, postcode, telephone, e-mail, facsimile):
Urban Regen ex Tetrosyl
Mill Road, Walmersley
Bury, Lancs, BL9 6RE

Signature

Date 08/07/2014 Time 1530

PART E Consignee's certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

Individual EWC code(s) received	Quantity of each EWC code received (kg)	EWC code accepted/rejected	Waste management operation (R or D code)
160709	5000	A	R13

1 I received this waste at the address given in A4 on: Date 08/07/2014 Time 0930

2 Vehicle registration no. (or mode of transport if not road):

3 Where waste is rejected please provide details:

I certify that waste management licence/permit/authorised exemption no(s).

RP3531LP

authorises the management of the waste description in B at the address given in A4.

Name: M Roberts

On behalf of (name, address, postcode, telephone, e-mail, facsimile):
BIP Organics Limited, Site 2, Waste Division
Road Beta, Brooks Lane, Middlewich,
Cheshire, CW10 0QF - Tel 01606 838207

Signature

Date 08/07/2014 Time 0930

White - **CONSIGNOR'S COPY** (Return) Yellow - **CARRIER'S COPY** Pink - **CONSIGNEE'S COPY** Green - **CONSIGNOR'S COPY** (Deposit)

Attached list to hazardous waste consignment note number URBANR/RW001

Constituent	Maximum concentration %
Decane	11.90%
Cyclohexane, (2-methylpropyl)-	1.09%
Benzene, 1,2,3-trimethyl-	2.93%
Benzene, 1-methyl-3-propyl-	1.12%
Undecane	6.51%
Benzene, 2-ethyl-1,4-dimethyl-	0.68%
Heptane, 2,5-dimethyl-	1.91%
Octane, 2,6-dimethyl-	2.91%
Nonane, 4-methyl-	2.38%
Nonane, 2-methyl-	2.04%
Nonane, 3-methyl-	2.84%
Benzene, 1-ethyl-2-methyl-	3.89%
Cyclohexane, 1,2-dimethyl-, trans-	0.12%
Heptane, 2,6-dimethyl-	0.36%
Cyclohexane, ethyl-	0.86%
Cyclohexane, 1,1,3-trimethyl-	0.94%
Cyclohexane, 1,2,4-trimethyl-	0.75%
Octane, 2-methyl-	2.37%
1,3,8-p-Menthatriene	1.05%
Benzene, 1,2,3-trimethyl-	4.28%
Acetone	1.17%
2-Butanone	1.73%
Nonane	6.65%
Benzene, 1-ethyl-3-methyl-	1.52%

THE HAZARDOUS WASTE REGULATIONS 2005
CONSIGNMENT NOTE

OLAN	

PART A: Notification Details

1 Consignment note code: **URBANR/3272A**

2 The waste described below is to be removed from:

Urban Regen - BL9
Tetrosyl
Walmersley Old Road
Bury
Lancs
BL9 6RE

3 Premises code (where applicable): **URBANR**

4 The waste will be taken to:

CSG Cadishead
Liverpool Road
Cadishead
Manchester
M44 5DT

5 The waste producer was (if different from A2):

PART B: Description of the Waste

The process giving rise to the waste(s):

SIC for the process giving rise to the waste(s): 43110

Item	Description Of Waste	EWC Code	Qty (kg)	Chemical/Biological Component	Chemical/Biological Concentration %	Physical Form	Hazard Code(s)	Container Type	Number & Size
i	LISTED	LISTED	LISTED	LISTED	LISTED	LISTED	LISTED	LISTED	LISTED

Item	Packing Group	UN Number(s)	Proper Shipping Name	UN Class(es)	Special Handling Requirements
i	LISTED	LISTED	LISTED	LISTED	Personal Protective Equipment + LISTED

PART C: Carrier Details

I certify that I today collected the consignment and that the details in A2, A4 and B3 are correct and I have been advised of any specific handling requirements.

1 Carrier:
Enviroclear Site Services Ltd
Hafod Yard
Hafod Industrial Estate
Hafod Road
LL14 6HF

2 Carrier Registration no: **CBDU13486**

3 Vehicle Registration: DX71 OKH.

Print Name: Lee Pritchard Signature:

Date: 22/4/22 Time: 0915

PART D: Consignor's Certificate

I certify that the information in A, B and C above is correct and that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

2 Consignor name:
Urban Regen - BL9
Tetrosyl
Walmersley Old Road
Bury
Lancs
BL9 6RE

Print Name: Sam Richard

Signature:

Date: 23/04/22 Time: 09:15

PART E: Consignee's Certificate

Individual EWC	Quantity of each EWC code received (kg)	EWC code accepted/rejected	Waste management operation (R or D code)
LISTED	LISTED	LISTED	LISTED

1 I received this waste at the address given in A4 on:

2 Vehicle registration number:

Name:
CSG Cadishead
Liverpool Road
Cadishead
Manchester
M44 5DT

3 Where waste is rejected please provide details:

I certify that waste management permit EPR/BS1538IQ authorises the management of the waste described in B at the address given in A4.

Signature:

Date: Time:

CSG Ref: UR0025-0224817

CONSIGNMENT LIST UR0025-0224817

Consignor:	Urban Regen - BL9	**Consignee:**	CSG Cadishead	**Consignment Note Ref:**	URBANR/3272A	**CSG Order Number:**	
Consignor Address:	Tetrosyl Walmersley Old Road Bury, Lancs BL9 6RE	**Consignee Address:**	Liverpool RoadCadisheadManchesterM44 5DT	**Haulage Company:**	Enviroclear Site Services Ltd	**CSG Opp Ref:**	0224817
Customer Contact:	Ben Thomas 07376 611818	**CSG Contact:**	Sam Watkins	**Expected Date:**	22/04/2022	**PO Ref:**	

Part B: Description Waste														Part E: Consignee's Certificate			
No.	**DESCRIPTION**	**PROPER SHIPPING NAME**	**CHEMICAL/BIOLOGICAL COMPOSITION & CONCENTRATIONS**	**PHYSICAL FORM**	**HAZARD CODES**	**EWC**	**UN NO.**	**PG**	**HAZ LABEL**	**TC**	**CONTAINER TYPE**	**FILL%**	**WEIGHT (KG)**	**NO.OF UNITS**	**LINE WEIGHT(KG)**	**NO.OF UNITS RECEIVED**	**EWC ACCEPTED**	**R OR D CODE**
1	IC12(-S1) - Kerosene floating on water	WASTE KEROSENE	Kerosene/water 100%	Liquid	HP3;HP5;HP14	16 07 08*	1223	III	3	(D/E)	Bulk	100%	1,000.0				Yes	*R13
2	IC14(-S1) - White Spirit floating on water	WASTE FLAMMABLE LIQUID; N.O.S. Contains (White spirit/water 100%)	White spirit/water 100%	Liquid	HP3;HP5;HP14	16 07 09*	1993	II	3	(D/E)	Bulk	100%	1,000.0				Yes	*R13
													Totals:					

HAZARDOUS WASTE RETURNS SUMMARY

Collection Address:	Disposal Address:	Customer:	Account No:	Customer's Ref:	Our Ref:
Tetrosyl Walmersley Old Road, Bury BL9 6RE	Liverpool RoadCadisheadManchesterM44 5DT	Urban Regen Ltd	UR0025		0224817

Consignment No.	Consignment Type	Round No.	Collection No.	Date Received	Postcode of Place of Production	EWC Code	Hazard	Physical Form	Weight (kg)	R&D Code	Ref
URBANR/3272A	Single			22/04/2022	BL9 6RE	16 07 08*	HP3,HP5,HP14	Liquid	20220.00	*R13	WA-0196456

Generated:11/05/2022

HAZARDOUS WASTE RETURNS SUMMARY

Collection Address:	Disposal Address:	Customer:	Account No:	Customer's Ref:	Our Ref:
Tetrosyl Walmersley Old Road, Bury BL9 6RE	Liverpool RoadCadisheadManchesterM44 5DT	Urban Regen Ltd	UR0025		0224909

Consignment No.	Consignment Type	Round No.	Collection No.	Date Received	Postcode of Place of Production	EWC Code	Hazard	Physical Form	Weight (kg)	R&D Code	Ref
URBANR/3272B	Single			22/04/2022	BL9 6RE	16 07 08*	HP3,HP5,HP14	Liquid	2620.00	*R13	WA-0196572

Generated:11/05/2022

THE HAZARDOUS WASTE REGULATIONS 2005
CONSIGNMENT NOTE

OLAN	

ART A: Notification Details

Consignment note code: **URBANR/**

The waste described below is to be removed from:

ban Regen - BL9
trosyl
almersley Old Road
ury
ncs
.9 6RE

Premises code (where applicable): **URBANR**

4 The waste will be taken to:

CSG Recovery Cadishead
CSG Recovery
Liverpool Road
Cadishead
Manchester
M44 5DT

5 The waste producer was (if different from A2):

ART B: Description of the Waste

The process giving rise to the waste(s): **Site preparation**

SIC for the process giving rise to the waste(s): **43.12/0**

tem	UN Number	Proper Shipping Name	Class	Packing Group	Tunnel Code	Description	Chemical/Biological Composition & Concentration %
i	LISTED	LISTED	LISTED	LISTED	LISTED	LISTED	LISTED

tem	Physical Form	Hazard Code(s)	EWC	Fill %	Container Type	Number & Size	Special Handling Requirements
i	LISTED	LISTED	LISTED	LISTED	LISTED	LISTED	Personal Protective Equipment + LISTED

ART C: Carrier Details

certify that I today collected the consignment and that the details in A2, A4 and B3 are orrect and I have been advised of any specific handling requirements.

1 Carrier:
Cleansing Service Group
(Recovery) Ltd
T/A CSG Recovery
Carr Lane Prescot
KNOWSLEY
L34 1JZ

2 Carrier Registration no: **CBDU277052**

3 Vehicle Registration: **AN73KJY**

Print Name: O. LENNON Signature:

Date: 30/04/20 Time: 09:00

PART D: Consignor's Certificate

I certify that the information in A, B and C above is correct and that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

2 Consignor name:
Urban Regen - BL9
Tetrosyl
Walmersley Old Road
Bury
Lancs
BL9 6RE

Print Name: A Regan Corrigan

Signature: A Regan

Date: 30/04/20 Time: 10:00

PART E: Consignee's Certificate

Individual EWC	Quantity of each EWC code received (kg)	EWC code accepted/rejected	Waste management operation (R or D code)
LISTED	LISTED	LISTED	LISTED

1 I received this waste at the address given in A4 on:

2 Vehicle registration number:

Name:
CSG Recovery Cadishead
CSG Recovery
Liverpool Road
Cadishead
Manchester
M44 5DT

3 Where waste is rejected please provide details:

I certify that waste management permit EPR/BS1538IQ authorises the management of the waste described in B at the address given in A4.

Signature:

Date: Time:

CONSIGNMENT LIST UR0025 - OP-0319380

Consignor:	Urban Regen - BL9	**Consignee:**	CSG Recovery Cadishead	**Consignment Note Ref:**	URBANR/	**CSG Order Number:**	
Consignor Address:	Urban Regen - BL9 Tetrosyl Walmersley Old Road Bury Lancs BL9 6RE	**Consignee Address:**	CSG Recovery Cadishead CSG Recovery Liverpool Road Cadishead Manchester M44 5DT	**Haulage Company:**	Cleansing Service Group	**CSG Opp Ref:**	OP-0319380
Customer Contact:	Rob Parry 01204 595933	**CSG Contact:**	Samuel Smith	**Expected Date:**	30/04/2024	**PO Ref:**	023675/333

Part B: Description Waste															Part E: Consignee's Certificate			
No.	**UN NO.**	**PROPER SHIPPING NAME**	**CLASS**	**PG**	**TC**	**DESCRIPTION**	**CHEMICAL/BIOLOGICAL COMPOSITION & CONCENTRATIONS**	**PHYSICAL FORM**	**HAZARD CODES**	**EWC**	**HAZ LABEL**	**FILL%**	**UNIT TYPE**	**UNIT QTY**	**LINE WEIGHT(KG)**	**NO.OF UNITS RECEIVED**	**EWC ACCEPTED**	**R OR D CODE**
1	UN 1993	WASTE FLAMMABLE LIQUID, N.O.S. (Contains Solvent/Fuel Waste <100%)	3	III	(D/E)	Degraded Drums	Solvent/Fuel Waste <100%	Liquid	HP3 HP4	14 06 03*	3	100	Drum (205 litres)	3	615.00		Yes	R13
													Totals:	3	615.00			

Element Materials Technology
Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

P: +44 (0) 1244 833780
F: +44 (0) 1244 833781
W: www.element.com

Urban Regen Ltd
Langley Road
Pendlebury
Salford
United Kingdom
M6 6FG

Attention :	Ben Thomas
Date :	29th February, 2024
Your reference :	333
Our reference :	Test Report 24/2885 Batch 1
Location :	-
Date samples received :	19th February, 2024
Status :	Final Report
Issue :	202402291439

One sample was received for analysis on 19th February, 2024 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.362 kg of CO2

Scope 1&2&3 emissions - 0.856 kg of CO2

Authorised By:

D. Bower

Darcey Bower MESci
Project Co-ordinator

Please include all sections of this report if it is reproduced

Client Name: Urban Regen Ltd
Reference: 333
Location: -
Contact: Ben Thomas
EMT Job No: 24/2885

Report : Product

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2										LOD LOR	Units	Method No.
Sample ID	RES DRUMS 1												
Depth													
COC No / misc													
Containers	V												
Sample Date	15/02/2024												
Sample Type	Product												
Batch Number	1												
Date of Receipt	19/02/2024												
Whole Oil Trace #	See Attached											None	TM1/PM0
SVOC TICs	See Attached											None	TM16/PM0
SVOC MS													
Phenols													
2-Chlorophenol	<0.01										<0.01	%	TM16/PM0
2-Methylphenol	<0.01										<0.01	%	TM16/PM0
2-Nitrophenol	<0.01										<0.01	%	TM16/PM0
2,4-Dichlorophenol	<0.01										<0.01	%	TM16/PM0
2,4-Dimethylphenol	<0.01										<0.01	%	TM16/PM0
2,4,5-Trichlorophenol	<0.01										<0.01	%	TM16/PM0
2,4,6-Trichlorophenol	<0.01										<0.01	%	TM16/PM0
4-Chloro-3-methylphenol	<0.01										<0.01	%	TM16/PM0
4-Methylphenol	<0.01										<0.01	%	TM16/PM0
4-Nitrophenol	<0.01										<0.01	%	TM16/PM0
Pentachlorophenol	<0.01										<0.01	%	TM16/PM0
Phenol	<0.01										<0.01	%	TM16/PM0
PAHs													
2-Chloronaphthalene	<0.01										<0.01	%	TM16/PM0
2-Methylnaphthalene	0.37										<0.01	%	TM16/PM0
Naphthalene	0.41										<0.01	%	TM16/PM0
Acenaphthylene	<0.01										<0.01	%	TM16/PM0
Acenaphthene	<0.01										<0.01	%	TM16/PM0
Fluorene	<0.01										<0.01	%	TM16/PM0
Phenanthrene	<0.01										<0.01	%	TM16/PM0
Anthracene	<0.01										<0.01	%	TM16/PM0
Fluoranthene	<0.01										<0.01	%	TM16/PM0
Pyrene	<0.01										<0.01	%	TM16/PM0
Benzo(a)anthracene	<0.01										<0.01	%	TM16/PM0
Chrysene	<0.01										<0.01	%	TM16/PM0
Benzo(bk)fluoranthene	<0.01										<0.01	%	TM16/PM0
Benzo(a)pyrene	<0.01										<0.01	%	TM16/PM0
Indeno(123cd)pyrene	<0.01										<0.01	%	TM16/PM0
Dibenzo(ah)anthracene	<0.01										<0.01	%	TM16/PM0
Benzo(ghi)perylene	<0.01										<0.01	%	TM16/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Urban Regen Ltd
Reference: 333
Location: -
Contact: Ben Thomas
EMT Job No: 24/2885

Report : Product

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2												
Sample ID	RES DRUMS 1												
Depth													
COC No / misc													
Containers	V												
Sample Date	15/02/2024												
Sample Type	Product												
Batch Number	1												
Date of Receipt	19/02/2024												

Please see attached notes for all abbreviations and acronyms

											LOD LOR	Units	Method No.
Phthalates													
Bis(2-ethylhexyl) phthalate	<0.01										<0.01	%	TM16/PM0
Butylbenzyl phthalate	<0.01										<0.01	%	TM16/PM0
Di-n-butyl phthalate	<0.01										<0.01	%	TM16/PM0
Di-n-Octyl phthalate	<0.01										<0.01	%	TM16/PM0
Diethyl phthalate	<0.01										<0.01	%	TM16/PM0
Dimethyl phthalate	<0.01										<0.01	%	TM16/PM0
Other SVOCs													
1,2-Dichlorobenzene	<0.01										<0.01	%	TM16/PM0
1,2,4-Trichlorobenzene	<0.01										<0.01	%	TM16/PM0
1,3-Dichlorobenzene	<0.01										<0.01	%	TM16/PM0
1,4-Dichlorobenzene	<0.01										<0.01	%	TM16/PM0
2-Nitroaniline	<0.01										<0.01	%	TM16/PM0
2,4-Dinitrotoluene	<0.01										<0.01	%	TM16/PM0
2,6-Dinitrotoluene	<0.01										<0.01	%	TM16/PM0
3-Nitroaniline	<0.01										<0.01	%	TM16/PM0
4-Bromophenylphenylether	<0.01										<0.01	%	TM16/PM0
4-Chloroaniline	<0.01										<0.01	%	TM16/PM0
4-Chlorophenylphenylether	<0.01										<0.01	%	TM16/PM0
4-Nitroaniline	<0.01										<0.01	%	TM16/PM0
Azobenzene	<0.01										<0.01	%	TM16/PM0
Bis(2-chloroethoxy)methane	<0.01										<0.01	%	TM16/PM0
Bis(2-chloroethyl)ether	<0.01										<0.01	%	TM16/PM0
Carbazole	<0.01										<0.01	%	TM16/PM0
Dibenzofuran	<0.01										<0.01	%	TM16/PM0
Hexachlorobenzene	<0.01										<0.01	%	TM16/PM0
Hexachlorobutadiene	<0.01										<0.01	%	TM16/PM0
Hexachlorocyclopentadiene	<0.01										<0.01	%	TM16/PM0
Hexachloroethane	<0.01										<0.01	%	TM16/PM0
Isophorone	<0.01										<0.01	%	TM16/PM0
N-nitrosodi-n-propylamine	<0.01										<0.01	%	TM16/PM0
Nitrobenzene	<0.01										<0.01	%	TM16/PM0

Client Name: Urban Regen Ltd
Reference: 333
Location: -
Contact: Ben Thomas
EMT Job No: 24/2885

Report : Product

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2												
Sample ID	RES DRUMS 1												
Depth													
COC No / misc													
Containers	V												
Sample Date	15/02/2024												
Sample Type	Product												
Batch Number	1												
Date of Receipt	19/02/2024												

Please see attached notes for all abbreviations and acronyms

											LOD LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<0.01										<0.01	%	TM124/PM0
Methyl Tertiary Butyl Ether	<0.05										<0.05	%	TM124/PM0
Chloromethane	<0.01										<0.01	%	TM124/PM0
Vinyl Chloride	<0.01										<0.01	%	TM124/PM0
Bromomethane	<0.01										<0.01	%	TM124/PM0
Chloroethane	<0.01										<0.01	%	TM124/PM0
Trichlorofluoromethane	<0.01										<0.01	%	TM124/PM0
1,1-Dichloroethene (1,1 DCE)	<0.01										<0.01	%	TM124/PM0
Dichloromethane (DCM)	<0.01										<0.01	%	TM124/PM0
trans-1-2-Dichloroethene	<0.01										<0.01	%	TM124/PM0
1,1-Dichloroethane	<0.01										<0.01	%	TM124/PM0
cis-1-2-Dichloroethene	<0.01										<0.01	%	TM124/PM0
2,2-Dichloropropane	<0.01										<0.01	%	TM124/PM0
Bromochloromethane	<0.01										<0.01	%	TM124/PM0
Chloroform	<0.01										<0.01	%	TM124/PM0
1,1,1-Trichloroethane	<0.01										<0.01	%	TM124/PM0
1,1-Dichloropropene	<0.01										<0.01	%	TM124/PM0
Carbon tetrachloride	<0.01										<0.01	%	TM124/PM0
1,2-Dichloroethane	<0.01										<0.01	%	TM124/PM0
Benzene	0.04										<0.01	%	TM124/PM0
Trichloroethene (TCE)	<0.01										<0.01	%	TM124/PM0
1,2-Dichloropropane	<0.01										<0.01	%	TM124/PM0
Dibromomethane	<0.01										<0.01	%	TM124/PM0
Bromodichloromethane	<0.01										<0.01	%	TM124/PM0
cis-1-3-Dichloropropene	<0.01										<0.01	%	TM124/PM0
Toluene	0.26										<0.01	%	TM124/PM0
trans-1-3-Dichloropropene	<0.01										<0.01	%	TM124/PM0
1,1,2-Trichloroethane	<0.01										<0.01	%	TM124/PM0
Tetrachloroethene (PCE)	<0.01										<0.01	%	TM124/PM0
1,3-Dichloropropane	<0.01										<0.01	%	TM124/PM0
Dibromochloromethane	<0.01										<0.01	%	TM124/PM0
1,2-Dibromoethane	<0.01										<0.01	%	TM124/PM0
Chlorobenzene	<0.01										<0.01	%	TM124/PM0
1,1,1,2-Tetrachloroethane	<0.01										<0.01	%	TM124/PM0
Ethylbenzene	0.49										<0.01	%	TM124/PM0
m/p-Xylene	1.84										<0.01	%	TM124/PM0
o-Xylene	1.13										<0.01	%	TM124/PM0
Styrene	<0.01										<0.01	%	TM124/PM0
Bromoform	<0.01										<0.01	%	TM124/PM0
Isopropylbenzene	0.79										<0.01	%	TM124/PM0
1,1,2,2-Tetrachloroethane	<0.01										<0.01	%	TM124/PM0
Bromobenzene	<0.01										<0.01	%	TM124/PM0
1,2,3-Trichloropropane	<0.01										<0.01	%	TM124/PM0

Element Materials Technology

Client Name: Urban Regen Ltd
Reference: 333
Location: -
Contact: Ben Thomas
EMT Job No: 24/2885

Report : Product

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2												
Sample ID	RES DRUMS 1												
Depth													
COC No / misc													
Containers	V												
Sample Date	15/02/2024												
Sample Type	Product												
Batch Number	1												
Date of Receipt	19/02/2024												

Please see attached notes for all abbreviations and acronyms

											LOD LOR	Units	Method No.
Propylbenzene	0.46										<0.01	%	TM124/PM0
2-Chlorotoluene	<0.01										<0.01	%	TM124/PM0
1,3,5-Trimethylbenzene	2.82										<0.01	%	TM124/PM0
4-Chlorotoluene	<0.01										<0.01	%	TM124/PM0
tert-Butylbenzene	<0.01										<0.01	%	TM124/PM0
1,2,4-Trimethylbenzene	4.55										<0.01	%	TM124/PM0
sec-Butylbenzene	1.51										<0.01	%	TM124/PM0
4-Isopropyltoluene	0.61										<0.01	%	TM124/PM0
1,3-Dichlorobenzene	<0.01										<0.01	%	TM124/PM0
1,4-Dichlorobenzene	<0.01										<0.01	%	TM124/PM0
n-Butylbenzene	1.08										<0.01	%	TM124/PM0
1,2-Dichlorobenzene	<0.01										<0.01	%	TM124/PM0
1,2-Dibromo-3-chloropropane	<0.01										<0.01	%	TM124/PM0
1,2,4-Trichlorobenzene	<0.01										<0.01	%	TM124/PM0
Hexachlorobutadiene	<0.01										<0.01	%	TM124/PM0
Naphthalene	0.12										<0.01	%	TM124/PM0
1,2,3-Trichlorobenzene	<0.01										<0.01	%	TM124/PM0
VOC TICs	See Attached											None	TM124/PM0

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Job number: 24/2885 **Method:** VOC
Sample number: 1 **Matrix:** Product
Sample identity: RES DRUMS 1
Sample depth:
Sample Type: Product
Units: %

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

CAS No.	Tentative Compound Identification	Retention Time (minutes)	% Match	Concentration
UI_PEAK_GRP	Unidentified Group of Compounds (Poor Quality Match)	1.233 - 15.531	80,80,80,80,80,80,80	31.94
75-31-0	2-Propanamine	2.151	80	1.06
107-83-5	Pentane, 2-methyl-	3.025	90	0.19
96-14-0	Pentane, 3-methyl-	3.270	80	0.12
110-54-3	n-Hexane	3.547	91	0.42
96-37-7	Cyclopentane, methyl-	4.164	81	0.18
565-59-3	Pentane, 2,3-dimethyl-	4.910	91	0.12
589-34-4	Hexane, 3-methyl-	5.022	96	0.52
2532-58-3	Cyclopentane, 1,3-dimethyl-, cis-	5.326	95	0.13
1192-18-3	Cyclopentane, 1,2-dimethyl-, cis-	5.385	97	0.22
142-82-5	Heptane	5.511	94	1.44
108-87-2	Cyclohexane, methyl-	6.131	97	1.75
589-43-5	Hexane, 2,4-dimethyl-	6.227	91	0.14
1640-89-7	Cyclopentane, ethyl-	6.349	91	0.13
2815-58-9	Cyclopentane, 1,2,4-trimethyl-	6.445	90	0.21
15890-40-1	Cyclopentane, 1,2,3-trimethyl-, (1.alpha.,2.alpha.,3.beta.)-	6.616	87	0.22
592-27-8	Heptane, 2-methyl-	6.894	95	1.30
589-81-1	Heptane, 3-methyl-	7.069	90	0.92
638-04-0	Cyclohexane, 1,3-dimethyl-, cis-	7.293	94	1.29
111-65-9	Octane	7.603	81	2.64
6876-23-9	Cyclohexane, 1,2-dimethyl-, trans-	7.732	97	0.64
2207-04-7	Cyclohexane, 1,4-dimethyl-, trans-	7.881	97	0.30
1072-05-5	Heptane, 2,6-dimethyl-	8.204	87	0.53
1502-38-1	Cyclooctane, methyl-	8.399	89	0.78
1678-91-7	Cyclohexane, ethyl-	8.475	97	0.83
3073-66-3	Cyclohexane, 1,1,3-trimethyl-	8.547	94	1.29
3074-71-3	Heptane, 2,3-dimethyl-	8.805	91	0.50
7667-60-9	Cyclohexane, 1,2,4-trimethyl-, (1.alpha.,2.beta.,4.beta.)-	8.844	93	0.65
2216-33-3	Octane, 3-methyl-	9.075	90	1.15
694-72-4	Pentalene, octahydro-	9.267	80	0.20

Job number: 24/2885 **Method:** VOC
Sample number: 1 **Matrix:** Product
Sample identity: RES DRUMS 1
Sample depth:
Sample Type: Product
Units: %

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

CAS No.	Tentative Compound Identification	Retention Time (minutes)	% Match	Concentration
111-84-2	Nonane	9.603	95	4.76
5911-04-6	Nonane, 3-methyl-	10.274	86	2.44
15869-93-9	Octane, 3,5-dimethyl-	10.785	81	1.99
124-18-5	Decane	11.465	95	7.80
7058-05-1	Cyclohexane, 1-ethyl-2,3-dimethyl-	11.604	81	0.66
1678-93-9	Cyclohexane, butyl-	12.257	81	1.69
526-73-8	Benzene, 1,2,3-trimethyl-	12.501	94	2.24
6975-98-0	Decane, 2-methyl-	12.587	91	1.08
13151-34-3	Decane, 3-methyl-	12.713	96	0.92
493-02-7	Naphthalene, decahydro-, trans-	12.871	94	1.60
1120-21-4	Undecane	13.185	95	3.27
535-77-3	Benzene, 1-methyl-3-(1-methylethyl)-	13.373	89	0.78
934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	13.485	93	0.73
3333-13-9	Benzene, 1-methyl-4-(2-propenyl)-	13.610	83	0.24
2958-76-1	Naphthalene, decahydro-2-methyl-	13.822 - 14.122	95,97	0.97
112-40-3	Dodecane	14.785	93	0.81
23609-46-3	Cyclooctane, 1,2-diethyl-	15.145	90	0.07

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

Job number: 24/2885 **Method:** SVOC
Sample number: 1 **Matrix:** Product
Sample identity: RES DRUMS 1
Sample depth:
Sample Type: Product
Units: %

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

CAS No.	Tentative Compound Identification	Retention Time (minutes)	% Match	Concentration
108-38-3	Benzene, 1,3-dimethyl-	3.502	86	0.16
3728-55-0	1-Ethyl-3-methylcyclohexane (c,t)	3.812	81	0.21
111-84-2	Nonane	3.956	95	1.23
2051-30-1	Octane, 2,6-dimethyl-	4.359	90	0.49
611-14-3	Benzene, 1-ethyl-2-methyl-	4.519	91	0.34
108-67-8	Mesitylene	4.891 - 5.180	90,90	1.76
124-18-5	Decane	5.091	95	3.02
17302-23-7	Nonane, 4,5-dimethyl-	5.246	83	0.25
17302-28-2	Nonane, 2,6-dimethyl-	5.345	87	1.38
1678-93-9	Cyclohexane, butyl-	5.403	81	0.81
527-84-4	o-Cymene	5.553	95	0.34
91-17-8	Naphthalene, decahydro-	5.620	96	0.87
2847-72-5	Decane, 4-methyl-	5.697	90	0.09
13151-34-3	Decane, 3-methyl-	5.795	87	0.72
1120-21-4	Undecane	6.060	94	2.20
2958-76-1	Naphthalene, decahydro-2-methyl-	6.149	97	0.18
1632-70-8	Undecane, 5-methyl-	6.224	87	0.16
1002-43-3	Undecane, 3-methyl-	6.651	91	0.36
112-40-3	Dodecane	6.877	94	2.62
54676-39-0	Cyclohexane, 2-butyl-1,1,3-trimethyl-	7.085	86	0.10
5617-41-4	Heptylcyclohexane	7.165	87	0.10
6117-97-1	Dodecane, 4-methyl-	7.308	95	0.20
56862-62-5	10-Methylnonadecane	7.342	83	0.46
17312-57-1	Dodecane, 3-methyl-	7.387	86	0.32
629-50-5	Tridecane	7.583	93	2.37
25117-31-1	Tridecane, 5-methyl-	7.934	86	0.08
26730-12-1	Tridecane, 4-methyl-	7.962	90	0.17
1560-96-9	Tridecane, 2-methyl-	7.995	95	0.19
17312-63-9	Nonane, 5-butyl-	8.088	81	0.45
629-59-4	Tetradecane	8.211 - 8.785	90,91	3.06

Job number: 24/2885 **Method:** SVOC
Sample number: 1 **Matrix:** Product
Sample identity: RES DRUMS 1
Sample depth:
Sample Type: Product
Units: %

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

CAS No.	Tentative Compound Identification	Retention Time (minutes)	% Match	Concentration
629-99-2	Pentacosane	8.588	91	0.48
544-76-3	Hexadecane	9.316	96	0.11
544-63-8	Tetradecanoic acid	9.987	95	0.01
57-10-3	n-Hexadecanoic acid	10.898	99	0.15
60-33-3	9,12-Octadecadienoic acid (Z,Z)-	11.609	99	0.36
593-39-5	6-Octadecenoic acid, (Z)-	11.639	98	0.83
57-11-4	Octadecanoic acid	11.735	99	0.07
31158-91-5	Hexadecanoic acid, 1,1-dimethylethyl ester	11.861	91	0.02
506-17-2	cis-Vaccenic acid	12.490	93	0.05
123-95-5	Octadecanoic acid, butyl ester	12.738	95	0.02
112-86-7	Erucic acid	13.431	99	0.07

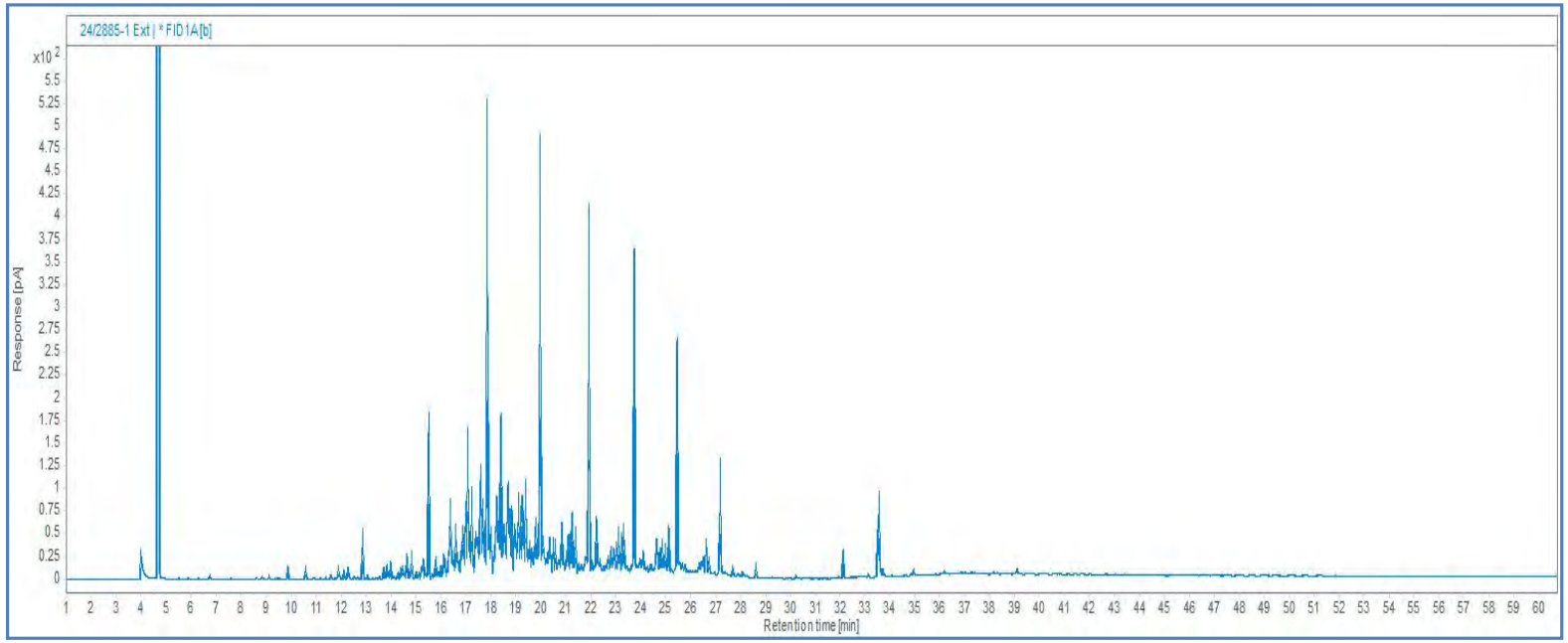
Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name:	Urban Regen Ltd	**EMT Job No.:**	24/2885
Reference:	333	**EMT Sample No.:**	1
Location:	-	**Sample Identity:**	RES DRUMS 1
Contact:	Ben Thomas	**Depth:**	

Description:	Opaque, cream coloured emulsion (extracted with DCM - clear)	**% Diesel:**	-
Carbon Range:	6-35	**% Petrol:**	-
Boiling Point Range (°C):	69-491	**Estimated % Weathering of Petrol:**	-
Pristane/Phytane Ratio:	n/a	**Toluene/nC_8 ratio of Petrol:**	-
nC_{17}/Pristane Ratio:	n/a	**Age of Petrol (years) (schmidt et al 2002):**	-
Age of Diesel (+/- 2 years)*:	Not possible as relevant markers are either not present or values are above the permitted range		

Interpretation: Possible white spirit type, weathered kerosene, and possible seed oil

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: Urban Regen Ltd
Reference: 333
Location: -
Contact: Ben Thomas

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/2885						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/2885

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

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

EMT Job No: 24/2885

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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	
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.	Yes		AR	
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM0	No preparation is required.			AR	
TM124	Modified USEPA 8260B v2:1996. Semi- Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM0	No preparation is required.			AR	

Please include all sections of this report if it is reproduced

APPENDIX 4 – L3 Remedial Target Values

14 July 2023

Environment Agency Groundwater
Hydrology & Contaminated Land team
Warrington

For the attention of Lee Beveridge

Re: Tetrosyl Bevis Green Works, Bury Project (Ref: ENVPAC/1/GMC/00429)

Dear Lee,

Thank you for your recent letter (Ref: *SO/2022/122094/03-L01*, dated *27 April 2023*) with regards to the DQRA undertaken by Groundetch Consulting (Ref: *GRO-21459-3710_1.2*, dated *22 November 2022*).

The letter highlights the requirement of defining validation and verification criteria for the far southern area of site. Based on the requirements, we have developed site specific Level 3 (L3) Remedial Target Values (RTVs) for soils in the southern section of site. The RTVs are based on no degradation and 0m compliance point.

The following parameters were selected for all compounds:

Parameter	Value	Source of data
Porosity (Water Filled)	*0.097 θw*	*Site won data (Laboratory testing conversion)*
FoC (L1 Soil)	*0.08561 (Fraction)*	*TOC database (HS1 Validation Exercise)*
FoC (L3 Soil)	*0.002 (Fraction)*	*TOC database (Rough Rock Database)*
Length of source in direction of groundwater flow	*20m*	*Conservatively estimated Hotspot width*
Width of source perpendicular to groundwater flow	*20m*	*Conservatively estimated Hotspot length*

The following CoC specific parameters were used to calculate the L3 Soil RTVs for the southern section of site:

Compound	L3 RTV (mg/kg)	Henrys Law Constant (Dimensionless)	Source	KoC (l/kg)	Source
Benzene	*0.19*	*0.228*	*Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards*	*67.6*	*SC050021/SR7*
Toluene	*4.23*	*0.272*	*Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards*	*204*	*SC050021/SR7*
Ethylbenzene	*4.64*	*0.323*	*Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards*	*447*	*SC050021/SR7*
Xylene	*3.84*	*0.276*	*Chemical Properties for Calculation of*	*457*	*SC050021/SR7*

			Impact to Ground Water Soil Remediation Standards		
Aliphatic (C5-C6)	331	0.14	Online directory based on hexane	790	CL:AIRE: Petroleum Hydrocarbons in Groundwater
Aliphatic (C6-C8)	1680	0.272	No value for Aliphatic C6-C8 (Heptane) so Toluene value used as similarly ranged Toluene taken from: Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards	4,000	CL:AIRE: Petroleum Hydrocarbons in Groundwater
Aliphatic (C8-C10)	300	0.276	No value for Aliphatic C8-C10 (Octane/Nonane) so Xylene value used as similarly ranged Xylene taken from: Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards	32,000	CL:AIRE: Petroleum Hydrocarbons in Groundwater
Aliphatic (C10-C12)	60,800,000	0.0198	No value for Aliphatic C10-C12 so Naphthalene value used as similarly ranged Naphthalene taken from: Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards		CL:AIRE: Petroleum Hydrocarbons in Groundwater
Aromatic (C10-C12)	62.9	0.14	-	2,500	CL:AIRE: Petroleum Hydrocarbons in Groundwater
PCE	0.754	0.754	Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards	269	SC050021/SR7
TCE	0.396	0.422	Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards	141	SC050021/SR7
Dichloromethane	0.0682	0.098	Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards	11.7	Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards
1-2 Dichloroethene	0.503	0.167	Chemical Properties for Calculation of	35.5	Chemical Properties for Calculation of

			Impact to Ground Water Soil Remediation Standards		*Impact to Ground Water Soil Remediation Standards*
Phenol	*0.18*	*0.065*	*Chemical Properties for Calculation of Impact to Ground Water Soil Remediation Standards*	*83.2*	*SC050021/SR7*

The Remedial Target Worksheets will be attached to the email to allow them to be reviewed, if you have any queries please do not hesitate to contact the undersigned.

Yours Sincerely
For Groundtech Consulting Limited

L Harrison

Luke Harrison
Senior Consulting Engineer
lh@groundtechconsulting.com

APPENDIX 5 - Hotspot 1 Validation Testing Results

Element Materials Technology
Unit 3 Deeside Point
Zone 3
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Deeside
CH5 2UA

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F: +44 (0) 1244 833781
W: www.element.com

Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE

Attention :	Luke Harrison
Date :	19th May, 2022
Your reference :	
Our reference :	Test Report 22/7334 Batch 1
Location :	Tetrosyl
Date samples received :	6th May, 2022
Status :	Final Report
Issue :	1

Twenty nine samples were received for analysis on 6th May, 2022 of which twenty five 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

Client Name: Groundtech Consulting Limited
Reference:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7334

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	LOD/LOR	Units	Method No.
Sample ID	HS1 - A	HS1 - B	HS1 - C	HS1 - D	HS1 - E	HS1 - F	HS1 - G	HS1 - H	HS1 - I	HS1 - J			
Depth	4.200	2.000	2.200	1.500	3.000	2.000	4.200	4.200	1.000	3.000			
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	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	04/05/2022	04/05/2022			
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	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022			
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	5	10	<3	6	123	98	178	182	5	50	<3	ug/kg	TM15/PM10
Toluene #	111	10281$_{AA}$	283	296	>>40566$_{AA}$	24203$_{AA}$	>>69140$_{AA}$	>>56468$_{AA}$	1171	2641	<3	ug/kg	TM15/PM10
Ethylbenzene #	8	15393$_{AA}$	42	314	420	6463$_{AA}$	578	555	433	>>2706	<3	ug/kg	TM15/PM10
m/p-Xylene #	18	>>67168$_{AA}$	1861	1968	1139	18901$_{AA}$	1348	1282	3694	>>7409	<5	ug/kg	TM15/PM10
o-Xylene #	3	8735$_{AA}$	10	1061	315	2985$_{AA}$	649	413	320	2454	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	71	79	97	92	88	91	89	89	105	87	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	54	56	83	70	59	67	58	56	86	63	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1^{SV}	<1.0$_{AA}$	<0.1	>><0.1	<0.1	<0.1	0.2	0.1	<0.1	>><0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	0.7^{SV}	10.1$_{AA}$	0.1	>>0.6	10.7	5.6	16.6	11.8	0.5	>>2.7	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1^{SV}	197.6$_{AA}$	1.8	>>67.1	1.4	7.2	0.6	0.7	3.0	>>103.5	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	258.3	3.1	4.0	<0.2	<0.2	7.9	130.8	22.1	6.7	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	6	90	<4	<4	<4	<4	8	19	46	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	18	73	<7	<7	<7	<7	<7	107	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	15	12	<7	<7	<7	<7	<7	173	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	40	641	<19	72	<19	<19	33	442	72	113	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1^{SV}	<1.0$_{AA}$	<0.1	>><0.1	0.2	<0.1	0.2	0.1	<0.1	>><0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1^{SV}	13.0$_{AA}$	0.2	>>0.8	41.1	24.5	74.2	48.3	1.9	>>5.0	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1^{SV}	142.8$_{AA}$	2.5	>>4.1	1.5	26.6	1.6	2.1	5.7	>>16.6	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	48.3	6.3	<0.2	<0.2	1.0^{SV}	<0.2	59.8	3.9	2.8	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	43	<4	<4	<4	<4^{SV}	<4	56	10	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	58	<7	<7	<7	<7^{SV}	<7	118	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	18	<7	<7	<7	<7^{SV}	<7	227	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	323	<19	<19	43	52^{SV}	76	511	22	24	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	40	964	<38	72	43	52^{SV}	109	953	94	137	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Monoethylene glycol	<50	<50	<50	<50	<50	305	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Diethylene glycol	<50	<50	<50	<50	<50	<50	<50	<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
Organic Matter	2.1	1.5	1.4	4.0	2.3	2.3	1.9	31.8	1.6	7.1	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7334

Report : Solid

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

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	49-51	52-54	55-57	58-60	64-66	LOD/LOR	Units	Method No.
Sample ID	HS1 - K	HS1 - L	HS1 - M	HS1 - N	HS1 - O	HS1 - Q	HS1 - R	HS1 - S	HS1 - T	HS1 - V			
Depth	2.000	2.000	3.900	2.000	2.300	4.000	4.000	4	2	2			
COC No / misc													
Containers	V J T	V J T	V J T	V J	V J	V J T	V J T	V J T	V J	V J			
Sample Date	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022			
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	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022			
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	10	17	<3	190	445 SV	1375	71	183	230	92	<3	ug/kg	TM15/PM10
Toluene #	>>2727	>>4594	157	>>108678 AA	>>143525 AA	>>115606 AA	2013	>>8512	>>108131 AA	>>104875 AA	<3	ug/kg	TM15/PM10
Ethylbenzene #	395	594	216	14343 AA	>>60865 AA	1253	149	659	>>45822 AA	21482 AA	<3	ug/kg	TM15/PM10
m/p-Xylene #	622	1290	906	37900 AA	>>131372 AA	3169	331	1461	>>109497 AA	>>56458 AA	<5	ug/kg	TM15/PM10
o-Xylene #	517	295	13	7823 AA	>>23855 AA	876	34	170	>>25511 AA	8187 AA	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	79	74	107	92	72 SV	88	82	84	78	94	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	64	58	89	67	46 SV	57	56	55	52	67	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1 SV	<0.1	>><0.1	>>0.5	>>0.3	10.1 SV	0.6 SV	>><0.1	>><0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	0.8	1.4 SV	0.3	>>32.5	>>98.6	>>31.4	4.8 SV	7.0 SV	>>60.8	>>33.3	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	7.0	1.3 SV	0.8	>>17.4	>>35.9	>>1.1	5.4 SV	2.1 SV	>>45.1	>>22.2	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	15.3	<0.2	15.3	<0.2	<0.2	<0.2	<0.2	<0.2	1.6	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	43	<4	10	6	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	440	<7	19	17	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	286	<7	11	18	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	<19	787	<19	105	176	33	20	<19	106	57	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1 SV	<0.1	>>0.2	>>0.5	>>1.6	<0.1 SV	0.1 SV	>>0.2	>><0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	3.1	6.1 SV	0.9	>>149.3	>>451.4	>>145.4	2.8 SV	10.2 SV	>>291.8	>>139.0	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	1.2	1.4 SV	0.9	>>39.0	>>140.3	>>3.1	0.4 SV	1.5 SV	>>206.6	>>72.3	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	78.8	<0.2	9.4	10.5	<0.2	0.5	0.8	3.5	7.6	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	101	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	227	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	234	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	648	<19	198	603	150	<19	<19	502	219	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	<38	1435	<38	303	779	183	<38	<38	608	276	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Monoethylene glycol	<50	<50	<50	224	<50	62	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	<50	<50	<50	62	<50	<50	<50	<50	ug/kg	TM179/PM8
Diethylene glycol	<50	<50	<50	64	<50	<50	<50	<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
Organic Matter	1.6	27.5	0.5	1.6	2.3	2.2	1.7	2.4	2.0	1.7	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7334

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	67-69	70-72	73-75	78-80	83-85						LOD/LOR	Units	Method No.
Sample ID	HS1 - W	HS1 - W	HS1 - X	HS1 - Y	HS1 - Z								
Depth	1.50	3.00		1.00	1.50								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	1	1	1	1	1								
Date of Receipt	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022								
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
Benzene #	46	297	503	119	55						<3	ug/kg	TM15/PM10
Toluene #	4720 AA	>>35931 AA	>>52593 AA	>>23494 AA	1262						<3	ug/kg	TM15/PM10
Ethylbenzene #	>>19453	5536 AA	14117 AA	3836 AA	620						<3	ug/kg	TM15/PM10
m/p-Xylene #	>>41484	15461 AA	36408 AA	16547 AA	>>9944						<5	ug/kg	TM15/PM10
o-Xylene #	>>9086	3293 AA	>>6475	1885	144						<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	82	92	78	85	79						<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	60	60	53	60	61						<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1 SV						<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	3.1 SV	10.3	11.8 SV	4.6 SV	0.6 SV						<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	17.5 SV	4.0	10.8 SV	9.1 SV	3.4 SV						<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	141.0	<0.2	22.8	74.1	<0.2						<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	495	<4	84	232	<4						<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	862	<7	154	341	<7						<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	179	<7	32	85	<7						<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	1698	<19	315	746	<19						<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1 SV	0.2	0.5 SV	0.2 SV	<0.1 SV						<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	3.5 SV	37.0	45.4 SV	17.8 SV	0.9 SV						<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	41.0 SV	13.8	38.4 SV	13.1 SV	4.8 SV						<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	61.5	<0.2	16.2	22.4	3.8						<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	200	<4	49	86	9						<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	372	<7	99	159	<7						<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	217	<7	78	64	27						<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	895	51	327	363	46						<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	2593	51	642	1109	46						<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Monoethylene glycol	<50	<50	<50	<50	<50						<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	<50	<50						<50	ug/kg	TM179/PM8
Diethylene glycol	<50	<50	<50	<50	<50						<50	ug/kg	TM179/PM8
Triethylene glycol	<50	<50	<50	<50	<50						<50	ug/kg	TM179/PM8
Thiodiglycol	<50	<50	<50	<50	<50						<50	ug/kg	TM179/PM8
Organic Matter	15.0	3.1	11.3	7.3	7.6						<0.2	%	TM21/PM24

Client Name: Groundtech Consulting Limited
Reference:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7334

VOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	HS1 - A	HS1 - B	HS1 - C	HS1 - D	HS1 - E	HS1 - F	HS1 - G	HS1 - H	HS1 - I	HS1 - J			
Depth	4.200	2.000	2.200	1.500	3.000	2.000	4.200	4.200	1.000	3.000			
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	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	03/05/2022	04/05/2022	04/05/2022			
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	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<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) #	17	16	58	28	110	14	1110	175	36	212	<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	4	<3	14	11	<3	<3	<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	11	<3	<3	11	16	38	54	<3	11	<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	18	25	<4	<4	<4	ug/kg	TM15/PM10
Benzene #	5	10	<3	6	123	98	178	182	5	50	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	5	<3	<3	14	20	73	44	<3	21	<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 #	111	10281$_{AA}$	283	296	>>40566$_{AA}$	24203$_{AA}$	>>69140$_{AA}$	>>56468$_{AA}$	1171	2641	<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	54	<3	<3	<3	7	<3	<3	<3	7	<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	44	33	10	<3	34	<3	<3	6	88	<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 #	8	15393$_{AA}$	42	314	420	6463$_{AA}$	578	555	433	>>2706	<3	ug/kg	TM15/PM10
m/p-Xylene #	18	>>67168$_{AA}$	1861	1968	1139	18901$_{AA}$	1348	1282	3694	>>7409	<5	ug/kg	TM15/PM10
o-Xylene #	3	8735$_{AA}$	10	1061	315	2985$_{AA}$	649	413	320	2454	<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3	<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	1011	20	268	4	67	<3	<3	24	599	<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	2029	31	939	<4	75	<4	<4	82	1782	<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	7718$_{AA}$	83	>>2575	6	111	<3	<3	201	>>2928	<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	444	7	162	<5	<5	<5	<5	7	181	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	9	>>38502	248	>>14797	<6	347	<6	<6	897	>>23329	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	>>3420	12	1754	<4	<4	<4	<4	107	2337	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	>>2486	14	1352	<4	<4	<4	<4	84	1604	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	14	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	23	10	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	>>2828	17	1912	<4	<4	<4	<4	155	1935	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	59	22	<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	1438	<27	144	<27	<27	<27	<27	<27	66	<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	71	79	97	92	88	91	89	89	105	87	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	54	56	83	70	59	67	58	56	86	63	<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7334

VOC Report : **Solid**

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	49-51	52-54	55-57	58-60	64-66	LOD/LOR	Units	Method No.
Sample ID	HS1 - K	HS1 - L	HS1 - M	HS1 - N	HS1 - O	HS1 - Q	HS1 - R	HS1 - S	HS1 - T	HS1 - V			
Depth	2.000	2.000	3.900	2.000	2.300	4.000	4.000	4	2	2			
COC No / misc													
Containers	V J T	V J T	V J T	V J	V J	V J T	V J T	V J T	V J	V J			
Sample Date	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022			
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	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Chloromethane #	6	8	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1 SV	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #	3	4	<2	<2	<2 SV	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6	<6	<6 SV	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	178	293	38	104	445 SV	1985	>>40817 AA	503	345	113	<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	7	<3 SV	<3	<3	<3	<3	3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3	3	8 SV	15	4	7	16	3	<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	8	<3	21	40 SV	26	4	6	22	80	<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	<3	<3	5 SV	<3	<3	<3	11	<3	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	5	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4	39	124 SV	<4	19	<4	70	<4	<4	ug/kg	TM15/PM10
Benzene #	10	17	<3	190	445 SV	1375	71	183	230	92	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	7	12	<3	3	426 SV	132	4	12	372	59	<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6	<6	<6 SV	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #	>>2727	>>4594	157	>>108678 AA	>>143525 AA	>>115606 AA	2013	>>8512	>>108131 AA	>>104875 AA	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	34	49	<3	<3	88 SV	<3	<3	<3	13	56	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	<3	25	76 SV	13	<3	<3	13	38	<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #	395	594	216	14343 AA	>>60865 AA	1253	149	659	>>45822 AA	21482 AA	<3	ug/kg	TM15/PM10
m/p-Xylene #	622	1290	906	37900 AA	>>131372 AA	3169	331	1461	>>109497 AA	>>56458 AA	<5	ug/kg	TM15/PM10
o-Xylene #	517	295	13	7823 AA	>>23855 AA	876	34	170	>>25511 AA	8187 AA	<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	97	12	13	986	278 SV	9	<3	6	519	269	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene #	343	17	24	1092	594 SV	10	<4	7	1100	605	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	2153	56	62	820	834 SV	19	<3	9	1090	1179	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	200	27	9	<5	<5 SV	24	<5	<5	<5	328	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	1952	200	133	2846 AA	>>6737	141	13	44	>>4735	>>5854	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	1181	36	23	33	69 SV	16	<4	7	37	435	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	858	8	<4	38	53 SV	9	<4	<4	27	81	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene	1152	8	<4	23	65 SV	11	<4	<4	30	122	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	9	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7	<7	<7	<7 SV	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	47 SV	<27	<27	<27	38	47	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7	<7	<7	<7 SV	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	79	74	107	92	72 SV	88	82	84	78	94	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	64	58	89	67	46 SV	57	56	55	52	67	<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7334

VOC Report : **Solid**

EMT Sample No.	67-69	70-72	73-75	78-80	83-85							
Sample ID	HS1 - W	HS1 - W	HS1 - X	HS1 - Y	HS1 - Z							
Depth	1.50	3.00		1.00	1.50							
COC No / misc												
Containers	V J T	V J T	V J T	V J T	V J T							
Sample Date	05/05/2022	05/05/2022	05/05/2022	05/05/2022	05/05/2022							
Sample Type	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1							
Date of Receipt	06/05/2022	06/05/2022	06/05/2022	06/05/2022	06/05/2022							
VOC MS												
Dichlorodifluoromethane	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
Chloromethane #	11	<3	<3	<3	4						<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	5	<2	<2						<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1						<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	258	376	570	333	356						<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	7	<3	<3						<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	9	5	<3	<3						<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	12	10	145	22	6						<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	26	<4	<4	<4						<4	ug/kg	TM15/PM10
Benzene #	46	297	503	119	55						<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	15	26	16	18	9						<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Toluene #	4720 AA	>>35931 AA	>>52593 AA	>>23494 AA	1262						<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Chlorobenzene #	182	6	174	42	11						<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Ethylbenzene #	>>19453	5536 AA	14117 AA	3836 AA	620						<3	ug/kg	TM15/PM10
m/p-Xylene #	>>41484	15461 AA	36408 AA	16547 AA	>>9944						<5	ug/kg	TM15/PM10
o-Xylene #	>>9086	3293 AA	>>6475	1885	144						<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3						<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Isopropylbenzene #	660	53	172	62	55						<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Propylbenzene #	1137	75	201	93	100						<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	>>3180	131	746	835	512						<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
tert-Butylbenzene #	449	21	101	201	75						<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	>>14613	608	-	1511	1272						<6	ug/kg	TM15/PM10
sec-Butylbenzene #	424	21	126	76	64						<4	ug/kg	TM15/PM10
4-Isopropyltoluene	177	6	74	158	81						<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	8	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	20	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
n-Butylbenzene	185	14	73	52	49						<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	67	<4	<4	10	<4						<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Naphthalene	130	<27	42	<27	<27						<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	82	92	78	85	79						<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	60	60	53	60	61						<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 22/7334						

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.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/7334

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a 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

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: 22/7334

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	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
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

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Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE

Attention :	Luke Harrison
Date :	27th May, 2022
Your reference :	
Our reference :	Test Report 22/7435 Batch 1
Location :	Tetrosyl
Date samples received :	7th May, 2022
Status :	Final Report
Issue :	1.2

Ten samples were received for analysis on 7th May, 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:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7435

Report : Solid

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

EMT Sample No.	4-7	8-11	12-15	23-26	27-30	31-34	35-38	42-44	45-47	49	LOD/LOR	Units	Method No.
Sample ID	HS1-04	HS1-04	HS1-04	HS1-05	HS1-05	HS1-05	HS1-06	HS1-P	HS1-T	HS1-Y			
Depth	1.00	3.00	3.60	1.00	3.00	3.60	4.00	3.20	3.20	3.50			
COC No / misc													
Containers	V B	V B	V B	V B	V B	V B	V B	V B	V B	B			
Sample Date	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	05/05/2022			
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	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022	07/05/2022			
Methyl Tertiary Butyl Ether #	<2	<2 SV	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	11	9 SV	12	31	11	4	18	259	360	47	<3	ug/kg	TM15/PM10
Toluene #	1844	1216 SV	1347	>>9380	2073	913	655	>>57036 AB	>>127801 AB	>>7660	<3	ug/kg	TM15/PM10
Ethylbenzene #	121	92 SV	114	1875	175	59	68	21798 AB	>>35188 AB	983	<3	ug/kg	TM15/PM10
m/p-Xylene #	397	190 SV	366	4093	387	245	677	>>56963 AB	>>89040 AB	1587	<5	ug/kg	TM15/PM10
o-Xylene #	229	120 SV	110	>>2466	178	54	118	11550 AB	14015 AB	593	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	72	8 SV	87	81	74	108	98	89	87	71	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	59	29 SV	72	56	52	89	85	63	53	50	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1 SV	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	>><0.1	<1.0 AB	<0.1 SV	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	0.5 SV	0.4	0.6	1.8	0.4	0.2	0.2	>>32.5	54.6 AB	2.9 SV	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	0.3 SV	0.1	1.3	24.1	0.1	0.1	3.5	>>15.9	28.6 AB	0.2 SV	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	<0.2	<0.2	18.6	<0.2	<0.2	<0.2	<0.2	6.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	<4	<4	13	9	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7	<7	62	110	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7	<7	39	108	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	<19	<19	<19	159	228	<19	<19	48	89	<19	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1 SV	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	>>0.2	<1.0 AB	<0.1 SV	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	2.2 SV	1.5	1.1	7.6	1.9	0.5	0.8	>>139.5	248.5 AB	0.9 SV	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	0.7 SV	0.4	0.6	5.4	0.5	0.3	0.9	>>74.4	108.9 AB	<0.1 SV	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	<0.2	9.8	<0.2	<0.2	<0.2	3.3	4.6	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	<4	<4	26	11	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	<7	51	64	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	63	167	<7	<7	<7	47	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	<19	<19	163	244	<19	<19	217	409	<19	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	<38	<38	<38	322	472	<38	<38	265	498	<38	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Monoethylene glycol	<50	<50	<50	<50	<50	351	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Diethylene glycol	<50	1681	1991 AA	376	79	13622 AB	31159 AC	<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
Organic Matter	35.8	43.1	<0.2	18.5	33.4	<0.2	1.7	3.0	1.8	2.5	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

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Please include all sections of this report if it is reproduced

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

Client Name: Groundtech Consulting Limited
Reference:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7435

VOC Report : **Solid**

EMT Sample No.	4-7	8-11	12-15	23-26	27-30	31-34	35-38	42-44	45-47	49			
Sample ID	HS1-04	HS1-04	HS1-04	HS1-05	HS1-05	HS1-05	HS1-06	HS1-P	HS1-T	HS1-Y			
Depth	1.00	3.00	3.60	1.00	3.00	3.60	4.00	3.20	3.20	3.50			
COC No / misc													
Containers	V B	V B	V B	V B	V B	V B	V B	V B	V B	B			
Sample Date	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	05/05/2022			
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	07/05/2022	07/05/2022	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.
VOC MS													
Dichlorodifluoromethane	<2	<2 SV	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2 SV	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2 SV	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1 SV	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2 SV	<2	<2	4	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2 SV	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6 SV	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	57	34 SV	38	50	37	<7	11	26	793	67	<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3 SV	<3	<3	<3	<3	<3	7	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3 SV	<3	<3	<3	<3	<3	49	11	<3	<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3 SV	<3	5	<3	<3	<3	154	6	6	<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4 SV	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chloroform #	<3	<3 SV	<3	<3	<3	<3	<3	5	3	<3	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	4	<3 SV	<3	4	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4 SV	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4 SV	<4	<4	<4	<4	<4	136	97	<4	<4	ug/kg	TM15/PM10
Benzene #	11	9 SV	12	31	11	4	18	259	360	47	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	31	32 SV	7	26	37	<3	4	12	222	22	<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6 SV	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4 SV	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #	1844	1216 SV	1347	>>9380	2073	913	655	>>57036 AB	>>127801 AB	>>7660	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	41	37 SV	<3	33	41	<3	<3	5	14	6	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3 SV	<3	6	<3	<3	<3	<3	11	<3	<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #	121	92 SV	114	1875	175	59	68	21798 AB	>>35188 AB	983	<3	ug/kg	TM15/PM10
m/p-Xylene #	397	190 SV	366	4093	387	245	677	>>56963 AB	>>89040 AB	1587	<5	ug/kg	TM15/PM10
o-Xylene #	229	120 SV	110	>>2466	178	54	118	11550 AB	14015 AB	593	<3	ug/kg	TM15/PM10
Styrene	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3 SV	10	490	<3	4	7	158	110	9	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2 SV	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4 SV	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4 SV	29	1562	<4	<4	12	276	178	18	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	15	6 SV	141	>>3800	9	5	51	234	274	51	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3 SV	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5 SV	65	833	<5	<5	39	<5	12	25	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	11	<6 SV	335	>>21327	11	<6	76	736	1945	65	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4 SV	69	>>4497	<4	<4	37	9	25	40	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4 SV	50	>>3295	<4	<4	22	5	18	26	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4 SV	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4 SV	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4 SV	68	>>4616	<4	<4	29	6	18	44	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4 SV	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4 SV	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7 SV	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4 SV	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27 SV	<27	196	<27	<27	<27	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7 SV	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	81	72	8 SV	81	74	108	98	89	87	71	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	63	59	29 SV	56	52	89	85	63	53	50	<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited

Matrix : Solid

Reference:

Location: Tetrosyl

Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
22/7435	1	HS1-04	1.00	4-7	EPH	Sample received in inappropriate container
22/7435	1	HS1-04	3.00	8-11	EPH	Sample received in inappropriate container
22/7435	1	HS1-04	3.60	12-15	EPH	Sample received in inappropriate container
22/7435	1	HS1-05	1.00	23-26	EPH	Sample received in inappropriate container
22/7435	1	HS1-05	3.00	27-30	EPH	Sample received in inappropriate container
22/7435	1	HS1-05	3.60	31-34	EPH	Sample received in inappropriate container
22/7435	1	HS1-06	4.00	35-38	EPH	Sample received in inappropriate container
22/7435	1	HS1-P	3.20	42-44	EPH	Sample received in inappropriate container
22/7435	1	HS1-T	3.20	45-47	EPH	Sample received in inappropriate container
22/7435	1	HS1-Y	3.50	49	EPH	Sample received in inappropriate container

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.: 22/7435

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a 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

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: 22/7435

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	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
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

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Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE

Attention :	Luke Harrison
Date :	27th May, 2022
Your reference :	
Our reference :	Test Report 22/7435 Batch 1
Location :	Tetrosyl
Date samples received :	7th May, 2022
Status :	Final Report
Issue :	1.1

Two samples were received for analysis on 7th May, 2022 of which two 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:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7435

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	20-22									LOD/LOR	Units	Method No.
Sample ID	HS1-01	HS1-03											
Depth	4.20	4.00											
COC No / misc													
Containers	V J B	V J B											
Sample Date	05/05/2022	05/05/2022											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	07/05/2022	07/05/2022											
Methyl Tertiary Butyl Ether #	<2	<2									<2	ug/kg	TM15/PM10
Benzene #	231	217									<3	ug/kg	TM15/PM10
Toluene #	>>43857 AB	>>7006									<3	ug/kg	TM15/PM10
Ethylbenzene #	1549	900									<3	ug/kg	TM15/PM10
m/p-Xylene #	3684	2138									<5	ug/kg	TM15/PM10
o-Xylene #	864	406									<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	81	90									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	63	67									<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	8.6	1.5									<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	1.0	0.5									<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	<0.2									<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	5	<4									<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	10	<7									<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7									<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	25	<19									<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	0.2	0.2									<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	38.2	5.4									<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	3.6	1.8									<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2									<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	<4									<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7									<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7									<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	42	<19									<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	67	<38									<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Monoethylene glycol	<50	<50									<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50									<50	ug/kg	TM179/PM8
Diethylene glycol	780	<50									<50	ug/kg	TM179/PM8
Triethylene glycol	<50	<50									<50	ug/kg	TM179/PM8
Thiodiglycol	<50	<50									<50	ug/kg	TM179/PM8
Organic Matter	2.2	2.0									<0.2	%	TM21/PM24

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Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference:
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/7435

VOC Report : **Solid**

EMT Sample No.	1-3	20-22										
Sample ID	HS1-01	HS1-03										
Depth	4.20	4.00										
COC No / misc												
Containers	V J B	V J B										
Sample Date	05/05/2022	05/05/2022										
Sample Type	Soil	Soil										
Batch Number	1	1										
Date of Receipt	07/05/2022	07/05/2022										
VOC MS												
Dichlorodifluoromethane	<2	<2									<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2									<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2									<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1									<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2									<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2									<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6									<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	50	37									<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	14	5									<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4									<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Chloroform #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3									<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4									<4	ug/kg	TM15/PM10
Benzene #	231	217									<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	25	16									<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6									<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4									<4	ug/kg	TM15/PM10
Toluene #	>>43857 AB	>>7006									<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3									<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	5	<3									<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3									<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3									<3	ug/kg	TM15/PM10
Chlorobenzene #	3	<3									<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Ethylbenzene #	1549	900									<3	ug/kg	TM15/PM10
m/p-Xylene #	3684	2138									<5	ug/kg	TM15/PM10
o-Xylene #	864	406									<3	ug/kg	TM15/PM10
Styrene	<3	<3									<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3									<3	ug/kg	TM15/PM10
Isopropylbenzene #	8	6									<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2									<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4									<4	ug/kg	TM15/PM10
Propylbenzene #	9	11									<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	12	18									<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
tert-Butylbenzene #	7	8									<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	42									<6	ug/kg	TM15/PM10
sec-Butylbenzene #	8	10									<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4									<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	6									<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4									<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7									<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4									<4	ug/kg	TM15/PM10
Naphthalene	<27	<27									<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7									<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	81	90									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	63	67									<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited

Matrix : Solid

Reference:

Location: Tetrosyl

Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason

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.: 22/7435

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a 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

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: 22/7435

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	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
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

APPENDIX 6 - Hotspot 3 Validation Testing Results

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Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE

Attention :	Luke Harrison
Date :	9th May, 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 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:

Liza Klebe
Project Co-ordinator

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: 22/5878

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	4-6	7-9	10-12	13-15	16-18	25-27	28-30	31-33	34-36		LOD/LOR	Units	Method No.
Sample ID	BH510	HS3 - A	HS3 - B	HS3 - C	HS3 - D	HS3 - G	HS3 - H	BH513	BH513				
Depth	2.80							0.30	1.80				
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	06/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022	07/04/2022				
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	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022	08/04/2022				
Methyl Tertiary Butyl Ether #	<2	-	-	-	-	-	-	<2	<2		<2	ug/kg	TM15/PM10
Benzene #	<3	-	-	-	-	-	-	<3	<3		<3	ug/kg	TM15/PM10
Toluene #	<3	-	-	-	-	-	-	23	<3		<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	-	-	-	-	-	-	<3	<3		<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	-	-	-	-	-	-	11	<5		<5	ug/kg	TM15/PM10
o-Xylene #	<3	-	-	-	-	-	-	5	<3		<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	84	-	-	-	-	-	-	104	109		<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	69	-	-	-	-	-	-	86	91		<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1 SV	<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 SV	<0.1 SV	<0.1	<0.1		<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1 SV	<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	<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	<4	<4	<4		<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7	<7	<7		<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7	<7	<7		<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	<19	<19	<19	<19	<19	<19	<19	<19	<19		<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 SV	<0.1 SV	<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 SV	<0.1 SV	<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 SV	<0.1 SV	<0.1	<0.1		<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	8.4	<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	<4	<4	<4	<4	<4	<4	<4		<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	<7	<7	<7		<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	<7	<7	<7		<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	<19	<19	<19	<19	<19	<19	<19	<19		<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	<38	<38	<38	<38	<38	<38	<38	<38	<38		<38	mg/kg	TM5/TM36/PM8/PM12/PM16
MTBE #	-	<5	<5	<5	<5	<5 SV	<5 SV	-	-		<5	ug/kg	TM36/PM12
Benzene #	-	<5	<5	<5	<5	<5 SV	<5 SV	-	-		<5	ug/kg	TM36/PM12
Toluene #	-	8	13	<5	18	70 SV	57 SV	-	-		<5	ug/kg	TM36/PM12
Ethylbenzene #	-	<5	<5	<5	<5	6 SV	8 SV	-	-		<5	ug/kg	TM36/PM12
m/p-Xylene #	-	<5	<5	<5	8	23 SV	17 SV	-	-		<5	ug/kg	TM36/PM12
o-Xylene #	-	<5	<5	<5	<5	<5 SV	9 SV	-	-		<5	ug/kg	TM36/PM12
Monoethylene glycol	<50	-	-	-	-	-	-	<50	<50		<50	ug/kg	TM179/PM8
Propylene glycol	<50	-	-	-	-	-	-	<50	<50		<50	ug/kg	TM179/PM8
Diethylene glycol	<50	-	-	-	-	-	-	<50	<50		<50	ug/kg	TM179/PM8
Triethylene glycol	<50	-	-	-	-	-	-	<50	<50		<50	ug/kg	TM179/PM8
Thiodiglycol	<50	-	-	-	-	-	-	<50	<50		<50	ug/kg	TM179/PM8
Organic Matter	-	1.6	1.4	1.3	1.4	36.8	18.9	-	-		<0.2	%	TM21/PM24

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	31-33	34-36									
Sample ID	BH510	BH513	BH513									
Depth	2.80	0.30	1.80							Please see attached notes for all abbreviations and acronyms		
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	06/04/2022	07/04/2022	07/04/2022									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	08/04/2022	08/04/2022	08/04/2022									
SVOC MS										LOD/LOR	Units	Method No.
Phenols												
2-Chlorophenol #	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
Phenol #	<10	<10	<10							<10	ug/kg	TM16/PM8
PAHs												
2-Chloronaphthalene #	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	16	<10							<10	ug/kg	TM16/PM8
Naphthalene	<10	13	<10							<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10							<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10							<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10							<10	ug/kg	TM16/PM8
Phenanthrene #	<10	29	<10							<10	ug/kg	TM16/PM8
Anthracene	<10	<10	<10							<10	ug/kg	TM16/PM8
Fluoranthene #	<10	25	<10							<10	ug/kg	TM16/PM8
Pyrene #	<10	22	<10							<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10	35	<10							<10	ug/kg	TM16/PM8
Chrysene	<10	15	<10							<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10	20	<10							<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	14	<10							<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	<10	<10							<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10							<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	<10	<10							<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	<10	14	<10							<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	<10	<10							<10	ug/kg	TM16/PM8
Phthalates												
Bis(2-ethylhexyl) phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<200$_{AA}$	<200$_{AA}$							<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100							<100	ug/kg	TM16/PM8

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

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	31-33	34-36									
Sample ID	BH510	BH513	BH513									
Depth	2.80	0.30	1.80									
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	06/04/2022	07/04/2022	07/04/2022									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	08/04/2022	08/04/2022	08/04/2022									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10								<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10								<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10								<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10								<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10								<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10								<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10								<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10								<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10								<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10								<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10								<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10								<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10								<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	106	117	122								<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	115	114	121								<0	%	TM16/PM8

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	31-33	34-36									
Sample ID	BH510	BH513	BH513									
Depth	2.80	0.30	1.80									
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	06/04/2022	07/04/2022	07/04/2022									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	08/04/2022	08/04/2022	08/04/2022									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2								<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2								<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2								<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1								<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2								<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2								<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6								<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7	<7								<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	9	<3	<3								<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	<3								<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4								<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3								<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4								<4	ug/kg	TM15/PM10
Benzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6								<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4								<4	ug/kg	TM15/PM10
Toluene #	<3	23	<3								<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	11	<5								<5	ug/kg	TM15/PM10
o-Xylene #	<3	5	<3								<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3								<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3								<3	ug/kg	TM15/PM10
Isopropylbenzene #	5	<3	<3								<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2								<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4								<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3								<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3								<3	ug/kg	TM15/PM10
tert-Butylbenzene #	14	<5	<5								<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	10	<6	<6								<6	ug/kg	TM15/PM10
sec-Butylbenzene #	11	<4	<4								<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4	<4								<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7	<7								<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4								<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27								<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7	<7								<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	84	104	109								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	69	86	91								<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
22/5878	1	HS3 - A		7-9	No interpretation possible
22/5878	1	HS3 - B		10-12	No interpretation possible
22/5878	1	HS3 - C		13-15	No interpretation possible
22/5878	1	HS3 - D		16-18	No interpretation possible
22/5878	1	HS3 - G		25-27	No interpretation possible
22/5878	1	HS3 - H		28-30	No interpretation possible

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
22/5878	1	HS3 - A		7-9	EPH	Sample holding time exceeded
22/5878	1	HS3 - B		10-12	EPH	Sample holding time exceeded
22/5878	1	HS3 - C		13-15	EPH	Sample holding time exceeded
22/5878	1	HS3 - D		16-18	EPH	Sample holding time exceeded
22/5878	1	HS3 - G		25-27	EPH	Sample holding time exceeded
22/5878	1	HS3 - H		28-30	EPH	Sample holding time exceeded
22/5878	1	BH513	0.30	31-33	EPH, GRO, SVOC, VOC	Sample holding time exceeded
22/5878	1	BH513	1.80	34-36	EPH, GRO, SVOC, VOC	Sample holding time exceeded

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 overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a 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: 22/5878

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
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
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
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	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
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

Please include all sections of this report if it is reproduced

EMT Job No: 22/5878

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

APPENDIX 7 - Hotspot 4 Validation Testing Results

Element Materials Technology
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Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE

Attention :	Luke Harrison
Date :	31st May, 2022
Your reference :	GRO-21459
Our reference :	Test Report 22/8294 Batch 1
Location :	Tetrosyl
Date samples received :	20th May, 2022
Status :	Final Report
Issue :	1

Six samples were received for analysis on 20th May, 2022 of which six 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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 22/8294

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18					LOD/LOR	Units	Method No.
Sample ID	HS4 - 1	HS4 - 2	HS4 - 3	HS4 - 4	HS4 - 5	HS4 - 6							
Depth	N/A	N/A	N/A	N/A	N/A	N/A							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022	19/05/2022							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	20/05/2022	20/05/2022	20/05/2022	20/05/2022	20/05/2022	20/05/2022							
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV					<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 SV	<0.1 SV					<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 SV	<0.1 SV					<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2					<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	14	7	15	16	20	11					<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	113	74	113	117	110	90					<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	114	76	108	128	93	90					<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	241	157	236	261	223	191					<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV					<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 SV	<0.1 SV					<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 SV	<0.1 SV					<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	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	7	8	<4	9	12					<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	60	39	55	54	71	69					<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	194	163	139	162	179	170					<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR)#	254	209	202	216	259	251					<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	495	366	438	477	482	442					<38	mg/kg	TM5/TM36/PM8/PM12/PM16
MTBE#	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV					<5	ug/kg	TM36/PM12
Benzene#	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV					<5	ug/kg	TM36/PM12
Toluene#	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV					<5	ug/kg	TM36/PM12
Ethylbenzene#	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV					<5	ug/kg	TM36/PM12
m/p-Xylene#	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV					<5	ug/kg	TM36/PM12
o-Xylene#	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV	<5 SV					<5	ug/kg	TM36/PM12
Organic Matter	23.0	42.4	28.3	27.0	21.9	19.4					<0.2	%	TM21/PM24

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 22/8294						

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.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/8294

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a 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
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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: 22/8294

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	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
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

APPENDIX 8 - Hotspot 5 Validation Testing Results

Bradley Massey
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e: BM@GROUNDTECHCONSULTING.COM

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Business Park,
Watford,
Herts,
WD18 8YS

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f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 22-36095

Project / Site name:	Tetrosyl	**Samples received on:**	27/01/2022
Your job number:	GRO-21249	**Samples instructed on/ Analysis started on:**	28/01/2022
Your order number:		**Analysis completed by:**	08/02/2022
Report Issue Number:	1	**Report issued on:**	08/02/2022
Samples Analysed:	6 soil samples		

Signed:

Joanna Wawrzeczko
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 22-36095
Project / Site name: Tetrosyl

Lab Sample Number				2153438	2153439	2153440	2153441	2153442
Sample Reference				HS5 S1	HS5 S3	HS5 S4	HS5 S6	HS5 S8
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				25/01/2022	25/01/2022	25/01/2022	25/01/2022	25/01/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	13	23	22	25	14
Total mass of sample received	kg	0.001	NONE	0.50	0.50	0.50	0.50	0.50
General Inorganics								
Organic Matter (automated)	%	0.1	MCERTS	1.4	1.5	1.8	1.9	2.0
Monoaromatics & Oxygenates								
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 22-36095
Project / Site name: Tetrosyl

Lab Sample Number				2153443
Sample Reference				HS5 S10
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				25/01/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	14
Total mass of sample received	kg	0.001	NONE	0.50

General Inorganics

Organic Matter (automated)	%	0.1	MCERTS	1.1

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	MCERTS	< 10

TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	MCERTS	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number : 22-36095
Project / Site name: Tetrosyl

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2153438	HS5 S1	None Supplied	None Supplied	Brown loam and clay with gravel.
2153439	HS5 S3	None Supplied	None Supplied	Brown clay and loam.
2153440	HS5 S4	None Supplied	None Supplied	Brown clay and loam.
2153441	HS5 S6	None Supplied	None Supplied	Brown clay and loam.
2153442	HS5 S8	None Supplied	None Supplied	Brown clay and loam.
2153443	HS5 S10	None Supplied	None Supplied	Brown clay and loam.

Analytical Report Number : 22-36095
Project / Site name: Tetrosyl

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

APPENDIX 9 - Hotspot 6 Validation Testing Results

Element Materials Technology
Unit 3 Deeside Point
Zone 3
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Deeside
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Groundtech Consulting Limited
PO Box 499
Manchester
M28 8EE

Attention :	Connor Hastings
Date :	18th April, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/5278 Batch 1 23/5156 Batch 1
Location :	Tetrosyl
Date samples received :	
Status :	Final report
Issue :	1.1

Authorised By:

Liza Klebe
Project Co-ordinator

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Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

Report : Solid

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

EMT Job No.	23/5156	23/5156	23/5156	23/5156	23/5156	23/5278	23/5278	23/5278	23/5278	23/5278	LOD/LOR	Units	Method No.
EMT Sample No.	1-3	7-9	13-15	19-21	25-27	4-6	10-13	17-18	22-24	28-30			
Sample ID	HS6-A	HS6-C	HS6-E	HS6-G	HS6-I	HS6-2	HS6-4	HS6-6	HS6-8	HS6-10			
Depth													
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 T	V J T	V J T			
Sample Date	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023			
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	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023			
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 #	5	6	6	8	6	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	<3	<3	32	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	<5	<5	7	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	82	91	89	83	94	96	100	102	97	96	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	71	78	77	79	85	103	107	106	93	108	<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	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	1.0	<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	<0.2	<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	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7	<7	69	97	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	<19	<19	<19	69	97	<19	<19	<19	<19	<19	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
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	0.2	<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	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	103	109	127	216	119	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	103	109	127	216	119	<19	<19	<19	<19	<19	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	103	109	127	285	216	<38	<38	<38	<38	<38	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Natural Moisture Content	18.4	18.3	15.3	17.6	18.6	15.7	12.3	11.1	10.9	12.4	<0.1	%	PM4/PM0
Total Organic Carbon #	6.86	10.45	3.15	5.68	6.86	1.86	0.24	0.09	0.10	0.10	<0.02	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

Report : Solid

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

EMT Job No.	23/5278	23/5278	23/5278								Please see attached notes for all abbreviations and acronyms		
EMT Sample No.	31-33	37-39	42-45										
Sample ID	HS6-K	HS6-M	HS6-O										
Depth													
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	30/03/2023	30/03/2023	30/03/2023										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1								LOD/LOR	Units	Method No.
Date of Receipt	01/04/2023	01/04/2023	01/04/2023										
Methyl Tertiary Butyl Ether #	<2	<2	<2 SV								<2	ug/kg	TM15/PM10
Benzene #	<3	<3	42 SV								<3	ug/kg	TM15/PM10
Toluene #	12	12	8735 AA								<3	ug/kg	TM15/PM10
Ethylbenzene #	90	15	7965 AA								<3	ug/kg	TM15/PM10
m/p-Xylene #	42	14	>>57035 AA								<5	ug/kg	TM15/PM10
o-Xylene #	21	5	>>51147 AA								<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	87	88	42 SV								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	81	79	44 SV								<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	<0.1 SV								<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	<0.1	7.4 SV								<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	0.7	0.2	563.5 SV								<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	4.7	6.5	6489.1								<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	11	14	351								<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	20	18	151								<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	128	113	64								<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	164	152	7626								<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	<0.1 SV								<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	3.2 SV								<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	0.9	0.2	52.7 SV								<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	1334.9								<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	<4	139								<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	31	16	87								<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	206	125	342								<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	238	141	1959								<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	402	293	9585								<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Natural Moisture Content	23.2	16.9	24.8								<0.1	%	PM4/PM0
Total Organic Carbon #	2.20	2.05	0.02								<0.02	%	TM21/PM24

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

SVOC Report : **Solid**

EMT Job No.	23/5156	23/5156	23/5156	23/5156	23/5156	23/5278	23/5278	23/5278	23/5278	23/5278			
EMT Sample No.	1-3	7-9	13-15	19-21	25-27	4-6	10-13	17-18	22-24	28-30			
Sample ID	HS6-A	HS6-C	HS6-E	HS6-G	HS6-I	HS6-2	HS6-4	HS6-6	HS6-8	HS6-10			
Depth											Please see attached notes for all abbreviations and acronyms		
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 T	V J T	V J T			
Sample Date	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023			
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	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	172	196	158	230	151	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Naphthalene	137	153	152	192	120	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenanthrene #	161	86	81	112	113	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Anthracene	13	<10	<10	18	15	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluoranthene #	202	93	65	109	136	<10	24	<10	<10	<10	<10	ug/kg	TM16/PM8
Pyrene #	356	102	73	122	149	<10	21	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	211	79	63	92	103	<10	33	<10	<10	<10	<10	ug/kg	TM16/PM8
Chrysene	249	82	53	95	110	<10	17	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	313	108	76	127	147	<10	25	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	219	62	38	72	85	<10	12	<10	<10	<10	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	92	33	20	38	45	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	44	14	<10	15	19	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	123	53	37	60	64	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	225	78	55	91	106	<10	18	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	88	30	21	36	41	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	124	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

SVOC Report : **Solid**

EMT Job No.	23/5156	23/5156	23/5156	23/5156	23/5156	23/5278	23/5278	23/5278	23/5278	23/5278			
EMT Sample No.	1-3	7-9	13-15	19-21	25-27	4-6	10-13	17-18	22-24	28-30			
Sample ID	HS6-A	HS6-C	HS6-E	HS6-G	HS6-I	HS6-2	HS6-4	HS6-6	HS6-8	HS6-10			
Depth											Please see attached notes for all abbreviations and acronyms		
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 T	V J T	V J T			
Sample Date	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023			
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	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	186	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #	40	41	43	52	37	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	112	112	113	109	115	93	135 SV	103	109	114	<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	114	111	115	112	115	92	142 SV	100	108	113	<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

SVOC Report : **Solid**

EMT Job No.	23/5278	23/5278	23/5278										
EMT Sample No.	31-33	37-39	42-45										
Sample ID	HS6-K	HS6-M	HS6-O										
Depth													
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	30/03/2023	30/03/2023	30/03/2023										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1										
Date of Receipt	01/04/2023	01/04/2023	01/04/2023										
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<100 AA										
2-Methylphenol	<10	<10	<100 AA										
2-Nitrophenol	<10	<10	<100 AA										
2,4-Dichlorophenol #	<10	<10	<100 AA										
2,4-Dimethylphenol	<10	<10	<100 AA										
2,4,5-Trichlorophenol	<10	<10	<100 AA										
2,4,6-Trichlorophenol	<10	<10	<100 AA										
4-Chloro-3-methylphenol	<10	<10	<100 AA										
4-Methylphenol	<10	<10	<100 AA										
4-Nitrophenol	<10	<10	<100 AA										
Pentachlorophenol	<10	<10	<100 AA										
Phenol #	<10	<10	<100 AA										
PAHs													
2-Chloronaphthalene #	<10	<10	<100 AA										
2-Methylnaphthalene #	38	21	3338 AA										
Naphthalene	48	54	13337 AA										
Acenaphthylene	176	<10	<100 AA										
Acenaphthene	81	19	<100 AA										
Fluorene	133	<10	524 AA										
Phenanthrene #	1217	133	1117 AA										
Anthracene	352	30	482 AA										
Fluoranthene #	1127	227	998 AA										
Pyrene #	1015	240	1076 AA										
Benzo(a)anthracene	509	122	876 AA										
Chrysene	522	136	679 AA										
Benzo(bk)fluoranthene	606	160	1184 AA										
Benzo(a)pyrene	371	87	580 AA										
Indeno(123cd)pyrene	158	42	464 AA										
Dibenzo(ah)anthracene	58	18	306 AA										
Benzo(ghi)perylene	185	58	574 AA										
Benzo(b)fluoranthene	436	115	852 AA										
Benzo(k)fluoranthene	170	45	332 AA										
Phthalates													
Bis(2-ethylhexyl) phthalate	134	236	<1000 AA										
Butylbenzyl phthalate	<100	<100	<1000 AA										
Di-n-butyl phthalate	<100	<100	<1000 AA										
Di-n-Octyl phthalate	<100	<100	<1000 AA										
Diethyl phthalate	<100	<100	<1000 AA										
Dimethyl phthalate #	<100	<100	<1000 AA										

Please see attached notes for all abbreviations and acronyms

LOD/LOR	Units	Method No.
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<100	ug/kg	TM16/PM8
<100	ug/kg	TM16/PM8
<100	ug/kg	TM16/PM8
<100	ug/kg	TM16/PM8
<100	ug/kg	TM16/PM8
<100	ug/kg	TM16/PM8

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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

SVOC Report : **Solid**

EMT Job No.	23/5278	23/5278	23/5278									
EMT Sample No.	31-33	37-39	42-45									
Sample ID	HS6-K	HS6-M	HS6-O									
Depth												
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	30/03/2023	30/03/2023	30/03/2023									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	01/04/2023	01/04/2023	01/04/2023									
SVOC MS												
Other SVOCs												
1,2-Dichlorobenzene	<10	<10	<100 AA									
1,2,4-Trichlorobenzene #	<10	<10	<100 AA									
1,3-Dichlorobenzene	<10	<10	<100 AA									
1,4-Dichlorobenzene	<10	<10	<100 AA									
2-Nitroaniline	<10	<10	<100 AA									
2,4-Dinitrotoluene	<10	<10	<100 AA									
2,6-Dinitrotoluene	<10	<10	<100 AA									
3-Nitroaniline	<10	<10	<100 AA									
4-Bromophenylphenylether #	<10	<10	<100 AA									
4-Chloroaniline	<10	<10	<100 AA									
4-Chlorophenylphenylether	<10	<10	<100 AA									
4-Nitroaniline	<10	<10	<100 AA									
Azobenzene	<10	<10	<100 AA									
Bis(2-chloroethoxy)methane	<10	<10	<100 AA									
Bis(2-chloroethyl)ether	<10	<10	<100 AA									
Carbazole	78	<10	263 AA									
Dibenzofuran #	90	<10	160 AA									
Hexachlorobenzene	<10	<10	<100 AA									
Hexachlorobutadiene #	<10	<10	<100 AA									
Hexachlorocyclopentadiene	<10	<10	<100 AA									
Hexachloroethane	<10	<10	<100 AA									
Isophorone #	<10	<10	<100 AA									
N-nitrosodi-n-propylamine #	<10	<10	<100 AA									
Nitrobenzene #	<10	<10	<100 AA									
Surrogate Recovery 2-Fluorobiphenyl	163 SV	115	105 AA									
Surrogate Recovery p-Terphenyl-d14	173 SV	117	112 AA									

LOD/LOR	Units	Method No.
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<10	ug/kg	TM16/PM8
<0	%	TM16/PM8
<0	%	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

VOC Report : **Solid**

EMT Job No.	23/5156	23/5156	23/5156	23/5156	23/5156	23/5278	23/5278	23/5278	23/5278	23/5278			
EMT Sample No.	1-3	7-9	13-15	19-21	25-27	4-6	10-13	17-18	22-24	28-30			
Sample ID	HS6-A	HS6-C	HS6-E	HS6-G	HS6-I	HS6-2	HS6-4	HS6-6	HS6-8	HS6-10			
Depth											Please see attached notes for all abbreviations and acronyms		
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 T	V J T	V J T			
Sample Date	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023			
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	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<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) #	13	14	13	<7	9	<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) #	44	31	30	27	18	<3	<3	<3	4	<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 #	5	6	6	8	6	<3	<3	<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) #	5	<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 #	<3	<3	<3	32	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	<5	<5	7	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Styrene	27	27	42	267	46	6	<3	<3	6	<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	<6	<6	<6	<6	<6	<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	<27	<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	82	91	89	83	94	96	100	102	97	96	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	71	78	77	79	85	103	107	106	93	108	<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

VOC Report : **Solid**

EMT Job No.	23/5278	23/5278	23/5278										
EMT Sample No.	31-33	37-39	42-45										
Sample ID	HS6-K	HS6-M	HS6-O										
Depth													
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	30/03/2023	30/03/2023	30/03/2023										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1										
Date of Receipt	01/04/2023	01/04/2023	01/04/2023										
VOC MS													
Dichlorodifluoromethane	<2	<2	<2 SV								<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2 SV								<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2 SV								<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1 SV								<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2 SV								<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2 SV								<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6 SV								<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7	15 SV								<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	5 SV								<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4 SV								<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4 SV								<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4 SV								<4	ug/kg	TM15/PM10
Benzene #	<3	<3	42 SV								<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	5	<3	<3 SV								<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6 SV								<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4 SV								<4	ug/kg	TM15/PM10
Toluene #	12	12	8735 AA								<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	22 SV								<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
Ethylbenzene #	90	15	7965 AA								<3	ug/kg	TM15/PM10
m/p-Xylene #	42	14	>>57035 AA								<5	ug/kg	TM15/PM10
o-Xylene #	21	5	>>51147 AA								<3	ug/kg	TM15/PM10
Styrene	551	72	5616 AA								<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
Isopropylbenzene #	6	<3	11631 AA								<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2 SV								<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4 SV								<4	ug/kg	TM15/PM10
Propylbenzene #	10	<4	16917 AA								<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	55	4	>>67719 AA								<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3 SV								<3	ug/kg	TM15/PM10
tert-Butylbenzene #	32	<5	>>72776 AA								<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	211	13	>>518500 AA								<6	ug/kg	TM15/PM10
sec-Butylbenzene #	31	<4	>>67739 AA								<4	ug/kg	TM15/PM10
4-Isopropyltoluene	20	<4	>>35584 AA								<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4 SV								<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4 SV								<4	ug/kg	TM15/PM10
n-Butylbenzene	36	<4	>>59692 AA								<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4 SV								<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4 SV								<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7	<7 SV								<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4 SV								<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	10326 AA								<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7	<7 SV								<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	87	88	42 SV								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	81	79	44 SV								<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for jobs 23/5156,23/5278						

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

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/5278 23/5156

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a 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 quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	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: 23/5278 23/5156

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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
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
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.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes

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EMT Job No: 23/5278 23/5156

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

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Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	14th November, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/18362 Batch 1
Location :	Tetrosyl
Date samples received :	3rd November, 2023
Status :	Final report
Issue :	1

Twenty seven samples were received for analysis on 3rd November, 2023 of which twenty 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 53.142 kg of CO2

Scope 1&2&3 emissions - 125.587 kg of CO2

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: 23/18362

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH506-1			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
Methyl Tertiary Butyl Ether #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	-	<2	ug/kg	TM15/PM10
Benzene #	<3 SV	14	24	<3	27	<3	<3 SV	<3	<3	-	<3	ug/kg	TM15/PM10
Toluene #	22 SV	63930 AB	>>62675 AB	52	2960 AA	20	13	77	39	-	<3	ug/kg	TM15/PM10
Ethylbenzene #	<3 SV	26419 AB	15712 AB	8	3824 AA	8	<3	92	210	-	<3	ug/kg	TM15/PM10
m/p-Xylene #	<5 SV	43457 AB	24148 AB	7	315	<5	<5 SV	36	29	-	<5	ug/kg	TM15/PM10
o-Xylene #	<3 SV	4059 AB	>>3881	<3	50	<3	<3 SV	<3	<3	-	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	56 SV	70	77	56	70	63	56 SV	61	64	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	49 SV	54	65	50	59	52	48 SV	51	52	-	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1 SV	0.1	0.6	<0.1 SV	0.6	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1 SV	10.2	11.5	<0.1 SV	2.0	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1 SV	7.0	5.8	<0.1 SV	1.2	<0.1 SV	<0.1 SV	<0.1 SV	0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	3.5	5.4	5.1	4.8	3.0	4.4	4.0	<0.2	-	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	10	13	17	17	12	12	19	17	6	-	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	18	19	31	31	20	21	36	34	16	-	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	20	12	26	24	15	16	31	27	24	-	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	48	65	97	77	56	52	90	82	46	-	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1 SV	35.4	40.6	<0.1 SV	2.0	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1 SV	27.7	21.1	<0.1 SV	1.6	<0.1 SV	<0.1 SV	<0.1 SV	0.4 SV	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	1.1	<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	7	10	<4	<4	<4	<4	<4	<4	-	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	12	<7	<7	<7	<7	<7	<7	<7	-	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	<7	<7	<7	-	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	82	73	<19	<19	<19	<19	<19	<19	-	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	48	147	170	77	56	52	90	82	46	-	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	-	-	-	-	-	-	-	-	-	<0.01	<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Diethylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Triethylene glycol	<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	ug/kg	TM179/PM8
Natural Moisture Content	19.5	20.4	19.3	16.2	16.2	19.4	28.1	16.4	19.3	14.7	<0.1	%	PM4/PM0
Organic Matter	1.8	2.5	2.8	3.4	2.5	1.9	3.6	6.2	2.4	1.7	<0.2	%	TM21/PM24

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

Report : Solid

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

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	LOD/LOR	Units	Method No.
Sample ID	BH506-2	BH506-3	BH506-4	BH506-5	BH502-1	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
Methyl Tertiary Butyl Ether #	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	-	-	-	-	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Toluene #	-	-	-	-	<3	<3	<3	<3	<3	4	<3	ug/kg	TM15/PM10
Ethylbenzene #	-	-	-	-	14	107	49	<3	<3	12	<3	ug/kg	TM15/PM10
m/p-Xylene #	-	-	-	-	<5	7	<5	<5	<5	63	<5	ug/kg	TM15/PM10
o-Xylene #	-	-	-	-	<3	<3	<3	<3	<3	7	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	72	88	84	104	105	109	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	66	83	73	100	103	103	<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	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	-	-	-	-	<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	1.7	0.2	<0.1	<0.1	1.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	-	-	-	-	<0.2	14.2	<0.2	<0.2	<0.2	25.0	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	-	-	-	-	<4	7	<4	<4	<4	6	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	-	-	-	-	<19	23	<19	<19	<19	32	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	-	-	-	-	<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	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	-	-	-	-	<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	11.4	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	-	-	-	-	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	-	-	-	-	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	-	-	-	-	<38	<38	<38	<38	<38	<38	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Propylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Diethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	61	<50	ug/kg	TM179/PM8
Triethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Thiodiglycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Natural Moisture Content	17.6	14.2	19.4	19.2	20.5	15.1	19.7	13.6	6.9	11.3	<0.1	%	PM4/PM0
Organic Matter	1.4	1.3	1.8	2.7	1.5	1.3	3.3	0.3	<0.2	1.6	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

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Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

Report : Solid

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

EMT Sample No.	61-63	64-66	67-69	70-72	73-75	76-78	79-81				LOD/LOR	Units	Method No.
Sample ID	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2	HS6-O-3	HS6-O-4						
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023						
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2	<2	<2				<2	ug/kg	TM15/PM10
Benzene #	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Toluene #	11	7	9	181	102	<3	39				<3	ug/kg	TM15/PM10
Ethylbenzene #	10	10	8	>>23677 AB	15972 AB	23	>>74916 AB				<3	ug/kg	TM15/PM10
m/p-Xylene #	39	<5	<5	>>5974	1747	<5	2238				<5	ug/kg	TM15/PM10
o-Xylene #	5	<3	<3	894	556	<3	762				<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	91	97	97	92	102	96	95				<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	73	91	89	80	87	93	81				<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	<0.1	<1.0 AB	<0.1	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	<0.1	<0.1	<1.0 AB	0.2	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	1.9	1.0	0.5	55.0 AB	35.3	<0.1	11.6 AB				<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	18.0	<0.2	<0.2	<0.2	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	14	<4	<4	<4	<4	<4				<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	<19	33	<19	55	36	<19	<19				<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	<0.1	<1.0 AB	<0.1	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	<0.1	<1.0 AB	0.3	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	0.4	<0.1	<0.1	431.2 AB	199.3	<0.1	63.2 AB				<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	7.2	<0.2	<0.2	3.9	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	6	<4	<4	9	<4	<4				<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	<7	54	28	12	<7				<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	82	<7	<7				<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	<19	<19	485	323	<19	63				<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	<38	<38	<38	540	359	<38	63				<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	-	-	-	-	-	-	-				<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	<50	81	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Diethylene glycol	<50	119	65	-	-	-	-				<50	ug/kg	TM179/PM8
Triethylene glycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Thiodiglycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Natural Moisture Content	20.6	15.7	15.4	11.7	9.6	6.8	9.5				<0.1	%	PM4/PM0
Organic Matter	1.5	1.0	1.3	3.5	3.5	0.3	1.7				<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45			
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth											Please see attached notes for all abbreviations and acronyms		
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	237	138	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	627	948	<10	327	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #	<10	<10	444	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	24	45	<10	31	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	23	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenanthrene #	<10	<10	60	<10	44	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluoranthene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pyrene #	<10	<10	17	<10	15	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Chrysene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45			
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth											Please see attached notes for all abbreviations and acronyms		
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	17	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	102	97	103	103	101	104	106	102	107	103	<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	85	79	89	101	100	90	100	92	105	100	<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	187	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	<10	<10	<10	32	<10	28	<10	31	25	<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	<10	<10	157	<10	15	<10	34	26	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenanthrene #	<10	<10	<10	<10	<10	<10	<10	<10	49	78	<10	ug/kg	TM16/PM8
Anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluoranthene #	<10	<10	<10	<10	<10	<10	<10	<10	106	71	<10	ug/kg	TM16/PM8
Pyrene #	<10	<10	<10	<10	<10	<10	<10	<10	99	83	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	116	48	<10	ug/kg	TM16/PM8
Chrysene	<10	<10	<10	<10	<10	<10	<10	<10	105	42	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	176	39	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	86	15	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	38	<10	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	13	<10	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	<10	58	15	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	127	28	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	49	11	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	484	2694	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	>>51388	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	125	328	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/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: 23/18362

SVOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	104	106	106	109	105	104	112	104	116	113	<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	100	105	101	101	102	99	111	100	119	117	<0	%	TM16/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: 23/18362

SVOC Report : **Solid**

EMT Sample No.	76-78	79-81											
Sample ID	HS6-O-3	HS6-O-4											
Depth											Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T											
Sample Date	01/11/2023	01/11/2023											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	03/11/2023	03/11/2023									LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10									<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10									<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10									<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10									<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10									<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10									<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10									<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10									<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10									<10	ug/kg	TM16/PM8
Phenol #	<10	<10									<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10									<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	32	13									<10	ug/kg	TM16/PM8
Naphthalene	35	74									<10	ug/kg	TM16/PM8
Acenaphthylene	<10	61									<10	ug/kg	TM16/PM8
Acenaphthene	69	72									<10	ug/kg	TM16/PM8
Fluorene	38	64									<10	ug/kg	TM16/PM8
Phenanthrene #	349	103									<10	ug/kg	TM16/PM8
Anthracene	59	66									<10	ug/kg	TM16/PM8
Fluoranthene #	284	113									<10	ug/kg	TM16/PM8
Pyrene #	233	107									<10	ug/kg	TM16/PM8
Benzo(a)anthracene	147	116									<10	ug/kg	TM16/PM8
Chrysene	168	103									<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	221	168									<10	ug/kg	TM16/PM8
Benzo(a)pyrene	107	76									<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	46	44									<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	14	34									<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	65	58									<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	159	121									<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	62	47									<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	244									<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	136	<100									<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100									<100	ug/kg	TM16/PM8

Please include all sections of this report if it is reproduced

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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	76-78	79-81										
Sample ID	HS6-O-3	HS6-O-4										
Depth												
COC No / misc												
Containers	V J T	V J T										
Sample Date	01/11/2023	01/11/2023										
Sample Type	Soil	Soil										
Batch Number	1	1										
Date of Receipt	03/11/2023	03/11/2023										

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10									<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10									<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10									<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10									<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10									<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10									<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
Azobenzene	<10	<10									<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10									<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10									<10	ug/kg	TM16/PM8
Carbazole	27	<10									<10	ug/kg	TM16/PM8
Dibenzofuran #	41	<10									<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10									<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10									<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10									<10	ug/kg	TM16/PM8
Isophorone #	<10	<10									<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10									<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10									<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	104	109									<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	105	111									<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45	LOD/LOR	Units	Method No.
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
VOC MS													
Dichlorodifluoromethane	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Chloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1 SV	<1	<1	<1	<1	<1	<1 SV	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	109 SV	2866 AA	7744 AB	1701	>>20700 AA	62	51	182	103	<2	<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6 SV	<6	<6	<6	<6	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7 SV	<7	<7	<7	13	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Chloroform #	<3 SV	7	10	<3	19	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Benzene #	<3 SV	14	24	<3	27	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6 SV	<6	<6	<6	<6	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
Dibromomethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #	22 SV	63930 AB	>>62675 AB	52	2960 AA	20	13	77	39	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #	<3 SV	26419 AB	15712 AB	8	3824 AA	8	<3	92	210	14	<3	ug/kg	TM15/PM10
m/p-Xylene #	<5 SV	43457 AB	24148 AB	7	315	<5	<5 SV	36	29	<5	<5	ug/kg	TM15/PM10
o-Xylene #	<3 SV	4059 AB	>>3881	<3	50	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Styrene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	12	<3	ug/kg	TM15_A/PM10
Bromoform	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3 SV	7	20	<3	6	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene #	<4 SV	<4	11	<4	7	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3 SV	6	24	<3	28	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5 SV	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6 SV	37	167	<6	132	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4 SV	<4	7	<4	19	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4 SV	<4	8	<4	22	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene	<4 SV	<4	<4	<4	15	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7 SV	<7	<7	<7	<7	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27 SV	<27	<27	<27	<27	<27	<27 SV	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7 SV	<7	<7	<7	<7	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	56 SV	70	77	56	70	63	56 SV	61	64	72	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	49 SV	54	65	50	59	52	48 SV	51	52	66	<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
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<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	3	<2	<2	16	<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) #	<3	<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	<3	<3	4	11	7	9	181	102	<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 #	107	49	<3	<3	12	10	10	8	>>23677$_{AB}$	15972$_{AB}$	<3	ug/kg	TM15/PM10
m/p-Xylene #	7	<5	<5	<5	63	39	<5	<5	>>5974	1747	<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	<3	<3	7	5	<3	<3	894	556	<3	ug/kg	TM15/PM10
Styrene	28	20	<3	<3	<3	<3	19	10	>>160702$_{AB}$	>>35418$_{AB}$	<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	13	<3	<3	<3	17	5	16	<3	231	69	<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 #	32	<4	<4	<4	46	12	56	<4	126	37	<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 #	16	<3	<3	<3	18	<3	6	<3	23	5	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	25	<5	<5	<5	<5	<5	14	12	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	12	<6	<6	<6	545	87	80	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	67	<4	<4	<4	70	12	53	5	36	9	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	8	<4	<4	<4	14	<4	6	<4	6	<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	66	<4	<4	<4	73	11	93	<4	7	<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	<27	<27	98	<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	88	84	104	105	109	91	97	97	92	102	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	83	73	100	103	103	73	91	89	80	87	<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
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	76-78	79-81										
Sample ID	HS6-O-3	HS6-O-4										
Depth												
COC No / misc												
Containers	V J T	V J T										
Sample Date	01/11/2023	01/11/2023										
Sample Type	Soil	Soil										
Batch Number	1	1										
Date of Receipt	03/11/2023	03/11/2023										

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2									<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2									<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2									<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1									<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2									<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2									<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6									<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7									<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4									<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Chloroform #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3									<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4									<4	ug/kg	TM15/PM10
Benzene #	<3	<3									<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6									<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4									<4	ug/kg	TM15/PM10
Toluene #	<3	39									<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3									<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3									<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3									<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3									<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Ethylbenzene #	23	>>74916 AB									<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	2238									<5	ug/kg	TM15/PM10
o-Xylene #	<3	762									<3	ug/kg	TM15/PM10
Styrene	12	>>20755									<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3									<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	135									<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2									<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4									<4	ug/kg	TM15/PM10
Propylbenzene #	<4	65									<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	5									<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5									<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6									<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	15									<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4									<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4									<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7									<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4									<4	ug/kg	TM15/PM10
Naphthalene	<27	<27									<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7									<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	96	95									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	93	81									<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
23/18362	1	HS8-2		1-3	Trace of degraded diesel
23/18362	1	HS8-6		4-6	Trace of degraded diesel
23/18362	1	HS8-7		7-9	Trace of degraded diesel
23/18362	1	HS8-3A		10-12	Trace of degraded diesel
23/18362	1	HS8-4A		13-15	Trace of degraded diesel
23/18362	1	HS8-9A		16-18	Trace of degraded diesel
23/18362	1	HS8-11		19-21	Trace of degraded diesel
23/18362	1	HS8-12		22-24	Trace of degraded diesel
23/18362	1	HS8-13		25-27	Trace of degraded diesel
23/18362	1	BH502-1		43-45	No interpretation possible
23/18362	1	BH502-2		46-48	Degraded kerosene-type product
23/18362	1	BH502-3		49-51	No interpretation possible
23/18362	1	BH502-4		52-54	No interpretation possible
23/18362	1	BH502-5		55-57	No interpretation possible
23/18362	1	BH502-6		58-60	Degraded kerosene-type product
23/18362	1	BH502-7		61-63	No interpretation possible
23/18362	1	BH502-8		64-66	Possible degraded kerosene
23/18362	1	BH502-9		67-69	No interpretation possible
23/18362	1	HS6-O-1		70-72	Gasoline residues & Trace of degraded diesel
23/18362	1	HS6-O-2		73-75	Gasoline residues & Trace of degraded diesel
23/18362	1	HS6-O-3		76-78	Possaible PAH's
23/18362	1	HS6-O-4		79-81	No interpretation possible

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/18362						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/18362

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 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: 23/18362

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
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
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
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes

EMT Job No: 23/18362

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.	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 GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

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Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	29th December, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/21487 Batch 1
Location :	Tetrosyll
Date samples received :	16th December, 2023
Status :	Final Report
Issue :	202312291249

Thirty two samples were received for analysis on 16th December, 2023 of which twenty 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 38.444 kg of CO2

Scope 1&2&3 emissions - 90.854 kg of CO2

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: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

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	LOD/LOR	Units	Method No.
Sample ID	HS1-A2	HS1-B2	HS1-C2	HS1-D2	HS1-E2	HS1-F2	HS1-G2	HS1-H2	HS1-I2	HS1-J2			
Depth													
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	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023			
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	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023			
Methyl Tertiary Butyl Ether #	<2	<2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	675	179	115 SV	778	267	50 SV	279	340	138	43	<3	ug/kg	TM15/PM10
Toluene #	>>28267 AB	>>24657 AB	>>145528 AB	>>204064 AB	>>146035 AB	>>151620 AB	>>55104 AB	1036	>>2914	1765	<3	ug/kg	TM15/PM10
Ethylbenzene #	8113 AB	19104 AB	>>41456 AB	>>92569 AB	>>12279	>>36269 AB	10278 AB	131	1395	231	<3	ug/kg	TM15/PM10
m/p-Xylene #	22927 AB	>>51510 AB	>>103658 AB	>>167698 AB	20753 AB	>>86321 AB	27215 AB	>>18951	>>9948	566	<5	ug/kg	TM15/PM10
o-Xylene #	3496 AB	7790 AB	19737 AB	>>41024 AB	>>5398	14225 AB	5307 AB	41	193	94	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	67	73	62 SV	77	73	75 SV	76	79	84	71	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	55	57	47 SV	58	54	46 SV	61	66	76	60	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.5 AA	<0.1	0.2	0.3	<0.1	<0.5 AA	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	10.9 AA	3.9	82.8	88.9	34.7	53.6 AA	9.2 SV	2.9	1.3	0.8 SV	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	11.4 AA	14.1	83.4	141.9	30.6	68.8 AA	10.9 SV	5.2	3.2	3.5 SV	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	3.1	16.2	18.6	<0.2	<0.2	58.5	2.8	32.0	23.0	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	19	42	23	<4	<4	264	18	130	126	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	34	89	34	<7	<7	361	32	221	261	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	26	78	23	<7	<7	97	36	33	138	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH_CU+HS_1D_AL)	22	100	392	330	65	122	801	97	421	552	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.5 AA	0.1	<0.1	<0.1	<0.1	<0.5 AA	<0.1 SV	0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	35.6 AA	11.7	283.6	354.2	211.8	275.3 AA	27.5 SV	3.7	3.8	1.8 SV	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	33.0 AA	52.5	188.5	273.2	25.0	129.7 AA	13.9 SV	11.3	10.0	0.8 SV	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	5.0	11.9	16.4	<0.2	13.2	16.3	8.9	11.2	13.8	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	<4	14	10	<4	8	74	27	59	69	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	16	<7	<7	<7	119	64	103	165	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	21	153	14	142	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH_CU+HS_1D_AR) #	69	69	514	654	237	426	272	268	201	392	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH_CU+HS_1D_Total)	91	169	906	984	302	548	1073	365	622	944	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Natural Moisture Content	12.7	13.9	16.0	14.9	14.3	14.7	22.8	27.4	27.6	25.7	<0.1	%	PM4/PM0
Organic Matter	1.8	2.6	2.6	2.2	2.3	2.3	3.7	6.5	2.9	17.3	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

Report : Solid

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

EMT Sample No.	31-33	34-36	37-39	40-42	46-48	49-51	52-54	55-57	58-60	64-66	LOD/LOR	Units	Method No.
Sample ID	HS1-K2	HS1-L2	HS1-M2	HS1-N2	HS6-02	HS6-03	HS6-04	HS6-05	HS6-06	HS8-6A			
Depth													
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	12/12/2023	12/12/2023	12/12/2023	12/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023			
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	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023			
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	37	7	<3	44	<3	<3	<3	<3	<3	19	<3	ug/kg	TM15/PM10
Toluene #	2470	303	396	1323	74	7	54	335	<3	>>26106 AB	<3	ug/kg	TM15/PM10
Ethylbenzene #	601	72	31	303	>>40489 AB	6	>>3254	>>23196 AB	34	5543 AB	<3	ug/kg	TM15/PM10
m/p-Xylene #	2323	347	92	>>4358	130	<5	69	758	<5	4144	<5	ug/kg	TM15/PM10
o-Xylene #	226	28	34	380	45	<3	18	200	<3	476	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	68	79	74	71	89	95	86	89	102	67	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	53	64	60	64	77	81	73	81	95	50	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1 SV	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	1.0 SV	0.2	0.1	1.0	<0.1	<0.1	<0.1	0.2	<0.1	12.5	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	1.5 SV	0.6	0.1	7.0	4.4	3.4	0.8	13.0	<0.1	3.0	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	10.0	<0.2	<0.2	56.4	<0.2	125.9	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	76	32	13	185	<4	163	<4	<4	<4	7	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	146	50	10	304	<7	19	21	<7	<7	20	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	56	49	<7	91	<7	16	33	<7	<7	22	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH_CU+HS_1D_AL)	291	132	23	644	<19	327	55	<19	<19	65	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1 SV	<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) #	2.2 SV	0.6	0.3	1.3	<0.1	<0.1	<0.1	0.2	<0.1	31.2	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	2.2 SV	0.5	<0.1	3.3	17.3	0.5	3.1	52.0	0.3	11.3	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	6.2	7.6	<0.2	18.0	<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) #	31	30	<4	116	<4	15	8	<4	<4	8	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	95	86	<7	235	41	29	37	23	<7	23	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	75	181	<7	121	71	108	111	56	<7	52	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH_CU+HS_1D_AR) #	212	306	<19	495	129	153	159	131	<19	126	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH_CU+HS_1D_Total)	503	438	<38	1139	129	480	214	131	<38	191	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Natural Moisture Content	24.7	20.1	12.4	25.8	16.2	15.9	14.7	15.2	25.5	16.6	<0.1	%	PM4/PM0
Organic Matter	15.7	6.1	24.3	5.0	3.3	2.3	2.8	1.2	0.4	2.7	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

Report : Solid

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

EMT Sample No.	70-72												
Sample ID	HS8-7A												
Depth													
COC No / misc													
Containers	V J T												
Sample Date	13/12/2023												
Sample Type	Soil												
Batch Number	1												
Date of Receipt	16/12/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<2										<2	ug/kg	TM15/PM10
Benzene #	6										<3	ug/kg	TM15/PM10
Toluene #	>>17603										<3	ug/kg	TM15/PM10
Ethylbenzene #	>>20751										<3	ug/kg	TM15/PM10
m/p-Xylene #	>>29591										<5	ug/kg	TM15/PM10
o-Xylene #	>>3488										<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	76										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	57										<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1										<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	6.0										<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	7.8										<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	1.4										<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	7										<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) #	41										<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH_CU+HS_1D_AL)	85										<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1										<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	19.1										<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	33.4										<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_CU+HS_1D_AR) #	53										<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH_CU+HS_1D_Total)	138										<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Natural Moisture Content	20.2										<0.1	%	PM4/PM0
Organic Matter	2.1										<0.2	%	TM21/PM24

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	76-78	79-81	82-84	85-87	88-90	91-93	94-95				LOD/LOR	Units	Method No.
Sample ID	BH316	BH319	BH320	BH321	BH323	BH324	SW01						
Depth													
COC No / misc													
Containers	V G	V G	V G	V G	V G	V G	V						
Sample Date	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023						
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023						
Methyl Tertiary Butyl Ether #	-	-	-	-	-	-	<0.1				<0.1	ug/l	TM15/PM10
Benzene #	-	-	-	-	-	-	<0.5				<0.5	ug/l	TM15/PM10
Toluene #	-	-	-	-	-	-	<5				<5	ug/l	TM15/PM10
Ethylbenzene #	-	-	-	-	-	-	<1				<1	ug/l	TM15/PM10
m/p-Xylene #	-	-	-	-	-	-	<2				<2	ug/l	TM15/PM10
o-Xylene #	-	-	-	-	-	-	<1				<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	-	-	80				<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	-	94				<0	%	TM15/PM10
GRO (>C4-C8) (HS_1D_Total) #	148	<10	21280	55074	7951	9424	<10				<10	ug/l	TM36/PM12
GRO (>C8-C12) (HS_1D_Total) #	371	11	>>26036	>>36377	5352	4526	<10				<10	ug/l	TM36/PM12
GRO (>C4-C12) (HS_1D_Total) #	519	11	>>47316	>>91451	13303	13950	<10				<10	ug/l	TM36/PM12
MTBE #	<5	<5	131	154	35	43	-				<5	ug/l	TM36/PM12
Benzene #	<5	<5	33	24	11	37	-				<5	ug/l	TM36/PM12
Toluene #	<5	<5	>>15980	>>42946	>>6148	>>7190	-				<5	ug/l	TM36/PM12
Ethylbenzene #	144	<5	4300	5539	563	476	-				<5	ug/l	TM36/PM12
m/p-Xylene #	18	<5	>>12638	>>19073	2871	2288	-				<5	ug/l	TM36/PM12
o-Xylene #	13	<5	1928	4045	523	348	-				<5	ug/l	TM36/PM12

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

SVOC Report : **Solid**

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	64-66	70-72				LOD/LOR	Units	Method No.
Sample ID	HS6-02	HS6-03	HS6-04	HS6-05	HS6-06	HS8-6A	HS8-7A						
Depth													
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	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023						
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	219	203				<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	<10	<10	<10	<10	<10	176	<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	693	700				<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 #	16	<10	31	<10	<10	37	25				<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	48	<10	<10	15	<10				<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Fluorene	<10	<10	41	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Phenanthrene #	<10	436	479	<10	46	69	38				<10	ug/kg	TM16/PM8
Anthracene	<10	126	91	<10	19	<10	<10				<10	ug/kg	TM16/PM8
Fluoranthene #	26	799	594	17	119	14	<10				<10	ug/kg	TM16/PM8
Pyrene #	26	647	509	16	104	21	17				<10	ug/kg	TM16/PM8
Benzo(a)anthracene	37	306	224	31	83	29	26				<10	ug/kg	TM16/PM8
Chrysene	22	314	260	13	68	16	22				<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	28	362	333	16	89	14	14				<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	191	184	<10	49	<10	<10				<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	80	80	<10	24	<10	<10				<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	108	112	<10	29	<10	<10				<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	20	261	240	12	64	10	10				<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	101	93	<10	25	<10	<10				<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	210	<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	<100	218	319	<100	<100	140	<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: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

SVOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	64-66	70-72						
Sample ID	HS6-02	HS6-03	HS6-04	HS6-05	HS6-06	HS8-6A	HS8-7A						
Depth											Please see attached notes for all abbreviations and acronyms		
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	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023						
SVOC MS											LOD/LOR	Units	Method No.
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Carbazole	<10	65	48	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	<10	<10	<10	17	<10				<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	116	118	117	115	103	110	113				<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	120	120	121	119	104	108	113				<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

VOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30			
Sample ID	HS1-A2	HS1-B2	HS1-C2	HS1-D2	HS1-E2	HS1-F2	HS1-G2	HS1-H2	HS1-I2	HS1-J2			
Depth											Please see attached notes for all abbreviations and acronyms		
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	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023			
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	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	6	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	5	2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1 SV	<1	<1	<1 SV	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2 SV	9	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6 SV	7	<6	<6 SV	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	14	14	152 SV	293	17	50 SV	<7	<7	<7	26	<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3 SV	<3	51	<3 SV	6	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	8	5	20 SV	78	103	5 SV	14	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	11	<3	8 SV	9	998	15 SV	20	<3	<3	8	<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	107 SV	207	59	49 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	122 SV	888	22	91 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Benzene #	675	179	115 SV	778	267	50 SV	279	340	138	43	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	7	16	1191 SV	4447 AB	216	738 SV	6	4	10	24	<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6 SV	<6	<6	<6 SV	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3 +	<3 +	<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #	>>28267 AB	>>24657 AB	>>145528 AB	>>204064 AB	>>146035 AB	>>151620 AB	>>55104 AB	1036	>>2914	1765	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3 +	<3 +	<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	136 SV	589	35	96 SV	6	<3	<3	4	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3 +	<3 +	<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3 +	<3 +	<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	74 SV	248	33	30 SV	9	138	48	5	<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #	8113 AB	19104 AB	>>41456 AB	>>92569 AB	>>12279	>>36269 AB	10278 AB	131	1395	231	<3	ug/kg	TM15/PM10
m/p-Xylene #	22927 AB	>>51510 AB	>>103658 AB	>>167698 AB	20753 AB	>>86321 AB	27215 AB	>>18951	>>9948	566	<5	ug/kg	TM15/PM10
o-Xylene #	3496 AB	7790 AB	19737 AB	>>41024 AB	>>5398	14225 AB	5307 AB	41	193	94	<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	70	98	568 SV	1210	71	224 SV	274	224	41	31	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4 +	<4 +	<4	ug/kg	TM15/PM10
Propylbenzene #	131	133	1290 SV	2254 AB	61	430 SV	503	409	88	21	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	176	223	2030 SV	4466 AB	85	980 SV	723	808	116	469	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5 SV	<5	<5	<5 SV	281	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	914	1341	12326 SV	>>26851	567	8647 SV	6388 AB	>>2687	330	1136	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	17	15	203 SV	470	9	99 SV	156	65	8	23	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	15	11	171 SV	363	7	72 SV	264	42	5	68	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4 SV	21	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4 SV	8	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4 SV	34	<4	<4 SV	<4	17	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7	<7 SV	<7	<7	<7 SV	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	220 SV	458	38	133 SV	273	45	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7	<7 SV	<7	<7	<7 SV	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	67	73	62 SV	77	73	75 SV	76	79	84	71	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	55	57	47 SV	58	54	46 SV	61	66	76	60	<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

VOC Report : **Solid**

EMT Sample No.	31-33	34-36	37-39	40-42	46-48	49-51	52-54	55-57	58-60	64-66	LOD/LOR	Units	Method No.
Sample ID	HS1-K2	HS1-L2	HS1-M2	HS1-N2	HS6-02	HS6-03	HS6-04	HS6-05	HS6-06	HS8-6A			
Depth													
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	12/12/2023	12/12/2023	12/12/2023	12/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023			
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	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<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 #	5	<3	4	<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	4100 AB	<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) #	19	<7	11	<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 #	7	<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	8	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	6	<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 #	37	7	<3	44	<3	<3	<3	<3	<3	19	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	32	14	39	10	<3	<3	9	<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 #	2470	303	396	1323	74	7	54	335	<3	>>26106 AB	<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) #	11	16	40	5	<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 #	9	<3	<3	5	<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 #	601	72	31	303	>>40489 AB	6	>>3254	>>23196 AB	34	5543 AB	<3	ug/kg	TM15/PM10
m/p-Xylene #	2323	347	92	>>4358	130	<5	69	758	<5	4144	<5	ug/kg	TM15/PM10
o-Xylene #	226	28	34	380	45	<3	18	200	<3	476	<3	ug/kg	TM15/PM10
Styrene	<3	6	<3	20	42	12	78	60	<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 #	17	5	<3	91	116	<3	15	245	<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 #	29	10	<4	159	62	<4	8	141	<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 #	110	41	25	528	8	<3	5	9	<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	8	166	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	362	171	38	>>3226	21	<6	9	28	<6	10	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	15	10	<4	156	12	<4	<4	21	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	11	<4	<4	34	<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	<27	1128	<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	68	79	74	71	89	95	86	89	102	67	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	53	64	60	64	77	81	73	81	95	50	<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

VOC Report : **Solid**

EMT Sample No.	70-72												
Sample ID	HS8-7A												
Depth													
COC No / misc													
Containers	V J T												
Sample Date	13/12/2023												
Sample Type	Soil												
Batch Number	1												
Date of Receipt	16/12/2023												

Please see attached notes for all abbreviations and acronyms

											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 #	986										<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6										<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	11										<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3										<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3										<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 #	6										<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 #	>>17603										<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 #	>>20751										<3	ug/kg	TM15/PM10
m/p-Xylene #	>>29591										<5	ug/kg	TM15/PM10
o-Xylene #	>>3488										<3	ug/kg	TM15/PM10
Styrene	<3										<3	ug/kg	TM15_A/PM10
Bromoform	<3										<3	ug/kg	TM15/PM10
Isopropylbenzene #	19										<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 #	7										<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3										<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	23										<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3										<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5										<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	184										<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4										<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	76										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	57										<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

VOC Report : **Liquid**

EMT Sample No.	94-95												
Sample ID	SW01												
Depth													
COC No / misc													
Containers	V												
Sample Date	14/12/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	16/12/2023												
VOC MS													
Dichlorodifluoromethane	<2											<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1											<0.1	ug/l	TM15/PM10
Chloromethane #	<3											<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1											<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 #	<0.5											<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 #	<5											<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 #	<1											<1	ug/l	TM15/PM10
m/p-Xylene #	<2											<2	ug/l	TM15/PM10
o-Xylene #	<1											<1	ug/l	TM15/PM10
Styrene	<2											<2	ug/l	TM15/PM10
Bromoform #	<2											<2	ug/l	TM15/PM10
Isopropylbenzene #	<3											<3	ug/l	TM15/PM10
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 #	<3											<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3											<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3											<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 #	<3											<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	<2											<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3											<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	80											<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	94											<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited

Matrix : Solid

Reference: GRO-21459

Location: Tetrosyll

Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
23/21487	1	HS1-C2		7-9	GRO	Sample holding time exceeded
23/21487	1	HS1-D2		10-12	GRO	Sample holding time exceeded
23/21487	1	HS1-E2		13-15	GRO	Sample holding time exceeded
23/21487	1	HS1-G2		19-21	EPH	Sample holding time exceeded
23/21487	1	HS1-K2		31-33	EPH	Sample holding time exceeded

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.

It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/21487

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
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: 23/21487

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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.				
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			
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

EMT Job No: 23/21487

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes
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			
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	26th January, 2024
Your reference :	GRP-21459
Our reference :	Test Report 24/602 Batch 1
Location :	Tetrosyll
Date samples received :	13th January, 2024
Status :	Final Report
Issue :	202401261404

Four samples were received for analysis on 13th January, 2024 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 4.923 kg of CO2

Scope 1&2&3 emissions - 11.635 kg of CO2

Authorised By:

Phil Sommerton BSc
Senior Project Manager

Please include all sections of this report if it is reproduced

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 24/602

Report : Solid

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

EMT Sample No.	1-3	4-6	7-9	10-12							LOD/LOR	Units	Method No.
Sample ID	HS06-02A	HS06-05A	HS08-06C	HS08-07C									
Depth													
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	12/01/2024	12/01/2024	12/01/2024	12/01/2024									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	13/01/2024	13/01/2024	13/01/2024	13/01/2024									
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1	0.1 SV	<0.1 SV							<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1	0.6 SV	0.4 SV							<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 SV	<0.1 SV							<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	<0.2	<0.2							<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4	<4	<4							<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	<7	<7							<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7	<7	<7							<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH_CU+HS_1D_AL)	<19	<19	<19	<19							<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1 SV							<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1 SV							<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	0.1	<0.1 SV	<0.1 SV							<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2							<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4	<4	<4							<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	<7	<7							<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7	<7	<7							<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH_CU+HS_1D_AR)#	<19	<19	<19	<19							<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH_CU+HS_1D_Total)	<38	<38	<38	<38							<38	mg/kg	TM5/TM36/PM8/PM12/PM16
MTBE#	<5	<5	<5 SV	<5 SV							<5	ug/kg	TM36/PM12
Benzene#	<5	<5	<5 SV	<5 SV							<5	ug/kg	TM36/PM12
Toluene#	<5	<5	47 SV	21 SV							<5	ug/kg	TM36/PM12
Ethylbenzene#	54	55	6 SV	<5 SV							<5	ug/kg	TM36/PM12
m/p-Xylene#	6	<5	13 SV	<5 SV							<5	ug/kg	TM36/PM12
o-Xylene#	17	60	<5 SV	<5 SV							<5	ug/kg	TM36/PM12
Natural Moisture Content	7.3	12.6	17.1	18.6							<0.1	%	PM4/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 24/602

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12							LOD/LOR	Units	Method No.
Sample ID	HS06-02A	HS06-05A	HS08-06C	HS08-07C									
Depth													
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	12/01/2024	12/01/2024	12/01/2024	12/01/2024									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	13/01/2024	13/01/2024	13/01/2024	13/01/2024									
SVOC MS													
Phenols													
2-Chlorophenol #	<10+	<10+	<10+	<10+							<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Phenol #	<10+	<10+	<10+	<10+							<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	36	30	<10	<10							<10	ug/kg	TM16/PM8
Naphthalene	35	26	<10	<10							<10	ug/kg	TM16/PM8
Acenaphthylene	27	<10	<10	<10							<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Phenanthrene #	130	77	26	<10							<10	ug/kg	TM16/PM8
Anthracene	38	18	<10	<10							<10	ug/kg	TM16/PM8
Fluoranthene #	336	80	<10	<10							<10	ug/kg	TM16/PM8
Pyrene #	310	81	14	<10							<10	ug/kg	TM16/PM8
Benzo(a)anthracene	192	68	32	<10							<10	ug/kg	TM16/PM8
Chrysene	217	68	16	<10							<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	288	87	<10	<10							<10	ug/kg	TM16/PM8
Benzo(a)pyrene	161	47	<10	<10							<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	52	19	<10	<10							<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	16	<10	<10	<10							<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	54	18	<10	<10							<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	207	63	<10	<10							<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	81	24	<10	<10							<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Dimethyl phthalate #	168	<100	<100	<100							<100	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 24/602

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12							LOD/LOR	Units	Method No.
Sample ID	HS06-02A	HS06-05A	HS08-06C	HS08-07C									
Depth													
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	12/01/2024	12/01/2024	12/01/2024	12/01/2024									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	13/01/2024	13/01/2024	13/01/2024	13/01/2024									
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Dibenzofuran #	13	12	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10+	<10+	<10+	<10+							<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	114	112	108	115							<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	115	110	107	111							<0	%	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Notification of Deviating Samples

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyll
Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/602						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/602

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

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

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: 24/602

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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
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 GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

APPENDIX 10 - Hotspot 7 Validation Testing Results

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Attention :	Connor Hastings
Date :	18th April, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/5278 Batch 1 23/5156 Batch 1
Location :	Tetrosyl
Date samples received :	
Status :	Final report
Issue :	1.2

Authorised By:

Liza Klebe
Project Co-ordinator

Please include all sections of this report if it is reproduced

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

Report : Solid

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

EMT Job No.	23/5278	23/5278	23/5278	23/5278	23/5278	23/5278	23/5278	23/5278					
EMT Sample No.	46-48	52-54	58-60	61-63	64	65	66	67					
Sample ID	HS7-1	HS7-3	HS7-5	HS7-6	HS7-7	HS7-8	HS7-9	HS7-10					
Depth											Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T	V J T	V J T	T	T	T	T					
Sample Date	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023	30/03/2023					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	1	1	1	1	1	1	1	1					
Date of Receipt	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023	01/04/2023					
											LOD/LOR	Units	Method No.
PCB 28 #	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/kg	TM17/PM8
PCB 52 #	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/kg	TM17/PM8
PCB 101 #	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/kg	TM17/PM8
PCB 118 #	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/kg	TM17/PM8
PCB 138 #	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/kg	TM17/PM8
PCB 153 #	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/kg	TM17/PM8
PCB 180 #	<5	<5	<5	<5	<5	<5	<5	<5			<5	ug/kg	TM17/PM8
Total 7 PCBs #	<35	<35	<35	<35	<35	<35	<35	<35			<35	ug/kg	TM17/PM8
Natural Moisture Content	15.8	18.1	15.8	16.8	19.5	16.1	20.5	11.7			<0.1	%	PM4/PM0

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Connor Hastings

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/5278						

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

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/5278 23/5156

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a 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 quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

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: 23/5278 23/5156

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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
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
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.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes

Please include all sections of this report if it is reproduced

EMT Job No: 23/5278 23/5156

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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 11 - Hotspot 8 Validation Testing Results

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United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	12th October, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/16466 Batch 1
Location :	Tetrosyl
Date samples received :	5th October, 2023
Status :	Final Report
Issue :	1

Ten samples were received for analysis on 5th October, 2023 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 15.638 kg of CO2

Scope 1&2&3 emissions - 36.958 kg of CO2

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: 23/16466

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	7-9	10-12	13-15	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	HS8-1	HS8-3	HS8-4	HS8-5	HS8-8	HS8-9	HS8-10			
Depth	0.30	0.30	0.40	0.30	0.25	0.55	0.55			
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	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1			
Date of Receipt	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023			
Methyl Tertiary Butyl Ether #	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	<3	23	25 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Toluene #	16	6955	10305 AA	27	21	35	30	<3	ug/kg	TM15/PM10
Ethylbenzene #	118	18381 AA	76847 AA	55	50	793	90	<3	ug/kg	TM15/PM10
m/p-Xylene #	61	>>12026	36003 AA	222	355	10191 AB	233	<5	ug/kg	TM15/PM10
o-Xylene #	5	>>1697	9774 AA	22	17	315	15	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	80	77	56 SV	90	103	96	84	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	64	61	48 SV	78	82	90	63	<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	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	2.8	14.5	0.4	0.1	0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	0.1	<0.1	<0.1	1.5	1.4	4.9	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	9.3	2815.7	51.4	153.1	3.1	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	6	44	3328	104	648	23	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	14	120	74	39	38	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	12	261	168	63	41	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	32	437	6400	259	882	31	<19	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics										
>C5-EC7 (HS_1D_AR) #	<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	7.1	4.7	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	0.2	22.6	15.8	2.2	0.5	17.2	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	2.1	363.5	9.9	17.9	3.1	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	14	420	17	84	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	79	91	18	49	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	244	315	<7	120	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	369	1210	47	271	20	<19	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	<38	806	7610	306	1153	51	<38	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Monoethylene glycol	<50	<50	106	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	128	<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
Natural Moisture Content	20.3	16.4	30.3	28.6	29.4	33.3	16.3	<0.1	%	PM4/PM0
Organic Matter	2.3	14.3	5.8	2.8	7.4	1.9	2.8	<0.2	%	TM21/PM24

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/16466

SVOC Report : **Solid**

EMT Sample No.	1-3	7-9	10-12	13-15	22-24	25-27	28-30					
Sample ID	HS8-1	HS8-3	HS8-4	HS8-5	HS8-8	HS8-9	HS8-10					
Depth	0.30	0.30	0.40	0.30	0.25	0.55	0.55					
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	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	1	1	1	1	1	1	1					
Date of Receipt	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023					
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	<10	<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 #	40	169	3087	26	258	<10	17				<10	ug/kg	TM16/PM8
Naphthalene	32	136	2996	32	211	55	15				<10	ug/kg	TM16/PM8
Acenaphthylene	<10	31	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Fluorene	<10	30	78	<10	31	<10	<10				<10	ug/kg	TM16/PM8
Phenanthrene #	70	255	357	42	349	<10	30				<10	ug/kg	TM16/PM8
Anthracene	<10	77	103	<10	80	<10	<10				<10	ug/kg	TM16/PM8
Fluoranthene #	42	257	447	21	558	<10	<10				<10	ug/kg	TM16/PM8
Pyrene #	51	296	481	21	568	<10	<10				<10	ug/kg	TM16/PM8
Benzo(a)anthracene	55	173	297	44	268	37	30				<10	ug/kg	TM16/PM8
Chrysene	49	219	395	21	316	15	16				<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	59	299	722	<10	514	<10	<10				<10	ug/kg	TM16/PM8
Benzo(a)pyrene	24	214	404	<10	291	<10	<10				<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	14	102	228	<10	160	<10	<10				<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	35	73	<10	54	<10	<10				<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	28	168	309	<10	233	<10	<10				<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	42	215	520	<10	370	<10	<10				<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	17	84	202	<10	144	<10	<10				<10	ug/kg	TM16/PM8
Phthalates												
Bis(2-ethylhexyl) phthalate	322	757	721	775	<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	<100	265	425	<100	775	<100	<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

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: 23/16466

SVOC Report : **Solid**

EMT Sample No.	1-3	7-9	10-12	13-15	22-24	25-27	28-30					
Sample ID	HS8-1	HS8-3	HS8-4	HS8-5	HS8-8	HS8-9	HS8-10					
Depth	0.30	0.30	0.40	0.30	0.25	0.55	0.55					
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	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	1	1	1	1	1	1	1					
Date of Receipt	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023					
SVOC MS												
Other SVOCs												
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Carbazole	<10	<10	36	<10	31	<10	<10				<10	ug/kg	TM16/PM8
Dibenzofuran #	14	40	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	111	119	106	118	124	115	101				<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	99	117	123	113	129	111	97				<0	%	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/16466

VOC Report : **Solid**

EMT Sample No.	1-3	7-9	10-12	13-15	22-24	25-27	28-30				LOD/LOR	Units	Method No.
Sample ID	HS8-1	HS8-3	HS8-4	HS8-5	HS8-8	HS8-9	HS8-10						
Depth	0.30	0.30	0.40	0.30	0.25	0.55	0.55						
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	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023	03/10/2023						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023	05/10/2023						
VOC MS													
Dichlorodifluoromethane	<2	<2	<2 SV	<2	<2	<2	<2				<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2 SV	<2	<2	<2	<2				<2	ug/kg	TM15/PM10
Chloromethane #	<3	6	9 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2 SV	<2	<2	<2	<2				<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1 SV	<1	<1	<1	<1				<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2 SV	<2	<2	<2	<2				<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	1599	839 SV	<2	<2	9	<2				<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6 SV	<6	<6	<6	<6				<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7	<7 SV	<7	<7	<7	<7				<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4 SV	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4 SV	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4 SV	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Benzene #	<3	23	25 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6 SV	<6	<6	<6	<6				<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4 SV	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Toluene #	16	6955	10305 AA	27	21	35	30				<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	21 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Ethylbenzene #	118	18381 AA	76847 AA	55	50	793	90				<3	ug/kg	TM15/PM10
m/p-Xylene #	61	>>12026	36003 AA	222	355	10191 AB	233				<5	ug/kg	TM15/PM10
o-Xylene #	5	>>1697	9774 AA	22	17	315	15				<3	ug/kg	TM15/PM10
Styrene	<3	106	749 SV	<3	<3	<3	<3				<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	148	2034 SV	<3	17	23	<3				<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2 SV	<2	<2	<2	<2				<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4 SV	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Propylbenzene #	<4	244	4344 AA	<4	<4	20	<4				<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	5	1282	14964 AA	18	26	101	8				<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3 SV	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	109	<5 SV	<5	9	<5	<5				<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	17	>>8065	115960 AA	36	151	391	43				<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	835	15947 AA	<4	10	12	7				<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	959	14565 AA	6	9	15	7				<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4 SV	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	7	<4 SV	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
n-Butylbenzene	6	1266	16278 AA	<4	<4	11	6				<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4 SV	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4 SV	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	10	<7	<7 SV	<7	<7	<7	<7				<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4 SV	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Naphthalene	<27	391	5514 SV	<27	<27	75	<27				<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	10	<7	<7 SV	<7	<7	<7	<7				<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	80	77	56 SV	90	103	96	84				<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	64	61	48 SV	78	82	90	63				<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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/16466						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/16466

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
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: 23/16466

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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
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
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes
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: 23/16466

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

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Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	14th November, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/18362 Batch 1
Location :	Tetrosyl
Date samples received :	3rd November, 2023
Status :	Final report
Issue :	1

Twenty seven samples were received for analysis on 3rd November, 2023 of which twenty 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 53.142 kg of CO2

Scope 1&2&3 emissions - 125.587 kg of CO2

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: 23/18362

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH506-1			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
Methyl Tertiary Butyl Ether #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	-	<2	ug/kg	TM15/PM10
Benzene #	<3 SV	14	24	<3	27	<3	<3 SV	<3	<3	-	<3	ug/kg	TM15/PM10
Toluene #	22 SV	63930 AB	>>62675 AB	52	2960 AA	20	13	77	39	-	<3	ug/kg	TM15/PM10
Ethylbenzene #	<3 SV	26419 AB	15712 AB	8	3824 AA	8	<3	92	210	-	<3	ug/kg	TM15/PM10
m/p-Xylene #	<5 SV	43457 AB	24148 AB	7	315	<5	<5 SV	36	29	-	<5	ug/kg	TM15/PM10
o-Xylene #	<3 SV	4059 AB	>>3881	<3	50	<3	<3 SV	<3	<3	-	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	56 SV	70	77	56	70	63	56 SV	61	64	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	49 SV	54	65	50	59	52	48 SV	51	52	-	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1 SV	0.1	0.6	<0.1 SV	0.6	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1 SV	10.2	11.5	<0.1 SV	2.0	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1 SV	7.0	5.8	<0.1 SV	1.2	<0.1 SV	<0.1 SV	<0.1 SV	0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	3.5	5.4	5.1	4.8	3.0	4.4	4.0	<0.2	-	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	10	13	17	17	12	12	19	17	6	-	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	18	19	31	31	20	21	36	34	16	-	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	20	12	26	24	15	16	31	27	24	-	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	48	65	97	77	56	52	90	82	46	-	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1 SV	35.4	40.6	<0.1 SV	2.0	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1 SV	27.7	21.1	<0.1 SV	1.6	<0.1 SV	<0.1 SV	<0.1 SV	0.4 SV	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	1.1	<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	7	10	<4	<4	<4	<4	<4	<4	-	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	12	<7	<7	<7	<7	<7	<7	<7	-	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	<7	<7	<7	-	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	82	73	<19	<19	<19	<19	<19	<19	-	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	48	147	170	77	56	52	90	82	46	-	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	-	-	-	-	-	-	-	-	-	<0.01	<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Diethylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Triethylene glycol	<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	ug/kg	TM179/PM8
Natural Moisture Content	19.5	20.4	19.3	16.2	16.2	19.4	28.1	16.4	19.3	14.7	<0.1	%	PM4/PM0
Organic Matter	1.8	2.5	2.8	3.4	2.5	1.9	3.6	6.2	2.4	1.7	<0.2	%	TM21/PM24

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

Report : Solid

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

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	LOD/LOR	Units	Method No.
Sample ID	BH506-2	BH506-3	BH506-4	BH506-5	BH502-1	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
Methyl Tertiary Butyl Ether #	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	-	-	-	-	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Toluene #	-	-	-	-	<3	<3	<3	<3	<3	4	<3	ug/kg	TM15/PM10
Ethylbenzene #	-	-	-	-	14	107	49	<3	<3	12	<3	ug/kg	TM15/PM10
m/p-Xylene #	-	-	-	-	<5	7	<5	<5	<5	63	<5	ug/kg	TM15/PM10
o-Xylene #	-	-	-	-	<3	<3	<3	<3	<3	7	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	72	88	84	104	105	109	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	66	83	73	100	103	103	<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	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	-	-	-	-	<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	1.7	0.2	<0.1	<0.1	1.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	-	-	-	-	<0.2	14.2	<0.2	<0.2	<0.2	25.0	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	-	-	-	-	<4	7	<4	<4	<4	6	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	-	-	-	-	<19	23	<19	<19	<19	32	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	-	-	-	-	<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	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	-	-	-	-	<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	11.4	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	-	-	-	-	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	-	-	-	-	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	-	-	-	-	<38	<38	<38	<38	<38	<38	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Propylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Diethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	61	<50	ug/kg	TM179/PM8
Triethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Thiodiglycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Natural Moisture Content	17.6	14.2	19.4	19.2	20.5	15.1	19.7	13.6	6.9	11.3	<0.1	%	PM4/PM0
Organic Matter	1.4	1.3	1.8	2.7	1.5	1.3	3.3	0.3	<0.2	1.6	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

Report : Solid

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

EMT Sample No.	61-63	64-66	67-69	70-72	73-75	76-78	79-81				LOD/LOR	Units	Method No.
Sample ID	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2	HS6-O-3	HS6-O-4						
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023						
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2	<2	<2				<2	ug/kg	TM15/PM10
Benzene #	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Toluene #	11	7	9	181	102	<3	39				<3	ug/kg	TM15/PM10
Ethylbenzene #	10	10	8	>>23677 AB	15972 AB	23	>>74916 AB				<3	ug/kg	TM15/PM10
m/p-Xylene #	39	<5	<5	>>5974	1747	<5	2238				<5	ug/kg	TM15/PM10
o-Xylene #	5	<3	<3	894	556	<3	762				<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	91	97	97	92	102	96	95				<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	73	91	89	80	87	93	81				<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	<0.1	<1.0 AB	<0.1	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	<0.1	<0.1	<1.0 AB	0.2	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	1.9	1.0	0.5	55.0 AB	35.3	<0.1	11.6 AB				<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	18.0	<0.2	<0.2	<0.2	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	14	<4	<4	<4	<4	<4				<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	<19	33	<19	55	36	<19	<19				<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	<0.1	<1.0 AB	<0.1	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	<0.1	<1.0 AB	0.3	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	0.4	<0.1	<0.1	431.2 AB	199.3	<0.1	63.2 AB				<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	7.2	<0.2	<0.2	3.9	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	6	<4	<4	9	<4	<4				<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	<7	54	28	12	<7				<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	82	<7	<7				<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	<19	<19	485	323	<19	63				<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	<38	<38	<38	540	359	<38	63				<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	-	-	-	-	-	-	-				<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	<50	81	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Diethylene glycol	<50	119	65	-	-	-	-				<50	ug/kg	TM179/PM8
Triethylene glycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Thiodiglycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Natural Moisture Content	20.6	15.7	15.4	11.7	9.6	6.8	9.5				<0.1	%	PM4/PM0
Organic Matter	1.5	1.0	1.3	3.5	3.5	0.3	1.7				<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced

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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45			
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth											Please see attached notes for all abbreviations and acronyms		
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	237	138	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	627	948	<10	327	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #	<10	<10	444	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	24	45	<10	31	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	23	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenanthrene #	<10	<10	60	<10	44	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluoranthene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pyrene #	<10	<10	17	<10	15	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Chrysene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45			
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth											Please see attached notes for all abbreviations and acronyms		
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	17	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	102	97	103	103	101	104	106	102	107	103	<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	85	79	89	101	100	90	100	92	105	100	<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	187	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	<10	<10	<10	32	<10	28	<10	31	25	<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	<10	<10	157	<10	15	<10	34	26	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenanthrene #	<10	<10	<10	<10	<10	<10	<10	<10	49	78	<10	ug/kg	TM16/PM8
Anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluoranthene #	<10	<10	<10	<10	<10	<10	<10	<10	106	71	<10	ug/kg	TM16/PM8
Pyrene #	<10	<10	<10	<10	<10	<10	<10	<10	99	83	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	116	48	<10	ug/kg	TM16/PM8
Chrysene	<10	<10	<10	<10	<10	<10	<10	<10	105	42	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	176	39	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	86	15	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	38	<10	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	13	<10	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	<10	58	15	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	127	28	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	49	11	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	484	2694	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	>>51388	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	125	328	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/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: 23/18362

SVOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	104	106	106	109	105	104	112	104	116	113	<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	100	105	101	101	102	99	111	100	119	117	<0	%	TM16/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: 23/18362

SVOC Report : **Solid**

EMT Sample No.	76-78	79-81											
Sample ID	HS6-O-3	HS6-O-4											
Depth											Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T											
Sample Date	01/11/2023	01/11/2023											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	03/11/2023	03/11/2023									LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10									<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10									<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10									<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10									<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10									<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10									<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10									<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10									<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10									<10	ug/kg	TM16/PM8
Phenol #	<10	<10									<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10									<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	32	13									<10	ug/kg	TM16/PM8
Naphthalene	35	74									<10	ug/kg	TM16/PM8
Acenaphthylene	<10	61									<10	ug/kg	TM16/PM8
Acenaphthene	69	72									<10	ug/kg	TM16/PM8
Fluorene	38	64									<10	ug/kg	TM16/PM8
Phenanthrene #	349	103									<10	ug/kg	TM16/PM8
Anthracene	59	66									<10	ug/kg	TM16/PM8
Fluoranthene #	284	113									<10	ug/kg	TM16/PM8
Pyrene #	233	107									<10	ug/kg	TM16/PM8
Benzo(a)anthracene	147	116									<10	ug/kg	TM16/PM8
Chrysene	168	103									<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	221	168									<10	ug/kg	TM16/PM8
Benzo(a)pyrene	107	76									<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	46	44									<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	14	34									<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	65	58									<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	159	121									<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	62	47									<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	244									<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	136	<100									<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100									<100	ug/kg	TM16/PM8

Please include all sections of this report if it is reproduced

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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	76-78	79-81										
Sample ID	HS6-O-3	HS6-O-4										
Depth												
COC No / misc												
Containers	V J T	V J T										
Sample Date	01/11/2023	01/11/2023										
Sample Type	Soil	Soil										
Batch Number	1	1										
Date of Receipt	03/11/2023	03/11/2023										

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10									<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10									<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10									<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10									<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10									<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10									<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
Azobenzene	<10	<10									<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10									<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10									<10	ug/kg	TM16/PM8
Carbazole	27	<10									<10	ug/kg	TM16/PM8
Dibenzofuran #	41	<10									<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10									<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10									<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10									<10	ug/kg	TM16/PM8
Isophorone #	<10	<10									<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10									<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10									<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	104	109									<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	105	111									<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45	LOD/LOR	Units	Method No.
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
VOC MS													
Dichlorodifluoromethane	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Chloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1 SV	<1	<1	<1	<1	<1	<1 SV	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	109 SV	2866 AA	7744 AB	1701	>>20700 AA	62	51	182	103	<2	<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6 SV	<6	<6	<6	<6	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7 SV	<7	<7	<7	13	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Chloroform #	<3 SV	7	10	<3	19	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Benzene #	<3 SV	14	24	<3	27	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6 SV	<6	<6	<6	<6	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
Dibromomethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #	22 SV	63930 AB	>>62675 AB	52	2960 AA	20	13	77	39	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #	<3 SV	26419 AB	15712 AB	8	3824 AA	8	<3	92	210	14	<3	ug/kg	TM15/PM10
m/p-Xylene #	<5 SV	43457 AB	24148 AB	7	315	<5	<5 SV	36	29	<5	<5	ug/kg	TM15/PM10
o-Xylene #	<3 SV	4059 AB	>>3881	<3	50	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Styrene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	12	<3	ug/kg	TM15_A/PM10
Bromoform	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3 SV	7	20	<3	6	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene #	<4 SV	<4	11	<4	7	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3 SV	6	24	<3	28	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5 SV	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6 SV	37	167	<6	132	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4 SV	<4	7	<4	19	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4 SV	<4	8	<4	22	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene	<4 SV	<4	<4	<4	15	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7 SV	<7	<7	<7	<7	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27 SV	<27	<27	<27	<27	<27	<27 SV	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7 SV	<7	<7	<7	<7	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	56 SV	70	77	56	70	63	56 SV	61	64	72	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	49 SV	54	65	50	59	52	48 SV	51	52	66	<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
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<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	3	<2	<2	16	<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) #	<3	<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	<3	<3	4	11	7	9	181	102	<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 #	107	49	<3	<3	12	10	10	8	>>23677$_{AB}$	15972$_{AB}$	<3	ug/kg	TM15/PM10
m/p-Xylene #	7	<5	<5	<5	63	39	<5	<5	>>5974	1747	<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	<3	<3	7	5	<3	<3	894	556	<3	ug/kg	TM15/PM10
Styrene	28	20	<3	<3	<3	<3	19	10	>>160702$_{AB}$	>>35418$_{AB}$	<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	13	<3	<3	<3	17	5	16	<3	231	69	<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 #	32	<4	<4	<4	46	12	56	<4	126	37	<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 #	16	<3	<3	<3	18	<3	6	<3	23	5	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	25	<5	<5	<5	<5	<5	14	12	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	12	<6	<6	<6	545	87	80	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	67	<4	<4	<4	70	12	53	5	36	9	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	8	<4	<4	<4	14	<4	6	<4	6	<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	66	<4	<4	<4	73	11	93	<4	7	<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	<27	<27	98	<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	88	84	104	105	109	91	97	97	92	102	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	83	73	100	103	103	73	91	89	80	87	<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
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	76-78	79-81										
Sample ID	HS6-O-3	HS6-O-4										
Depth												
COC No / misc												
Containers	V J T	V J T										
Sample Date	01/11/2023	01/11/2023										
Sample Type	Soil	Soil										
Batch Number	1	1										
Date of Receipt	03/11/2023	03/11/2023										

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2									<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2									<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2									<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1									<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2									<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2									<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6									<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7									<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4									<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Chloroform #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3									<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4									<4	ug/kg	TM15/PM10
Benzene #	<3	<3									<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6									<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4									<4	ug/kg	TM15/PM10
Toluene #	<3	39									<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3									<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3									<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3									<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3									<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Ethylbenzene #	23	>>74916 AB									<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	2238									<5	ug/kg	TM15/PM10
o-Xylene #	<3	762									<3	ug/kg	TM15/PM10
Styrene	12	>>20755									<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3									<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	135									<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2									<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4									<4	ug/kg	TM15/PM10
Propylbenzene #	<4	65									<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	5									<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5									<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6									<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	15									<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4									<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4									<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7									<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4									<4	ug/kg	TM15/PM10
Naphthalene	<27	<27									<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7									<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	96	95									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	93	81									<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
23/18362	1	HS8-2		1-3	Trace of degraded diesel
23/18362	1	HS8-6		4-6	Trace of degraded diesel
23/18362	1	HS8-7		7-9	Trace of degraded diesel
23/18362	1	HS8-3A		10-12	Trace of degraded diesel
23/18362	1	HS8-4A		13-15	Trace of degraded diesel
23/18362	1	HS8-9A		16-18	Trace of degraded diesel
23/18362	1	HS8-11		19-21	Trace of degraded diesel
23/18362	1	HS8-12		22-24	Trace of degraded diesel
23/18362	1	HS8-13		25-27	Trace of degraded diesel
23/18362	1	BH502-1		43-45	No interpretation possible
23/18362	1	BH502-2		46-48	Degraded kerosene-type product
23/18362	1	BH502-3		49-51	No interpretation possible
23/18362	1	BH502-4		52-54	No interpretation possible
23/18362	1	BH502-5		55-57	No interpretation possible
23/18362	1	BH502-6		58-60	Degraded kerosene-type product
23/18362	1	BH502-7		61-63	No interpretation possible
23/18362	1	BH502-8		64-66	Possible degraded kerosene
23/18362	1	BH502-9		67-69	No interpretation possible
23/18362	1	HS6-O-1		70-72	Gasoline residues & Trace of degraded diesel
23/18362	1	HS6-O-2		73-75	Gasoline residues & Trace of degraded diesel
23/18362	1	HS6-O-3		76-78	Possaible PAH's
23/18362	1	HS6-O-4		79-81	No interpretation possible

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/18362						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/18362

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 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: 23/18362

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
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
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
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes

EMT Job No: 23/18362

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.	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 GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

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Groundtech Consulting Limited
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Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	29th December, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/21487 Batch 1
Location :	Tetrosyll
Date samples received :	16th December, 2023
Status :	Final Report
Issue :	202312291249

Thirty two samples were received for analysis on 16th December, 2023 of which twenty 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 38.444 kg of CO2

Scope 1&2&3 emissions - 90.854 kg of CO2

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: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

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	LOD/LOR	Units	Method No.
Sample ID	HS1-A2	HS1-B2	HS1-C2	HS1-D2	HS1-E2	HS1-F2	HS1-G2	HS1-H2	HS1-I2	HS1-J2			
Depth													
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	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023			
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	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023			
Methyl Tertiary Butyl Ether #	<2	<2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	675	179	115 SV	778	267	50 SV	279	340	138	43	<3	ug/kg	TM15/PM10
Toluene #	>>28267 AB	>>24657 AB	>>145528 AB	>>204064 AB	>>146035 AB	>>151620 AB	>>55104 AB	1036	>>2914	1765	<3	ug/kg	TM15/PM10
Ethylbenzene #	8113 AB	19104 AB	>>41456 AB	>>92569 AB	>>12279	>>36269 AB	10278 AB	131	1395	231	<3	ug/kg	TM15/PM10
m/p-Xylene #	22927 AB	>>51510 AB	>>103658 AB	>>167698 AB	20753 AB	>>86321 AB	27215 AB	>>18951	>>9948	566	<5	ug/kg	TM15/PM10
o-Xylene #	3496 AB	7790 AB	19737 AB	>>41024 AB	>>5398	14225 AB	5307 AB	41	193	94	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	67	73	62 SV	77	73	75 SV	76	79	84	71	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	55	57	47 SV	58	54	46 SV	61	66	76	60	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.5 AA	<0.1	0.2	0.3	<0.1	<0.5 AA	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	10.9 AA	3.9	82.8	88.9	34.7	53.6 AA	9.2 SV	2.9	1.3	0.8 SV	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	11.4 AA	14.1	83.4	141.9	30.6	68.8 AA	10.9 SV	5.2	3.2	3.5 SV	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	3.1	16.2	18.6	<0.2	<0.2	58.5	2.8	32.0	23.0	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	19	42	23	<4	<4	264	18	130	126	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	34	89	34	<7	<7	361	32	221	261	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	26	78	23	<7	<7	97	36	33	138	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH_CU+HS_1D_AL)	22	100	392	330	65	122	801	97	421	552	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.5 AA	0.1	<0.1	<0.1	<0.1	<0.5 AA	<0.1 SV	0.1	<0.1	<0.1 SV	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	35.6 AA	11.7	283.6	354.2	211.8	275.3 AA	27.5 SV	3.7	3.8	1.8 SV	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	33.0 AA	52.5	188.5	273.2	25.0	129.7 AA	13.9 SV	11.3	10.0	0.8 SV	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	5.0	11.9	16.4	<0.2	13.2	16.3	8.9	11.2	13.8	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	<4	14	10	<4	8	74	27	59	69	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	16	<7	<7	<7	119	64	103	165	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	21	153	14	142	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH_CU+HS_1D_AR) #	69	69	514	654	237	426	272	268	201	392	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH_CU+HS_1D_Total)	91	169	906	984	302	548	1073	365	622	944	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Natural Moisture Content	12.7	13.9	16.0	14.9	14.3	14.7	22.8	27.4	27.6	25.7	<0.1	%	PM4/PM0
Organic Matter	1.8	2.6	2.6	2.2	2.3	2.3	3.7	6.5	2.9	17.3	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

Report : Solid

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

EMT Sample No.	31-33	34-36	37-39	40-42	46-48	49-51	52-54	55-57	58-60	64-66	LOD/LOR	Units	Method No.
Sample ID	HS1-K2	HS1-L2	HS1-M2	HS1-N2	HS6-02	HS6-03	HS6-04	HS6-05	HS6-06	HS8-6A			
Depth													
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	12/12/2023	12/12/2023	12/12/2023	12/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023			
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	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023			
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	37	7	<3	44	<3	<3	<3	<3	<3	19	<3	ug/kg	TM15/PM10
Toluene #	2470	303	396	1323	74	7	54	335	<3	>>26106 AB	<3	ug/kg	TM15/PM10
Ethylbenzene #	601	72	31	303	>>40489 AB	6	>>3254	>>23196 AB	34	5543 AB	<3	ug/kg	TM15/PM10
m/p-Xylene #	2323	347	92	>>4358	130	<5	69	758	<5	4144	<5	ug/kg	TM15/PM10
o-Xylene #	226	28	34	380	45	<3	18	200	<3	476	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	68	79	74	71	89	95	86	89	102	67	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	53	64	60	64	77	81	73	81	95	50	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1 SV	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	1.0 SV	0.2	0.1	1.0	<0.1	<0.1	<0.1	0.2	<0.1	12.5	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	1.5 SV	0.6	0.1	7.0	4.4	3.4	0.8	13.0	<0.1	3.0	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	10.0	<0.2	<0.2	56.4	<0.2	125.9	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	76	32	13	185	<4	163	<4	<4	<4	7	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	146	50	10	304	<7	19	21	<7	<7	20	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	56	49	<7	91	<7	16	33	<7	<7	22	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH_CU+HS_1D_AL)	291	132	23	644	<19	327	55	<19	<19	65	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1 SV	<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) #	2.2 SV	0.6	0.3	1.3	<0.1	<0.1	<0.1	0.2	<0.1	31.2	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	2.2 SV	0.5	<0.1	3.3	17.3	0.5	3.1	52.0	0.3	11.3	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	6.2	7.6	<0.2	18.0	<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) #	31	30	<4	116	<4	15	8	<4	<4	8	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	95	86	<7	235	41	29	37	23	<7	23	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	75	181	<7	121	71	108	111	56	<7	52	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH_CU+HS_1D_AR) #	212	306	<19	495	129	153	159	131	<19	126	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH_CU+HS_1D_Total)	503	438	<38	1139	129	480	214	131	<38	191	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Natural Moisture Content	24.7	20.1	12.4	25.8	16.2	15.9	14.7	15.2	25.5	16.6	<0.1	%	PM4/PM0
Organic Matter	15.7	6.1	24.3	5.0	3.3	2.3	2.8	1.2	0.4	2.7	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

Report : Solid

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

EMT Sample No.	70-72												
Sample ID	HS8-7A												
Depth													
COC No / misc													
Containers	V J T												
Sample Date	13/12/2023												
Sample Type	Soil												
Batch Number	1												
Date of Receipt	16/12/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<2										<2	ug/kg	TM15/PM10
Benzene #	6										<3	ug/kg	TM15/PM10
Toluene #	>>17603										<3	ug/kg	TM15/PM10
Ethylbenzene #	>>20751										<3	ug/kg	TM15/PM10
m/p-Xylene #	>>29591										<5	ug/kg	TM15/PM10
o-Xylene #	>>3488										<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	76										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	57										<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1										<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	6.0										<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	7.8										<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	1.4										<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	7										<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) #	41										<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH_CU+HS_1D_AL)	85										<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1										<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	19.1										<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	33.4										<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_CU+HS_1D_AR) #	53										<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH_CU+HS_1D_Total)	138										<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Natural Moisture Content	20.2										<0.1	%	PM4/PM0
Organic Matter	2.1										<0.2	%	TM21/PM24

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	76-78	79-81	82-84	85-87	88-90	91-93	94-95				LOD/LOR	Units	Method No.
Sample ID	BH316	BH319	BH320	BH321	BH323	BH324	SW01						
Depth													
COC No / misc													
Containers	V G	V G	V G	V G	V G	V G	V						
Sample Date	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023						
Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023						
Methyl Tertiary Butyl Ether #	-	-	-	-	-	-	<0.1				<0.1	ug/l	TM15/PM10
Benzene #	-	-	-	-	-	-	<0.5				<0.5	ug/l	TM15/PM10
Toluene #	-	-	-	-	-	-	<5				<5	ug/l	TM15/PM10
Ethylbenzene #	-	-	-	-	-	-	<1				<1	ug/l	TM15/PM10
m/p-Xylene #	-	-	-	-	-	-	<2				<2	ug/l	TM15/PM10
o-Xylene #	-	-	-	-	-	-	<1				<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	-	-	80				<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	-	94				<0	%	TM15/PM10
GRO (>C4-C8) (HS_1D_Total) #	148	<10	21280	55074	7951	9424	<10				<10	ug/l	TM36/PM12
GRO (>C8-C12) (HS_1D_Total) #	371	11	>>26036	>>36377	5352	4526	<10				<10	ug/l	TM36/PM12
GRO (>C4-C12) (HS_1D_Total) #	519	11	>>47316	>>91451	13303	13950	<10				<10	ug/l	TM36/PM12
MTBE #	<5	<5	131	154	35	43	-				<5	ug/l	TM36/PM12
Benzene #	<5	<5	33	24	11	37	-				<5	ug/l	TM36/PM12
Toluene #	<5	<5	>>15980	>>42946	>>6148	>>7190	-				<5	ug/l	TM36/PM12
Ethylbenzene #	144	<5	4300	5539	563	476	-				<5	ug/l	TM36/PM12
m/p-Xylene #	18	<5	>>12638	>>19073	2871	2288	-				<5	ug/l	TM36/PM12
o-Xylene #	13	<5	1928	4045	523	348	-				<5	ug/l	TM36/PM12

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

SVOC Report : **Solid**

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	64-66	70-72	LOD/LOR	Units	Method No.
Sample ID	HS6-02	HS6-03	HS6-04	HS6-05	HS6-06	HS8-6A	HS8-7A			
Depth										
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	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1			
Date of Receipt	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023			
SVOC MS										
Phenols										
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	219	203	<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	<10	<10	<10	<10	<10	176	<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	693	700	<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 #	16	<10	31	<10	<10	37	25	<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	48	<10	<10	15	<10	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	41	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenanthrene #	<10	436	479	<10	46	69	38	<10	ug/kg	TM16/PM8
Anthracene	<10	126	91	<10	19	<10	<10	<10	ug/kg	TM16/PM8
Fluoranthene #	26	799	594	17	119	14	<10	<10	ug/kg	TM16/PM8
Pyrene #	26	647	509	16	104	21	17	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	37	306	224	31	83	29	26	<10	ug/kg	TM16/PM8
Chrysene	22	314	260	13	68	16	22	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	28	362	333	16	89	14	14	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	191	184	<10	49	<10	<10	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	80	80	<10	24	<10	<10	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	108	112	<10	29	<10	<10	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	20	261	240	12	64	10	10	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	101	93	<10	25	<10	<10	<10	ug/kg	TM16/PM8
Phthalates										
Bis(2-ethylhexyl) phthalate	210	<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	<100	218	319	<100	<100	140	<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: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

SVOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	64-66	70-72						
Sample ID	HS6-02	HS6-03	HS6-04	HS6-05	HS6-06	HS8-6A	HS8-7A						
Depth											Please see attached notes for all abbreviations and acronyms		
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	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023						
SVOC MS											LOD/LOR	Units	Method No.
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Carbazole	<10	65	48	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	<10	<10	<10	17	<10				<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10				<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	116	118	117	115	103	110	113				<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	120	120	121	119	104	108	113				<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

VOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30			
Sample ID	HS1-A2	HS1-B2	HS1-C2	HS1-D2	HS1-E2	HS1-F2	HS1-G2	HS1-H2	HS1-I2	HS1-J2			
Depth											Please see attached notes for all abbreviations and acronyms		
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	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023			
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	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	6	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	5	2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1 SV	<1	<1	<1 SV	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2 SV	9	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6 SV	7	<6	<6 SV	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	14	14	152 SV	293	17	50 SV	<7	<7	<7	26	<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3 SV	<3	51	<3 SV	6	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	8	5	20 SV	78	103	5 SV	14	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	11	<3	8 SV	9	998	15 SV	20	<3	<3	8	<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	107 SV	207	59	49 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	122 SV	888	22	91 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Benzene #	675	179	115 SV	778	267	50 SV	279	340	138	43	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	7	16	1191 SV	4447 AB	216	738 SV	6	4	10	24	<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6 SV	<6	<6	<6 SV	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3 +	<3 +	<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #	>>28267 AB	>>24657 AB	>>145528 AB	>>204064 AB	>>146035 AB	>>151620 AB	>>55104 AB	1036	>>2914	1765	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3 +	<3 +	<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	136 SV	589	35	96 SV	6	<3	<3	4	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3 +	<3 +	<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3 +	<3 +	<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	74 SV	248	33	30 SV	9	138	48	5	<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #	8113 AB	19104 AB	>>41456 AB	>>92569 AB	>>12279	>>36269 AB	10278 AB	131	1395	231	<3	ug/kg	TM15/PM10
m/p-Xylene #	22927 AB	>>51510 AB	>>103658 AB	>>167698 AB	20753 AB	>>86321 AB	27215 AB	>>18951	>>9948	566	<5	ug/kg	TM15/PM10
o-Xylene #	3496 AB	7790 AB	19737 AB	>>41024 AB	>>5398	14225 AB	5307 AB	41	193	94	<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	70	98	568 SV	1210	71	224 SV	274	224	41	31	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2 SV	<2	<2	<2 SV	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4 +	<4 +	<4	ug/kg	TM15/PM10
Propylbenzene #	131	133	1290 SV	2254 AB	61	430 SV	503	409	88	21	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	176	223	2030 SV	4466 AB	85	980 SV	723	808	116	469	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3 SV	<3	<3	<3 SV	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5 SV	<5	<5	<5 SV	281	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	914	1341	12326 SV	>>26851	567	8647 SV	6388 AB	>>2687	330	1136	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	17	15	203 SV	470	9	99 SV	156	65	8	23	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	15	11	171 SV	363	7	72 SV	264	42	5	68	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4 SV	21	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4 SV	8	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4 SV	34	<4	<4 SV	<4	17	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7	<7 SV	<7	<7	<7 SV	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4 SV	<4	<4	<4 SV	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	220 SV	458	38	133 SV	273	45	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7	<7 SV	<7	<7	<7 SV	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	67	73	62 SV	77	73	75 SV	76	79	84	71	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	55	57	47 SV	58	54	46 SV	61	66	76	60	<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

VOC Report : **Solid**

EMT Sample No.	31-33	34-36	37-39	40-42	46-48	49-51	52-54	55-57	58-60	64-66	LOD/LOR	Units	Method No.
Sample ID	HS1-K2	HS1-L2	HS1-M2	HS1-N2	HS6-02	HS6-03	HS6-04	HS6-05	HS6-06	HS8-6A			
Depth													
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	12/12/2023	12/12/2023	12/12/2023	12/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023			
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	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023	16/12/2023			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<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 #	5	<3	4	<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	4100 AB	<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) #	19	<7	11	<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 #	7	<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	8	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	6	<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 #	37	7	<3	44	<3	<3	<3	<3	<3	19	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	32	14	39	10	<3	<3	9	<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 #	2470	303	396	1323	74	7	54	335	<3	>>26106 AB	<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) #	11	16	40	5	<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 #	9	<3	<3	5	<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 #	601	72	31	303	>>40489 AB	6	>>3254	>>23196 AB	34	5543 AB	<3	ug/kg	TM15/PM10
m/p-Xylene #	2323	347	92	>>4358	130	<5	69	758	<5	4144	<5	ug/kg	TM15/PM10
o-Xylene #	226	28	34	380	45	<3	18	200	<3	476	<3	ug/kg	TM15/PM10
Styrene	<3	6	<3	20	42	12	78	60	<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 #	17	5	<3	91	116	<3	15	245	<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 #	29	10	<4	159	62	<4	8	141	<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 #	110	41	25	528	8	<3	5	9	<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	8	166	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	362	171	38	>>3226	21	<6	9	28	<6	10	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	15	10	<4	156	12	<4	<4	21	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	11	<4	<4	34	<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	<27	1128	<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	68	79	74	71	89	95	86	89	102	67	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	53	64	60	64	77	81	73	81	95	50	<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

VOC Report : **Solid**

EMT Sample No.	70-72												
Sample ID	HS8-7A												
Depth													
COC No / misc													
Containers	V J T												
Sample Date	13/12/2023												
Sample Type	Soil												
Batch Number	1												
Date of Receipt	16/12/2023												

Please see attached notes for all abbreviations and acronyms

											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 #	986										<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6										<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	11										<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3										<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3										<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 #	6										<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 #	>>17603										<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 #	>>20751										<3	ug/kg	TM15/PM10
m/p-Xylene #	>>29591										<5	ug/kg	TM15/PM10
o-Xylene #	>>3488										<3	ug/kg	TM15/PM10
Styrene	<3										<3	ug/kg	TM15_A/PM10
Bromoform	<3										<3	ug/kg	TM15/PM10
Isopropylbenzene #	19										<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 #	7										<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3										<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	23										<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3										<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5										<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	184										<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4										<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	76										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	57										<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

VOC Report : **Liquid**

EMT Sample No.	94-95												
Sample ID	SW01												
Depth													
COC No / misc													
Containers	V												
Sample Date	14/12/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	16/12/2023												
VOC MS													
Dichlorodifluoromethane	<2											<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1											<0.1	ug/l	TM15/PM10
Chloromethane #	<3											<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1											<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 #	<0.5											<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 #	<5											<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 #	<1											<1	ug/l	TM15/PM10
m/p-Xylene #	<2											<2	ug/l	TM15/PM10
o-Xylene #	<1											<1	ug/l	TM15/PM10
Styrene	<2											<2	ug/l	TM15/PM10
Bromoform #	<2											<2	ug/l	TM15/PM10
Isopropylbenzene #	<3											<3	ug/l	TM15/PM10
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 #	<3											<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3											<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3											<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 #	<3											<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	<2											<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3											<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	80											<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	94											<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited

Matrix : Solid

Reference: GRO-21459

Location: Tetrosyll

Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
23/21487	1	HS1-C2		7-9	GRO	Sample holding time exceeded
23/21487	1	HS1-D2		10-12	GRO	Sample holding time exceeded
23/21487	1	HS1-E2		13-15	GRO	Sample holding time exceeded
23/21487	1	HS1-G2		19-21	EPH	Sample holding time exceeded
23/21487	1	HS1-K2		31-33	EPH	Sample holding time exceeded

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.

It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/21487

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
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: 23/21487

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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.				
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			
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

EMT Job No: 23/21487

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes
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			
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

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Groundtech Consulting Limited
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Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	26th January, 2024
Your reference :	GRP-21459
Our reference :	Test Report 24/602 Batch 1
Location :	Tetrosyll
Date samples received :	13th January, 2024
Status :	Final Report
Issue :	202401261404

Four samples were received for analysis on 13th January, 2024 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 4.923 kg of CO2

Scope 1&2&3 emissions - 11.635 kg of CO2

Authorised By:

Phil Sommerton BSc
Senior Project Manager

Please include all sections of this report if it is reproduced

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 24/602

Report : Solid

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

EMT Sample No.	1-3	4-6	7-9	10-12							LOD/LOR	Units	Method No.
Sample ID	HS06-02A	HS06-05A	HS08-06C	HS08-07C									
Depth													
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	12/01/2024	12/01/2024	12/01/2024	12/01/2024									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	13/01/2024	13/01/2024	13/01/2024	13/01/2024									
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1	0.1 SV	<0.1 SV							<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1	0.6 SV	0.4 SV							<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 SV	<0.1 SV							<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2	<0.2	<0.2							<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4	<4	<4							<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	<7	<7							<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7	<7	<7							<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH_CU+HS_1D_AL)	<19	<19	<19	<19							<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1 SV							<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1 SV	<0.1 SV							<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	0.1	<0.1 SV	<0.1 SV							<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2							<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4	<4	<4							<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	<7	<7							<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7	<7	<7							<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH_CU+HS_1D_AR)#	<19	<19	<19	<19							<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH_CU+HS_1D_Total)	<38	<38	<38	<38							<38	mg/kg	TM5/TM36/PM8/PM12/PM16
MTBE#	<5	<5	<5 SV	<5 SV							<5	ug/kg	TM36/PM12
Benzene#	<5	<5	<5 SV	<5 SV							<5	ug/kg	TM36/PM12
Toluene#	<5	<5	47 SV	21 SV							<5	ug/kg	TM36/PM12
Ethylbenzene#	54	55	6 SV	<5 SV							<5	ug/kg	TM36/PM12
m/p-Xylene#	6	<5	13 SV	<5 SV							<5	ug/kg	TM36/PM12
o-Xylene#	17	60	<5 SV	<5 SV							<5	ug/kg	TM36/PM12
Natural Moisture Content	7.3	12.6	17.1	18.6							<0.1	%	PM4/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 24/602

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12							LOD/LOR	Units	Method No.
Sample ID	HS06-02A	HS06-05A	HS08-06C	HS08-07C									
Depth													
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	12/01/2024	12/01/2024	12/01/2024	12/01/2024									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	13/01/2024	13/01/2024	13/01/2024	13/01/2024									
SVOC MS													
Phenols													
2-Chlorophenol #	<10+	<10+	<10+	<10+							<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Phenol #	<10+	<10+	<10+	<10+							<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	36	30	<10	<10							<10	ug/kg	TM16/PM8
Naphthalene	35	26	<10	<10							<10	ug/kg	TM16/PM8
Acenaphthylene	27	<10	<10	<10							<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Phenanthrene #	130	77	26	<10							<10	ug/kg	TM16/PM8
Anthracene	38	18	<10	<10							<10	ug/kg	TM16/PM8
Fluoranthene #	336	80	<10	<10							<10	ug/kg	TM16/PM8
Pyrene #	310	81	14	<10							<10	ug/kg	TM16/PM8
Benzo(a)anthracene	192	68	32	<10							<10	ug/kg	TM16/PM8
Chrysene	217	68	16	<10							<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	288	87	<10	<10							<10	ug/kg	TM16/PM8
Benzo(a)pyrene	161	47	<10	<10							<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	52	19	<10	<10							<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	16	<10	<10	<10							<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	54	18	<10	<10							<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	207	63	<10	<10							<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	81	24	<10	<10							<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Dimethyl phthalate #	168	<100	<100	<100							<100	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 24/602

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12							LOD/LOR	Units	Method No.
Sample ID	HS06-02A	HS06-05A	HS08-06C	HS08-07C									
Depth													
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	12/01/2024	12/01/2024	12/01/2024	12/01/2024									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	1	1	1	1									
Date of Receipt	13/01/2024	13/01/2024	13/01/2024	13/01/2024									
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Dibenzofuran #	13	12	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10+	<10+	<10+	<10+							<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	114	112	108	115							<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	115	110	107	111							<0	%	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Notification of Deviating Samples

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyll
Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/602						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/602

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

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

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: 24/602

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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
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 GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

APPENDIX 12 - Hotspot BH502 Validation Testing Results

Element Materials Technology
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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	14th November, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/18362 Batch 1
Location :	Tetrosyl
Date samples received :	3rd November, 2023
Status :	Final report
Issue :	1

Twenty seven samples were received for analysis on 3rd November, 2023 of which twenty 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 53.142 kg of CO2

Scope 1&2&3 emissions - 125.587 kg of CO2

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: 23/18362

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH506-1			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
Methyl Tertiary Butyl Ether #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	-	<2	ug/kg	TM15/PM10
Benzene #	<3 SV	14	24	<3	27	<3	<3 SV	<3	<3	-	<3	ug/kg	TM15/PM10
Toluene #	22 SV	63930 AB	>>62675 AB	52	2960 AA	20	13	77	39	-	<3	ug/kg	TM15/PM10
Ethylbenzene #	<3 SV	26419 AB	15712 AB	8	3824 AA	8	<3	92	210	-	<3	ug/kg	TM15/PM10
m/p-Xylene #	<5 SV	43457 AB	24148 AB	7	315	<5	<5 SV	36	29	-	<5	ug/kg	TM15/PM10
o-Xylene #	<3 SV	4059 AB	>>3881	<3	50	<3	<3 SV	<3	<3	-	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	56 SV	70	77	56	70	63	56 SV	61	64	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	49 SV	54	65	50	59	52	48 SV	51	52	-	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1 SV	0.1	0.6	<0.1 SV	0.6	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1 SV	10.2	11.5	<0.1 SV	2.0	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1 SV	7.0	5.8	<0.1 SV	1.2	<0.1 SV	<0.1 SV	<0.1 SV	0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	3.5	5.4	5.1	4.8	3.0	4.4	4.0	<0.2	-	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	10	13	17	17	12	12	19	17	6	-	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	18	19	31	31	20	21	36	34	16	-	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	20	12	26	24	15	16	31	27	24	-	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	48	65	97	77	56	52	90	82	46	-	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1 SV	35.4	40.6	<0.1 SV	2.0	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1 SV	27.7	21.1	<0.1 SV	1.6	<0.1 SV	<0.1 SV	<0.1 SV	0.4 SV	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	1.1	<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	7	10	<4	<4	<4	<4	<4	<4	-	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	12	<7	<7	<7	<7	<7	<7	<7	-	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	<7	<7	<7	-	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	82	73	<19	<19	<19	<19	<19	<19	-	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	48	147	170	77	56	52	90	82	46	-	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	-	-	-	-	-	-	-	-	-	<0.01	<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Diethylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Triethylene glycol	<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	ug/kg	TM179/PM8
Natural Moisture Content	19.5	20.4	19.3	16.2	16.2	19.4	28.1	16.4	19.3	14.7	<0.1	%	PM4/PM0
Organic Matter	1.8	2.5	2.8	3.4	2.5	1.9	3.6	6.2	2.4	1.7	<0.2	%	TM21/PM24

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

Report : Solid

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

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	LOD/LOR	Units	Method No.
Sample ID	BH506-2	BH506-3	BH506-4	BH506-5	BH502-1	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
Methyl Tertiary Butyl Ether #	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	-	-	-	-	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Toluene #	-	-	-	-	<3	<3	<3	<3	<3	4	<3	ug/kg	TM15/PM10
Ethylbenzene #	-	-	-	-	14	107	49	<3	<3	12	<3	ug/kg	TM15/PM10
m/p-Xylene #	-	-	-	-	<5	7	<5	<5	<5	63	<5	ug/kg	TM15/PM10
o-Xylene #	-	-	-	-	<3	<3	<3	<3	<3	7	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	72	88	84	104	105	109	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	66	83	73	100	103	103	<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	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	-	-	-	-	<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	1.7	0.2	<0.1	<0.1	1.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	-	-	-	-	<0.2	14.2	<0.2	<0.2	<0.2	25.0	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	-	-	-	-	<4	7	<4	<4	<4	6	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	-	-	-	-	<19	23	<19	<19	<19	32	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	-	-	-	-	<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	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	-	-	-	-	<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	11.4	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	-	-	-	-	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	-	-	-	-	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	-	-	-	-	<38	<38	<38	<38	<38	<38	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Propylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Diethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	61	<50	ug/kg	TM179/PM8
Triethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Thiodiglycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Natural Moisture Content	17.6	14.2	19.4	19.2	20.5	15.1	19.7	13.6	6.9	11.3	<0.1	%	PM4/PM0
Organic Matter	1.4	1.3	1.8	2.7	1.5	1.3	3.3	0.3	<0.2	1.6	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

Report : Solid

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

EMT Sample No.	61-63	64-66	67-69	70-72	73-75	76-78	79-81				LOD/LOR	Units	Method No.
Sample ID	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2	HS6-O-3	HS6-O-4						
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023						
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2	<2	<2				<2	ug/kg	TM15/PM10
Benzene #	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Toluene #	11	7	9	181	102	<3	39				<3	ug/kg	TM15/PM10
Ethylbenzene #	10	10	8	>>23677 AB	15972 AB	23	>>74916 AB				<3	ug/kg	TM15/PM10
m/p-Xylene #	39	<5	<5	>>5974	1747	<5	2238				<5	ug/kg	TM15/PM10
o-Xylene #	5	<3	<3	894	556	<3	762				<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	91	97	97	92	102	96	95				<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	73	91	89	80	87	93	81				<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	<0.1	<1.0 AB	<0.1	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	<0.1	<0.1	<1.0 AB	0.2	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	1.9	1.0	0.5	55.0 AB	35.3	<0.1	11.6 AB				<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	18.0	<0.2	<0.2	<0.2	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	14	<4	<4	<4	<4	<4				<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	<19	33	<19	55	36	<19	<19				<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	<0.1	<1.0 AB	<0.1	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	<0.1	<1.0 AB	0.3	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	0.4	<0.1	<0.1	431.2 AB	199.3	<0.1	63.2 AB				<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	7.2	<0.2	<0.2	3.9	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	6	<4	<4	9	<4	<4				<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	<7	54	28	12	<7				<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	82	<7	<7				<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	<19	<19	485	323	<19	63				<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	<38	<38	<38	540	359	<38	63				<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	-	-	-	-	-	-	-				<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	<50	81	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Diethylene glycol	<50	119	65	-	-	-	-				<50	ug/kg	TM179/PM8
Triethylene glycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Thiodiglycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Natural Moisture Content	20.6	15.7	15.4	11.7	9.6	6.8	9.5				<0.1	%	PM4/PM0
Organic Matter	1.5	1.0	1.3	3.5	3.5	0.3	1.7				<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced

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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45			
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth											Please see attached notes for all abbreviations and acronyms		
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	237	138	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	627	948	<10	327	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #	<10	<10	444	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	24	45	<10	31	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	23	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenanthrene #	<10	<10	60	<10	44	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluoranthene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pyrene #	<10	<10	17	<10	15	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Chrysene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45			
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth											Please see attached notes for all abbreviations and acronyms		
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	17	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	102	97	103	103	101	104	106	102	107	103	<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	85	79	89	101	100	90	100	92	105	100	<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	187	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	<10	<10	<10	32	<10	28	<10	31	25	<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	<10	<10	157	<10	15	<10	34	26	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenanthrene #	<10	<10	<10	<10	<10	<10	<10	<10	49	78	<10	ug/kg	TM16/PM8
Anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluoranthene #	<10	<10	<10	<10	<10	<10	<10	<10	106	71	<10	ug/kg	TM16/PM8
Pyrene #	<10	<10	<10	<10	<10	<10	<10	<10	99	83	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	116	48	<10	ug/kg	TM16/PM8
Chrysene	<10	<10	<10	<10	<10	<10	<10	<10	105	42	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	176	39	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	86	15	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	38	<10	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	13	<10	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	<10	58	15	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	127	28	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	49	11	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	484	2694	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	>>51388	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	125	328	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/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: 23/18362

SVOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	104	106	106	109	105	104	112	104	116	113	<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	100	105	101	101	102	99	111	100	119	117	<0	%	TM16/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: 23/18362

SVOC Report : **Solid**

EMT Sample No.	76-78	79-81											
Sample ID	HS6-O-3	HS6-O-4											
Depth											Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T											
Sample Date	01/11/2023	01/11/2023											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	03/11/2023	03/11/2023									LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10									<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10									<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10									<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10									<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10									<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10									<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10									<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10									<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10									<10	ug/kg	TM16/PM8
Phenol #	<10	<10									<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10									<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	32	13									<10	ug/kg	TM16/PM8
Naphthalene	35	74									<10	ug/kg	TM16/PM8
Acenaphthylene	<10	61									<10	ug/kg	TM16/PM8
Acenaphthene	69	72									<10	ug/kg	TM16/PM8
Fluorene	38	64									<10	ug/kg	TM16/PM8
Phenanthrene #	349	103									<10	ug/kg	TM16/PM8
Anthracene	59	66									<10	ug/kg	TM16/PM8
Fluoranthene #	284	113									<10	ug/kg	TM16/PM8
Pyrene #	233	107									<10	ug/kg	TM16/PM8
Benzo(a)anthracene	147	116									<10	ug/kg	TM16/PM8
Chrysene	168	103									<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	221	168									<10	ug/kg	TM16/PM8
Benzo(a)pyrene	107	76									<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	46	44									<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	14	34									<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	65	58									<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	159	121									<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	62	47									<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	244									<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	136	<100									<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100									<100	ug/kg	TM16/PM8

Please include all sections of this report if it is reproduced

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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	76-78	79-81										
Sample ID	HS6-O-3	HS6-O-4										
Depth												
COC No / misc												
Containers	V J T	V J T										
Sample Date	01/11/2023	01/11/2023										
Sample Type	Soil	Soil										
Batch Number	1	1										
Date of Receipt	03/11/2023	03/11/2023										

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10									<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10									<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10									<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10									<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10									<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10									<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
Azobenzene	<10	<10									<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10									<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10									<10	ug/kg	TM16/PM8
Carbazole	27	<10									<10	ug/kg	TM16/PM8
Dibenzofuran #	41	<10									<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10									<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10									<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10									<10	ug/kg	TM16/PM8
Isophorone #	<10	<10									<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10									<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10									<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	104	109									<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	105	111									<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45	LOD/LOR	Units	Method No.
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
VOC MS													
Dichlorodifluoromethane	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Chloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1 SV	<1	<1	<1	<1	<1	<1 SV	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	109 SV	2866 AA	7744 AB	1701	>>20700 AA	62	51	182	103	<2	<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6 SV	<6	<6	<6	<6	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7 SV	<7	<7	<7	13	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Chloroform #	<3 SV	7	10	<3	19	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Benzene #	<3 SV	14	24	<3	27	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6 SV	<6	<6	<6	<6	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
Dibromomethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #	22 SV	63930 AB	>>62675 AB	52	2960 AA	20	13	77	39	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #	<3 SV	26419 AB	15712 AB	8	3824 AA	8	<3	92	210	14	<3	ug/kg	TM15/PM10
m/p-Xylene #	<5 SV	43457 AB	24148 AB	7	315	<5	<5 SV	36	29	<5	<5	ug/kg	TM15/PM10
o-Xylene #	<3 SV	4059 AB	>>3881	<3	50	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Styrene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	12	<3	ug/kg	TM15_A/PM10
Bromoform	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3 SV	7	20	<3	6	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene #	<4 SV	<4	11	<4	7	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3 SV	6	24	<3	28	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5 SV	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6 SV	37	167	<6	132	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4 SV	<4	7	<4	19	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4 SV	<4	8	<4	22	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene	<4 SV	<4	<4	<4	15	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7 SV	<7	<7	<7	<7	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27 SV	<27	<27	<27	<27	<27	<27 SV	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7 SV	<7	<7	<7	<7	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	56 SV	70	77	56	70	63	56 SV	61	64	72	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	49 SV	54	65	50	59	52	48 SV	51	52	66	<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
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<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	3	<2	<2	16	<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) #	<3	<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	<3	<3	4	11	7	9	181	102	<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 #	107	49	<3	<3	12	10	10	8	>>23677$_{AB}$	15972$_{AB}$	<3	ug/kg	TM15/PM10
m/p-Xylene #	7	<5	<5	<5	63	39	<5	<5	>>5974	1747	<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	<3	<3	7	5	<3	<3	894	556	<3	ug/kg	TM15/PM10
Styrene	28	20	<3	<3	<3	<3	19	10	>>160702$_{AB}$	>>35418$_{AB}$	<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	13	<3	<3	<3	17	5	16	<3	231	69	<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 #	32	<4	<4	<4	46	12	56	<4	126	37	<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 #	16	<3	<3	<3	18	<3	6	<3	23	5	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	25	<5	<5	<5	<5	<5	14	12	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	12	<6	<6	<6	545	87	80	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	67	<4	<4	<4	70	12	53	5	36	9	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	8	<4	<4	<4	14	<4	6	<4	6	<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	66	<4	<4	<4	73	11	93	<4	7	<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	<27	<27	98	<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	88	84	104	105	109	91	97	97	92	102	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	83	73	100	103	103	73	91	89	80	87	<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
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	76-78	79-81										
Sample ID	HS6-O-3	HS6-O-4										
Depth												
COC No / misc												
Containers	V J T	V J T										
Sample Date	01/11/2023	01/11/2023										
Sample Type	Soil	Soil										
Batch Number	1	1										
Date of Receipt	03/11/2023	03/11/2023										

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2									<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2									<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2									<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1									<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2									<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2									<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6									<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7									<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4									<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Chloroform #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3									<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4									<4	ug/kg	TM15/PM10
Benzene #	<3	<3									<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6									<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4									<4	ug/kg	TM15/PM10
Toluene #	<3	39									<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3									<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3									<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3									<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3									<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Ethylbenzene #	23	>>74916 AB									<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	2238									<5	ug/kg	TM15/PM10
o-Xylene #	<3	762									<3	ug/kg	TM15/PM10
Styrene	12	>>20755									<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3									<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	135									<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2									<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4									<4	ug/kg	TM15/PM10
Propylbenzene #	<4	65									<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	5									<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5									<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6									<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	15									<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4									<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4									<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7									<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4									<4	ug/kg	TM15/PM10
Naphthalene	<27	<27									<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7									<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	96	95									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	93	81									<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
23/18362	1	HS8-2		1-3	Trace of degraded diesel
23/18362	1	HS8-6		4-6	Trace of degraded diesel
23/18362	1	HS8-7		7-9	Trace of degraded diesel
23/18362	1	HS8-3A		10-12	Trace of degraded diesel
23/18362	1	HS8-4A		13-15	Trace of degraded diesel
23/18362	1	HS8-9A		16-18	Trace of degraded diesel
23/18362	1	HS8-11		19-21	Trace of degraded diesel
23/18362	1	HS8-12		22-24	Trace of degraded diesel
23/18362	1	HS8-13		25-27	Trace of degraded diesel
23/18362	1	BH502-1		43-45	No interpretation possible
23/18362	1	BH502-2		46-48	Degraded kerosene-type product
23/18362	1	BH502-3		49-51	No interpretation possible
23/18362	1	BH502-4		52-54	No interpretation possible
23/18362	1	BH502-5		55-57	No interpretation possible
23/18362	1	BH502-6		58-60	Degraded kerosene-type product
23/18362	1	BH502-7		61-63	No interpretation possible
23/18362	1	BH502-8		64-66	Possible degraded kerosene
23/18362	1	BH502-9		67-69	No interpretation possible
23/18362	1	HS6-O-1		70-72	Gasoline residues & Trace of degraded diesel
23/18362	1	HS6-O-2		73-75	Gasoline residues & Trace of degraded diesel
23/18362	1	HS6-O-3		76-78	Possaible PAH's
23/18362	1	HS6-O-4		79-81	No interpretation possible

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/18362						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/18362

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 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: 23/18362

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
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
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
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes

EMT Job No: 23/18362

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.	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 GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

APPENDIX 13 - Hotspot BH506 Validation Testing Results

Element Materials Technology
Unit 3 Deeside Point
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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	14th November, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/18362 Batch 1
Location :	Tetrosyl
Date samples received :	3rd November, 2023
Status :	Final report
Issue :	1

Twenty seven samples were received for analysis on 3rd November, 2023 of which twenty 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 53.142 kg of CO2

Scope 1&2&3 emissions - 125.587 kg of CO2

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: 23/18362

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	28-30	LOD/LOR	Units	Method No.
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH506-1			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
Methyl Tertiary Butyl Ether #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	-	<2	ug/kg	TM15/PM10
Benzene #	<3 SV	14	24	<3	27	<3	<3 SV	<3	<3	-	<3	ug/kg	TM15/PM10
Toluene #	22 SV	63930 AB	>>62675 AB	52	2960 AA	20	13	77	39	-	<3	ug/kg	TM15/PM10
Ethylbenzene #	<3 SV	26419 AB	15712 AB	8	3824 AA	8	<3	92	210	-	<3	ug/kg	TM15/PM10
m/p-Xylene #	<5 SV	43457 AB	24148 AB	7	315	<5	<5 SV	36	29	-	<5	ug/kg	TM15/PM10
o-Xylene #	<3 SV	4059 AB	>>3881	<3	50	<3	<3 SV	<3	<3	-	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	56 SV	70	77	56	70	63	56 SV	61	64	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	49 SV	54	65	50	59	52	48 SV	51	52	-	<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1 SV	0.1	0.6	<0.1 SV	0.6	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1 SV	10.2	11.5	<0.1 SV	2.0	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1 SV	7.0	5.8	<0.1 SV	1.2	<0.1 SV	<0.1 SV	<0.1 SV	0.1 SV	-	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	3.5	5.4	5.1	4.8	3.0	4.4	4.0	<0.2	-	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	10	13	17	17	12	12	19	17	6	-	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	18	19	31	31	20	21	36	34	16	-	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	20	12	26	24	15	16	31	27	24	-	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	48	65	97	77	56	52	90	82	46	-	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1 SV	<0.1	<0.1	<0.1 SV	<0.1	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1 SV	35.4	40.6	<0.1 SV	2.0	<0.1 SV	<0.1 SV	<0.1 SV	<0.1 SV	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1 SV	27.7	21.1	<0.1 SV	1.6	<0.1 SV	<0.1 SV	<0.1 SV	0.4 SV	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	1.1	<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	7	10	<4	<4	<4	<4	<4	<4	-	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	12	<7	<7	<7	<7	<7	<7	<7	-	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	<7	<7	<7	<7	-	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	82	73	<19	<19	<19	<19	<19	<19	-	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	48	147	170	77	56	52	90	82	46	-	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	-	-	-	-	-	-	-	-	-	<0.01	<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Diethylene glycol	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	ug/kg	TM179/PM8
Triethylene glycol	<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	ug/kg	TM179/PM8
Natural Moisture Content	19.5	20.4	19.3	16.2	16.2	19.4	28.1	16.4	19.3	14.7	<0.1	%	PM4/PM0
Organic Matter	1.8	2.5	2.8	3.4	2.5	1.9	3.6	6.2	2.4	1.7	<0.2	%	TM21/PM24

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

Report : Solid

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

EMT Sample No.	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	LOD/LOR	Units	Method No.
Sample ID	BH506-2	BH506-3	BH506-4	BH506-5	BH502-1	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
Methyl Tertiary Butyl Ether #	-	-	-	-	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Benzene #	-	-	-	-	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Toluene #	-	-	-	-	<3	<3	<3	<3	<3	4	<3	ug/kg	TM15/PM10
Ethylbenzene #	-	-	-	-	14	107	49	<3	<3	12	<3	ug/kg	TM15/PM10
m/p-Xylene #	-	-	-	-	<5	7	<5	<5	<5	63	<5	ug/kg	TM15/PM10
o-Xylene #	-	-	-	-	<3	<3	<3	<3	<3	7	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	72	88	84	104	105	109	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	66	83	73	100	103	103	<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	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	-	-	-	-	<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	1.7	0.2	<0.1	<0.1	1.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	-	-	-	-	<0.2	14.2	<0.2	<0.2	<0.2	25.0	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	-	-	-	-	<4	7	<4	<4	<4	6	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	-	-	-	-	<19	23	<19	<19	<19	32	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	-	-	-	-	<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	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	-	-	-	-	<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	11.4	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	-	-	-	-	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	-	-	-	-	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	-	-	-	-	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	-	-	-	-	<38	<38	<38	<38	<38	<38	<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Propylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Diethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	61	<50	ug/kg	TM179/PM8
Triethylene glycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Thiodiglycol	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	ug/kg	TM179/PM8
Natural Moisture Content	17.6	14.2	19.4	19.2	20.5	15.1	19.7	13.6	6.9	11.3	<0.1	%	PM4/PM0
Organic Matter	1.4	1.3	1.8	2.7	1.5	1.3	3.3	0.3	<0.2	1.6	<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

Report : Solid

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

EMT Sample No.	61-63	64-66	67-69	70-72	73-75	76-78	79-81				LOD/LOR	Units	Method No.
Sample ID	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2	HS6-O-3	HS6-O-4						
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1	1						
Date of Receipt	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023						
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2	<2	<2	<2				<2	ug/kg	TM15/PM10
Benzene #	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Toluene #	11	7	9	181	102	<3	39				<3	ug/kg	TM15/PM10
Ethylbenzene #	10	10	8	>>23677 AB	15972 AB	23	>>74916 AB				<3	ug/kg	TM15/PM10
m/p-Xylene #	39	<5	<5	>>5974	1747	<5	2238				<5	ug/kg	TM15/PM10
o-Xylene #	5	<3	<3	894	556	<3	762				<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	91	97	97	92	102	96	95				<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	73	91	89	80	87	93	81				<0	%	TM15/PM10
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	<0.1	<1.0 AB	<0.1	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	<0.1	<0.1	<1.0 AB	0.2	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	1.9	1.0	0.5	55.0 AB	35.3	<0.1	11.6 AB				<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	18.0	<0.2	<0.2	<0.2	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	14	<4	<4	<4	<4	<4				<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH+HS_CU_1D_AL)	<19	33	<19	55	36	<19	<19				<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	<0.1	<1.0 AB	<0.1	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	<0.1	<1.0 AB	0.3	<0.1	<1.0 AB				<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	0.4	<0.1	<0.1	431.2 AB	199.3	<0.1	63.2 AB				<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	7.2	<0.2	<0.2	3.9	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	6	<4	<4	9	<4	<4				<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	<7	54	28	12	<7				<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	<7	<7	82	<7	<7				<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH+HS_CU_1D_AR) #	<19	<19	<19	485	323	<19	63				<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH+HS_CU_1D_Total)	<38	<38	<38	540	359	<38	63				<38	mg/kg	TM5/TM36/PM8/PM12/PM16
Phenol #	-	-	-	-	-	-	-				<0.01	mg/kg	TM26/PM21B
Monoethylene glycol	<50	81	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Propylene glycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Diethylene glycol	<50	119	65	-	-	-	-				<50	ug/kg	TM179/PM8
Triethylene glycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Thiodiglycol	<50	<50	<50	-	-	-	-				<50	ug/kg	TM179/PM8
Natural Moisture Content	20.6	15.7	15.4	11.7	9.6	6.8	9.5				<0.1	%	PM4/PM0
Organic Matter	1.5	1.0	1.3	3.5	3.5	0.3	1.7				<0.2	%	TM21/PM24

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced

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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45			
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth											Please see attached notes for all abbreviations and acronyms		
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	237	138	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	627	948	<10	327	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #	<10	<10	444	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	24	45	<10	31	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	23	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenanthrene #	<10	<10	60	<10	44	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluoranthene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pyrene #	<10	<10	17	<10	15	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Chrysene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45			
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth											Please see attached notes for all abbreviations and acronyms		
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	17	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	102	97	103	103	101	104	106	102	107	103	<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	85	79	89	101	100	90	100	92	105	100	<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	187	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	<10	<10	<10	<10	32	<10	28	<10	31	25	<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	<10	<10	157	<10	15	<10	34	26	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenanthrene #	<10	<10	<10	<10	<10	<10	<10	<10	49	78	<10	ug/kg	TM16/PM8
Anthracene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Fluoranthene #	<10	<10	<10	<10	<10	<10	<10	<10	106	71	<10	ug/kg	TM16/PM8
Pyrene #	<10	<10	<10	<10	<10	<10	<10	<10	99	83	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	116	48	<10	ug/kg	TM16/PM8
Chrysene	<10	<10	<10	<10	<10	<10	<10	<10	105	42	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	176	39	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	86	15	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	38	<10	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10	<10	13	<10	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	<10	58	15	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	127	28	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	49	11	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	484	2694	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	>>51388	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	125	328	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/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: 23/18362

SVOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	104	106	106	109	105	104	112	104	116	113	<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	100	105	101	101	102	99	111	100	119	117	<0	%	TM16/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: 23/18362

SVOC Report : **Solid**

EMT Sample No.	76-78	79-81											
Sample ID	HS6-O-3	HS6-O-4											
Depth											Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T											
Sample Date	01/11/2023	01/11/2023											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	03/11/2023	03/11/2023									LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10	<10									<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10									<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10									<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10									<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10									<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10									<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10									<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10									<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10									<10	ug/kg	TM16/PM8
Phenol #	<10	<10									<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10	<10									<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	32	13									<10	ug/kg	TM16/PM8
Naphthalene	35	74									<10	ug/kg	TM16/PM8
Acenaphthylene	<10	61									<10	ug/kg	TM16/PM8
Acenaphthene	69	72									<10	ug/kg	TM16/PM8
Fluorene	38	64									<10	ug/kg	TM16/PM8
Phenanthrene #	349	103									<10	ug/kg	TM16/PM8
Anthracene	59	66									<10	ug/kg	TM16/PM8
Fluoranthene #	284	113									<10	ug/kg	TM16/PM8
Pyrene #	233	107									<10	ug/kg	TM16/PM8
Benzo(a)anthracene	147	116									<10	ug/kg	TM16/PM8
Chrysene	168	103									<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	221	168									<10	ug/kg	TM16/PM8
Benzo(a)pyrene	107	76									<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	46	44									<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	14	34									<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	65	58									<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	159	121									<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	62	47									<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	244									<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	136	<100									<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100									<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100	<100									<100	ug/kg	TM16/PM8

Please include all sections of this report if it is reproduced

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

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

SVOC Report : **Solid**

EMT Sample No.	76-78	79-81										
Sample ID	HS6-O-3	HS6-O-4										
Depth												
COC No / misc												
Containers	V J T	V J T										
Sample Date	01/11/2023	01/11/2023										
Sample Type	Soil	Soil										
Batch Number	1	1										
Date of Receipt	03/11/2023	03/11/2023										

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10	<10									<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10									<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10									<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10	<10									<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10									<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10									<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10									<10	ug/kg	TM16/PM8
Azobenzene	<10	<10									<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10									<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10									<10	ug/kg	TM16/PM8
Carbazole	27	<10									<10	ug/kg	TM16/PM8
Dibenzofuran #	41	<10									<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10									<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10	<10									<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10									<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10									<10	ug/kg	TM16/PM8
Isophorone #	<10	<10									<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10	<10									<10	ug/kg	TM16/PM8
Nitrobenzene #	<10	<10									<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	104	109									<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	105	111									<0	%	TM16/PM8

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	1-3	4-6	7-9	10-12	13-15	16-18	19-21	22-24	25-27	43-45	LOD/LOR	Units	Method No.
Sample ID	HS8-2	HS8-6	HS8-7	HS8-3A	HS8-4A	HS8-9A	HS8-11	HS8-12	HS8-13	BH502-1			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
VOC MS													
Dichlorodifluoromethane	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Chloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1 SV	<1	<1	<1	<1	<1	<1 SV	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	109 SV	2866 AA	7744 AB	1701	>>20700 AA	62	51	182	103	<2	<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6 SV	<6	<6	<6	<6	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7 SV	<7	<7	<7	13	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Chloroform #	<3 SV	7	10	<3	19	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Benzene #	<3 SV	14	24	<3	27	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6 SV	<6	<6	<6	<6	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
Dibromomethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #	22 SV	63930 AB	>>62675 AB	52	2960 AA	20	13	77	39	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #	<3 SV	26419 AB	15712 AB	8	3824 AA	8	<3	92	210	14	<3	ug/kg	TM15/PM10
m/p-Xylene #	<5 SV	43457 AB	24148 AB	7	315	<5	<5 SV	36	29	<5	<5	ug/kg	TM15/PM10
o-Xylene #	<3 SV	4059 AB	>>3881	<3	50	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Styrene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	12	<3	ug/kg	TM15_A/PM10
Bromoform	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3 SV	7	20	<3	6	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2 SV	<2	<2	<2	<2	<2	<2 SV	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene #	<4 SV	<4	11	<4	7	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3 SV	6	24	<3	28	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3 SV	<3	<3	<3	<3	<3	<3 SV	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5 SV	<5	<5	<5	<5	<5	<5 SV	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6 SV	37	167	<6	132	<6	<6 SV	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4 SV	<4	7	<4	19	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4 SV	<4	8	<4	22	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene	<4 SV	<4	<4	<4	15	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7 SV	<7	<7	<7	<7	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4 SV	<4	<4	<4	<4	<4	<4 SV	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27 SV	<27	<27	<27	<27	<27	<27 SV	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7 SV	<7	<7	<7	<7	<7	<7 SV	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	56 SV	70	77	56	70	63	56 SV	61	64	72	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	49 SV	54	65	50	59	52	48 SV	51	52	66	<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
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	46-48	49-51	52-54	55-57	58-60	61-63	64-66	67-69	70-72	73-75	LOD/LOR	Units	Method No.
Sample ID	BH502-2	BH502-3	BH502-4	BH502-5	BH502-6	BH502-7	BH502-8	BH502-9	HS6-O-1	HS6-O-2			
Depth													
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	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023			
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	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<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	3	<2	<2	16	<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) #	<3	<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	<3	<3	4	11	7	9	181	102	<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 #	107	49	<3	<3	12	10	10	8	>>23677$_{AB}$	15972$_{AB}$	<3	ug/kg	TM15/PM10
m/p-Xylene #	7	<5	<5	<5	63	39	<5	<5	>>5974	1747	<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	<3	<3	7	5	<3	<3	894	556	<3	ug/kg	TM15/PM10
Styrene	28	20	<3	<3	<3	<3	19	10	>>160702$_{AB}$	>>35418$_{AB}$	<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Isopropylbenzene #	13	<3	<3	<3	17	5	16	<3	231	69	<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 #	32	<4	<4	<4	46	12	56	<4	126	37	<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 #	16	<3	<3	<3	18	<3	6	<3	23	5	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	25	<5	<5	<5	<5	<5	14	12	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	12	<6	<6	<6	545	87	80	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	67	<4	<4	<4	70	12	53	5	36	9	<4	ug/kg	TM15/PM10
4-Isopropyltoluene	8	<4	<4	<4	14	<4	6	<4	6	<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	66	<4	<4	<4	73	11	93	<4	7	<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	<27	<27	98	<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	88	84	104	105	109	91	97	97	92	102	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	83	73	100	103	103	73	91	89	80	87	<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
EMT Job No: 23/18362

VOC Report : **Solid**

EMT Sample No.	76-78	79-81										
Sample ID	HS6-O-3	HS6-O-4										
Depth												
COC No / misc												
Containers	V J T	V J T										
Sample Date	01/11/2023	01/11/2023										
Sample Type	Soil	Soil										
Batch Number	1	1										
Date of Receipt	03/11/2023	03/11/2023										

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2									<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2									<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2									<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1									<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2									<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2									<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6									<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7									<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3									<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4									<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
Chloroform #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3									<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4									<4	ug/kg	TM15/PM10
Benzene #	<3	<3									<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6									<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3									<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4									<4	ug/kg	TM15/PM10
Toluene #	<3	39									<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3									<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3									<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3									<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3									<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3									<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3									<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Ethylbenzene #	23	>>74916 AB									<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	2238									<5	ug/kg	TM15/PM10
o-Xylene #	<3	762									<3	ug/kg	TM15/PM10
Styrene	12	>>20755									<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3									<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	135									<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3									<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2									<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4									<4	ug/kg	TM15/PM10
Propylbenzene #	<4	65									<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	5									<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3									<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5									<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6									<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	15									<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4									<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4									<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4									<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7									<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4									<4	ug/kg	TM15/PM10
Naphthalene	<27	<27									<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7									<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	96	95									<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	93	81									<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited

Reference: GRO-21459

Location: Tetrosyl

Contact: Luke Harrison

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
23/18362	1	HS8-2		1-3	Trace of degraded diesel
23/18362	1	HS8-6		4-6	Trace of degraded diesel
23/18362	1	HS8-7		7-9	Trace of degraded diesel
23/18362	1	HS8-3A		10-12	Trace of degraded diesel
23/18362	1	HS8-4A		13-15	Trace of degraded diesel
23/18362	1	HS8-9A		16-18	Trace of degraded diesel
23/18362	1	HS8-11		19-21	Trace of degraded diesel
23/18362	1	HS8-12		22-24	Trace of degraded diesel
23/18362	1	HS8-13		25-27	Trace of degraded diesel
23/18362	1	BH502-1		43-45	No interpretation possible
23/18362	1	BH502-2		46-48	Degraded kerosene-type product
23/18362	1	BH502-3		49-51	No interpretation possible
23/18362	1	BH502-4		52-54	No interpretation possible
23/18362	1	BH502-5		55-57	No interpretation possible
23/18362	1	BH502-6		58-60	Degraded kerosene-type product
23/18362	1	BH502-7		61-63	No interpretation possible
23/18362	1	BH502-8		64-66	Possible degraded kerosene
23/18362	1	BH502-9		67-69	No interpretation possible
23/18362	1	HS6-O-1		70-72	Gasoline residues & Trace of degraded diesel
23/18362	1	HS6-O-2		73-75	Gasoline residues & Trace of degraded diesel
23/18362	1	HS6-O-3		76-78	Possaible PAH's
23/18362	1	HS6-O-4		79-81	No interpretation possible

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/18362						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/18362

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 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: 23/18362

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
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
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
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes

APPENDIX 14 – Silt Testing Results

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i2 Analytical Ltd.
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Watford,
Herts,
WD18 8YS

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e: reception@i2analytical.com

Analytical Report Number : 23-64439

Project / Site name:	Tetrosyl	**Samples received on:**	23/10/2023
Your job number:	333	**Samples instructed on/ Analysis started on:**	24/10/2023
Your order number:		**Analysis completed by:**	31/10/2023
Report Issue Number:	1	**Report issued on:**	31/10/2023
Samples Analysed:	3 soil samples		

Signed:

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

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

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

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

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

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

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

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 23-64439
Project / Site name: Tetrosyl

Lab Sample Number				2854993	2854994	2854995
Sample Reference				Silt-1	Silt-2	Silt-3
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				19/10/2023	19/10/2023	19/10/2023
Time Taken				0900	0900	0900
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	35	37	39
Total mass of sample received	kg	0.001	NONE	0.7	0.7	0.6
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Amosite	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	< 0.001	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	< 0.001	< 0.001
Asbestos Analyst ID	N/A	N/A	N/A	KWB	KWB	KWB
General Inorganics						
pH - Automated	pH Units	N/A	MCERTS	8	6.2	7.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	4000	5700	3200
Loss on Ignition @ 450oC	%	0.2	MCERTS	11.7	11.8	11.1
Total Phenols						
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Speciated PAHs						
Naphthalene	mg/kg	0.05	MCERTS	0.12	0.2	0.19
Acenaphthylene	mg/kg	0.05	MCERTS	0.07	0.07	0.06
Acenaphthene	mg/kg	0.05	MCERTS	0.2	0.3	0.16
Fluorene	mg/kg	0.05	MCERTS	0.19	0.28	0.19
Phenanthrene	mg/kg	0.05	MCERTS	1.3	2.1	1.2
Anthracene	mg/kg	0.05	MCERTS	0.35	0.56	0.43
Fluoranthene	mg/kg	0.05	MCERTS	3.1	5.1	2.8
Pyrene	mg/kg	0.05	MCERTS	2.9	4.7	2.6
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.5	2.3	1.3
Chrysene	mg/kg	0.05	MCERTS	1.6	2.6	1.5
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	2.3	3.1	1.8
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.64	1.5	0.83
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.7	2.6	1.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1	1.5	0.9
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.23	0.37	0.24
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.2	1.7	1
Total PAH						
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	18.2	28.9	16.6

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Analytical Report Number: 23-64439
Project / Site name: Tetrosyl

Lab Sample Number				2854993	2854994	2854995
Sample Reference				Silt-1	Silt-2	Silt-3
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				19/10/2023	19/10/2023	19/10/2023
Time Taken				0900	0900	0900
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Heavy Metals / Metalloids						
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	35	31	35
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.3	2.6	2.6
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	27	28
Copper (aqua regia extractable)	mg/kg	1	MCERTS	66	88	88
Lead (aqua regia extractable)	mg/kg	1	MCERTS	150	200	210
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	40	43	48
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	300	370	350
Monoaromatics & Oxygenates						
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
p & m-xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
o-xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	< 5.0	< 5.0	< 5.0
Petroleum Hydrocarbons						
Petroleum Range Organics (C6 - C10) $_{HS\_1D\_TOTAL}$	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0
TPH C10 - C40 $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	530	760	440
TPH-CWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.02	NONE	< 0.020	< 0.020	< 0.020
TPH-CWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPH-CWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	7.8	11	11
TPH-CWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	33	44	37
TPH-CWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	220	400	220
TPH-CWG - Aliphatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	NONE	260	450	270
TPH-CWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.01	NONE	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.05	NONE	< 0.050	< 0.050	< 0.050
TPH-CWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	3.1	3.9	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	20	27	11
TPH-CWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	180	180	110
TPH-CWG - Aromatic (EC5 - EC35) $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	NONE	200	210	120

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Analytical Report Number: 23-64439
Project / Site name: Tetrosyl

Lab Sample Number				2854993	2854994	2854995
Sample Reference				Silt-1	Silt-2	Silt-3
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				19/10/2023	19/10/2023	19/10/2023
Time Taken				0900	0900	0900
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Miscellaneous Organics						
Product ID		N/A	NONE	See Appendix	See Appendix	See Appendix
TPH Carbon Range	N/A	N/A	NONE	The total ion count (TIC trace) shows a carbon range from C10 to C35. The sample TIC trace is complex, showing aromatic and aliphatic product sources. The trace does not match the standard product profiles but is suggestive of Lube oil	The total ion count (TIC trace) shows a carbon range from C10 to C35. The sample TIC trace is complex, showing aromatic and aliphatic product sources. The trace does not match the standard product profiles but is suggestive of Lube oil	The total ion count (TIC trace) shows a carbon range from C10 to C35. The sample TIC trace is complex, showing aromatic and aliphatic product sources. The trace does not match the standard product profiles but is suggestive of Lube oil
TPH Fuel Type	N/A	N/A	NONE	The total ion count (TIC trace) shows a carbon range from C10 to C35. The sample TIC trace is complex, showing aromatic and aliphatic product sources. The trace does not match the standard product profiles but is suggestive of Lube oil	The total ion count (TIC trace) shows a carbon range from C10 to C35. The sample TIC trace is complex, showing aromatic and aliphatic product sources. The trace does not match the standard product profiles but is suggestive of Lube oil	The total ion count (TIC trace) shows a carbon range from C10 to C35. The sample TIC trace is complex, showing aromatic and aliphatic product sources. The trace does not match the standard product profiles but is suggestive of Lube oil

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

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Analytical Report Number: 23-64439
Project / Site name: Tetrosyl
Your Order No:

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
2854993	Silt-1		100	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
2854994	Silt-2		101	Loose Fibres	**Amosite**	< 0.001	**< 0.001**
2854995	Silt-3		106	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

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

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number : 23-64439
Project / Site name: Tetrosyl

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2854993	Silt-1	None Supplied	None Supplied	Brown clay and sand.
2854994	Silt-2	None Supplied	None Supplied	Brown loam with peat.
2854995	Silt-3	None Supplied	None Supplied	Brown loam with peat.

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Analytical Report Number : 23-64439
Project / Site name: Tetrosyl

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards. Refer to CoA for analyte specific accreditation.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
PRO (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260. Refer to CoA for analyte specific accreditation	L073B-PL	W	MCERTS
Product ID in soil	Determination of product ID by interpretation against standard chromatograms - Soil.	In-house method	L064-PL/UK	W	NONE
TPH Chromatogram in Soil	TPH Chromatogram in Soil.	In-house method	L064-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID. Refer to CoA for band specific accreditation.	In-house method with silica gel split/clean up.	L088/76-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025

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Analytical Report Number : 23-64439
Project / Site name: Tetrosyl

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

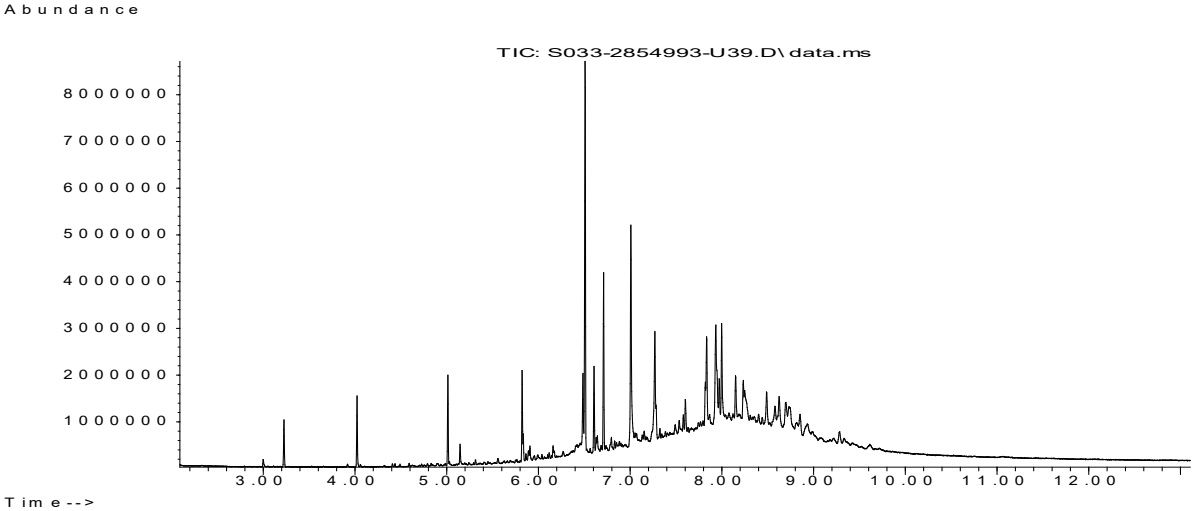
For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried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

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

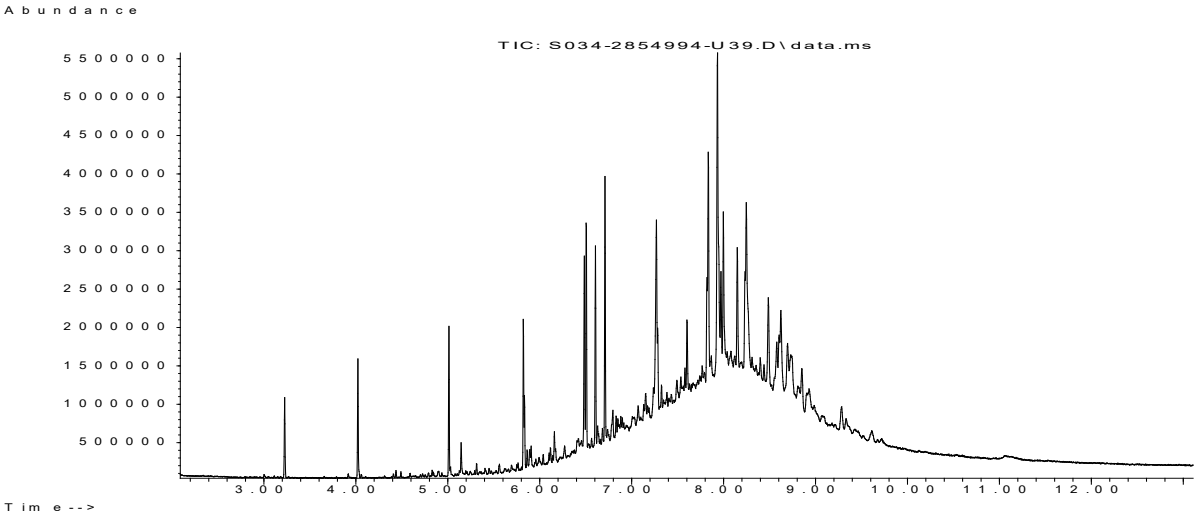
Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column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

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The results included within the report relate only to the sample(s) submitted for testing.



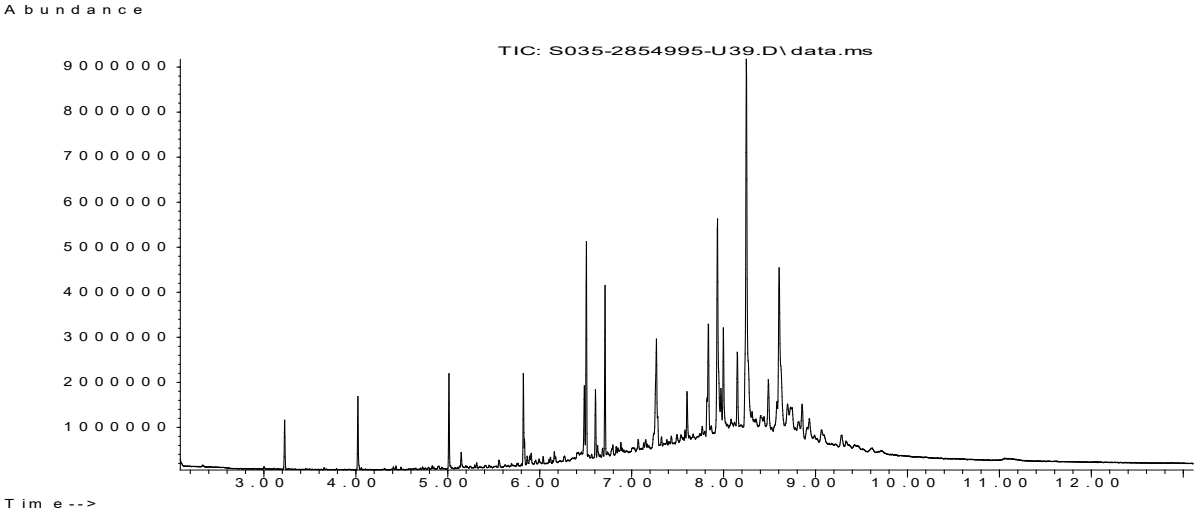
The total ion count (TIC trace) shows a carbon range from C10 to C35.
The sample TIC trace is complex, showing aromatic and aliphatic product sources.
The trace does not match the standard product profiles but is suggestive of Lube oil

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The total ion count (TIC trace) shows a carbon range from C10 to C35.
The sample TIC trace is complex, showing aromatic and aliphatic product sources.
The trace does not match the standard product profiles but is suggestive of Lube oil

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The total ion count (TIC trace) shows a carbon range from C10 to C35.
The sample TIC trace is complex, showing aromatic and aliphatic product sources.
The trace does not match the standard product profiles but is suggestive of Lube oil

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The results included within the report relate only to the sample(s) submitted for testing.

APPENDIX 15 - Surface Water Testing Results

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W: www.element.com

Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	29th June, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/10372 Batch 1
Location :	Tetrosyl
Date samples received :	24th June, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 24th June, 2023 and 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:

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: 23/10372

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2												
Sample ID	DS01												
Depth													
COC No / misc													
Containers	V												
Sample Date	19/06/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	24/06/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Benzene #	<0.5										<0.5	ug/l	TM15/PM10
Toluene #	<5										<5	ug/l	TM15/PM10
Ethylbenzene #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	97										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	92										<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

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/10372

VOC Report : **Liquid**

EMT Sample No.	1-2												
Sample ID	DS01												
Depth													
COC No / misc													
Containers	V												
Sample Date	19/06/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	24/06/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
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 #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	97										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	92										<0	%	TM15/PM10

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/10372						

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.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/10372

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

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

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: 23/10372

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

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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	11th August, 2023
Your reference :	N/A
Our reference :	Test Report 23/12684 Batch 1
Location :	Tetrosyl
Date samples received :	1st August, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 1st August, 2023 and 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:



Please include all sections of this report if it is reproduced

Client Name: Groundtech Consulting Limited
Reference: N/A
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/12684

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-4												
Sample ID	DS01A												
Depth													
COC No / misc													
Containers	V P G												
Sample Date	01/08/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	01/08/2023												
											LOD/LOR	Units	Method No.
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
MTBE #	<5										<5	ug/l	TM36/PM12
Benzene #	<5										<5	ug/l	TM36/PM12
Toluene #	<5										<5	ug/l	TM36/PM12
Ethylbenzene #	<5										<5	ug/l	TM36/PM12
m/p-Xylene #	<5										<5	ug/l	TM36/PM12
o-Xylene #	<5										<5	ug/l	TM36/PM12

Client Name: Groundtech Consulting Limited
Reference: N/A
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/12684

SVOC Report : **Liquid**

EMT Sample No.	1-4												
Sample ID	DS01A												
Depth													
COC No / misc													
Containers	V P G												
Sample Date	01/08/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	01/08/2023												
SVOC MS													
Phenols													
2-Chlorophenol #	<1											<1	ug/l	TM16/PM30
2-Methylphenol #	<0.5											<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	<1											<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	<1											<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 #	<1											<1	ug/l	TM16/PM30
Naphthalene #	<1											<1	ug/l	TM16/PM30
Acenaphthylene #	<0.5											<0.5	ug/l	TM16/PM30
Acenaphthene #	<1											<1	ug/l	TM16/PM30
Fluorene #	<0.5											<0.5	ug/l	TM16/PM30
Phenanthrene #	<0.5											<0.5	ug/l	TM16/PM30
Anthracene #	<0.5											<0.5	ug/l	TM16/PM30
Fluoranthene #	<0.5											<0.5	ug/l	TM16/PM30
Pyrene #	<0.5											<0.5	ug/l	TM16/PM30
Benzo(a)anthracene #	<0.5											<0.5	ug/l	TM16/PM30
Chrysene #	<0.5											<0.5	ug/l	TM16/PM30
Benzo(bk)fluoranthene #	<1											<1	ug/l	TM16/PM30
Benzo(a)pyrene	<1											<1	ug/l	TM16/PM30
Indeno(123cd)pyrene	<1											<1	ug/l	TM16/PM30
Dibenzo(ah)anthracene #	<0.5											<0.5	ug/l	TM16/PM30
Benzo(ghi)perylene #	<0.5											<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 #	<1.5											<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

Client Name: Groundtech Consulting Limited
Reference: N/A
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/12684

SVOC Report : **Liquid**

EMT Sample No.	1-4												
Sample ID	DS01A												
Depth													
COC No / misc													
Containers	V P G												
Sample Date	01/08/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	01/08/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene #	<1										<1	ug/l	TM16/PM30
1,2,4-Trichlorobenzene #	<1										<1	ug/l	TM16/PM30
1,3-Dichlorobenzene #	<1										<1	ug/l	TM16/PM30
1,4-Dichlorobenzene #	<1										<1	ug/l	TM16/PM30
2-Nitroaniline	<1										<1	ug/l	TM16/PM30
2,4-Dinitrotoluene #	<0.5										<0.5	ug/l	TM16/PM30
2,6-Dinitrotoluene	<1										<1	ug/l	TM16/PM30
3-Nitroaniline	<1										<1	ug/l	TM16/PM30
4-Bromophenylphenylether #	<1										<1	ug/l	TM16/PM30
4-Chloroaniline	<1										<1	ug/l	TM16/PM30
4-Chlorophenylphenylether #	<1										<1	ug/l	TM16/PM30
4-Nitroaniline	<0.5										<0.5	ug/l	TM16/PM30
Azobenzene #	<0.5										<0.5	ug/l	TM16/PM30
Bis(2-chloroethoxy)methane #	<0.5										<0.5	ug/l	TM16/PM30
Bis(2-chloroethyl)ether #	<1										<1	ug/l	TM16/PM30
Carbazole #	<0.5										<0.5	ug/l	TM16/PM30
Dibenzofuran #	<0.5										<0.5	ug/l	TM16/PM30
Hexachlorobenzene #	<1										<1	ug/l	TM16/PM30
Hexachlorobutadiene #	<1										<1	ug/l	TM16/PM30
Hexachlorocyclopentadiene	<1										<1	ug/l	TM16/PM30
Hexachloroethane #	<1										<1	ug/l	TM16/PM30
Isophorone #	<0.5										<0.5	ug/l	TM16/PM30
N-nitrosodi-n-propylamine #	<0.5										<0.5	ug/l	TM16/PM30
Nitrobenzene #	<1										<1	ug/l	TM16/PM30
Surrogate Recovery 2-Fluorobiphenyl	122										<0	%	TM16/PM30
Surrogate Recovery p-Terphenyl-d14	126										<0	%	TM16/PM30

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: N/A
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/12684						

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

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/12684

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

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

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: 23/12684

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

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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	5th September, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/14312 Batch 1
Location :	Tetrosyl
Date samples received :	31st August, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 31st August, 2023 and 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: 23/14312

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS1												
Depth													
COC No / misc													
Containers	V												
Sample Date	29/08/2023												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	31/08/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Benzene	<0.5										<0.5	ug/l	TM15/PM10
Toluene	<5										<5	ug/l	TM15/PM10
Ethylbenzene	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	137										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	94										<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

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/14312

VOC Report : **Liquid**

EMT Sample No.	1-2												
Sample ID	DS1												
Depth													
COC No / misc													
Containers	V												
Sample Date	29/08/2023												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	31/08/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane	<3										<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1										<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	<0.5										<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	<5										<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	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform	<2										<2	ug/l	TM15/PM10
Isopropylbenzene	<3										<3	ug/l	TM15/PM10
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	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3										<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	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	137										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	94										<0	%	TM15/PM10

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/14312						

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.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/14312

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

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

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: 23/14312

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

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PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	3rd October, 2023
Your reference :	N/A
Our reference :	Test Report 23/16113 Batch 1
Location :	Tetrosyl
Date samples received :	29th September, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 29th September, 2023 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.434 kg of CO2

Scope 1&2&3 emissions - 1.027 kg of CO2

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: N/A
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/16113

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS1												
Depth													
COC No / misc													
Containers	V												
Sample Date	27/09/2023												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	29/09/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Benzene	<0.5										<0.5	ug/l	TM15/PM10
Toluene	<5										<5	ug/l	TM15/PM10
Ethylbenzene	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	109										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	104										<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

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: N/A
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/16113

VOC Report : **Liquid**

EMT Sample No.	1-2										LOD/LOR	Units	Method No.
Sample ID	DS1												
Depth													
COC No / misc													
Containers	V												
Sample Date	27/09/2023												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	29/09/2023												
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane	<3										<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1										<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	<0.5										<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	<5										<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	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform	<2										<2	ug/l	TM15/PM10
Isopropylbenzene	<3										<3	ug/l	TM15/PM10
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	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3										<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	<3										<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	<2										<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	104										<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference: N/A
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/16113						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

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NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/16113

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

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

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: 23/16113

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

Element Materials Technology
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Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

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F: +44 (0) 1244 833781
W: www.element.com

Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	23rd October, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/17169 Batch 1
Location :	Tetrosyl
Date samples received :	16th October, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 16th October, 2023 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.652 kg of CO2

Scope 1&2&3 emissions - 1.54 kg of CO2

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: 23/17169

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS1												
Depth													
COC No / misc													
Containers	V												
Sample Date	13/10/2023												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	16/10/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Benzene	<0.5										<0.5	ug/l	TM15/PM10
Toluene	<5										<5	ug/l	TM15/PM10
Ethylbenzene	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	101										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	100										<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

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/17169

VOC Report : **Liquid**

EMT Sample No.	1-2												
Sample ID	DS1												
Depth													
COC No / misc													
Containers	V												
Sample Date	13/10/2023												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	16/10/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane	<3										<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1										<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	<0.5										<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	<5										<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	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform	<2										<2	ug/l	TM15/PM10
Isopropylbenzene	<3										<3	ug/l	TM15/PM10
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	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3										<3	ug/l	TM15/PM10
4-Chlorotoluene	<3										<3	ug/l	TM15/PM10
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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
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1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	101										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	100										<0	%	TM15/PM10

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/17169						

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EMT Job No.: 23/17169

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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.

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% 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.

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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.

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

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

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: 23/17169

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

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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	31st October, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/17806 Batch 1
Location :	Tetrosyl
Date samples received :	26th October, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 26th October, 2023 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.434 kg of CO2

Scope 1&2&3 emissions - 1.027 kg of CO2

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: 23/17806

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	24/10/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	26/10/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Benzene #	<0.5										<0.5	ug/l	TM15/PM10
Toluene #	<5										<5	ug/l	TM15/PM10
Ethylbenzene #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	91										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	100										<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

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/17806

VOC Report : **Liquid**

EMT Sample No.	1-2												
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	24/10/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	26/10/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
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 #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	91										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	100										<0	%	TM15/PM10

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/17806						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/17806

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

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

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: 23/17806

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

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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	15th November, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/18662 Batch 1
Location :	Tetrosyl
Date samples received :	8th November, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 8th November, 2023 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.652 kg of CO2

Scope 1&2&3 emissions - 1.54 kg of CO2

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: 23/18662

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2												
Sample ID	DS - 1												
Depth													
COC No / misc													
Containers	V												
Sample Date	08/11/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	08/11/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Benzene #	<0.5										<0.5	ug/l	TM15/PM10
Toluene #	<5										<5	ug/l	TM15/PM10
Ethylbenzene #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	100										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	102										<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

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/18662

VOC Report : **Liquid**

EMT Sample No.	1-2												
Sample ID	DS - 1												
Depth													
COC No / misc													
Containers	V												
Sample Date	08/11/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	08/11/2023												
VOC MS													
Dichlorodifluoromethane	<2											<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1											<0.1	ug/l	TM15/PM10
Chloromethane #	<3											<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1											<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 #	<0.5											<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 #	<5											<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 #	<1											<1	ug/l	TM15/PM10
m/p-Xylene #	<2											<2	ug/l	TM15/PM10
o-Xylene #	<1											<1	ug/l	TM15/PM10
Styrene	<2											<2	ug/l	TM15/PM10
Bromoform #	<2											<2	ug/l	TM15/PM10
Isopropylbenzene #	<3											<3	ug/l	TM15/PM10
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 #	<3											<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3											<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3											<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 #	<3											<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	<2											<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3											<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	100											<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	102											<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Notification of Deviating Samples

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/18662						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/18662

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

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

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: 23/18662

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

Element Materials Technology
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Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

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F: +44 (0) 1244 833781
W: www.element.com

Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	27th November, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/19583 Batch 1
Location :	Tetrosyl
Date samples received :	22nd November, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 22nd November, 2023 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.434 kg of CO2

Scope 1&2&3 emissions - 1.027 kg of CO2

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: 23/19583

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2												
Sample ID	DS-1 / SW01												
Depth													
COC No / misc													
Containers	V												
Sample Date	21/11/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	22/11/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Benzene #	<0.5										<0.5	ug/l	TM15/PM10
Toluene #	<5										<5	ug/l	TM15/PM10
Ethylbenzene #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	86										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	94										<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

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 23/19583

VOC Report : **Liquid**

EMT Sample No.	1-2										LOD/LOR	Units	Method No.
Sample ID	DS-1 / SW01												
Depth													
COC No / misc													
Containers	V												
Sample Date	21/11/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	22/11/2023												
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
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 #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	86										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	94										<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/19583						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

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NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/19583

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

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

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: 23/19583

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

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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	3rd January, 2024
Your reference :	GRO-21459
Our reference :	Test Report 23/21487 Batch 1
Location :	Tetrosyll
Date samples received :	16th December, 2023
Status :	Final report
Issue :	202401030908

One sample was received for analysis on 16th December, 2023 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 38.444 kg of CO2

Scope 1&2&3 emissions - 90.854 kg of CO2

Authorised By:

Phil Sommerton BSc
Senior Project Manager

Please include all sections of this report if it is reproduced

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	94-95												
Sample ID	SW01												
Depth													
COC No / misc													
Containers	V												
Sample Date	14/12/2023												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	16/12/2023												
											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Benzene #	<0.5										<0.5	ug/l	TM15/PM10
Toluene #	<5										<5	ug/l	TM15/PM10
Ethylbenzene #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	80										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	94										<0	%	TM15/PM10
GRO (>C4-C8) (HS_1D_Total) #	<10										<10	ug/l	TM36/PM12
GRO (>C8-C12) (HS_1D_Total) #	<10										<10	ug/l	TM36/PM12
GRO (>C4-C12) (HS_1D_Total) #	<10										<10	ug/l	TM36/PM12

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 23/21487

VOC Report : **Liquid**

EMT Sample No.	94-95												
Sample ID	SW01												
Depth													
COC No / misc													
Containers	V												
Sample Date	14/12/2023												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	16/12/2023												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
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 #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	80										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	94										<0	%	TM15/PM10

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Notification of Deviating Samples

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/21487						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/21487

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

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

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: 23/21487

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
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.				
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			
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

EMT Job No: 23/21487

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes
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			
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
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

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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	10th January, 2024
Your reference :	GRO-21459
Our reference :	Test Report 24/139 Batch 1
Location :	Tetrosyl
Date samples received :	5th January, 2024
Status :	Final Report
Issue :	202401101454

One sample was received for analysis on 5th January, 2024 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.652 kg of CO2

Scope 1&2&3 emissions - 1.54 kg of CO2

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: 24/139

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2										Please see attached notes for all abbreviations and acronyms		
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	03/01/2024												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	05/01/2024												
											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Benzene	<0.5										<0.5	ug/l	TM15/PM10
Toluene	<5										<5	ug/l	TM15/PM10
Ethylbenzene	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	92										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	88										<0	%	TM15/PM10
GRO (>C4-C8) (HS_1D_Total)	<10										<10	ug/l	TM36/PM12
GRO (>C8-C12) (HS_1D_Total)	<10										<10	ug/l	TM36/PM12
GRO (>C4-C12) (HS_1D_Total)	<10										<10	ug/l	TM36/PM12

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 24/139

VOC Report : **Liquid**

EMT Sample No.	1-2												
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	03/01/2024												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	05/01/2024												
VOC MS													
Dichlorodifluoromethane	<2											<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	<0.1											<0.1	ug/l	TM15/PM10
Chloromethane	<3											<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1											<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	<0.5											<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	<5											<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	<1											<1	ug/l	TM15/PM10
m/p-Xylene	<2											<2	ug/l	TM15/PM10
o-Xylene	<1											<1	ug/l	TM15/PM10
Styrene	<2											<2	ug/l	TM15/PM10
Bromoform	<2											<2	ug/l	TM15/PM10
Isopropylbenzene	<3											<3	ug/l	TM15/PM10
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	<3											<3	ug/l	TM15/PM10
2-Chlorotoluene	<3											<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3											<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	<3											<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	<2											<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3											<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	92											<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	88											<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Notification of Deviating Samples

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/139						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/139

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

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

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: 24/139

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

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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	18th January, 2024
Your reference :	GRP-21459
Our reference :	Test Report 24/607 Batch 1
Location :	Tetrosyl
Date samples received :	13th January, 2024
Status :	Final Report
Issue :	202401181358

One sample was received for analysis on 13th January, 2024 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.652 kg of CO2

Scope 1&2&3 emissions - 1.54 kg of CO2

Authorised By:

Phil Sommerton BSc
Senior Project Manager

Please include all sections of this report if it is reproduced

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 24/607

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-2												
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	12/01/2024												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	13/01/2024												
												LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<0.1											<0.1	ug/l	TM15/PM10
Benzene #	<0.5											<0.5	ug/l	TM15/PM10
Toluene #	<5											<5	ug/l	TM15/PM10
Ethylbenzene #	<1											<1	ug/l	TM15/PM10
m/p-Xylene #	<2											<2	ug/l	TM15/PM10
o-Xylene #	<1											<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	103											<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	107											<0	%	TM15/PM10
GRO (>C4-C8) (HS_1D_Total) #	<10											<10	ug/l	TM36/PM12
GRO (>C8-C12) (HS_1D_Total) #	<10											<10	ug/l	TM36/PM12
GRO (>C4-C12) (HS_1D_Total) #	<10											<10	ug/l	TM36/PM12

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 24/607

Report : Liquid (Duplicate results)

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2										Please see attached notes for all abbreviations and acronyms		
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	12/01/2024												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	13/01/2024											LOD/LOR	Units	Method No.
Surrogate Recovery Toluene D8	94											<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	106											<0	%	TM15/PM10

Please include all sections of this report if it is reproduced

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

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 24/607

VOC Report : **Liquid**

EMT Sample No.	1-2												
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	12/01/2024												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	13/01/2024												
VOC MS													
Dichlorodifluoromethane	<2											<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1											<0.1	ug/l	TM15/PM10
Chloromethane #	<3											<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1											<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 #	<0.5											<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 #	<5											<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 #	<1											<1	ug/l	TM15/PM10
m/p-Xylene #	<2											<2	ug/l	TM15/PM10
o-Xylene #	<1											<1	ug/l	TM15/PM10
Styrene	<2											<2	ug/l	TM15/PM10
Bromoform #	<2											<2	ug/l	TM15/PM10
Isopropylbenzene #	<3											<3	ug/l	TM15/PM10
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 #	<3											<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3											<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3											<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 #	<3											<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	<2											<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3											<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	103											<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	107											<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: Groundtech Consulting Limited
Reference: GRP-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 24/607

VOC Report : **Liquid (Duplicate results)**

EMT Sample No.	1-2												
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	12/01/2024												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	13/01/2024												
VOC MS													
Surrogate Recovery Toluene D8	94											<0	%
Surrogate Recovery 4-Bromofluorobenzene	106											<0	%

Please see attached notes for all abbreviations and acronyms

LOD/LOR	Units	Method No.
<0	%	TM15/PM10
<0	%	TM15/PM10

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Notification of Deviating Samples

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/607						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/607

SOILS and ASH

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

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

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

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

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

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

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

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

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

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

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

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

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

WATERS

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

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

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

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

STACK EMISSIONS

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

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

DEVIATING SAMPLES

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

SURROGATES

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

DILUTIONS

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

BLANKS

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

NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

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

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: 24/607

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

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F: +44 (0) 1244 833781
W: www.element.com

Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	6th February, 2024
Your reference :	GRO-21459
Our reference :	Test Report 24/1783 Batch 1
Location :	Tetrosyl
Date samples received :	2nd February, 2024
Status :	Final Report
Issue :	202402060920

One sample was received for analysis on 2nd February, 2024 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.434 kg of CO2

Scope 1&2&3 emissions - 1.027 kg of CO2

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: 24/1783

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	31/01/2024												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	02/02/2024												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Benzene	<0.5										<0.5	ug/l	TM15/PM10
Toluene	<5										<5	ug/l	TM15/PM10
Ethylbenzene	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	115										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	133										<0	%	TM15/PM10
GRO (>C4-C8) (HS_1D_Total)	<10										<10	ug/l	TM36/PM12
GRO (>C8-C12) (HS_1D_Total)	100										<10	ug/l	TM36/PM12
GRO (>C4-C12) (HS_1D_Total)	100										<10	ug/l	TM36/PM12

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 24/1783

VOC Report : **Liquid**

EMT Sample No.	1-2												
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	31/01/2024												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	02/02/2024												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane	<3										<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1										<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	<0.5										<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	<5										<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	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform	<2										<2	ug/l	TM15/PM10
Isopropylbenzene	<3										<3	ug/l	TM15/PM10
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	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3										<3	ug/l	TM15/PM10
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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
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1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	115										<0	%	TM15/PM10
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Element Materials Technology

Notification of Deviating Samples

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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/1783						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

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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.

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NOTE

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

REPORTS FROM THE SOUTH AFRICA LABORATORY

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

Measurement Uncertainty

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

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

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

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: 24/1783

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

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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	5th March, 2024
Your reference :	GRO-21459
Our reference :	Test Report 24/3474 Batch 1
Location :	Tetrosyl
Date samples received :	28th February, 2024
Status :	Final Report
Issue :	202403050937

One sample was received for analysis on 28th February, 2024 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.507 kg of CO2

Scope 1&2&3 emissions - 1.198 kg of CO2

Authorised By:

D. Bower

Darcey Bower MESci
Project Co-ordinator

Element Materials Technology Environmental UK Limited
Registered in England and Wales
Registered Office: 3rd Floor Davidson Building, 5 Southampton Street, London WC2E 7HA
Company Registration No: 11371415

Element Materials Technology

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 24/3474

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1												
Sample ID	SW01												
Depth													
COC No / misc													
Containers	G												
Sample Date	15/02/2024												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	28/02/2024												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Benzene #	<0.5										<0.5	ug/l	TM15/PM10
Toluene #	<5										<5	ug/l	TM15/PM10
Ethylbenzene #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	97										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	98										<0	%	TM15/PM10
GRO (>C4-C8) (HS_1D_Total) #	<10										<10	ug/l	TM36/PM12
GRO (>C8-C12) (HS_1D_Total) #	<10										<10	ug/l	TM36/PM12
GRO (>C4-C12) (HS_1D_Total) #	<10										<10	ug/l	TM36/PM12

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 24/3474

VOC Report : **Liquid**

EMT Sample No.	1												
Sample ID	SW01												
Depth													
COC No / misc													
Containers	G												
Sample Date	15/02/2024												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	28/02/2024												
VOC MS													
Dichlorodifluoromethane	<2											<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1											<0.1	ug/l	TM15/PM10
Chloromethane #	<3											<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1											<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 #	<0.5											<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 #	<5											<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 #	<1											<1	ug/l	TM15/PM10
m/p-Xylene #	<2											<2	ug/l	TM15/PM10
o-Xylene #	<1											<1	ug/l	TM15/PM10
Styrene	<2											<2	ug/l	TM15/PM10
Bromoform #	<2											<2	ug/l	TM15/PM10
Isopropylbenzene #	<3											<3	ug/l	TM15/PM10
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 #	<3											<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3											<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3											<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 #	<3											<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	<2											<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3											<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	97											<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	98											<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

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/3474						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/3474

SOILS and ASH

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

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

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

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

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

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

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

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

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

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
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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.

Age of Diesel

The age of release estimation 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 are not aware.

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M	MCERTS accredited.
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ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
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SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
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+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

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: 24/3474

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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			

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Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	5th March, 2024
Your reference :	GRO-21459
Our reference :	Test Report 24/3369 Batch 1
Location :	Tetrosyl
Date samples received :	27th February, 2024
Status :	Final Report
Issue :	202403050937

Three samples were received for analysis on 27th February, 2024 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.434 kg of CO2

Scope 1&2&3 emissions - 1.027 kg of CO2

Authorised By:

D. Bower

Darcey Bower MESci
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: 24/3369

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-3										Please see attached notes for all abbreviations and acronyms		
Sample ID	SW01												
Depth													
COC No / misc													
Containers	V G												
Sample Date	26/02/2024												
Sample Type	Liquid												
Batch Number	1										LOD/LOR	Units	Method No.
Date of Receipt	27/02/2024												
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Benzene	<0.5										<0.5	ug/l	TM15/PM10
Toluene	8										<5	ug/l	TM15/PM10
Ethylbenzene	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	101										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	97										<0	%	TM15/PM10
GRO (>C4-C8) (HS_1D_Total)	<10										<10	ug/l	TM36/PM12
GRO (>C8-C12) (HS_1D_Total)	12										<10	ug/l	TM36/PM12
GRO (>C4-C12) (HS_1D_Total)	12										<10	ug/l	TM36/PM12

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 24/3369

VOC Report : **Liquid**

EMT Sample No.	1-3												
Sample ID	SW01												
Depth													
COC No / misc													
Containers	V G												
Sample Date	26/02/2024												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	27/02/2024												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane	<3										<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1										<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	<0.5										<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	8										<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	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform	<2										<2	ug/l	TM15/PM10
Isopropylbenzene	<3										<3	ug/l	TM15/PM10
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	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3										<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	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	101										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	97										<0	%	TM15/PM10

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/3369						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/3369

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

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: 24/3369

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.				

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F: +44 (0) 1244 833781
W: www.element.com

Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	18th March, 2024
Your reference :	GRO-21459
Our reference :	Test Report 24/4391 Batch 1
Location :	Tetrosyll
Date samples received :	13th March, 2024
Status :	Final Report
Issue :	202403181532

One sample was received for analysis on 13th March, 2024 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.434 kg of CO2

Scope 1&2&3 emissions - 1.027 kg of CO2

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: Tetrosyll
Contact: Luke Harrison
EMT Job No: 24/4391

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	12/03/2024												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	13/03/2024												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Benzene	<0.5										<0.5	ug/l	TM15/PM10
Toluene	<5										<5	ug/l	TM15/PM10
Ethylbenzene	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	85										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	111										<0	%	TM15/PM10
GRO (>C4-C8) (HS_1D_Total)	<10										<10	ug/l	TM36/PM12
GRO (>C8-C12) (HS_1D_Total)	<10										<10	ug/l	TM36/PM12
GRO (>C4-C12) (HS_1D_Total)	<10										<10	ug/l	TM36/PM12

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison
EMT Job No: 24/4391

VOC Report : **Liquid**

EMT Sample No.	1-2												
Sample ID	DS-1												
Depth													
COC No / misc													
Containers	V												
Sample Date	12/03/2024												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	13/03/2024												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane	<3										<3	ug/l	TM15/PM10
Vinyl Chloride	<0.1										<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	<0.5										<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	<5										<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	<1										<1	ug/l	TM15/PM10
m/p-Xylene	<2										<2	ug/l	TM15/PM10
o-Xylene	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform	<2										<2	ug/l	TM15/PM10
Isopropylbenzene	<3										<3	ug/l	TM15/PM10
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	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene	<3										<3	ug/l	TM15/PM10
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1,2-Dibromo-3-chloropropane	<2										<2	ug/l	TM15/PM10
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1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	85										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	111										<0	%	TM15/PM10

Element Materials Technology

Notification of Deviating Samples

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyll
Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/4391						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

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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.

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All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

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: 24/4391

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.				

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W: www.element.com

Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	21st May, 2024
Your reference :	GRO-21459
Our reference :	Test Report 24/8100 Batch 1
Location :	Tetrosyl
Date samples received :	11th May, 2024
Status :	Final report
Issue :	202405211142

One sample was received for analysis on 11th May, 2024 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 7.819 kg of CO2

Scope 1&2&3 emissions - 18.479 kg of CO2

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: 24/8100

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	SW01												
Depth													
COC No / misc													
Containers	V												
Sample Date	09/05/2024												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	11/05/2024												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Benzene #	<0.5										<0.5	ug/l	TM15/PM10
Toluene #	<5										<5	ug/l	TM15/PM10
Ethylbenzene #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	97										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	101										<0	%	TM15/PM10
GRO (>C4-C8) (HS_1D_Total) #	<10										<10	ug/l	TM36/PM12
GRO (>C8-C12) (HS_1D_Total) #	<10										<10	ug/l	TM36/PM12
GRO (>C4-C12) (HS_1D_Total) #	<10										<10	ug/l	TM36/PM12

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison
EMT Job No: 24/8100

VOC Report : **Liquid**

EMT Sample No.	1-2												
Sample ID	SW01												
Depth													
COC No / misc													
Containers	V												
Sample Date	09/05/2024												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	11/05/2024												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
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 #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	97										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	101										<0	%	TM15/PM10

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/8100						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

Please include all sections of this report if it is reproduced

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/8100

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 35°C ±5°C.

Where Mineral Oil is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

Tentatively Identified Compounds (TICs)

Where Tentatively Identified Compounds (TICs) are reported, up to 10 Tentatively Identified Compounds will be listed where there is found to be a greater than 80% match with the NIST library. The reported concentration is determined semi-quantitively, with a matrix specific limit of detection. Note, other compounds may be present but are not reported.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
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: 24/8100

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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			
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			

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Urban Regen Ltd
Langley Road
Pendlebury
Salford
United Kingdom
M6 6FG

Attention :	Ben Thomas
Date :	17th May, 2023
Your reference :	333
Our reference :	Test Report 23/7274 Batch 1
Location :	Tetrosyl
Date samples received :	9th May, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 9th May, 2023 and 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

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 23/7274

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-2										LOD LOR	Units	Method No.
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	09/05/2023												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	09/05/2023												
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4										<4	ug/l	TM15/PM10
Bromobenzene #	<2										<2	ug/l	TM15/PM10

Element Materials Technology

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 23/7274

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	09/05/2023												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	09/05/2023												

Please see attached notes for all abbreviations and acronyms

											LOD LOR	Units	Method No.
1,2,3-Trichloropropane #	<3										<3	ug/l	TM15/PM10
Propylbenzene #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	110										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	103										<0	%	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Benzene #	<0.5										<0.5	ug/l	TM15/PM10
Toluene #	<5										<5	ug/l	TM15/PM10
Ethylbenzene #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	110										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	103										<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

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/7274						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/7274

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a 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 quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 23/7274

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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			

Element Materials Technology
Unit 3 Deeside Point
Zone 3
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Deeside
CH5 2UA

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F: +44 (0) 1244 833781
W: www.element.com

Urban Regen Ltd
Langley Road
Pendlebury
Salford
United Kingdom
M6 6FG

Attention :	Ben Thomas
Date :	5th June, 2023
Your reference :	333
Our reference :	Test Report 23/8138 Batch 1
Location :	Tetrosyl
Date samples received :	22nd May, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 22nd May, 2023 and 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:

Bruce Leslie
Project Manager

Please include all sections of this report if it is reproduced

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 23/8138

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-2										LOD LOR	Units	Method No.
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	22/05/2023												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	22/05/2023												
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4										<4	ug/l	TM15/PM10
Bromobenzene #	<2										<2	ug/l	TM15/PM10

Element Materials Technology

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 23/8138

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	22/05/2023												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	22/05/2023												

Please see attached notes for all abbreviations and acronyms

											LOD LOR	Units	Method No.
1,2,3-Trichloropropane #	<3										<3	ug/l	TM15/PM10
Propylbenzene #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<3	ug/l	TM15/PM10
4-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
tert-Butylbenzene #	<3										<3	ug/l	TM15/PM10
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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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	82										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	83										<0	%	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Benzene #	<0.5										<0.5	ug/l	TM15/PM10
Toluene #	<5										<5	ug/l	TM15/PM10
Ethylbenzene #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
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Surrogate Recovery Toluene D8	82										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	83										<0	%	TM15/PM10
GRO (>C4-C8) #	41										<10	ug/l	TM36/PM12
GRO (>C8-C12) #	<10										<10	ug/l	TM36/PM12
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Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/8138						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
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NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/8138

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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.

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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

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Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 23/8138

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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			

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Urban Regen Ltd
Langley Road
Pendlebury
Salford
United Kingdom
M6 6FG

Attention :	Ben Thomas
Date :	10th June, 2023
Your reference :	333
Our reference :	Test Report 23/8952 Batch 1
Location :	Tetrosyl
Date samples received :	5th June, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 5th June, 2023 and 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

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 23/8952

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-2										LOD LOR	Units	Method No.
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	31/05/2023												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	05/06/2023												
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4										<4	ug/l	TM15/PM10
Bromobenzene #	<2										<2	ug/l	TM15/PM10

Element Materials Technology

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 23/8952

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS												
Depth											Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V												
Sample Date	31/05/2023												
Sample Type	Surface Water												
Batch Number	1										LOD LOR	Units	Method No.
Date of Receipt	05/06/2023												
1,2,3-Trichloropropane #	<3										<3	ug/l	TM15/PM10
Propylbenzene #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<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	106										<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

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/8952						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/8952

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 23/8952

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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			

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Urban Regen Ltd
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M6 6FG

Attention :	Ben Thomas
Date :	13th July, 2023
Your reference :	330
Our reference :	Test Report 23/11364 Batch 1
Location :	Tetrosyl
Date samples received :	12th July, 2023
Status :	Final Report
Issue :	1

One sample was received for analysis on 12th July, 2023 and 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:

Bruce Leslie
Project Manager

Please include all sections of this report if it is reproduced

Client Name: Urban Regen Ltd
Reference: 330
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 23/11364

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	10/07/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	12/07/2023												

Please see attached notes for all abbreviations and acronyms

											LOD LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4										<4	ug/l	TM15/PM10
Bromobenzene #	<2										<2	ug/l	TM15/PM10

Element Materials Technology

Client Name: Urban Regen Ltd
Reference: 330
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 23/11364

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	10/07/2023												
Sample Type	Ground Water												
Batch Number	1												
Date of Receipt	12/07/2023												

Please see attached notes for all abbreviations and acronyms

											LOD LOR	Units	Method No.
1,2,3-Trichloropropane #	<3										<3	ug/l	TM15/PM10
Propylbenzene #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	118										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	126										<0	%	TM15/PM10
GRO (>C4-C8) #	<10										<10	ug/l	TM36/PM12
GRO (>C4-C8) #	<0.01										<0.01	mg/l	TM36/PM12
GRO (>C8-C12) #	<10										<10	ug/l	TM36/PM12
GRO (>C8-C12) #	<0.01										<0.01	mg/l	TM36/PM12
GRO (>C4-C12) #	<10										<10	ug/l	TM36/PM12
GRO (>C4-C12) #	<0.01										<0.01	mg/l	TM36/PM12
Surrogate Recovery Chlorobenzene	94										<0	%	TM36/PM12

Client Name: Urban Regen Ltd
Reference: 330
Location: Tetrosyl
Contact: Ben Thomas

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/11364						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/11364

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 23/11364

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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.				
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			

Please include all sections of this report if it is reproduced

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Urban Regen Ltd
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Pendlebury
Salford
United Kingdom
M6 6FG

Attention :	Ben Thomas
Date :	17th January, 2024
Your reference :	333
Our reference :	Test Report 24/541 Batch 1
Location :	TETROSYL
Date samples received :	12th January, 2024
Status :	Final Report
Issue :	202401171153

One sample was received for analysis on 12th January, 2024 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.434 kg of CO2

Scope 1&2&3 emissions - 1.027 kg of CO2

Authorised By:

Bruce Leslie
Project Manager

Please include all sections of this report if it is reproduced

Client Name: Urban Regen Ltd
Reference: 333
Location: TETROSYL
Contact: Ben Thomas
EMT Job No: 24/541

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2										LOD LOR	Units	Method No.
Sample ID	604 DISCHARGE												
Depth													
COC No / misc													
Containers	V												
Sample Date	12/01/2024												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	12/01/2024												
VOC MS													
Dichlorodifluoromethane	3										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	0.3										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4										<4	ug/l	TM15/PM10
Bromobenzene #	<2										<2	ug/l	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: Urban Regen Ltd
Reference: 333
Location: TETROSYL
Contact: Ben Thomas
EMT Job No: 24/541

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	604 DISCHARGE												
Depth													
COC No / misc													
Containers	V												
Sample Date	12/01/2024												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	12/01/2024												

Please see attached notes for all abbreviations and acronyms

											LOD LOR	Units	Method No.
1,2,3-Trichloropropane #	<3										<3	ug/l	TM15/PM10
Propylbenzene #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	104										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	104										<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

Element Materials Technology

Notification of Deviating Samples

Client Name: Urban Regen Ltd
Reference: 333
Location: TETROSYL
Contact: Ben Thomas

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/541						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/541

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 24/541

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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			

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Urban Regen Ltd
Langley Road
Pendlebury
Salford
United Kingdom
M6 6FG

Attention :	Ben Thomas
Date :	8th May, 2024
Your reference :	333
Our reference :	Test Report 24/6284 Batch 1
Location :	Tetrosyl
Date samples received :	12th April, 2024
Status :	Final Report
Issue :	202405081155

One sample was received for analysis on 12th April, 2024 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.652 kg of CO2

Scope 1&2&3 emissions - 1.54 kg of CO2

Authorised By:

Phil Sommerton BSc
Senior Project Manager

Please include all sections of this report if it is reproduced

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 24/6284

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2												
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	12/04/2023												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	12/04/2024												

Please see attached notes for all abbreviations and acronyms

											LOD LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4										<4	ug/l	TM15/PM10
Bromobenzene #	<2										<2	ug/l	TM15/PM10

Element Materials Technology

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 24/6284

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

EMT Sample No.	1-2												
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	12/04/2023												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	12/04/2024												

Please see attached notes for all abbreviations and acronyms

											LOD LOR	Units	Method No.
1,2,3-Trichloropropane #	<3										<3	ug/l	TM15/PM10
Propylbenzene #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	64										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	72										<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

Element Materials Technology

Notification of Deviating Samples

Client Name: Urban Regen Ltd

Matrix : Liquid

Reference: 333

Location: Tetrosyl

Contact: Ben Thomas

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
24/6284	1	DS		1-2	GRO, Vinyl Chloride, VOC	Sample holding time exceeded prior to receipt

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.

It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/6284

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 35°C ±5°C.

Where Mineral Oil is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

Tentatively Identified Compounds (TICs)

Where Tentatively Identified Compounds (TICs) are reported, up to 10 Tentatively Identified Compounds will be listed where there is found to be a greater than 80% match with the NIST library. The reported concentration is determined semi-quantitively, with a matrix specific limit of detection. Note, other compounds may be present but are not reported.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
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

EMT Job No: 24/6284

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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			

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Urban Regen Ltd
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Salford
United Kingdom
M6 6FG

Attention :	Ben Thomas
Date :	9th May, 2024
Your reference :	333
Our reference :	Test Report 24/7184 Batch 1
Location :	Tetrosyl
Date samples received :	26th April, 2024
Status :	Final Report
Issue :	202405091007

One sample was received for analysis on 26th April, 2024 and 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 0.434 kg of CO2

Scope 1&2&3 emissions - 1.027 kg of CO2

Authorised By:

Bruce Leslie
Project Manager

Element Materials Technology Environmental UK Limited
Registered in England and Wales
Registered Office: 3rd Floor Davidson Building, 5 Southampton Street, London WC2E 7HA
Company Registration No: 11371415

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 24/7184

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2										LOD LOR	Units	Method No.
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	23/04/2024												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	26/04/2024												
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/l	TM15/PM10
Methyl Tertiary Butyl Ether #	<0.1										<0.1	ug/l	TM15/PM10
Chloromethane #	<3										<3	ug/l	TM15/PM10
Vinyl Chloride #	<0.1										<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 #	<0.5										<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 #	<5										<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 #	<1										<1	ug/l	TM15/PM10
m/p-Xylene #	<2										<2	ug/l	TM15/PM10
o-Xylene #	<1										<1	ug/l	TM15/PM10
Styrene	<2										<2	ug/l	TM15/PM10
Bromoform #	<2										<2	ug/l	TM15/PM10
Isopropylbenzene #	<3										<3	ug/l	TM15/PM10
1,1,2,2-Tetrachloroethane	<4										<4	ug/l	TM15/PM10
Bromobenzene #	<2										<2	ug/l	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas
EMT Job No: 24/7184

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, HN=$HN0_3$

EMT Sample No.	1-2										LOD LOR	Units	Method No.
Sample ID	DS												
Depth													
COC No / misc													
Containers	V												
Sample Date	23/04/2024												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	26/04/2024												
1,2,3-Trichloropropane #	<3										<3	ug/l	TM15/PM10
Propylbenzene #	<3										<3	ug/l	TM15/PM10
2-Chlorotoluene #	<3										<3	ug/l	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<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 #	<3										<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	<2										<2	ug/l	TM15/PM10
1,2,3-Trichlorobenzene	<3										<3	ug/l	TM15/PM10
Surrogate Recovery Toluene D8	103										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	91										<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

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Notification of Deviating Samples

Client Name: Urban Regen Ltd
Reference: 333
Location: Tetrosyl
Contact: Ben Thomas

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 24/7184						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/7184

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 35°C ±5°C.

Where Mineral Oil is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

Tentatively Identified Compounds (TICs)

Where Tentatively Identified Compounds (TICs) are reported, up to 10 Tentatively Identified Compounds will be listed where there is found to be a greater than 80% match with the NIST library. The reported concentration is determined semi-quantitively, with a matrix specific limit of detection. Note, other compounds may be present but are not reported.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
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

EMT Job No: 24/7184

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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			

APPENDIX 16 - Crushed Aggregate Testing Results

Element Materials Technology
Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

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F: +44 (0) 1244 833781
W: www.element.com

Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Luke Harrison
Date :	13th December, 2023
Your reference :	GRO-21459
Our reference :	Test Report 23/20342 Batch 1
Location :	Tetrosyl
Date samples received :	2nd December, 2023
Status :	Final Report
Issue :	202312131334

Seven samples were received for analysis on 2nd December, 2023 of which six 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 4.344 kg of CO2

Scope 1&2&3 emissions - 10.266 kg of CO2

Authorised By:

Phil Sommerton BSc
Senior 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

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

Where trace asbestos is reported the amount of asbestos will be <0.1%.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
23/20342	1	SP01		1	Anthony Carman	11/12/2023	**General Description (Bulk Analysis)**	Brown Soil/Stones
					Anthony Carman	11/12/2023	**Asbestos Fibres**	Fibre Bundles
					Anthony Carman	11/12/2023	**Asbestos Fibres (2)**	Fibre Bundles
					Anthony Carman	11/12/2023	**Asbestos Fibres (3)**	Fibre Bundles
					Anthony Carman	11/12/2023	**Asbestos ACM**	NAD
					Anthony Carman	11/12/2023	**Asbestos ACM (2)**	NAD
					Anthony Carman	11/12/2023	**Asbestos ACM (3)**	NAD
					Anthony Carman	11/12/2023	**Asbestos Type**	Chrysotile
					Anthony Carman	11/12/2023	**Asbestos Type (2)**	Amosite
					Anthony Carman	11/12/2023	**Asbestos Type (3)**	Crocidolite
					Remigiusz Blichowski	12/12/2023	**Total ACM Gravimetric Quantification (% Asb)**	<0.001 (mass %)
					Remigiusz Blichowski	12/12/2023	**Total Detailed Gravimetric Quantification (% Asb)**	0.002 (mass %)
					Remigiusz Blichowski	12/12/2023	**Total Gravimetric Quantification (ACM + Detailed) (% Asb)**	0.002 (mass %)
					Remigiusz Blichowski	12/12/2023	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					Remigiusz Blichowski	12/12/2023	**Asbestos Gravimetric & PCOM Total**	0.002 (mass %)
23/20342	1	SP02		2	Emily Anderton	12/12/2023	**General Description (Bulk Analysis)**	Brown soil with stones
					Emily Anderton	12/12/2023	**Asbestos Fibres**	Fibre Bundles
					Emily Anderton	12/12/2023	**Asbestos Fibres (2)**	Free Fibres
					Emily Anderton	12/12/2023	**Asbestos ACM**	NAD
					Emily Anderton	12/12/2023	**Asbestos ACM (2)**	NAD
					Emily Anderton	12/12/2023	**Asbestos Type**	Chrysotile
					Emily Anderton	12/12/2023	**Asbestos Type (2)**	Amosite
					Emily Anderton	12/12/2023	**Total ACM Gravimetric Quantification (% Asb)**	<0.001 (mass %)
					Emily Anderton	12/12/2023	**Total Detailed Gravimetric Quantification (% Asb)**	<0.001 (mass %)
					Emily Anderton	12/12/2023	**Total Gravimetric Quantification (ACM + Detailed) (% Asb)**	<0.001 (mass %)
					Remigiusz Blichowski	13/12/2023	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					Remigiusz Blichowski	13/12/2023	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
23/20342	1	SP03		3	Emily Anderton	12/12/2023	**General Description (Bulk Analysis)**	Brown soil with stones
					Emily Anderton	12/12/2023	**Asbestos Fibres**	Fibre Bundles
					Emily Anderton	12/12/2023	**Asbestos ACM**	NAD
					Emily Anderton	12/12/2023	**Asbestos Type**	Chrysotile
					Emily Anderton	12/12/2023	**Total ACM Gravimetric Quantification (% Asb)**	<0.001 (mass %)
					Emily Anderton	12/12/2023	**Total Detailed Gravimetric Quantification (% Asb)**	0.003 (mass %)
					Emily Anderton	12/12/2023	**Total Gravimetric Quantification (ACM + Detailed) (% Asb)**	0.003 (mass %)
					Remigiusz Blichowski	12/12/2023	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					Remigiusz Blichowski	12/12/2023	**Asbestos Gravimetric & PCOM Total**	0.003 (mass %)

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
23/20342	1	SP04		4	Emily Anderton	12/12/2023	**General Description (Bulk Analysis)**	Brown soil with stones
					Emily Anderton	12/12/2023	**Asbestos Fibres**	Fibre Bundles
					Emily Anderton	12/12/2023	**Asbestos ACM**	NAD
					Emily Anderton	12/12/2023	**Asbestos Type**	Chrysotile
					Emily Anderton	12/12/2023	**Total ACM Gravimetric Quantification (% Asb)**	<0.001 (mass %)
					Emily Anderton	12/12/2023	**Total Detailed Gravimetric Quantification (% Asb)**	<0.001 (mass %)
					Emily Anderton	12/12/2023	**Total Gravimetric Quantification (ACM + Detailed) (% Asb)**	<0.001 (mass %)
					Remigiusz Blichowski	12/12/2023	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					Remigiusz Blichowski	12/12/2023	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
23/20342	1	SP05		5	Emily Anderton	12/12/2023	**General Description (Bulk Analysis)**	Brown soil with stones
					Emily Anderton	12/12/2023	**Asbestos Fibres**	NAD
					Emily Anderton	12/12/2023	**Asbestos ACM**	NAD
					Emily Anderton	12/12/2023	**Asbestos Type**	NAD
23/20342	1	SP06		6	Anthony Carman	12/12/2023	**General Description (Bulk Analysis)**	Brown Soil/Stones
					Anthony Carman	12/12/2023	**Asbestos Fibres**	Fibre Bundles
					Anthony Carman	12/12/2023	**Asbestos ACM**	NAD
					Anthony Carman	12/12/2023	**Asbestos Type**	Chrysotile
					Remigiusz Blichowski	12/12/2023	**Total ACM Gravimetric Quantification (% Asb)**	<0.001 (mass %)
					Remigiusz Blichowski	12/12/2023	**Total Detailed Gravimetric Quantification (% Asb)**	0.007 (mass %)
					Remigiusz Blichowski	12/12/2023	**Total Gravimetric Quantification (ACM + Detailed) (% Asb)**	0.007 (mass %)
					Remigiusz Blichowski	13/12/2023	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					Remigiusz Blichowski	13/12/2023	**Asbestos Gravimetric & PCOM Total**	0.007 (mass %)

Client Name: Groundtech Consulting Limited
Reference: GRO-21459
Location: Tetrosyl
Contact: Luke Harrison

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 23/20342						

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.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/20342

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation 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 are not aware.

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.
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M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

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: 23/20342

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM131	Quantification of Asbestos Fibres and ACM based on HSG 248 Second edition:2021, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes

Certificate of Analysis

Certificate Number	24-02575	*Issued:*	09-Feb-24

Client Groundtech Consulting Ltd
First Floor
Lloyd House
Orford Ct
Leigh
Warrington
WN7 3XJ

Our Reference	24-02575
Client Reference	GRO-21459
Order No	(not supplied)
Contract Title	TETROSYL BEVIS GREEN WORKS, BURY
Description	One Soil sample.
Date Received	07-Feb-24
Date Started	07-Feb-24
Date Completed	09-Feb-24
Test Procedures	Identified by prefix DETSn (details on request).
Notes	Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 24-02575
Client Ref GRO-21459
Contract Title TETROSYL BEVIS GREEN WORKS, BURY

Lab No	2296655
.Sample ID	6F2-01
Depth	
Other ID	
Sample Type	SOIL
Sampling Date	31/01/2024
Sampling Time	n/s

Test	Method	LOD	Units	
Inorganics				
Sample Weight on Receipt	DETSC 1004	0	g	2900

Key: n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 24-02575
Client Ref GRO-21459
Contract Title TETROSYL BEVIS GREEN WORKS, BURY

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2296655	6F2-01	SOIL	NAD	none	Keith Wilson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 24-02575
Client Ref GRO-21459
Contract TETROSYL BEVIS GREEN WORKS, BURY

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2296655	6F2-01 SOIL	31/01/24	PG		

Key: P-Plastic G-Bag

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

APPENDIX 17 - Asbestos Air Monitoring Results

Certificate of Analysis

Northstar Environmental Ltd
Compass House
Bank Farm
Ledsham La
Ellesmere Port
CH66 0NA
0151 538 3141

NORTH STAR ENVIRONMENTAL LTD

Email: info@nse.direct **Website:** www.northstarenvironmental.co.uk

Certificate No:	J104076/FZ01
Tests carried out in accordance with North Star Environmental in-house Technical Procedures NSDOC46 & 47 & HSE Guidance HSG 248:2021 All four stages of the clearance procedure, air sampling & fibre counting have been accredited by UKAS	Date: 15 Feb 2024

UKAS TESTING 7691

Client	Removal Contractor	Site Address	Description of Work Area & Works Carried Out
Urban Regen Ltd Langley Road Pendlebury Salford M6 6FG	Urban Regen Ltd Langley Road, Pendlebury, Salford, M6 6FG	Tetrosyl Waldmers Wood Walmersley Old Road Bury Lancashire BL9 6SA	x 2 SEM - limit of Detection must be 0.001 or lower. 1 sample during loading and 1 sample during tipping and spreading Phase 2D
Contact: Jayne Coleman	**Contact:** Jayne Coleman	**Supervisor:**	Ben Thomas

Air Sampling and Fibre Counting Details

Microscope No:	NSM17	**Graticule Diameter (µm)**	100	**NPL Test Slide**	NSTS4	**BTT**	NSBTT17
Flow Meter	NSFM19	**Pressure (Mb) (Cal/Samp)**	1022 / 998.6	**Fifth Line Visible**	Yes	**Exposed Filter Diameter**	22.0mm
Flow Meter Calib Date	24-04-2024	**Temp (C) (Cal/Samp)**	19 / 11.5	**Stage Micrometer**	NSSM13	**Filter Analysis Location**	DN71 EFV

Sample No	Pump Ref	Cowl Ref	Location	Start Time Min	Start Flow L/Min	During Time Min	During Flow L/Min	End Time Min	End Flow L/Min	Ave Flow L/Min	Sample Vol Litres	No. of Fibres	No. of Fields	Limit of Quantification f/cm^3	Calculated Result	Reported Fibre Conc f/cm^3
FZ000934	NSAP 40	4A	Adjacent to loading area	08:53	10.0	N/A	N/A	10:29	10.0	10.0	960	Samples sent off for SEM testing				
FZ000935	NSAP 41	4B	Adjacent to drop zone	08:57	10.0	N/A	N/A	10:33	10.0	10.0	960	Sample sent off for SEM testing				
Field Blank No:	FZ000936	**Cowl Ref:**	4C	**Field Blank Counted:**	No	**No. of Fibres**		**No. of fields**								

The measured airborne respirable fibre concentrations are below the limit of detection stated above.

Samples sent off for SEM testing

Assessed By:	**Mark Richards**	**Signature:**		**Date:**	15 Feb 2024
Supervisor:	**Ben Thomas**	**Signature:**		**Date:**	15 Feb 2024

This certificate is invalid unless signed by an authorised analyst of North Star Environmental Ltd. Any queries as to the authenticity of this certificate can be clarified by contacting North Star office at the above address. It should be noted that any opinions or interpretations detailed herein are outside the scope of UKAS testing accreditation held.

Certificate No:	J104076/FZ01	Date:	15 Feb 2024

Photographs

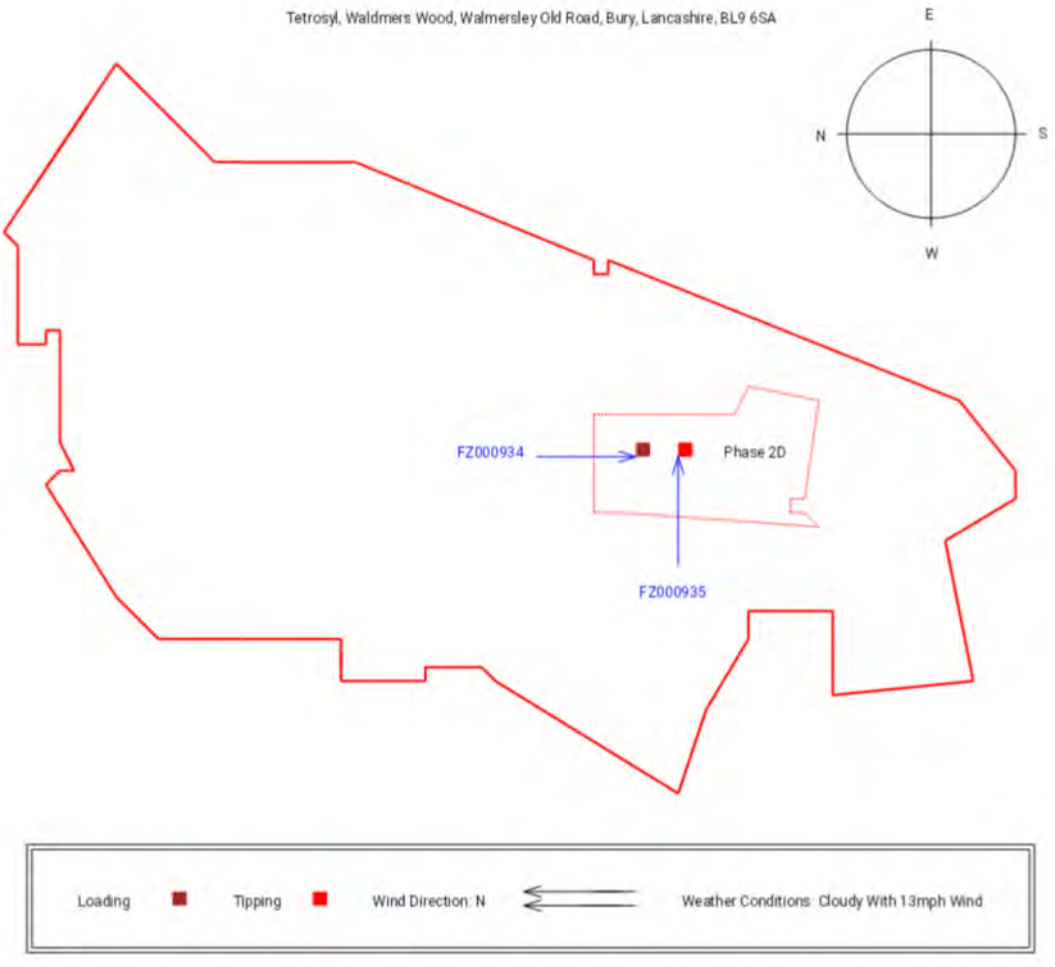
			
FZ000934	FZ000935	Loading Crush Material	Dropping Crush Material
No photographic evidence available.	No photographic evidence available.	No photographic evidence available.	No photographic evidence available.

Diagram

Enclosure Length: 0m

Enclosure Width: 0m

Enclosure Height: 0m



CERTIFICATE OF ANALYSIS

ANALYSIS REQUESTED BY: North Star Environmental
Compass House
Bank Farm
Ledsham Lane
Ellesmere Port
CH66 0NA

CONTRACT NO: S39238-1

DATE OF ISSUE: 01.03.24

DATE ANALYSIS REQUESTED: 27.02.24

DATE SAMPLES ANALYSED: 01.03.24

SAMPLES: Two airborne dust samples each supplied on a gridded MCE membrane filter.

ANALYSIS REQUESTED: Fibre Counting using Scanning Electron Microscopy (SEM) with fibre identification by Energy Dispersive X-ray Spectroscopy (EDXS)

METHOD:

Each membrane filter is ashed in a low temperature plasma asher. The residue from each plasma ashing is recovered using filtered, distilled water and filtered through a 25mm, 0.4µm pore size polycarbonate filter. A portion of each filter is excised and mounted on a 13mm aluminium stub, coated with gold and examined by SEM. Each filter is searched systematically at 2000X magnification until an area of 1mm^2 has been examined or 50 whole fibres found. All respirable fibres (aspect ratio >3:1, length >5µm and diameter <3µm and including fibres in contact with particles >3µm diameter) detected are analysed by EDXS and identified as closely as possible, by comparing morphology and composition with standard reference materials. Fibre counting rules based on those of ISO14966:2019 were used.

The method used for analysis is documented in IOM instruction manual No.1 and is based on **International Standards Organisation (2019), International Standard 14966, Ambient Air: Determination of numerical concentration of inorganic fibrous particles - Scanning electron microscopy method.**

www.iom-world.org
Registered Address: Research Avenue North, Riccarton, Edinburgh, EH14 4AP, United Kingdom
Tel: 0131 449 8000 Fax: 0131 449 8084 Email: iom@iom-world.org
IOM CONSULTING LIMITED, registered in Scotland No. SC205670

UKAS TESTING
0374

CONTRACT NO: S39238-1
DATE OF ISSUE: 01.03.24

RESULTS:

Sample No.	Volume (l)	(1) No. of Resp. Fibres Found	(1) No. of Fields Searched	Total Fibres *Fibre Conc^{n} (fml^{-1})*	AMX Fibre *No. of Resp. Fibres/ Fibre Conc^{n} (fml^{-1})*	CMX Fibre *No. of Resp. Fibres/ Fibre Conc^{n} (fml^{-1})*	MMMF *No. of Resp. Fibres/ Fibre Conc^{n} (fml^{-1})*	NAM Fibre *No. of Resp. Fibres/ Fibre Conc^{n} (fml^{-1})*
F20934	960	3.5	150	0.001	0 / <0.001*	0 / <0.001*	2 / <0.001*	1.5 / <0.001*
F20935	960	1	150	<0.001*	0 / <0.001*	0 / <0.001*	1 / <0.001*	0 / <0.001*

AMX-Amphibole Asbestos **CMX-**Chrysotile Asbestos **MMMF-**Machine Made Mineral Fibres **NAM-**Non Asbestos Mineral

*** DETECTION LIMIT**

When no fibres of a given type are detected, the fibre concentration can be reported as less than the concentration equivalent to three fibres (the one sided upper 95% confidence limit of the Poisson distribution). Therefore, when 0, 1 or 2 fibres are detected, 2.99 is used in the calculation of fibre concentrations. It expresses the 95% confidence detection limit for airborne fibre concentrations. When a volume of 9600 litres is used the 95% confidence limit is 0.001 fml^{-1} for the number of fields searched.

CONTRACT NO: S39238-1
DATE OF ISSUE: 01.03.24

COMMENTS:

No asbestos fibres were detected during the analysis of either of these samples.

Any organic fibres present on the original filters are destroyed during sample preparation.

(1) UKAS accreditation for this work is limited to results obtained directly from the analysis. Calculated results based on sampling information provided by the client are out with the scope of this accreditation.

Any opinions and interpretations expressed herein are out with the scope of UKAS accreditation.

IOM Consulting cannot accept responsibility for samples sent for analysis that have been incorrectly collected or despatched.

AUTHORISED BY:

S Clark
Head of Mineralogy

APPENDIX 18 - JIWG Decision Receptor Tool

JIWG

Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Project Reference	GRO-21459
Site Name	TETROSYL BEVIS GREEN WORKS, BURY
Client	URBAN REGEN
Run by	LUKE HARRISON
Date	08-May-24
Scenario details	

Decision Support Tool for CAR2012 Work Categories

Stage 1

Hazard Factors

		Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Free dispersed fibres/fibre bundles	2
Extent of degradation of ACMs at outset of work	Disaggregated (dominated by loose fibrous material; extreme degradation in ACM and/or free asbestos fibres/fibre bundles)	4
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Friable ACM or ACM with fibres not linked in any matrix (free dispersed fibres/fibre bundles)	4
Distribution of Visible Asbestos Across Affected Area	No visible ACMs/fibre bundles	0
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Trace quantities - <0.0001 to 0.001 %wt/wt	0
Sub-total		**0**

Note: the asbestos licensing regime is unaffected by the type of asbestos fibre present in ACMs

Hazard ranking **Negligible**

No warranty, expressed or implied, or reliance, is provided in relation to the use of this tool.
It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

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Version 2, July 2016

Stage 2

Exposure Factors

		Score
Anticipated airborne fibre concentration - Control Limit or SALI?	<0.001 fibres/ml	0
Anticipated duration of exposure to asbestos	> 2 hours in a 7 day period and Up to 10 hours in a day (e.g. full time occupational exposure)	4
Activity type and effect on deterioration of ACMs during work	Not low intensity, significant deterioration expected	4
Best description of primary host material matrix (soil/made ground)	Made Ground - Recycled Aggregate, Track Ballast	4
Respirable fibre index for ACM - RIVM report 711701034 (2003)	High	4
Sub-total		**16**
Exposure ranking		High
Combined hazard and exposure ranking	**16**	Low

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Stage 3

Risk Assessment Outputs

Probable Licensing Status	CAR do not apply
RPE*	None
Dust Suppression**	None
Hygiene/Decontamination***	None

*Where RPE has to be worn continuously for long periods (e.g. more than 1-hour), then powered RPE may be necessary.
**Reduction in control measures possible if natural mitigation factors are present (e.g. raining, wet ground)
***Guide only; suitability of selected personal hygiene measures may be reviewed on a site/contamination-specific basis

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JIWG

Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Decision Support Tool for Receptor Risk Ranking

Stage 1

Hazard Identification		Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Free dispersed fibres/fibre bundles	2
Extent of degradation of ACMs	Disaggregated (dominated by loose fibrous material; extreme degradation in ACM and/or free asbestos fibres/fibre bundles)	4
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Friable ACM or ACM with fibres not linked in any matrix (free dispersed fibres/fibre bundles)	4
Distribution of Visible Asbestos Across Affected Area	No visible ACMs/fibre bundles	0
Asbestos fibre type	Mainly amphibole and chrysotile mixtures, including trace crocidolite	2
Sub-total		**12**
Hazard ranking		**Medium**

No warranty, expressed or implied, or reliance, is provided in relation to the use of this tool.
It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

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JIWG

Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Stage 2

Emission Factors		Score
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Trace quantities - <0.0001 to <0.001 %wt/wt	0
Respirable fibre index for ACM - RIVM report 711701034 (2003)	High	4
Activity type and effect on deterioration of ACMs	Low disturbance, minimal deterioration expected	2
Best description of primary host material matrix	Coarse to Fine Gravel	3
Sub-total		**9**
Exposure ranking		**Low**

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Stage 3

Pathway and Receptor Sensitivity		Score	
Receptor category	Residential	No score required	
Age of Receptor	Infant (under 5)	4	
Duration of exposure/site occupancy	>> 10 hours per day (e.g. 24 hour residential exposure)	4	
Receptor ranking		**8**	**High**
Combined hazard, exposure and receptor ranking			**Medium**
Pathway: Distance of Receptor from Source	In or within 10m of area of disturbance	4	
Pathway: Depth to impacted material	Material buried at shallow depth, potential to be disturbed by excavation	C	
Pathway ranking		4C	**Low**
Overall ranking			**Low**

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JIWG

Joint Industry Working Group

Asbestos in Soil and Construction & Demolition Materials

Project Reference	GRO-21459

Site Name	TETROSYL BEVIS GREEN WORKS, BURY
Client	URBAN REGEN

Run by	LUKE HARRISON
Date	08-May-24
Reviewed by	

Characterisation of scenario being evaluated	

Interpretation of scenario ranking by DST	

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APPENDIX 19 - Limitations

Limitations

This report (Report) forms part of the Services and if applicable Additional Services undertaken by Groundtech Consulting Ltd pursuant to a written contract (Agreement) which contains detailed provisions including express limitations of the liability of Groundtech Consulting Ltd.

This Report was prepared using reasonable skill and care as stated in the Agreement for the purpose including intended end use stated by the Client (Purpose) and the liability of Groundtech Consulting Ltd in respect of the form and content of this Report is no greater than its liability under the Agreement. All records, measurements notes, or any other data (Data) obtained by or for the benefit of the Consultant were obtained at a specific point in time and it may not be assumed by the Client or any person relying on this Report that the Data will remain unaffected by the passage of time, the seasons, weather conditions, changes in the water table or the carrying out and completion of works at the Site.

Unless otherwise agreed this Report has been prepared exclusively for the use and reliance of the Client and may not be relied upon, by any other party except as provided for in the Agreement. A third party who relies on this Report, does so at their own and sole risk and Groundtech Consulting Ltd has no liability to such parties.

Groundtech Consulting Ltd that this Report is to be used for the Purpose. The Purpose was instrumental in determining the scope and of the Services provided. If the Purpose should change, the Client may not be able to rely on the Report without the separate agreement of Groundtech Consulting Ltd.

Since the Report was written, 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 (see below) 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 written confirmation from Groundtech Consulting Ltd 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 Ltd.

Groundtech Consulting Ltd is 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 Report is based upon Groundtech Consulting Ltd's 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 Ltd have relied upon such information assuming it to be correct.

Groundtech Consulting Ltd accepts no responsibility for errors or inaccuracies in third party information presented in this Report. Groundtech Consulting Ltd was 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 or Additional Services. Groundtech Consulting Ltd is not liable for any inaccurate information, misrepresentation of data or conclusions, which may inform the scope of investigation undertaken by Groundtech Consulting Ltd 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 may also vary due to the ground's heterogeneous properties

and because 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. If so stipulated in the Agreement, geo-environmental testing was carried out for a limited number of parameters based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

Any 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 groundwater levels may occur at other times of the year which are higher than were recorded during this investigation.

Any site drawings provided in this Report are preliminary and used to present the general relative locations of features on, and surrounding, the Site.

