Next Generation Engineering Consultancy Services

Enabling Works Completion and Updated Remediation Strategy Report for Land at Greenheys Business Centre, Pencroft Way, Manchester Science Park, M15 6JJ

Project No: NX534



Client

bruntwood SciTech

Next Generation Engineering Consultancy Services

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EXECUTIVE SUMMARY

NX Consulting Limited has been commissioned by Bruntwood Sci-Tech Ltd (The Client) to produce a contamination enabling works completion report and updated remediation strategy for the proposed Biohub at the former Greenheys Business Centre, Manchester Science Park, Pencroft Way Manchester M15 6JJ. NX Consulting developed a remediation strategy for the site in September 2020 which should be ready in conjunction with this report.

It is understood that the proposed scheme includes the construction of a 7-storey building comprising up to 17,249sq. m (GIA) commercial floorspace across 6 occupiable floors (Use Class E), plus plant level above; in addition to associated cycle parking, hard and soft landscaping, access and servicing and other associated works. The proposed site layout is presented in Appendix A.

The remediation works have been contracted in two phases. The initial enabling works were carried out by East Coast Construction Limited (ECC) between the November 2023 and April 4 and comprises the following:

- The 'turnover' ('grubbing out'/removal) of made ground soils down to natural ground; followed by screening/crush/re-compaction and placement of 'site won' soils and/or treated relic infrastructure. These works were to be carried out beneath the building footprint plus approximately 1metres behind eastern, western and southern boundaries.
- acement of a piling matt in line with BRE 470 Working Platforms for Tracked Plant.

An engineer from NX should was in attendance to verify the excavation works around area of recorded contamination, established during the NX intrusive works and DQRA modelling. As anticipated, during the site turnover, the main source of hydrocarbon contaminated soils and shallow perched groundwater became apparent. This comprised 2no ^{3} below ground diesel tanks (Tank a & B) located in the northwest of the site. Both tanks were housed on a brick and concrete base and bund with a concrete and brick slab and had been decommissioned and infilled with concrete Visual and olfactory evidence of hydrocarbon contaminated soils was observed within the immediate surrounding area. Groundwater was observed to be largely absent. The hydrocarbon contaminated soils were chased out and stockpiled in lined temporary bunds prior to disposal to a suitably licensed waste facility by ECC. Verification samples of the underlying soils has been carried out by NX. The recorded results are below both laboratory detection limits and established Tier 1 values for the site.

In March 2024, whilst ECC were turning over the final sector of the site, further 4no approximately ^{3} to ^{3} below ground fuel tanks (Tanks C to F) were found. e tanks were located within the former car park (situated off Pencroft Way) in the northeast of the site; and within an area inaccessible during the site investigation works due to the active Greenheys car park. No records of the tanks were noted on historical mapping or within Greater Manchester Fire Authority Petroleum Licensing records.

All four tanks were also either housed on a brick and concrete base and bund with a concrete/or and brick slab and had been decommissioned and infilled with concrete. Visual and olfactory evidence of hydrocarbon contaminated soils was observed within the immediate surrounding area. Groundwater was again observed to be largely absent albeit a tanker was brought in by ECC to manage and remove water during periods of heavy rainfall In line with the NX remediation strategy, the visibly hydrocarbon contaminated sand/ sand and gravel soils were again chased out and stockpiled in lined temporary bunds prior to testing and disposal to a suitably licensed waste facility by ECC. Verification samples of the underlying clay soils has been obtained by NX. The recorded results are below both laboratory detection limits and established Tier 1 values for the site. Photographs of all tanks and residual soils are provided within Appendix A.

Simple precautionary measures were adopted during the enabling works phase i.e. good personal hygiene, provision of suitable welfare facilities and basic personnel protective equipment, to protect site workers coming into contact with soils containing slightly elevated concentrations of inorganic and organic contaminants and asbestos. NX were not requested by ECC to attend site to record and document any further areas of unrecorded contamination during the site turnover.

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The works are considered to have involved a 'best sustainable approach'; involving a minimal approach with respect to the removal and disposal of potentially contaminated materials from site. Minimum materials were taken off site thus conserving landfill space locally and minimising lorry movements onto local roads from the site.

Unsuitable materials that could not be reused on site were removed from site to a suitably licensed waste management facility. Copies of example consignment notes are provided within Appendix B.

Now that the enabling works are completed, residual organic vapours in made ground, drift deposits and shallow groundwater are no longer deemed to present a risk to the integrity of standard damp proof membranes and hydrocarbon resistant/vapour membranes are not deemed to be necessary.

Recorded and potentially unrecorded contaminants will be isolated beneath buildings and areas of hardstanding, direct contact with recorded and potentially unrecorded contamination will remain a potentially viable pathway in landscaping and P.O.S Area scenario.

Outstanding remediation works required by the Main Contractor (Wilmott Dixon) comprise the following:

- Within landscaping and P.O.S. areas, Excavation & removal from site of granular and cohesive Made Ground from areas where future site levels are to be reduced.
- Placement of clean cover soil system within of soft landscaping, public open spaces or commercial gardens; where site levels are to be raised.
- Removal and replacement with clean cover systems within soft landscaping, public open spaces or commercial gardens where site levels are to be more or less unchanged.

The depths of material to be removed or the thickness of a soil barrier shall comprise the following:

- Within areas of soft landscaping a minimum 600mm of clean cover / removal & replacement of Made Grounds should be assumed.
- Within areas of areas of public open space to be grassed; a minimum 600mm of clean cover / removal & replacement of made ground should be assumed.
- A hard to dig layer or geotextile (designed to reduce infiltration) will be required within the cover system platform. If a geotextile is adopted then drainage should be introduced within the cover system layer to prevent waterlogged conditions within landscaped and P.O.S areas.

Imported subsoil/topsoil materials will require chemical validation to demonstrate that they are suitable for a commercial end use and taken to depths sufficient to provide a sufficient cover system for all proposed materials used which are capable to support root growth. The depth of cover should also be consistent with the needs of the landscaped architects planting requirements.

Cover system depths and sample ratios should be carried out in line with Section 6 of Manchester City Council's Planning and Technical Guidance document relating to ground contamination, dated February 2021.

For purposes of off-site disposal Waste Acceptance Criteria (WAC) testing is recommended on all made ground soils prior to discharge to a suitably licensed facility. Preliminary assessment indicates the majority of site soils are likely to be classified as Non-Hazardous. Areas of hazardous waste soils should be anticipated locally.

Construction workers should take appropriate health and safety measures when dealing with potential asbestos containing soils. General guidance on the protection of workers who may be exposed to asbestos containing materials is provided in the Health and Safety Executive (HSE) document "Asbestos: The Licensed Contractors Guide". Alternatively, further testing of Made Ground materials could be conducted to provide a higher degree of confidence and negate the need for measures recommended in the above document.

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New services and infrastructure should be kept as shallow as possible to avoid the need for dewatering.

It is recommended that a barrier pipe, such as Protect-a-Line (or similar) be adopted and/or further testing along the line of the proposed new pipework, now that the enabling works are completed.

Gas protection measures should be installed in accordance with BS8485: 2015. Based on a Type C development and CS2 classification is required. Gas protection measures should be installed as prescribed in BRE 414 with the ventilation of the sub-floor void designed to provide a minimum of one complete volume change per 24 hours. Prior to the adoption of any gas protection measures, agreement should be sought from the local authority environmental health department and building control.

NX Consulting are not responsible for the design of specialist gas protection measures. It is recommended that the design of gas protection measures should be provided by a specialist consultant/supplier and carried out in line with BS 8485:2015+A1:2019 s.7.1 and 8.3 and a copy of the full Gas Protection Design Report should be submitted for approval to Directorate of Planning of Manchester City Council.

No radon protection measures are necessary in the construction of new dwellings or extensions.

1st Line Defence Ltd has assessed that there is a Low Risk from items of German aerial delivered UXO and Allied UXO across the majority of the site, with a small area of Medium Risk within the south-west of the site.

All Works

- UXO Risk Management Plan
- Site Specific UXO Awareness Briefings to all personnel conducting intrusive works.
- Open Intrusive Works (trial pits, service pits, open excavations, shallow foundations etc.)
- UXO Specialist On-site Support

Boreholes and Piled Foundations within medium risk areas

- Intrusive Magnetometer Survey of all borehole and pile locations/clusters down to maximum bomb penetration depth has been carried out.

A piling risk assessment has been carried out to establish the most suitable choice of pile to reduce migration pathways for potential soil and groundwater contamination into the underlying aquifer. Piling method statement should consider appropriate and necessary PPE to reduce exposure to ground contamination and include a toolbox talk to ensure drilling contractors are aware of ground conditions before any works commence.

Prior to occupation of the building, a Contamination Land Verification Report will be required by Manchester City Council to discharge outline planning conditions relating to contamination. The report should encompass all the findings of the remediation works on this site.

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1.0 INTRODUCTION

1.1 The Commission & Brief

NX Consulting Limited has been commissioned by Bruntwood Sci-Tech Ltd (The Client) to produce a contamination enabling works completion report and updated remediation strategy for the proposed Biohub at the former Greenheys Business Centre, Manchester Science Park, Pencroft Way, Manchester M15 6JJ.

East Coast Construction (ECC) have carried out preparatory works, in general accordance with the ECC Drawing No: (ECR_144_CP06) provided within Appendix A.

These works commenced in November 2023 and were completed by the end of 21st March 2024.

The purpose of this document is to:

- Summarise the background to the works;
- Describe the ground preparatory works undertaken; and,
- Confirm that the enabling works around the area of anticipated hydrocarbon contamination have been completed and do not pose a risk to human health and controlled water receptors.
- To provide an updated remediation strategy for the main contract and building works.

Validation of the outstanding remedial measures will be required by the Local Planning Authority and/or the appointed Building Control officer.

1.2 Previous Surveys

Previous assessments conducted upon the site, which should be read in conjunction with this study; comprise the following:

- 'Pre-acquisition Phase 1 geoenvironmental survey of the MSP site', by NX Consulting, dated February 2012.
- 'Phase 1 and preliminary phase 2 geoenvironmental assessment of Ripon Street depot', by NX Consulting, dated May 2014.
- 'Phase 1 and Phase 2 geoenvironmental site investigation on land for the Bright Building (Formerly The Hub)', by NX Consulting, dated November 2014.
- 'Remediation Strategy on land for the Bright Building (Formerly The Hub)', by NX Consulting, dated February 2015.
- 'Detailed Phase 1 UXO assessment report of the New Base Building' by First Line Defence, dated May 2019.
- 'Phase 1 and preliminary phase 2 geoenvironmental assessment of New Base Building', by NX Consulting, dated May 2019.

- 'Remediation Strategy on land for the Bright Building (Formerly The Hub)', by NX Consulting, dated July 2019.
- 'Detailed Phase 1 UXO assessment report of the Greenheys Building' by First Line Defence, dated April 2023.
- 'Phase 1 and preliminary phase 2 geoenvironmental assessment of Greenheys Business Centre (Rev 3)', by NX Consulting, dated August 2023.
- 'Remediation Strategy NX534 Remediation Strategy Report for Greenheys Biohub, Manchester Science Park, by NX Consulting, dated September 2023.

This enabling works completion report and updated remediation strategy report should be read in conjunction with the reports listed above and drawings and specifications provided by the appointed structural engineers; DWllp. Particularly where details of enabling works, foundation detail, water supply pipework and cover system in landscaped and P.O.S areas are presented.

1.3 Proposed Development & Outstanding Works

It is understood that the site is to be developed for commercial purposes, comprising a multi-storey office building with associated car parking and landscaped areas. The main structure will be founded on piled foundations comprising CFA piled foundations.

The proposed site layout is presented in Appendix A.

The remediation works are to be contracted in two phases.

- The 'turnover' ('grubbing out'/removal) of made ground soils down to natural ground; followed by screening/crush/re-compaction and placement of 'site won' soils and/or treated relic infrastructure. These works were to be carried out beneath the building footprint plus approximately 1metres behind eastern, western and southern boundaries.
- Placement of a piling matt in line with BRE 470 Working Platforms for Tracked Plant.

These works were carried out to extents shown on the final 'as built' drawing is provided within Appendix A.

The main contract is to be let and the outstanding works still to be completed comprise the following:

- In areas of soft landscaping, to protect end users from isolated concentrations of inorganic and organic contamination and possible asbestos fibres, a soil cover system (consisting of a minimum 600mm thick layer) is recommended over deposits of made ground. Where landscaping requirements stipulate deeper areas then this should be carried out in line with landscape architects' details.

- Ground gas protection measures (CS2) will be required within the proposed development in accordance with CIRIA 665 document guidelines and subject to regulatory approval.

- Imported subsoil/topsoil materials will require chemical validation to demonstrate that they are suitable for a commercial end use and taken to depths sufficient to provide a sufficient cover system for all proposed materials used which are capable to support root growth.

- A potable water supply risk assessment should be carried out post-remediation or specialist barrier pipe be adopted.

- 1st Line Defence Ltd has assessed that there is a Medium Risk from items of German aerial delivered UXO and ant-aircraft UXO and mitigation measures are required during enabling works and the main contract works.

1.3 Limitations

The accuracy of the data supplied by third parties should be considered in the context of any known site conditions for which NX Consulting Limited cannot be held liable.

The comments given in this report and the opinions expressed assume that the ground conditions (geology, hydrogeology, contamination) do not vary beyond the range revealed by this assessment. There may be, however, conditions within the site, which have not been identified from the information reviewed and consequently have not been considered in this report: confirmation of such uncertainties should be the focus of any future intrusive investigations.

The comments made in this report are based on the data available at the time of its completion. Any unusual or conflicting evidence discovered during any future site works must be presented to NX Consulting as soon as possible so that any implications may be considered.

This report is provided for the benefit only of the party to whom it is addressed. NX Consulting does not extend responsibility to any third party for the whole or any part of the contents. Nx Consulting owes no duty of care in relation to this report to any third party. The investigation and reportage has been undertaken with all reasonable skill, care and due diligence. NX Consulting disclaims any responsibility to the client or others in respect of any matter(s) outside this agreed scope of the above works.

In addition to the above it should be noted that when investigating or developing land, sub-surface conditions might vary both spatially and over time. Whilst this investigation and subsequent interpretation has been undertaken to reasonably characterise current sub-surface conditions at the site within the scope of works and agreed budget, the absence of certain ground, contamination or groundwater conditions at the individual locations is not a guarantee that these conditions do not exist elsewhere on the site. Additional information, changes in legislation or revised practices may necessitate re-interpretation of part or all of this report.

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2.0 BACKGROUND

2.1 Site Description & Setting

This report is intended to support an application relating to the redevelopment of Greenheys Business Centre within Manchester Science Park. The former Greenheys Business Centre development is located to the north of the site adjacent to New Base Building. It now comprises an open plot of land with gravel surfacing following the enabling works and placement of a piling matt.

The larger Manchester Science Park site is generally rectangular in shape, generally flat and located off Lloyd Street North, Manchester, M15 6SE (NGR: 384440E; 396280N).). A Site Location Plan, site photographs and a site layout drawing is presented as Figure 01 in Appendix A.

The desk study information collected in the phase 1 desk study, provided sufficient information to characterise the potential for ground contamination the site with a reasonable level of confidence; a number of potential sources were identified involving former garages, a factory, roads and a warehouse were present upon site. Other subordinate developments were present within the site boundary and wider surrounding area, including the demolition of former residential housing/infilling of associated basements; relic roads and infrastructure which had the potential to introduce a range of contaminants to the site, as well as heterogeneous ground conditions and associated stability for foundations.

2.2 The Proposed Development

The proposed development includes the construction of a 7-storey building comprising up to 17,249sq. m (GIA) commercial floorspace across 6 occupiable floors (Use Class E), plus plant level above; in addition to associated cycle parking, hard and soft landscaping, access and servicing and other associated works.

2.3 Environmental Setting

A summary of the environmental setting of the site pertinent to this report has been summarised below.

Issue		Summary
Geology & Mining	GroundSure report BGS Mapping	**Drift** – Glacial Till (Diamicton) on site and surrounding area. Glaciofluvial Sheet Deposits (sand and gravel) 266m north of site. **Solid** – Chester Pebble Beds Formation – Sandstone **Faults** – There are no bedrock faults or other linear features recorded within 500m of the site. **Coal Mining** – The site is indicated to be within an area, which may be affected by coal mining activities. However, the risks to the site from shallow coal mining hazards are deemed to be low due to the significant cover of sandstone bedrock directly overlying coal measures strata beneath the site.
Landfills	GroundSure Mapping	There are no Environment Agency defined licensed, registered or historic landfills sites within 250m of the site.

Hydrology	GroundSure Report	Drift - The site has been classified as a Secondary (Undifferentiated) Aquifer - Assigned where it is not possible to attribute either category A or B to a rock type. In general, these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type. Bedrock – Principal Aquifer (high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale).
Hydrogeology	GroundSure Report	Guidance from the Environment Agency indicates that the superficial deposits are designated as a Secondary Undifferentiated Aquifer and underlying bedrock strata are designated as a Principal Aquifer. The are 6no. historic and 6no. active groundwater abstractions are recorded within 1km of the site. The site is also within a source protection zone 3 (Total Catchment). Given the underlying Principal Aquifer, the site sensitivity is regarded as low to moderate with regard to groundwater receptors. The Groundsure report indicates that no surface water features are situated within 250m of the site. A culverted watercourse is situated 5m west - Corn Brook (Hidden River in culvert https://hidden-manchester.org.uk/#/waterways/corn-brook), and no other surface water receptors are present within 250m of the site. There are 2no. active groundwater abstraction licences recorded within 500m of the site. Both are situated 490m SW off site. No historical or active surface water abstraction licences recorded within 1000m.
Flood Risk	GroundSure Report	Corn Brook is culverted to the west of Greenhey's Lane - https://hidden-manchester.org.uk/#/waterways/corn-brook According to GroundSure data, a portion of the western side of the site is within an Environment Agency indicative Zone 2 & Zone 3 flood plain. Zone 2 floodplain estimates the annual probability of flooding as one in one thousand (0.1%) or greater from rivers and the sea but less than 1% from rivers or 0.5% from the sea. Alternatively, where information is available they may show the highest known flood level. Zone 3 estimates the annual probability of flooding as one in one hundred (1%) or greater from rivers and a one in two hundred (0.5%) or greater from the sea. Again, as with Flood Zone 2, where information is available they may show the highest known flood level. The site does not benefit from Environment Agency defined flood defenses. A small section in the western portion of the site is at medium risk from river and coastal flooding. The remainder of the site is not reported to be at risk from river and coastal flooding. The site is at high risk from groundwater flooding. Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100year return period and a 5m Digital Terrain Model (DTM). The rainfall run off from the Proposed Scheme is to be restricted to the equivalent greenfield run off rate, creating a significant betterment to the existing situation. The runoff is proposed to be attenuated within the Site before being discharged to either local water courses or Severn Trent Water sewer. SuDS features will be incorporated within the design where possible, and may include green and brown roofs. An additional

		30% allowance for attenuation on Site will be implemented as a climate resilient measure. **Comments:** **DWLLP should establish whether or not a quantitative flood risk assessment is required.**
Radon	GroundSure Report	Both the Radon Atlas for England and Wales and the Groundsure report confirm that the site is in an area where less than 1% of homes are affected by radon (above the action level). Consequently, no radon protection measures are necessary in the construction of new dwellings or extensions.
Unexploded Ordnance	Zetica 1st Line Defence Ltd	The regional unexploded bomb risk map from Zetica indicates that the site is in an area at moderate risk from possible Unexploded Ordnance (UXO) resulting from the Second World War. A detailed UXO risk assessment report has been compiled by 1st Line Defence (Ref: DA17581-00) and dated May 2019, for the Greenheys Building. The majority of the site was deemed to be low risk. However, an area of cleared ground; which may be indicative of WWII bombing was recorded in the southwest. This area was deemed to be a medium risk and the following mitigation measures were recommended: The majority of the site is low risk with a small area of car park in the southwest being deemed a medium risk area. As such, the following recommendations were made:

2.4 Fieldworks

The preliminary phase of fieldworks were undertaken between 12th April 2023 and 19th April 2023. Due to limitations with accessing areas in the north of site, not all works were able to be completed meaning a second phase of supplementary works were carried out.

The second phase of supplementary works were carried out on 19th & 22nd July 2023. These works were also designed to delineate the extent of hydrocarbon contamination recorded within soil and groundwater during the preliminary works.

All arisings from the preliminary and supplementary site investigation were screened on-site for the presence of volatile organic compounds (VOC) using a MiniRae Photoionisation Detector (PID).

A plan showing all the exploratory hole locations are presented in Appendix A.

Underground services were surveyed, and hand dug trial pits formed to a depth of 1.20metres below ground level (m bgl) prior to the intrusive investigation; in line with NX Consulting health and safety methodology.

During the site investigation a total of 6no. Machine Excavated Trial Pits were formed to maximum depths of 2.80mbgl.

The exploratory hole retrieved continuous soil samples; these were then logged by an onsite engineer and representative samples were taken for geotechnical and chemical analysis.

During the site investigation 3no. Rotary Cored borehole was formed to a maximum depth of 20.00mbgl.

The exploratory hole retrieved continuous rock samples; these were then logged by an onsite engineer and representative samples were taken for geotechnical analysis.

24no. window sample boreholes were advanced across the site to depths of between 0.45mbgl. and 5.00mbgl. Representative samples were taken for geotechnical and chemical analysis. 17no. windowless sampler boreholes were drilled within both internal and external areas of the site, and 7no. handheld window sampler boreholes were undertaken within internal areas of the site. WS05, WS05a, WS12 & WS13 were all redrilled due to obstructions encountered within the hand pit excavations.

Environmental sample collection was carried out in accordance with BS EN ISO 22475-1:2006. All soil and groundwater samples were collected using either clean stainless-steel utensils or clean disposable gloves and placed directly into clean containers provided by the laboratory. Samples obtained during the investigation were subjected to a range of geochemical testing at appropriate UKAS accredited laboratories.

Testing was carried out in accordance with the procedures outlined in BS EN ISO14688-1:2002, 14688-2:2004, and 14689-1:2003.

Soil samples were tested for speciated PAH, asbestos screen, arsenic, boron (water soluble), cadmium, copper, chromium, lead, mercury, nickel, selenium, silver, zinc, total cyanide, free cyanide, phenols, pH, asbestos, total sulphur, sulphide, total sulphur, total organic carbon and nitrate analysis.

2.5 Ground Conditions

General

The following ground conditions summary has been utilised from information provided within the NX Consulting report. To obtain a more comprehensive picture of the ground conditions within the wider site, reference should be made to the NX Consulting Reports (ref: NX534/R3).

Made Ground was encountered in all the exploratory holes undertaken across the site to depths of between ground level and 1.50mbgl (WS01); with the deepest Made Ground recorded in the southeastern corner. The area with the shallowest confirmed depth of Made Ground was within WS09 in the southwestern corner; at a recorded depth of 0.25mbgl. Made Ground final depth was proven Made Ground was observed to directly bear onto drift deposits.

NX attempted to classify the Made Ground, (with a few exceptions) broadly into 6 distinct soil types;

- Tarmacadam or concrete hardstanding.
- Uncompact brown gravelly sand/sandy gravel (subgrade type material)
- Uncompact dark brown/grey/black fine to coarse slightly ashy slightly silty clayey sand/gravelly sand.
- Compact grey ashy sandy gravel of limestone (subbase type material)
- Soft to firm black/grey/brown ashy slightly silty very sandy very gravelly clay
- Soft to firm brown slightly ashy reworked clay with rare gravel.

<u>Made Ground – Surface Cover</u>

A surface cover of tarmacadam was present within external car parking areas. The internal areas (the floor slab within the Greenheys Building) were observed to comprise

of a screed over a weakly bound angular gravel within a cement/concrete bound matrix. Intact concrete being recorded in parts.

An area of car parking and former factory within the McDougall Centre was investigated during the supplementary site investigation. The eastern half comprised an inactive external car parking area where a surface cover of tarmacadam was present. The western half and area of the former factory was surrounded by hoarding. This hoarding was removed to allow access to WS08, WS09 and TP05.

Ground conditions within the former factory area comprised a relatively flat lying concrete slab (possible former concrete slab) within the west with residential properties beyond. The ground conditions within the east comprised demolition arising material with full intact bricks and cobbles of brick and concrete present upon the surface. All ground within the hoarding was heavily overgrown with weeds (reaching up to 3m in height) with some semi mature trees present too. Access was difficult and had to be cleared using drilling equipment to enable the works to commence.

Made Ground – Internal Area

Recorded Made Ground within the Greenheys Building typically comprised an initial layer of screed (occasionally covered by laminate floor covering) over a weakly bound angular gravel within a cement/concrete bound matrix (acting slab). This was found to a maximum depth of 0.58mbgl within WS20 and likely to consist of an insitu relic footing. A metal girder was also found within this material between 0.1mbgl and 0.25mbgl.

The concrete encountered within WS12 & WS12A (eastern areas of the Greenheys Business Centre building) was found to be reinforced with 1cm diameter metal rebar present at depths of 0.05mbgl.

Made Ground recorded below the concrete floor slab typically comprised a 150mm to 250mm layer of sub-base type gravel consisting of compact fine to coarse ashy sandy gravel of brick, sandstone, cement, concrete, ash, limestone and other mixed lithology.

Uncompact black/grey/red/brown ashy slightly clayey gravelly cobbly sand with gravel of brick, sandstone, ash, slate, limestone and other mixed lithology was recorded beneath the sub base materials. These soils frequently consisted of full intact bricks, cobble setts and intact relic cellar/brick footings which slowed progression. Below this material and at the base of the Made Ground (overlying natural strata), soft to firm black/dark brown slightly ashy slightly sandy (reworked) clay was recorded. Reworded clay was found in all internal boreholes where Made Ground was recorded (WS14, WS15, WS16, WS17 & WS18).

WS12 and WS13 were not drilled to their intended depths due to solid obstructions encountered within the base of the hand pits. Both boreholes were relocated nearby and renamed WS12A and WS13A. These boreholes were also terminated due to obstructions preventing progress. All 4no. of these exploratory holes are situated within the southeastern corner of the building. Ground conditions within these positions generally comprised compact dark brown fine to coarse ashy silty sandy cobbly gravel of brick, sandstone, concrete, ash, clinker, limestone and other mixed lithology. Compact light grey gravel of brick, concrete and other mixed lithology was also noted within WS13.

Relic in situ brick walls were noted within hand pits within WS12 and WS12A, relic in situ brick walls were present in west and eastern faces of hand pit, (orientated N-S).

Within WS13A a relic in situ brick wall was recovered as a core (between gl to 0.50mbgl).

Made Ground – External Areas

Within external areas, Made Ground typically comprised an initial layer of tarmacadam underlain by compact ashy gravelly sand/sandy fine to coarse angular gravel (subbase material) between 0.15m and 0.65m in thickness. This was found to be present to a maximum depth of 0.65mbgl in WS04. The subbase encountered within TP02 comprised a similar material with generally coarser gravel. The depth of the cobbley subbase was present was proven between 0.1m bgl to 1.15m bgl. The trial pit was terminated shortly after at 1.20m bgl due to poor stability and partial collapse.

Underlying the subbase, Made Ground consisted of a combination of soft to firm brown slightly ashy reworked clay with rare gravel of brick, ash, cement, slate, timber, clinker, concrete and/or generally loose brown slightly ashy slightly clayey sandy gravel of brick, ash, cement, slate, timber, clinker, concrete /gravelly sand. This type of Made Ground was proven to a maximum depth of 1.50m bgl (WS01).

These soils were found across all external boreholes (with the exception of RBH01 and WS09); where Made Ground was only recorded to 0.35mbgl and 0.25mbgl, respectively.

Relic intact brick cobbles and likely boulders were noted within WS04 hand pit which slowed progression 0.65m & 1.1mbgl. WS05/WS5A hand pit was excavated to 0.45m bgl where a solid concrete obstruction recorded and prevented continuation of the borehole.

Superficial Deposits

Superficial deposits was encountered within the majority of exploratory holes between depths of 0.25m-11.00m bgl, with the exception of WS05, WS05A, WS12, WS12A, WS13 and WS13A where the Made Ground was not able to be fully penetrated.

Superficial deposits were encountered across the site generally, comprising an initial layer of loose to medium dense light brown, fine to coarse SAND with rare gravel to recorded depths of 1.50-2.60mbgl. Within window sampler boreholes, the sand was generally noted to become darker in colour and gravel content increased with depth. Machine excavated trial pits within the supplementary works noted similar features to the preliminary phase observations, but also indicates a separate lithology of SAND AND GRAVEL was present beneath the sand.

Beneath the sand (where penetrated) in all exploratory holes, firm to firm to stiff dark brown (rarely sandy) CLAY with rare fine to coarse sub angular to rounded gravel of mixed lithology was recorded. The clay appears to become stiff between 3.00mbgl to 4.00mbgl. Clay was present to the end of the drilling within the WS boreholes (5.00m bgl+) and was proven to a maximum depth of 7.0mbgl in RBH03.

Probable Glaciofluvial drift deposits comprising dense red/brown SAND AND GRAVEL (drillers description) was found beneath clay within all rotary boreholes, between 6.0mbgl and 11.0mbgl. Gravel content within this strata typically comprised angular to subrounded mudstone, sandstone and other mixed lithology. At 10.50mbgl to 11.00mbgl within RBH01 (just prior to bedrock) the sand was noted to become reddish brown in colour. This strata was only encountered within the preliminary phase of works.

Cable tool percussion boreholes formed upon the adjacent New Base site recorded Glaciofluvial drift deposits comprising medium dense to dense clayey gravelly sand / sandy sub rounded to rounded gravel (with occasional cobbles) were encountered to maximum depths of 9.80m bgl.

Uncorrected SPT 'N' values within the drift deposits ranged from 4-50, with an average 'N' value of 19.12 and generally increased with depth. The standard deviation for the data is 11.95.

Solid Geology

Solid geology was encountered within all of the rotary core boreholes at depths between 11.00-20.00mbgl. and noted to comprise poorly cemented weak to medium strong reddish brown fine to coarse grained SANDSTONE with rare mineral inclusions and intraclasts. Subhorizontal bedding fractures, thinly spaced, planar, smooth to slightly rough were also noted upon recovered core runs. Recovery from shallower depths was often poor due to the rock being poorly cemented. This generally improved as drilling progressed. The colour of the sandstone was also noted to become reddish brown banded grey at 18.00mbgl in RBH01.

2.6 Groundwater

The following groundwater observations were monitored within boreholes during drilling at the following depths. Saturated sand and gravel depths are also provided:

Table 2.4.1 – summary of groundwater level and dip data

Borehole ID	Depth to water (mbgl)	Depth to water (mAOD)	Depth to base of well (mbgl)
WS04	1.51	32.65	1.98
WS05B	1.80	30.57	4.56
WS08	1.50	31.79	2.55
WS09	1.75	31.88	2.51
WS10	1.81	29.56	4.65
WS11	1.94	31.38	3.11
WS14	1.97	32.37	2.07
WS16	1.98	32.81	2.08
WS17A	1.96	31.64	3.11
WS18A	2.11	31.72	2.99
WS19	2.00	32.32	2.49
WS20	2.13	30.98	3.65
WS22	2.01	32.34	2.43
RBH01	1.61	30.46	4.06
RBH02	1.60	29.91	4.67

2.7 Contamination Observations

Hydrocarbon odours were recorded within the north and northwestern areas of the site within WS08, WS10, WS17, WS17a, WS18, WS18a, WS20 & TP05. The odours were generally observed between 1.9m bgl and 2.5m bgl, besides WS10 where a faint hydrocarbon odour observed within lower depth of Made Ground (0.25mbgl to 0.65mbgl). No visual evidence of contamination was observed within WS10. Visual evidence of contamination was observed within WS08, WS17a, WS18a & WS20, where a sheen was observed on surface of liquid during water sample extraction. In addition to this, the strata generally appeared dark grey in colour at depths where hydrocarbon

contamination was observed; however, this did not always represent hydrocarbon contamination was present as similar observations other boreholes where such contamination was not present (WS14 at 1.50m bgl)

Subsequent testing indicated that the soils are not significantly impacted by hydrocarbon contamination within respective areas.

During the preliminary works, the groundwater testing highlighted Total Petroleum Hydrocarbons (C10 – C35) values slightly exceeding the respective EQS screening values within WS05B. However, supplementary works were carried out and analysis was consistent with on-site observations whereby, groundwater concentrations of up to 350mg/l were recorded in exploratory boreholes within WS08, 17a, 18a, 20 & 22 above UKDWS and EQS guideline values.

All arisings from the preliminary and supplementary site investigation were screened on-site for the presence of volatile organic compounds (VOC) using a MiniRae Photoionisation Detector (PID). When tested against strata where olfactory and visual Hydrocarbon contamination was observed, elevated concentrations were noted within during the supplementary works (within WS08, WS17a, WS18a, WS20 & TP05).

Site investigation/fieldwork observations, PID sampling and chemical analysis of soil samples indicated that the hydrocarbon contamination is present within a localised corner of the northwest of site.

2.8 Underground Service Plans

Underground services, comprising BT Lines, gas mains, CCTV, and possible fibre optic cables may all impact the site and the design team and Client should familiarise themselves with their presence. Surface drainage is also present elsewhere.

2.9 Below ground obstructions

Several exploratory probeholes noted the presence of concrete and brick cobbles and boulder obstructions within Made Ground. Namely: WS05, WS05A, WS12, WS12A, WS13 & WS13A. Historical mapping indicates that demolition rubble associated with relic housing, slabs/cellars and slabs are likely to be present upon site within the upper 3.0m bgl.

Obstructions were recorded at the following depths:

- WS05 – 0.45m bgl.
- WS05a – 0.75m bgl, with a relic insitu plastic pipe at 0.60m bgl.
- WS12 - 0.70m bgl.
- WS12a - 0.70m bgl.
- WS13 - 0.60m bgl.
- WS13a - 0.50m bgl.

Hard digging/slow excavation was noted within the Made Ground within the internal exploratory WS boreholes. Where cobbles and boulders were noted within shall Made Ground, possibly relating to former roads.

A portion of the site (University of Manchester area to the north of site, surrounded by hoarding) comprised demolition arising material with full intact bricks and cobbles of brick and concrete present upon the surface. Obstructions were not encountered within the area but should be anticipated considering its historical use as a factory.

2.10 Contamination

The chemical analysis results were compared against the Tier 1 criteria for a *commercial* end use to reflect the development proposals.

The chemistry analysis results, presented in Appendix F, were been compared against the Tier 1 criteria for a *commercial industrial with landscaping* end use to reflect the development proposals.

For risk assessment purposes a soil organic matter value of 1.0% was used.

Made Ground & Natural Soils

The chemical analysis of soil samples showed that there were no Tier 1 exceedances for the soils analysed to date, beneath the existing building and the proposed development, for both natural soils and Made Ground soils.

No asbestos (<0.001%) was detected within the chemical analysis of soil samples.

Risks to Controlled Water Receptors

Site Investigation Summary

Leachate and groundwater testing analysis indicated inorganic contaminants to be largely absent beneath the site. The testing highlighted above has recorded a number of inorganic contaminants within the leachate samples in both Made Ground and drift deposits; at concentrations exceeding the respective EQS screening values recorded in WS01, WS10 & WS14. UKDWS screening values were not exceeded within the tested samples. The exceedances within copper, chromium and lead highlighted above are considered to be marginal due to the limited concentrations of heavy metals recorded within the soils across the site.

The NX site investigation works encountered ground conditions comprising Made Ground predominantly cohesive clay deposits which will restrict vertical and lateral percolation of recorded low levels of copper, chromium, lead. Given the low mobility of these contaminants, the potential for the contaminants to represent suspended solids and development proposals comprising predominantly hardstanding impermeable surfaces reducing infiltration the risks to controlled water receptors post construction is deemed to be low.

As such, risks to Corn Brook and the Principal Aquifer post construction were deemed to be low from inorganic contamination.

During the preliminary works, the groundwater testing highlighted Total Petroleum Hydrocarbons (C10 – C35) values slightly exceeding the respective EQS screening values within WS05B. However, supplementary works were carried out and analysis was consistent with on-site observations whereby, groundwater concentrations of up to 350mg/l were recorded in exploratory boreholes within WS08, 17a, 18a, 20 & 22 above UKDWS and EQS guideline values.

DQRA

To ensure a low risk to controlled waters and human health receptors, it was recommended that a P20 type Detail Quantitative Risk assessment/Remedial Target Methodology and suitable remediation strategy be developed for the site. A piling risk assessment was also recommended to establish the most suitable pile type for the ground conditions encountered.

In September 2023, Remedial target concentrations were developed for localised hydrocarbon contamination identified in soil and groundwater. No soil targets were

exceeded by site concentrations. Groundwater targets were exceeded for TPH aromatic fractions C10 to C12 and C12 to C16. However predicted concentrations down hydraulic gradient were not realised which suggests that plume migration may be more restricted than modelled data initially suggests.

It was recommended that an assessment of the likely source area should be undertaken during the enabling works, when the made ground 'turn over' was carried out and removal/treatment of the source material and localised impacted soils. Active groundwater remediation was not recommended. However, some localised dewatering in areas of high impact or where services intersect the shallow groundwater was deemed likely to be required.

Consideration was given to the potential for residual organic vapours in made ground, drift deposits and shallow groundwater which could present a risk to the integrity of standard damp proof membranes; even after remediation. It was recommended that hydrocarbon resistant membranes should be considered.

The piling risk assessment considered the adoption of CFA piles which generally result in good seals in low permeable layers where the clay thickness is equal to or greater than two pile diameters. Exploratory logs indicated that a minimum thickness of Glacial Till of approximately 3.5m and sufficient clay is likely to be present to ensure a seal and prevent seepage along the pile.

Further action within the DQRA Report included the following:

1) develop a construction environment management plan

2) develop a piling method statement

3) develop a remediation strategy

4) develop a material management plan

Outlying Remediation Appraisal

Once the enabling works were completed, contaminants were deemed to be isolated beneath buildings and areas of hardstanding, direct contact with asbestos fibres and heavy metals remain a potentially viable pathway in landscaping and P.O.S Area scenario. To address risks to site occupiers and maintenance staff from potential unrecorded contamination, the following remediation or mitigation should was also recommended:

- Excavation & removal from site of granular and cohesive made ground with heavy metals asbestos fibres from areas where future site levels are to be reduced.
- Placement of clean cover soil system within of soft landscaping, public open spaces or commercial gardens; where site levels are to be raised.
- Removal and replacement with clean cover systems within soft landscaping, public open spaces or commercial gardens where site levels are to be more or less unchanged.

The depths of material to be removed or the thickness of a soil barrier should comprise the following:

- Within areas of soft landscaping a minimum 600mm of clean cover / removal & replacement l of made grounds should be assumed.
- Within areas of areas of public open space to be grassed; a minimum 600mm of clean cover / removal & replacement of made ground should be assumed.

- A hard to dig layer or geotextile (designed to reduce infiltration) will be required within the cover system platform. If a geotextile is adopted then drainage should be introduced within the cover system layer to prevent waterlogged conditions within landscaped and P.O.S areas.

The risks presented to controlled water receptors are deemed to be low post construction due to the concentrations of solid analysis and significant cover of likely low permeability clay deposits underlying the site, over the Principal Aquifer.

Potable Water Supply

It is envisaged that new drainage and utility supplies will be at relatively shallow depth within the top 1200mm of the Made Ground deposits. It is considered likely that specialist supply pipe is required at the site. A UKWIR potable water supply risk assessment is required to establish the nature of water supply pipework for the proposed development. Preliminary information suggests special measures will be required in light of the presence of elevated hydrocarbon concentrations.

It was recommended that statutory services are consulted at an early stage, with respect to the ground conditions within which they will lay services, in order to enable them to assess at an early state any protection measures required.

Further testing was recommended along the line of proposed new pipework upon completion of the enabling works; to inform whether specialist protection measures are required.

2.11 Asbestos

None of the 15no tested samples of Made Ground have recorded asbestos, with preliminary quantification determining concentrations of 'Not Detected <0.001%' total mass.

Although unlikely, it should be noted that there may of course be areas of undetected contamination between our sampling points.

All Asbestos Containing Material (ACM) identified during the site enabling works must be dealt with in strict accordance with the Control of Asbestos Regulations (CAR) 2012, UK Waste Management Legislation and the Environmental Protection Act 1994.

As a contingency measure and to protect construction workers and future end users from any unrecorded asbestos contamination, it was recommended that the following protective measures be adopted during the proposed ground preparatory works:

- All site personnel should be provided with PPE when excavations and demolition works are taking place.
- A water bowser or other dust suppression equipment shall be provided in order to dampen exposed surfaces; during the movement of plant and removal of arisings.
- Provision of personal monitors for site staff to measure individual exposure to asbestos fibres.

Should off-site disposal be required, then additional asbestos quantification and waste classification testing should be undertaken to ensure that it is classified correctly and disposed at a suitably licenced facility.

All ACM impacted soils must be managed so as to ensure no airborne fibre release during construction or placement of impacted material in such a manner to ensure no future exposure risk.

2.12 Ground Gas

The preliminary risk assessment identified the risk from hazardous ground gas as moderate risk and low to moderate source generating potential in line with CIRIA 665, due to the potential for Made Ground and former developments on and within the surrounding area of the site.

6No.rounds of monitoring were undertaken with a barometric pressure of between 1006mb to 1025mb.

A summary of the soil gas monitoring results is presented in Table 2.12.1 below.

Table 2.12.1 – Summary of Gas Monitoring Results (NXC)

NX Consulting Borehole Reference	Max CO2 (%v/v)	Max Flow (l/hr)	Max GSV (l/hr)	Max CH4 (%v/v)	Max GSV (l/hr)
External Boreholes					
RBH01	6.4	0.0	<0.01	0.0	<0.01
RBH02	4.7	0.0	<0.01	0.0	<0.01
WS04	0.4	0.0	<0.01	0.0	<0.01
WS05B	1.4	0.0	<0.01	0.0	<0.01
WS10	2.8	0.0	<0.01	0.1	<0.01
WS11	0.1	0.0	<0.01	0.0	<0.01
Internal Boreholes					
WS14	2.5	0.0	<0.01	0.1	<0.01
WS16	1.6	0.0	<0.01	0.1	<0.01
WS17	0.5	0.0	<0.01	0.0	<0.01

It was recommended that CIRIA 665 CS2 gas protection measures should be installed. In accordance with BS8485: 2015. Based on a Type C development and CS2 classification a gas protection score of 2.5 would need to be achieved. Independent validation of gas protection measures was recommended to achieve the required points score.

Gas protection measures should also be installed as prescribed in BRE 414 with the ventilation of the sub-floor void designed to provide a minimum of one complete volume change per 24 hours.

Prior to the adoption of any gas protection measures, agreement should be sought from the local authority environmental health department and building control.

2.13 Updated Development Constraints Post Enabling Constraints

The potential risks which may exist on the site should be readily managed through implementation of an inspection regime to reduce uncertainty in the site conceptual model, good materials management and some basic mitigation measures to break the potential exposure pathways identified.

Ground Conditions & Earthworks

A significant amount of work has been carried out to physically prepare the site for development and achieve the required stable development platform needed for the proposed buildings, car parking, access roads and supporting infrastructure. As this involves the importation of materials and soils for cover systems, the potential for introduction of new sources or creation of new pathways must be addressed.

The majority of the site is underlain by Made Ground comprising replaced site won soils and compacted 6F2 type stone within the piling matt. Obstruction may be encountered at the site boundary beyond the point where 'turnover' and replacement has been carried out. Here broken concrete, brick, cobble sets, tarmacadam, sand, gravel and clay may be encountered. Numerous obstructions and/or oversized materials may also be present as surface deposits and within the made ground.

Soft clayey sand/sand and gravel should be anticipated at shallow depth and groundwater is present in the upper 1.5m to 3.0m of strata. During any excavation works, consideration should be given for pre-earthworks drainage that allows for temporary fill surfaces to be sealed and shaped to shed water and operational restrictions during periods of rainfall.

The requirements for geotextiles to be used to separate earthworks materials should be assessed by a suitably qualified specialist contractor/manufacturer. The required design life should be no less than 120 years.

Details of laying and lapping should be in accordance with the specialist contractors recommendations.

Excavations into the Made Ground, sand and Glacial Till should be viable using conventional hydraulic excavating plant. Any areas where the site Turnover hasn't been completed, relict concrete, cobbles and boulders are likely to be present within the upper 1.50m+ and breaking equipment may be needed to achieve the design depth required.

The stability of foundation excavations are likely to be variable and collapse and spalling of the granular strata (particularly where groundwater is present) and Made Ground materials should be anticipated. All excavations should be conducted in line with CIRIA Report 97 – Trenching Practice and BRE 440 Foundations, Basements and External Works 2002.

Trenchboxes or similar will be required to support drainage and deep excavations locally. Temporary support and dewatering will be required to maintain stability of excavations to remove contaminated soil.

Any replaced 'site won' or imported materials will again need to be compacted in a controlled manner in line with the Department of Transport, Specification for Highway Works Specification 600 & 800 series, subject to additional confirmatory earthworks testing.

Where possible all soils should be retained on site to reduce disposal costs.

It is possible that when the services formation is carried out, groundwater ingress will occur into excavations, resulting in blowing sand conditions and a resulting volume loss to surrounding soils. Prior to excavation works it would be prudent to survey in the positions of existing walls and any basement walls where close to existing site boundaries and/or infrastructure/underground services either left in-situ and/or utilize temporary support, should such conditions be encountered.

Regulatory Approval

Potential delays in achieving approval with the regulatory authorities has the potential to result in programme impacts. Pre-commencement conditions relating to contamination and provision of a piling risk assessment have been placed upon the development.

The successful removal of the primary source of hydrocarbon contaminated soils and groundwater, residual organic vapours in made ground, drift deposits and shallow groundwater are no longer deemed likely to pose a risk to the integrity of standard damp proof membranes. Therefore, hydrocarbon resistant membranes are no longer deemed to be necessary.

Piling method statement should consider appropriate and necessary PPE to reduce exposure to unrecorded ground contamination and include a toolbox talk to ensure piling contractors are aware of ground conditions before any works commence.

Compliance with the requirements of the regulators i.e. Manchester City Council, the Environment Agency, service providers (e.g drainage, water, gas and electricity, fibre optics) should be sought at the earliest opportunity and any potential delays built into the programme.

A final verification report will be required to discharge outlying planning conditions once the building is complete.

3.0 DETAILS OF SITE PREPARATORY WORKS

3.1 Site Preparatory Works

The majority of the site was cleared of residual debris, vegetation, shrubs, bushes and unprotected trees as instructed by the Client.

Fuel Tanks A & B

The main source of hydrocarbon contaminated soils and shallow perched groundwater has became apparent which comprised 2no x 8m^3 below ground diesel tanks located in the northwest of the site. Both tanks were housed on a brick and concrete base and bund with a concrete and brick slab and had been decommissioned and infilled with concrete. Visual and olfactory evidence of hydrocarbon contaminated soils was observed within the immediate surrounding area. Groundwater was observed to be largely absent. The hydrocarbon contaminated soils were chased out and stockpiled in lined temporary bunds prior to disposal to a suitably licensed waste facility by ECC. Verification samples of the underlying soils and sides of excavations has been carried out by NX. The recorded results are below both laboratory detection limits and established Tier 1 values for the site. A copy of engineering logs and associated photofile and extents drawings are provided in Appended A.

Fuel Tanks C, D E & F

In March 2024, whilst ECC were turning over the final sector of the site, a further 4no x approximately 8m3 to 9m3 below ground fuel tanks (Tanks C, D, E & F) were found. The tanks were located within the former car park (situated off Pencroft Way) in the northeast of the site; and within an area inaccessible during the site investigation works due to the active Greenheys car park. No records of the tanks were noted on historical mapping or within Greater Manchester Fire Authority Petroleum Licensing records.

All four tanks were also either housed on a brick and concrete base and bunded with a concrete/or and brick slab and had been decommissioned and infilled with concrete. The depths of the tanks ranged from 1.80m bgl to 2.50m below piling matt level.

A band of approximately 0.05m to 0.70m thick band of visually and olfactory evident hydrocarbon contaminated sand/sand and gravel deposits was observed within the immediate surrounding area. As with fuel tanks A & B the tank base was formed upon firm to stiff of stiffer Glacial Clay which restricted contamination to the deeper sand and gravel and sandstone deposits.

Groundwater was observed to be largely absent albeit a tanker was brought in by ECC to manage and remove water during periods of heavy rainfall.

In line with the NX remediation strategy and due to programme constraints, the client instructed NX to remove the visibly hydrocarbon contaminated sand/ sand and gravel soils and stockpile in 5no lined temporary bunds; prior to laboratory testing by NX and disposal to a suitably licensed waste facility by ECC.

Verification samples of the underlying soils and sides of excavations has been carried out by NX. The recorded results are below both laboratory detection limits and established Tier 1 values for the site. Photographs of all tanks and residual soils are provided within Appendix A.

UXO Probing Works

1st Line Defence have carried out a UXO magnetometer probing survey and cleared the proposed pile cap positions within the medium risk area. It is understood that the associated risk is now deemed to be low.

3.2 Engineering of Fill Materials

NX were employed by the Client to carry out part time monitoring of the tank removal and contaminated soils and to advise on verification testing requirements, etc.

NX were not responsible for overseeing the 'grubbing out/turnover' of made ground and earthworks.

4.0 VERIFICATION TESTING & EXPORT/IMPORT OF SOILS DATA

4.1 Chemical Analysis of Residual Soils Post Fuel Tank Removal

Fuel Tanks A & B

A total of 29 no. soil verification samples were obtained from the base and side walls of the excavations following fuel tank removal and chasing out of visually and olfactory contaminated sand and gravel/clay sand soils were submitted for both total soils and leachate analysis. The following testing was undertaken to establish contaminant risks to human health and controlled water receptors.

29no. samples were analysed for petroleum hydrocarbons.

23no. samples were analysed speciated PAH, pH and metals.

6no. samples were analysed for VOC/SVOC's.

Head space analysis was used to screen contaminated soils for removal using a PID monitor.

The recorded results are generally below both laboratory detection limits and established Tier 1 commercial end use values for the site. Photographs of all tanks and residual soils are provided within Appendix A and B.

Fuel Tanks C, D, E & F

A total of 46 no. soil verification samples were obtained from the base and side walls of the excavations following fuel tank removal and chasing out of visually and olfactory contaminated sand and gravel/clay sand soils were submitted for both total soils and leachate analysis. The following testing was undertaken to establish contaminant risks to human health and controlled water receptors.

46no. samples were analysed for petroleum hydrocarbons.

23no. samples were analysed speciated PAH

16no. samples were analysed pH and metals.

21no. samples were analysed for VOC/SVOC's.

Head space analysis was used to screen contaminated soils for removal using a PID monitor.

Table 4.4.1 displays the verification soil samples results for Fuel Tanks, C, D, E & F compared to Tier 1 Commercial End Use values.

Table 4.1.1 – Summary of Tier 1 Exceedances

Summary of Tier 1 Exceedances					
Solid Contamination Results					
DETERMINAND	**No. of Samples**	**Range**	**Average**	**GAC**	**No of Exceedences**
Inorganics, Carbon and Asbestos					
Asbestos Quantification (%)	0	**Not Detected <0.001%**		-	-

pH	10	7.2 – 9.7	8.17	-	-
Total Sulphate	10	131 – 840	345	-	-
Total Cyanide	10	<0.1	<0.1	527	0
Sulphide	10	<10 – 100	27.8	-	-
Total Organic Carbon (%)	10	0.5 – 1.4	0.97	-	-
Metals and Semi-Metals					
Arsenic	10	4.1 – 14	6.71	640	0
Cadmium	10	<0.1 – 0.4	0.12	190	0
Chromium III	10	11 – 28	21.2	8600	0
Copper	10	9.2 - 30	19.82	68,000	0
Lead	10	5.3 – 13	9.76	750	0
Mercury (Inorganic)	10	<0.05	<0.05	1,100	0
Nickel	10	8 – 34	26.4	980	0
Selenium	10	<0.05	0.5	1,200	0
Zinc	10	34 – 87	58.3	730,000	0
Boron	10	<0.2 – 0.4	0.31	240,000	0
Speciated Petroleum Hydrocarbons (TPH-CWG)					
TPH-CWG - Aliphatic >EC5 - EC6	24	<0.01 – 26	2.45	3,200	0
TPH-CWG - Aliphatic >EC6 - EC8	24	<0.01 – 15	1.40	7,800	0
TPH-CWG - Aliphatic >EC8 - EC10	24	<0.01 – 54	2.90	2,000	0
TPH-CWG - Aliphatic >EC10 - EC12	24	< 1.5 – 15	2.06	9,700	0
TPH-CWG - Aliphatic >EC12 - EC16	24	< 1.2 – 7.5	1.46	59,000	0
TPH-CWG - Aliphatic >EC16 - EC21	24	< 1.5 – 2.7	1.55	1,600,000	0
TPH-CWG - Aliphatic >EC21 - EC35	24	< 3.4	3.4	1,600,000	0
TPH-CWG - Aliphatic >EC35 – EC44	24	< 3.4	3.4	-	0
TPH-CWG - Aliphatic (EC10 – EC44)	24	<10.0 – 26	10.67	-	0
TPH-CWG - Aromatic >EC5 - EC7	24	<0.01 – 0.1	0.014	26,000	0

TPH-CWG - Aromatic >EC7 - EC8	24	<0.01 – 0.1	0.014	56,000	0
TPH-CWG - Aromatic >EC8 - EC10	24	<0.01 – 0.1	0.014	3,500	0
TPH-CWG - Aromatic >EC10 - EC12	24	<0.9	0.9	16,000	0
TPH-CWG - Aromatic >EC12 - EC16	24	<0.5	0.5	36,000	0
TPH-CWG - Aromatic >EC16 - EC21	24	<0.6	0.6	28,000	0
TPH-CWG - Aromatic >EC21 - EC35	24	<1.4	1.4	28,000	0
TPH-CWG - Aromatic >EC35 – EC44	24	<1.4	1.4	-	0
TPH-CWG - Aromatic (EC10 – EC44)	24	<10.0	10	-	0
Ali/Aro C10-C44	24	<10.0 – 26	10.67	-	0
Polynuclear Aromatic Hydrocarbons (PAHs)					
Naphthalene	15	<0.03 – 0.1	0.056	190	0
Acenaphthylene	15	<0.03 – 0.1	0.053	83,000	0
Acenaphthene	15	<0.03 – 0.1	0.053	84,000	0
Fluorene	15	<0.03 – 0.1	0.054	63,000	0
Phenanthrene	15	<0.03 – 0.1	0.054	22,000	0
Anthracene	15	<0.03 – 0.1	0.053	520,000	0
Fluoranthene	15	<0.03 – 0.1	0.053	23,000	0
Pyrene	15	<0.03 – 0.1	0.053	54,000	0
Benzo(a)anthracene	15	<0.03 – 0.1	0.053	170	0
Chrysene	15	<0.03 – 0.1	0.053	350	0
Benzo(b)fluoranthene	15	<0.03 – 0.1	0.053	44	0
Benzo(k)fluoranthene	15	<0.03 – 0.1	0.053	1,200	0
Benzo(a)pyrene	15	<0.03 – 0.1	0.053	35	0
Indeno(1,2,3-cd)pyrene	15	<0.03 – 0.1	0.053	500	0
Dibenz(a,h)anthracene	15	<0.03 – 0.1	0.053	3.5	0
Benzo(ghi)perylene	15	<0.03 – 0.1	0.053	3,900	0
Total PAH (Sum of USEPA 16)	15	<0.10 – 2.2	0.60	-	0

BTEX and MTBE (µg/kg)					
Benzene	24	< 0.01 – 0.87	0.05	27	0
Toluene	24	< 0.01 – 1.8	0.1	55,600	0
Ethylbenzene	24	< 0.01 – 2.3	0.17	5,700	0
p&m-xylene	24	< 0.01 – 5.6	0.33	5,900	0
o-xylene	24	< 0.01 – 5.6	0.33	5,900	0
MTBE (Methyl Tertiary Butyl Ether)	24	< 0.01 – 0.19	0.02	-	0

The table above shows that there were no Tier 1 exceedances for the soils analysed to date within the sides and base of excavations following removal of the fuel tanks.

Bunds 1 to 3 were independently tested by NX prior to disposal. These results have not been used in the Tier 1 Assessment, but used by ECC for waste characterization prior to disposal off site to a licensed facility.

Table 4.1.3 – Leachate Analysis Summary

DETERMINAND	UNITS	EQS	DWS	No	Max C	No of Exceedences	LOC. OF EX.
Total Petroleum Hydrocarbons							
TPH Aliphatic C5-C6	µg/l	-	10	12	< 0.1	**0**	N/A
TPH Aliphatic C6-C8	µg/l	-	10	12	< 0.1	**0**	
TPH Aliphatic C8-C10	µg/l	-	10	12	< 0.1	**0**	
TPH Aliphatic C10-C12	µg/l	-	10	12	< 1.0	**0**	
TPH Aliphatic C12-C16	µg/l	-	10	12	< 1.0	**0**	
TPH Aliphatic C16-C21	µg/l	-	10	12	< 1.0	**0**	
TPH Aliphatic C21-C35	µg/l	-	10	12	< 1.0	**0**	
TPH Aliphatic C35-C44	µg/l	-	10	12	< 1.0	**0**	
TPH Aromatic C5-C7	µg/l	-	10	12	< 0.1	**0**	
TPH Aromatic C7-C8	µg/l	-	10	12	< 0.1	**0**	
TPH Aromatic C8-C10	µg/l	-	10	12	< 0.1	**0**	
TPH Aromatic C10-C12	µg/l	-	10	12	< 1.0	**0**	
TPH Aromatic C12-C16	µg/l	-	10	12	< 1.0	**0**	
TPH Aromatic C16-C21	µg/l	-	10	12	< 1.0	**0**	
TPH Aromatic C21-C35	µg/l	-	10	12	< 1.0	**0**	
TPH Aromatic C35-C44	µg/l	-	10	12	< 1.0	**0**	

TPH Aromatic C10-C44	µg/l	-	10	12	< 1.0	**0**
Ali/Aro C10-C44	µg/l	-	10	12	< 1.0	**0**

The table above shows that there were no Tier 1 leachate threshold exceedances for the soils analysed, to date, within the sides and base of excavations following removal of the fuel tanks; when compared to EQS and UKDWS.

Soil concentrations indicate that the proposed development site is unlikely to pose an unacceptable risk to controlled waters when compared to Environmental Quality Standards (EQS) and UK Drinking Water standards and human health when compared to NX Site Specific Assessment criteria for a commercial end use. All soils recorded concentrations below Tier 1 values adopted for the site following the DQRA. Hydrocarbon contamination was generally recorded below detection limits of the laboratory instruments. Copies of the verification test results are provided within Appendix C.

The proposed development area will comprise majority building and hardstanding cover which will restrict vertical and lateral percolation to the underlying aquifers.

CFA piles will be adopted to mitigate the unlikely risks of unrecorded groundwater contamination migration to the underlying Principal Aquifer.

In areas of soft landscaping, to protect end users from isolated concentrations of unrecorded inorganic and organic contamination and possible asbestos fibres, a soil cover system (consisting of a minimum 600mm thick layer) is recommended over deposits of made ground. Where landscaping requirements stipulate deeper areas, then this should be carried out in line with landscaping architects details.

4.2 Imported and Exported Soils

NX Consulting have been provided with the following information regarding imported and exported soils from the Enabling Works Contractor (ECC) under Material Management Plan Declaration reference: 2023-12-18 10:04:11.

Further details and consignment notes can be obtained from East Coast Construction, Catwick Lane, Brandesburton, YO25 8SB. Tel Number: 01964 533112.

Imported Soils

Imported Source	Date of Activity	Nature of Materials	Registered Waste Carriers Licence	Volume (Tonnes)	No of Validation Sampled
Braidwoods, Old Santander Head Offices, Farriers Way, Bootle, L30 4XL	21/02/2024 to 11/04/24	6F5 - crushed concrete - aggregate placed for temporary working platform	CBDU91464	4,840	N/A
FGD, Fletcher Bank Quarry, Ramsbottom	05/03/24 to 08/04/24	6F5 - quarried - aggregate placed for temporary working platform	CBDU101751	2,080	N/A

Exported Soils

NX Consulting have been provided with the following information from the East Coast Construction, relating to exported soils.

EA Permit No:	Address	Date of Activity	Nature of Materials	Registered Waste Carriers Licence	Volume (Tonnes)	No of Validation Sampled
LB3407UX	NRE Aggregates 15 Port Salford Way, Eccles, Manchester, M30 7SF	14/12/23 to 28/03/24	Non-hazardous - Surplus materials to achieve formation level and from soft spot removals	CBDU91464	10,080	N/A
Not provided.	Whitehead Restoration Astley Tyldesley, Manchester, M29 7EW	4/2/2024	Non-hazardous - Surplus materials	CBDU91464	520	N/A
EPR/EB3806TM/V003	Chorley Sands & Aggregates Wigan Lane, Heath Charnock, Adlington, Chorley, PR7 4JT	05/04/24 to 15/04/24	Non-hazardous - saturated surplus materials	CBDU91464	140	N/A
EPR/BS7722ID/V007	Maw Green Soil 3C Waste Limited Treatment Facility, Maw Green Road, Coppenhall, Crewe, Cheshire, CW1 5NG	13/02/24 to 05/04/24	Hazardous - hydrocarbon impacted materials	CBDU91464	1260	N/A

5.0 RISK ASSESSMENT AND TARGET CONCENTRATIONS

Human Health

Quantitative risk assessments have not been established to date to derive site specific clean up criteria for contamination. This is because the results recorded to date for soils have been recorded generally below Environment Agency Soil Guideline Values (SGVs), Generic Assessment criteria and C4Sls. NX Consulting propose continued use of SGVs and GACs for a commercial end use throughout the Main Build works. If deemed necessary as a result of the finding of the any unexpectedly elevated concentrations of hydrocarbon contamination, site-specific clean up criteria will be reassessed via human health QRA.

With regards to site specific clean up criteria for hydrocarbon contaminated Made Ground, remediation works carried out to date have removed the source area (6no. below ground fuel tanks and contamination soils) thus breaking the source-pathway-receptor linkage.

The NX Consulting conceptual model should be continually re-assessed, throughout the main construction works. As such, Tier 1 commercial values have been utilised at this time.

The following table provides Tier 1 values for a range of potential contaminants for the site; for a commercial end use for the use of imported soils for clean cover systems and any bulk fill for earthworks purposes.

Controlled Waters

A detailed quantitative risk assessment has been undertaken, adopting the Environment Agency methodology to hydrogeological risk assessment.

The table below summarises the output from the hydrological assessment, based on the soil and groundwater concentrations observed and assuming a compliance distance of 50m (source area to the site boundary).

Table 5.1– Groundwater Remedial Targets

Determinant	Max soil concentration	Remedial target	Max water concentration	Remedial target
	(mg/kg)		(mg/L)	
TPH Aromatic C10 – C12	31	566	4.5	0.42
TPH Aromatic C12- C16	440	1123	49	0.42
Naphthalene	1.7	750	0.01	0.66
Toluene	<0.01	550	0.003	3.2
Xylenes	0.2	900	0.12	3.25

	Residential with Homegrown Produce.	Residential without Homegrown Produce.	Commercial Industrial with Landscaping
Active Pathways	• Direct Ingestion • Dermal Contact • Consumption of Vegetables and Attached Soil • Inhalation of Indoor Vapour and Dust • Inhalation of Outdoor Vapours and Dust	• Direct Ingestion • Dermal Contact • Inhalation of Indoor Vapour and Dust • Inhalation of Outdoor Vapours and Dust	• Direct Ingestion • Dermal Contact • Inhalation of Indoor Vapour and Dust • Inhalation of Outdoor Vapours and Dust
Critical Receptors	Female Child 0-6yrs Old	Female Child 0-6yrs Old	Female Adult Worker >17 years old.

Determinand/Units	mg/kg	Source	mg/kg	Source	mg/kg	Source
Arsenic	37	LQM / CIEH S4ULs	40	LQM / CIEH S4ULs	640	LQM / CIEH S4ULs
Cadmium	11	LQM / CIEH S4ULs	85	LQM / CIEH S4ULs	190	LQM / CIEH S4ULs
Mercury (inorganic)	40	LQM / CIEH S4ULs	56	LQM / CIEH S4ULs	1,100	LQM / CIEH S4ULs
Nickel	180	LQM / CIEH S4ULs	180	LQM / CIEH S4ULs	980	LQM / CIEH S4ULs
Selenium	250	LQM / CIEH S4ULs	430	LQM / CIEH S4ULs	1,200	LQM / CIEH S4ULs
Chromium III	910	LQM / CIEH S4ULs	910	LQM / CIEH S4ULs	8,600	LQM / CIEH S4ULs
Chromium VI	6	LQM / CIEH S4ULs	6	LQM / CIEH S4ULs	33	LQM / CIEH S4ULs
Lead	450	C4SLs	450	C4SLs	750	C4SLs
Copper	2,400	LQM / CIEH S4ULs	7,100	LQM / CIEH S4ULs	68,000	LQM / CIEH S4ULs
Zinc	3,700	LQM / CIEH S4ULs	40,000	LQM / CIEH S4ULs	730,000	LQM / CIEH S4ULs
Boron	290	LQM / CIEH S4ULs	1100	LQM / CIEH S4ULs	240,000	LQM / CIEH S4ULs

Consulting Tier 1 Values Version 1 - CLEA 2009 (Software Version 1.06)

LQM /CIEH S4ULs Copyright Land Quality Management Limited. Reproduced with permission Publication No. S4UL3671. All right reserved.

Standard Land Use Scenario	Residential with Homegrown Produce			Residential without Homegrown Produce			Commercial			Source
Determinand/SOM	1% SOM	2.5% SOM	6% SOM	1% SOM	2.5% SOM	6% SOM	1% SOM	2.5% SOM	6% SOM	
Naphthalene	*2.3*	*5.6*	*13*	*2.3*	*5.6*	*13*	*190*	*460*	*1100*	LQM / CIEH S4ULs
Acenaphthylene	170	420	920	2900	4600	6000	83000	97000	10000	LQM / CIEH S4ULs
Acenaphthene	210	510	1100	3000	4700	6000	84000	97000	10000	LQM / CIEH S4ULs
Fluorene	170	400	860	2800	3800	4500	63000	68000	71000	LQM / CIEH S4ULs
Phenanthrene	95	220	440	1300	1500	1500	22000	22000	23000	LQM / CIEH S4ULs
Anthracene	2400	5400	1100	31000	35000	37000	520000	540000	540000	LQM / CIEH S4ULs
Fluoranthene	280	560	890	1500	1600	1600	23000	23000	23000	LQM / CIEH S4ULs
Pyrene	620	1200	2000	3700	3800	3800	54000	54000	54000	LQM / CIEH S4ULs
Benzo(a)anthracene	7.2	11	13	11	14	15	170	170	180	LQM / CIEH S4ULs
Chrysene	15	22	27	30	31	32	350	350	350	LQM / CIEH S4ULs
Benzo(b)fluoranthene	2.6	3.3	3.7	3.9	4	4	44	44	44	LQM / CIEH S4ULs
Benzo(k)fluoranthene	77	93	100	110	110	110	1200	1200	1200	LQM / CIEH S4ULs
Benzo(a)pyrene	*2.2*	*2.7*	*3*	*3.2*	*3.2*	*3.2*	*35*	*35*	*35*	LQM / CIEH S4ULs
Indeno(1,2,3-cd)pyrene	27	36	41	45	46	46	500	510	510	LQM / CIEH S4ULs
Dibenz(a,h)anthracene	0.24	0.28	0.3	0.31	0.32	0.32	3.5	3.6	3.6	LQM / CIEH S4ULs
Benzo(ghi)perylene	320	340	350	360	360	360	3900	4000	4000	LQM / CIEH S4ULs
Benzene	*0.087*	*0.17*	*0.37*	*0.38*	*0.7*	*1.4*	*27*	*47*	*90*	LQM / CIEH S4ULs
Toluene	*130*	*290*	*660*	*880*	*1900*	*3900*	*55,600*	*11000*	*18000*	LQM / CIEH S4ULs
Ethylbenzene	*47*	*110*	*260*	*83*	*190*	*440*	*5,700*	*13000*	*27000*	LQM / CIEH S4ULs
Xylenes	*56*	*130*	*310*	*79*	*180*	*430*	*5,900*	*14000*	*30000*	LQM / CIEH S4ULs
Aliphatic C5-C6	*42*	*78*	*160*	*42*	*78*	*160*	*3200*	*5900*	*12000*	LQM / CIEH S4ULs

Standard Land Use Scenario	Residential with Homegrown Produce			Residential without Homegrown Produce			Commercial			Source
Aliphatic C6-C8	*100*	*230*	*530*	*100*	*230*	*530*	*7800*	*17000*	*40000*	LQM / CIEH S4ULs
Aliphatic C8-C10	*27*	*65*	*150*	*27*	*65*	*150*	*2000*	*4800*	*11000*	LQM / CIEH S4ULs
Aliphatic C10-C12	*130*	*330*	*760*	*130*	*330*	*770*	*9700*	*23000*	*47000*	LQM / CIEH S4ULs
Aliphatic C12-C16	*1100*	*2400*	*4300*	*1100*	*2400*	*4400*	*59000*	*82000*	*90000*	LQM / CIEH S4ULs
Aliphatic C16-C35	*65000*	*92000*	*110000*	*65000*	*92000*	*110000*	*1600000*	*1700000*	*1800000*	LQM / CIEH S4ULs
Aliphatic C35-44	*65000*	*92000*	*110000*	*65000*	*92000*	*110000*	*1600000*	*1700000*	*1800000*	LQM / CIEH S4ULs
Aromatic C5-C7	*70*	*140*	*300*	*370*	*690*	*1400*	*26000*	*46000*	*860000*	LQM / CIEH S4ULs
Aromatic C7-C8	*130*	*290*	*660*	*860*	*1800*	*3900*	*56000*	*110000*	*180000*	LQM / CIEH S4ULs
Aromatic C8-C10	*34*	*83*	*190*	*47*	*110*	*270*	*3500*	*8100*	*17000*	LQM / CIEH S4ULs
Aromatic C10-C12	*74*	*180*	*380*	*250*	*590*	*1200*	*16000*	*28000*	*34000*	LQM / CIEH S4ULs
Aromatic C12-C16	*140*	*330*	*660*	*1800*	*2300*	*2500*	*36000*	*37000*	*38000*	LQM / CIEH S4ULs
Aromatic C16-C21	*260*	*540*	*930*	*1900*	*1900*	*1900*	*28000*	*28000*	*28000*	LQM / CIEH S4ULs
Aromatic C21-C35	*1100*	*1500*	*1700*	*1900*	*1900*	*1900*	*28000*	*28000*	*28000*	LQM / CIEH S4ULs
Aromatic C35-C44	*1100*	*1500*	*1700*	*1900*	*1900*	*1900*	*28000*	*28000*	*28000*	LQM / CIEH S4ULs
Aromatic+aromatic EC>44-70	*1600*	*1800*	*1900*	*1900*	*1900*	*1900*	*28000*	*28000*	*28000*	LQM / CIEH S4ULs
Phenol	280	550	1100	750	1300	2300	760	1500	3200	LQM / CIEH S4ULs
Cyanide	527			527			1400			*CLEA 2009*
PCBs	1.7			1.8			1.8			*CLEA 2009*

6.0 UPDATED REMEDIATION STRATEGY FOR MAIN BUILD

6.1 Aims

This report contains a summary of the findings of the previous investigations and the risk assessments carried out, and then uses the risk pathways identified to define clear remediation objectives which must be met to allow the site to be developed without significant risk to human health or the wider environment. The various options for achieving these objectives are explored and a preferred strategy is arrived at and presented.

This updated Remediation Strategy is intended to confirm the preliminary recommendations made are appropriate, refine these into a final implementation plan and provide additional detail regarding the verification programme for the works.

If any unexpected contamination is encountered, then it will be necessary to characterise the source and submit the results of the supplementary investigations and assessments, and confirmation whether these require any amendments to the proposed scheme (as set out in this report).

This strategy does not provide estimates of volumes of material requiring excavation, haulage, treatment, storage, placement or disposal. The factual information provided in the site investigations may provide assistance in determining costs for the remediation programme, however estimating quantities to allow costing of works is outside the scope of this assessment.

The purpose of the remediation is to ensure the site is suitable for use for the proposed commercial development. As noted in the previous section from the point of view of human health assessment the development requires to meet the standards for a commercial end use with plant uptake land use scenario. In addition, the development requires to ensure there is no ongoing risk to the water environment related to soil and groundwater contamination.

As such the aims of this updated remediation strategy are the following:

- Resolve any potential and identified contamination issues in order to protect environmental receptors and render the site suitable for the proposed development.
- Satisfy the Environmental Agency and the Local Planning Authority with regards to soil and groundwater contamination.

6.2 Summary of Remediation Stages for Main Build Contractor

Proposed scope of works summary for the Main Build Contractor:

- Protection and re-routing of site services (if necessary). Seek utility company approval and possible further testing along the line of any new potable water supply.
- Brief all staff of UXO risks in line with the provided 1st Line Defence reports and recommendations.
- Develop a material management plan.
- Piling method statement should consider appropriate and necessary PPE to reduce exposure to ground contamination and include a toolbox talk to ensure piling contractors are aware of ground conditions before any works commence.
- Part-time supervision of the works by a suitably qualified engineer to include detailed records, testing requirements, etc. Including report and dealing with unlikely areas of unrecorded contamination.

- Design and provide CIRIA 665 CS2 ground gas protection measures. Including verification and reporting to the satisfaction of Manchester City Council..
- Verification of imported soils prior to and including placement of a 600mm deep 'clean' soil cover system in landscaped and areas of Public Open Space (P.O.S) areas.
- Validation of the remediated site in the form of a detailed Completion Statement confirming that the works set out in this document and agreed were completed and that the site is suitable for its intended use.

6.3 Site Setup, Organisation and Safety

Site works should be supervised when only deemed suitable by the contractor, by a suitably qualified Engineer, who will report to a Project Manager. Supervision may be part time for certain activities but must be full time if any grossly contaminated soil/fill is identified during construction works.

Site cabins and welfare provisions should be provided in accordance with the HSE Guidelines by the appointed Contractor.

All personnel shall undergo a site-specific health and safety induction prior to commencement of work on site.

Any proposed entry to a confined space or deep excavation must be restricted to a suitably qualified and equipped person and supervised at all times.

Works will be carried out with the proper regard to the following standards:

- Health and safety at work act 1974
- Management of Health and safety at work Regulations 1999
- Construction (Health, Safety and Welfare) Regulations 1994
- Construction (Head Protection) Regulations 1998
- Provision and Use of Work equipment Regulation 1998
- Lifting Operations and Lifting Equipment Regulations 1994
- Construction (design and management) Regulations 1994
- Health and Safety Executive "Protection of Workers and the general public during the redevelopment of Contaminated Land", HS(G)66, HMSO 1991
- The Control of Substances Hazardous to Health Regulations 1994
- Any successive legislation to the above

During any remediation works, all personnel on site will comply with guidance provided in the Health and Safety Executive (HSE) document "Protection of Workers and the general public during the redevelopment of Contaminated Land" & as detailed within the HSE 'Asbestos Essentials' document EM6. In summary, the following should be provided by the appointed contractor if contamination is found during the construction works:

- Protective clothing, footwear, glasses and gloves. (Personnel should be instructed in why and how they are to be used).
- Disposable coveralls should be provided where appropriate.
- Handwashing, eye-washing and boot-washing facilities.
- Smoking shall be limited to designated areas.

If at any time during the works personnel begin to feel unwell, they are to inform the Site Manager/Engineer, who will determine appropriate action.

All visitors to the site must enter and register at the main site contractor's office.

6.4 Contractor's Responsibilities

Prior to the commencement of any works the Contractor, in agreement with their appointed Engineer, shall:

- Satisfy requirements of the Client's contract documentation.
- Establish the boundaries of the site and the working areas
- Liaise with Local Authority regarding working hours, noise/dust/odour control, and protected trees.
- Liaise with the Local Water Company prior to any proposed discharge to local sewers. The Contractor will be responsible for obtaining all necessary permits, licenses and consents for disposal to the foul sewer.
- Complete a full services search and liaise with all relevant utility companies regarding work in close proximity to existing services.
- Prepare a detailed method statement outlining how the objectives in the Remediation Strategy are to be achieved to be agreed with both the client and consultant.
- Prepare any necessary COSSH statement and Health and Safety Plan in accordance with current CDM regulations.
- Provide the engineer with consignment notes and Waste management tip tickets and records.
- The infilling of the excavations should be carried out in line with the earthworks specification for the site.

The Contractor shall satisfy the HSE with regards to all matters concerning health, safety and the welfare of personnel on site.

The contractor shall insure that:

- Personnel, plant, materials and other equipment related to the contract are confined within the boundaries of the site.
- Any live services lying within the site boundary are clearly marked and protected or appropriated arrangements have been made to truncate them.
- Good practise relating to personal hygiene are adopted.
- Suitable precautions are taken to prevent the spread of soil and debris onto public roads.
- Suitable precautions are implemented to prevent offsite migration of any found pollutants via airborne dust and vapours.
- Refuelling of mobile plant is undertaken in a designated area. Above ground fuel storage tanks shall comply with the requirements of the Pollution Prevention Guideline PPG2. A spill kit shall be kept adjacent to any fuel storage area.

6.5 Engineering Supervision and Verification

The Engineer shall ensure that the requirements of the Remediation Strategy are complied with in a safe and orderly manner.

The responsibilities of the Engineer shall include but are not limited to the following:

- Retrieval of soil samples from suitable sources prior to importation to site and the subsequent scheduling of appropriate laboratory analysis to enable validation of various aspects of the works, and to advise the project manager of progress and unforeseen occurrences.
- Liaise with statutory authorities as required by the contractor.

- Liaise with Client as required.

When onsite, the Engineer will maintain a record of the works to include the following:

- Daily record sheets and summary of the day's activities.
- Date and weather conditions
- Test results

All areas of reduced excavation should be recorded by the use of digital photography of the excavation with a suitable scale indicator (such as survey staff) prior to backfilling. All photographs should include landmarks or other indicators proving their geographical location and indicate the entire area of backfilling, as well as detailed assessments of banks and boundaries.

On satisfactory completion of the works the Engineer will provide a verification report outlining and including the following:

- A summary of the desk study, site investigation report.
- A summary of the preparatory works undertaken and remediation strategy.
- Details of who carried out the respective remedial works.
- Details and justification of any changes from the original remediation strategy, including unforeseen ground conditions.
- Copies of any correspondence with Regulators relating to specific aspects of remedial works.
- Substantiating validation data included as follows:
    - Laboratory and in-situ test results (Geotechnical and Chemical)
    - Chemical test results relating to clean up criteria
    - Representative plans depicting treated areas and any amendments to strategy as a result of finding further contamination (if necessary).
    - Photographic records
    - Waste management tip tickets and records
- Recommendations with regards to the handling of contaminated soils.

The remedial recommendations will be produced in accordance with results obtained for the remediation strategy investigation and thus may differ significantly from the recommendations originally presented in the site investigation report.

6.6 Contamination, Clean Cover Systems & Verification Sampling

To conform with Condition 28 of the planning conditions (as set out below) requires the prior submission of unexpected contamination details if found to be provided on a phased basis:

"In the event that contamination is found at any time when carrying out the approved development that was not previously identified, it must be reported in writing immediately to the Local Planning Authority. An investigation and risk assessment must be undertaken and, where remediation is necessary, a remediation scheme must be prepared for that phase of development, submitted to and approved in writing by the Local Planning Authority. Following completion of measures identified in the approved remediation scheme a verification report must be prepared, submitted to and approved in writing by the Local Planning Authority".

Although unlikely, areas of potential contamination, not identified in the site investigation, may be encountered during the remedial works. The contractor should stop works, notify the Engineer immediately providing reasonable notice for site attendance.

Any grossly contaminated soil/fill found during construction works shall be placed in temporary stockpiles on hardstanding or high density Visqueen and be suitability covered to

minimize the potential for dust/odour nuisance and prevent surface water runoff. Samples of arisings material will be taken to determine whether this material is suitable for re-use on site following crushing in line with the earthwork's specification.

Should any visual or olfactory evidence of contamination be identified during the removal of below ground obstructions and the turning over of made ground appropriate samples shall be taken by the Engineer for chemical analysis. The Engineer should check the nature of materials excavated for visual and olfactory evidence of contamination throughout the remedial works. Depending on the results, the excavated materials shall either be returned to the works beneath the proposed cover system or disposed of, off-site to a suitable licensed facility.

Excavations should not be left open for longer than necessary, should be safely battered back and should be securely cordoned-off using 2m high Herras-type fencing, with appropriate warning signs whenever excavations works are suspended.

PID assessment will be carried out in excavations and on the stockpiles on a daily basis with mitigation measures being incorporated as required.

Once the excavation of soils has been completed then samples will be taken from the base and sides of the excavations and where possible samples of residual groundwater taken prior to placement. We propose a minimum of 3 samples per side of any excavation.

6.7 Updated Remedial Measures & Material Management Plan

Given the nature of the contamination the most cost effective remedial solution is likely to comprise a simple capping layer.

Within areas of proposed areas of P.O.S and landscaping it is recommended that a minimum of 600mm of Made Ground (below proposed formation level), should be removed from site and replaced with clean inert materials to form a capping layer over any potential contamination.

Where site levels allow, it may be possible to retain the Made Ground on site and provide the 600mm capping layer above.

Where the made ground materials are less than 600mm thick, only the Made Ground materials will require removal.

In areas of the site where buildings and hardstanding are proposed the made ground can be left in-situ as the buildings and hardstanding areas will break the 'pollutant linkage' and remove the pathway for contamination and come in to contact with the end users.

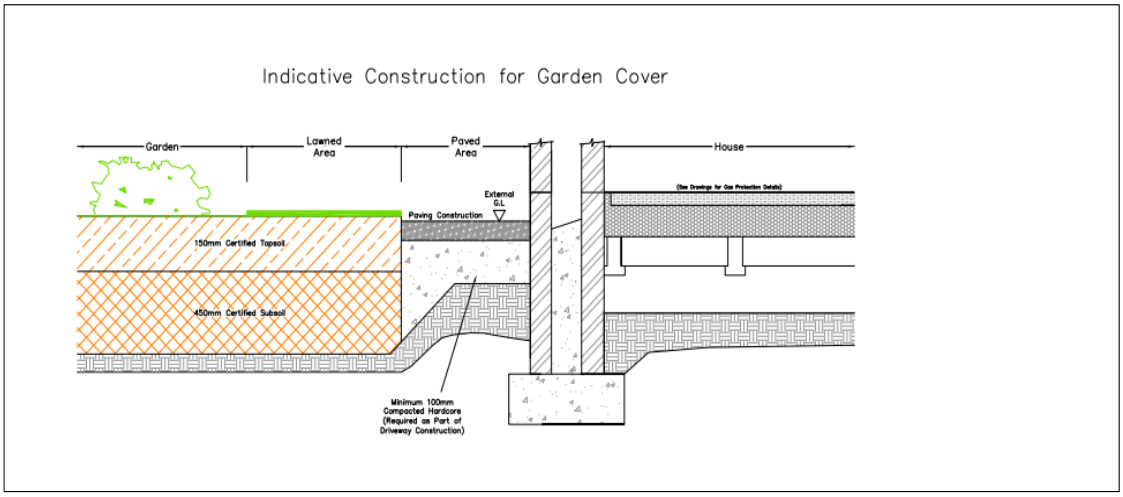


Figure 6.7.1 – Clean Cover System Example

Best practice typically states that the 'clean cover system' layer should comprise a capillary break layer/hard to dig layer comprising 100mm of compacted stone or geotextile membrane beneath the 450mm of clean imported subsoil and 150mm of topsoil to form the 600mm the cover system thickness. Given the nature of recorded contamination and commercial end use development, we consider that hard to dig layers are not required in landscaped areas. However, future contractors should be notified to ensure that appropriate PPE is adopted when future excavation works are carried out within proposed landscaped areas.

Cover system depths and sample ratios should be carried out in line with Section 6 of Manchester City Council's Planning and Technical Guidance document relating to ground contamination, dated February 2021.

Materials imported to site are required to be suitable for the intended commercial purpose.

Construction operations may be subject to regulation using a 'Materials Management Plan' (MMP) to be created in accordance with Version 2 of the CL:AIRE Definition of Waste – Industry Code of Practice. If so, the MMP should be created with due consideration to all proposed remediation and enabling works operations prescribed within this document and should be undertaken by a Qualified Person and a signed declaration submitted to the EA prior to re-use of materials on the site.

Topsoil should be in line with BS 3882: 2015 'Specification for topsoil' above the break subsoils and/or breaker layer.

At the site boundaries care should be taken not to undermine any existing structures or infrastructure. Where, such a risk may be present, it is recommended that any remedial excavations are battered back at a suitable angle (1:1). Given the relatively low levels of contaminants recorded and the very limited areas this is likely to entail any potential residual risk is likely to be very low.

Soils that are imported must be stockpiled separately to allow for validation. It is the responsibility of the Contractor and the Contractor's appointed engineers to validate the material as being suitable for use. It is crucial that the stockpiles are kept clean of any

construction materials in order to prevent them being inadvertently identified as contaminated and rejected for use on site.

Samples should be submitted to the analytical laboratory for a 5-7day turnaround of results. A shorter turnaround time can be achieved upon the request of the client with a surcharge fee for expedited results requests. The appointed Engineer should respond within 24 hours of receiving laboratory results from each stockpile; notifying the Contractor if the materials are suitable for their intended use. This procedure should be adopted for every stockpile brought to site for purposes of remediation and topsoil laying.

6.8 Control of Water

During the removal of below ground obstructions and the excavation through of the Made Ground, perched water may be encountered.

Groundwater shall be control in accordance with CIRIA report 113 "Control of Ground Water to Temporary Works".

Arrangements should be made to prevent ponding in any excavation, the Contractor shall ensure that ground levels are of sufficient gradient to enable the collection of surface water run-off in sumps or grips.

Any potentially contaminated water shall not be allowed to migrate into other areas until the results of the analysis are available and, if required, a suitable means of water treatment has been agreed.

Pumping from over excavated sumps may be required to maintain satisfactory working conditions.

6.9 Exported to Landfill

Any soils to be exported from site should be allocated an appropriate waste code, following the steps within Technical Guidance WM3: Waste Classification - Guidance on the classification and assessment of waste 2015.

The samples tested to date are likely to be classified as NON-HAZARDOUS and HAZARDOUS WASTE. This should be confirmed by the appointed waste management contractor following submission of all available test results carried out at the site to date.

Any material exported from the site to landfill should be hauled by a registered waste carrier in accordance with the requirements of the Duty of Care Regulations, 1991 and the Landfill (England and Wales) Regulations 2005.

A transfer note should then be completed, signed and retained by the parties involved. The transfer note should include the volume of waste, the nature of the material and a statement of its chemical composition, details of the source and destination sites, and details of the haulier.

In order to protect the general public from dust and vapour emissions, wagons that are used for the haulage of the contaminated material from the site must be sheeted. In addition, the Contractor must ensure that no fluids seep from the wagons.

All hazardous waste going for disposal at landfills must be classified according to the new European Waste Catalogue (EWC).

Contaminated soils are minor entries in the EWC. Waste contaminated soils may be classified as either hazardous or non-hazardous depending on the concentrations of "dangerous

substance" in the waste soil. An assessment of the composition of the waste soil will therefore be undertaken to determine if it is hazardous waste.

The WAC set threshold concentrations for leachable components of the waste stream and landfill operators will have waste acceptance procedures in place to ensure that only compliant waste is landfilled. Most waste will need to be treated before it can be landfilled to reduce its quality and the hazard it presents. Leaching compliance testing will be required in accordance with BS EN 14899:2005.

6.10 Dust, Odour Control & Noise

The excavation of fill should not present a significant problem with regard to emission of dust during the excavations and transport. However, at all times during the excavation works, Best Practicable Means shall be employed to minimise dust and odour generation and their emission off site.

In general terms, remedial and preparatory works are not considered likely to give rise to any significant odour problems. Whilst considered unlikely, if highly odorous materials are encountered which may give rise to nuisance to neighbouring properties, odour control measures can be considered at that time and an appropriate method statement supplied by the Contractor.

Any odorous materials should be covered at the end of each working day and any stockpiles will be located away from any residential properties. This should be continually assessed through the works.

The requirements of BS 5228:2009 'Noise and vibration control on construction sites' should be adhered to at all times. All machinery should be fitted with effective silencers and should be serviced at regular intervals. No items of plant should be operated with engine covers raised. The location of any crushing plant should take into consideration the location of neighbouring properties and other noise sensitive receptors and should be located away from these areas and located adjacent to proposed stockpile locations, where possible and practicable.

6.11 Controlled Waters

The superficial drift strata beneath the site are classified a Secondary (Undifferentiated) aquifer resources with underlying solid geology classified as a Principal aquifer. It is imperative that no pathways are created which results in impact of the underlying sandstone aquifer.

True sandstone aquifer groundwater levels are likely to be encountered at a significant depth and are unlikely to have an adverse impact on the site, although localised perched groundwater is present within granular pockets within the Made Ground and Glacial till deposits.

The risk to Controlled Water receptors from leaching and groundwater migration is considered to be low post construction.

7.0 VERIFICATION SUMMARY

7.1 Clean Cover Systems

Validation samples will need to be collected from all materials to be imported onto site to facilitate the proposed residential development.

Soil samples destined for chemical analysis to be collected in appropriate sampling containers. All samples will subsequently be stored in cool boxes prior to submission to a suitably accredited laboratory for analysis.

Where materials are found to contain concentrations of potential contaminants at levels in excess of the site specific screening criteria (as detailed within Section 5.0), undertake further assessment and recommendations on the appropriate use for the material in question.
For any imported materials required to complete the cover soils, the frequency of testing to be undertaken shall be as given in the Manchester City Council Planning & Contaminated Land Technical Guidance document, Sampling Ratios for Cover Systems, dated February 2021. The sampling frequency for materials to be managed under the Remediation Strategy is presented within Table 7.0 below. Where less than the stated volumes are utilised a minimum of three samples will be taken from each material/soil source.

Table 7.0 Proposed Testing frequency and analysis.

Soil Source	Sampling Frequency*	Analysis suite
Imported Soils - Brownfield source, or unknown soil source	Residential Gardens: 1:50m^3	Standard metals/ metalloids (should include as a minimum As, Cd, Cr, Cr, VI, Cu, Hg, Ni, Pb, Se, Zn), PAH (16 USEPA speciation), TPH (CWG banded), asbestos, pH and SOM (or calculated from TOC). Any additional analysis dependant on the history of the donor site (e.g. phenol, total cyanide, BTEX, MTBE).
	Soft Landscaping: 1:150m^3	
	Other: 1:200m^3	
Remediated Soils	Residential Gardens: 1:100m^3	Standard metals/ metalloids (should include as a minimum As, Cd, Cr, Cr, VI, Cu, Hg, Ni, Pb, Se, Zn), PAH (16 USEPA speciation), TPH (CWG banded), asbestos, pH and SOM (or calculated from TOC). Any additional analysis dependant on the history of the donor site (e.g. phenol, total cyanide, BTEX, MTBE).
	Soft Landscaping: 1:150m^3	
	Other: 1:200m^3	
Imported Soils - Greenfield Source	Residential Gardens: 1:200m^3	Standard metals/ metalloids (should include as a minimum As, Cd, Cr, Cr, VI, Cu, Hg, Ni, Pb, Se, Zn), PAH (16 USEPA speciation), asbestos, pH and soil organic matter (SOM) (or calculated from total organic carbon (TOC).
	Soft Landscaping: 1:200m^3	

	Other: 1:200m^3	

Analysis suite subject to review of specific soil source.

For any soil imported and installed into cover systems, a minimum of 3no. samples should be retrieved and tested regardless of the source/soil used to confirm its chemical suitability. All testing shall be carried out at a UKAS and MCERTS accredited laboratory.

Should any analyte exceed the concentrations shown, then the soil should be considered unsuitable for use within the capping system. The re-use of site won natural soils within the clean growing medium will require careful control of excavation arisings and soil management during the development. Clean soils won on site, or imported, that are not immediately placed, should be stored in stockpiles at agreed locations and sealed, by 'blading', to reduce water ingress and softening.

Depth validation of the capping system will be required. The validation will comprise a hand dug pits, with photographic record and hand pit logs.

The Validation Report will include the following:

- A summary of the preparatory works undertaken and remediation strategy.
- Details of who carried out the respective remedial works.
- Details and justification of any changes from the original remediation strategy, including unforeseen ground conditions.
- Copies of any correspondence with Regulators relating to specific aspects of remedial works.
- Substantiating validation data included as follows:
    - Laboratory and in-situ test results.
    - Chemical test results
    - Representative plans depicting treated areas and any amendments to strategy as a result of finding further contamination (if necessary).
    - Photographic records
    - Waste management tip tickets and records

7.2 Ground Gas Verification

GSV values fall into Characteristic Situations 2 and gas protection measures should be installed beneath all buildings in accordance with BS8485: 2015. Based on a Type C development and CS2 classification and a ground gas protection score of 2.5 to would need to be achieved.

Gas protection measures should be installed as prescribed in BRE 414 with the ventilation of the sub-floor void designed to provide a minimum of one complete volume change per 24 hours. Independent validation of gas protection measures is needed to achieve the required points score.

Ground gas verification should be carried out in line with the following documents:

- Chartered Institute of Environmental Health (2008). The local authority guide to ground gas.

- CIRIA Report C665. CIRIA Report C735 (Good Practice on the Testing and Verification of Protection Systems for Buildings Against Hazardous Ground Gases) and ASTM Standards D4437
- BRE 414 and 212.
- BS8485 2015 and A1:2019 Guidelines.

NX have been provided with detailed drawings by the Environmental Protection Group (EPG) which are available in Appendix A of this document. Typical service entry details from manufacturers are also provided within Appendix A.

A final gas verification report and refined risk assessment is required to confirm the low risk status to identified receptors; post construction.

The Verification report should include the following:

- Site and development details.
- Summary of Gas Risk Assessment
- Details of who carried out installation.
- Details of who carried out verification.
- Description of protection measures installed with reference to method statements and drawings and manufacturers specification of the materials used.
- Details of the actual verification inspection/s.
- Supporting information, plans, photographs, drawings.
- Summary of verification data (completed proformas, inspection record sheets and non-conformance/corrective action record sheets

The appointed engineer should inspect the membrane and selected seams/penetration. Attention being paid to areas most likely to cause failure. For the NX inspections, the seams along the propriety membrane should be subjected to a visual inspection and pick test, if hot welded methods are adopted. Cold weld methods are adopted, the joints should be subjected to an air lance test (where practical).

During the inspections the protection measures should be installed to a good level of workmanship and observed to fully lap over the eternal brick work. Any sub floor venting matts should be observed to be installed in line with manufacturers and structural engineers details. Where necessary any external venting grids should installed into the pin kerbs.

The final Verification Report will need to be submitted to the Local Authority for agreement, prior to building occupation.

8.0 PILING RISK ASSESSMENT

A initial remediation strategy prepared for the site focused on source removal where contamination was encountered during made ground turnover. The remediation approach has resulted in the Primary Source removal and a break in the source-pathway-receptor linkage and recorded a hydraulic separation between the secondary A aquifer and the underlying principal aquifer.

To support the remediation proposal, all piling on site must be undertaken following a methodology to retain the low permeable layer provided by the Glacial Till deposits and prevent the creation of migration pathways.

8.1 Piling method

It is understood that ground conditions support the use of continuous flight auger (CFA) to install the concrete piles.

CFA is a cast in-situ method of piling suited to environmentally sensitive sites where soft natural strata and/or water-bearing strata would usually require deep casings to be used.

A hollow stem auger is advanced into the ground at a constant penetration rate to the desired pile depth. The auger is then extracted, at the same time concrete is pumped down the hollow inside of the auger, continuously filling the resultant void space.

Pressure and volume of the pumped concrete is controlled by instrumentation in the piling rig to ensure positive pressure is maintained as the concrete is pumped into the ground, this prevents the drilled hole from collapsing as the auger is withdrawn. Maintaining a positive pressure also prevents wash out of concrete in aquifers with high transmissivity, although some localised dispersion is likely. The borehole is completely filled with concrete to surface. Steel reinforcement can then be inserted as required.

Some soils are bought to surface as the auger is retracted.

8.2 Risk evaluation

Studies into piling approaches[1] indicate CFA has the least ground disturbance and draw down when drilling through low permeable confining layers.

The degree of displacement depends on the speed of rotation relative to the speed of penetration. Theoretically, according to the study, it should be possible to adjust the rotation speeds so that the volume of soil removed is equal to the volume of concrete placed. If this is achieved, displacements of the surrounding ground should be negligible. There have also been instances of severe ground loss due to over-rotation and the risk is larger in soil deposits containing sand layers below the water table (the geological setting at the Greenheys site).

Research also suggested there was a negligible change in hydraulic gradient after piling, suggesting CFA piles do generally result in good seals in low permeable layers where the clay thickness is equal to or greater than two pile diameters. Individual pile diameters at

[1] Piling in layered ground: risks to groundwater and archaeology, Science Report SC020074/SR, published by Environment Agency, dated 2006

Greenheys will be between 450 to 600mm, giving a required cohesive layer thickness of 900 to 1200mm or more.

Exploratory logs indicate a minimum thickness of Glacial Till of approximately 3.5m. Sufficient clay should be present to ensure a seal and prevent seepage along the pile.

Good workmanship and operation of the CFA rig is essential as is the requirement for a method statement that considers the specific ground conditions and details how drilling will be undertaken to minimise displacement and ensure good seals.

Consideration should also be given to the use of casing through made ground and Glaciofluvial sands in the area of hydrocarbon impact, to prevent migration of mobile contamination during the drilling process.

The table below summarises key risk drivers when considering piling activities and the possible creation of contaminant linkages.

Table 8.2.1 - piling risk drivers

Pollution risk	Likelihood	Mitigation
Creation of preferential pathways, through a low permeability layer	Low	Primary source has been removed. The use of CFA piles should reduce this risk, providing the piling approach is well designed. Piling method statement must consider possible migration pathways and develop an approach to mitigate
Creation of preferential pathways, through a low permeability surface layer, to allow upward migration of landfill gas, soil gas, or contaminant vapours to the surface	Low	Organic contamination is no longer above the cohesive layer, piling will not increase the potential for vapour migration to surface. Mine workings have not been identified on site and mines gas is not anticipated.
Direct contact of site workers and others with contaminated soil arisings	Low	Minimal arisings likely during CFA piling. Providing appropriate health and safety training, planning and monitoring are in place for the works the risks are anticipated to be low. Piling contractors must be made aware of the potential issues associated with potentially contaminated material and this should be included in their piling method statement. Potential exposure can be mitigated with suitable PPE and contaminated arisings will be disposed of offsite as waste.
Direct contact of the piles or engineered structures with contaminated soil or leachate causing degradation of pile materials	Low	Contamination has been removed and contamination should not be in contact with deeper pile material.
The movement of solid contaminants down into an aquifer during pile driving	Low	Research indicates CFA drilling displace material horizontally with minimal downward heave. Some material may be brought to surface as the auger is retracted.

Pollution risk	Likelihood	Mitigation
Contamination of groundwater by concrete, cement paste, or grout	Low	The viscosity and set time of the concrete mix, as well as the bleed potential, will need to be precise to provide confidence the pile has been suitable created. This is particularly important in granular strata with a high groundwater flow. Consideration of this should be detailed in the method statement.

8.3 Piling method statement

The selected piling contractors should produce a method statement detailing the approach to ensure continued protection of the low permeable Glacial Till, having full regard to this risk assessment and potential risk drivers summarised in the table above.
The method statement should include maximum drill rates to minimise the degree of draw down and displacement and to provide confidence the final concrete pile has achieved a good seal.

The method statement should include the approach to cleaning the drill rig between locations and how contaminated arisings will be managed.

It is considered unlikely that contaminated water will be brought to the surface during piling. However, for completeness the method statement should also include a section on managing contaminated waters as a precaution.

Piling using CFA causes minimal displacement of ground and does not create significant volumes of arisings or result in dust. However, the piling method statement should consider appropriate and necessary PPE to reduce exposure to ground contamination and a toolbox talk to ensure drilling contractors are aware of ground conditions before any works commence.

The drillers method statement should be reviewed and approved by the Principal Contractor prior to any works commencing on site.

APPENDICES

A - Drawings & Photographs

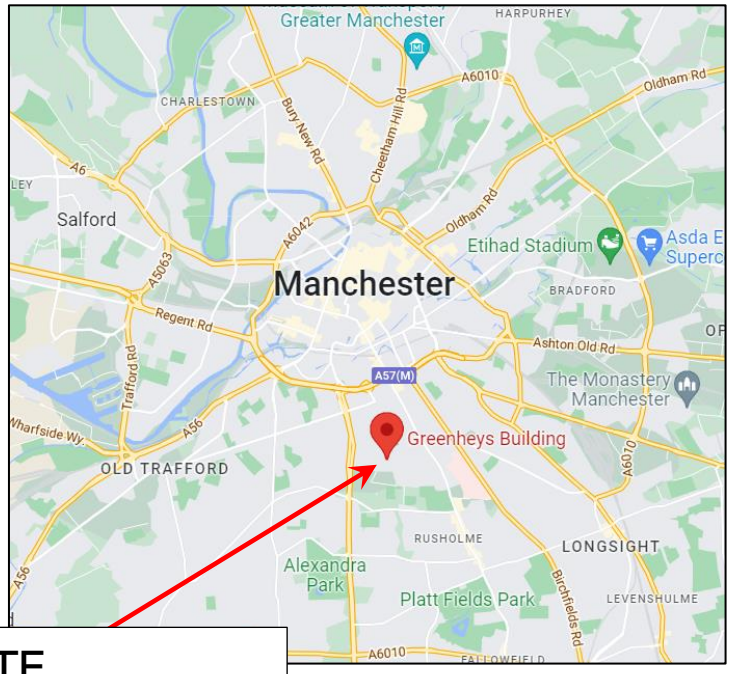
B - Fuel Tanks A, B, C, D, E & F: Engineers Logs & Photofiles

C - NX Verification Testing Results (Chemical)

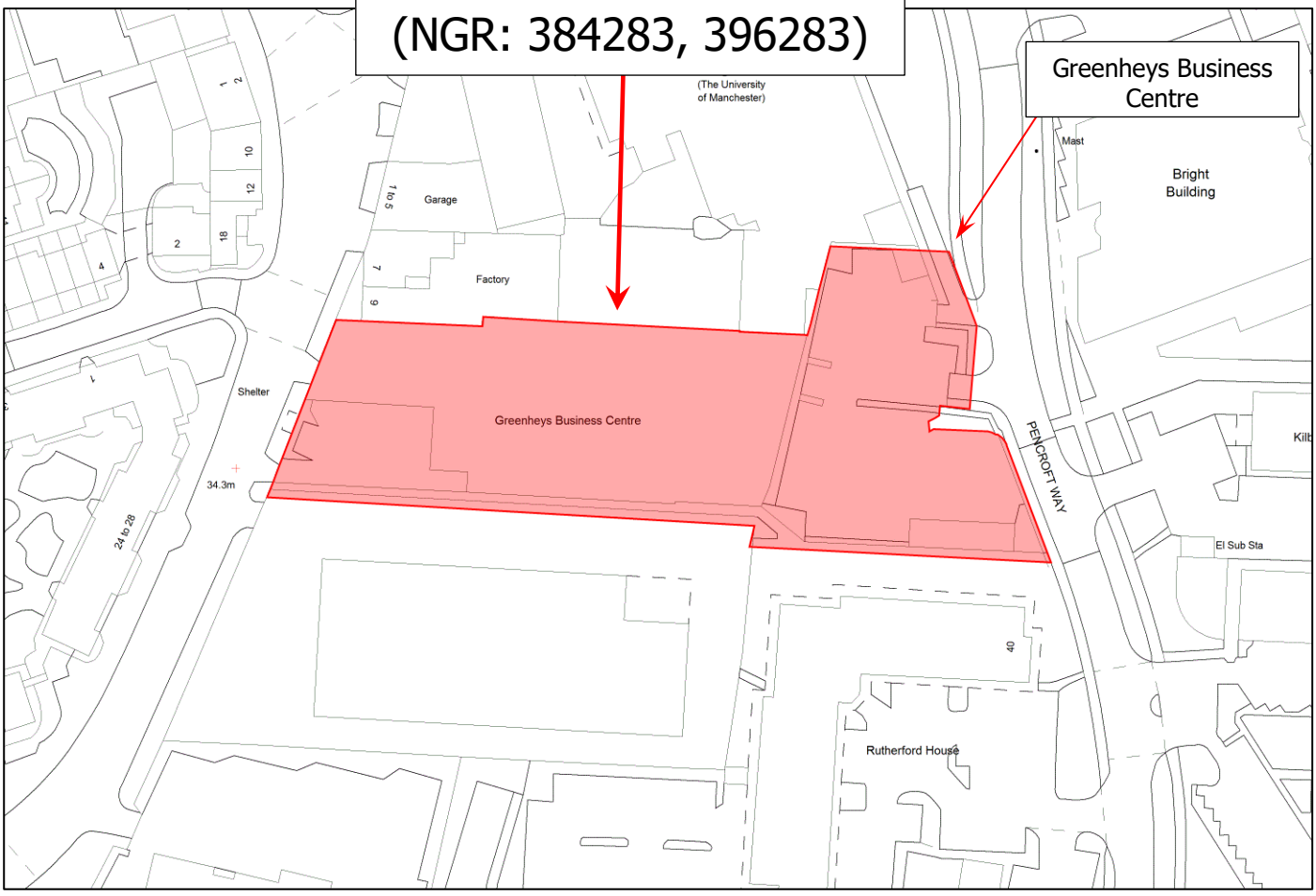
D - Example Contractor Consignment Notes

A - Drawings & Photographs





SITE
(NGR: 384283, 396283)



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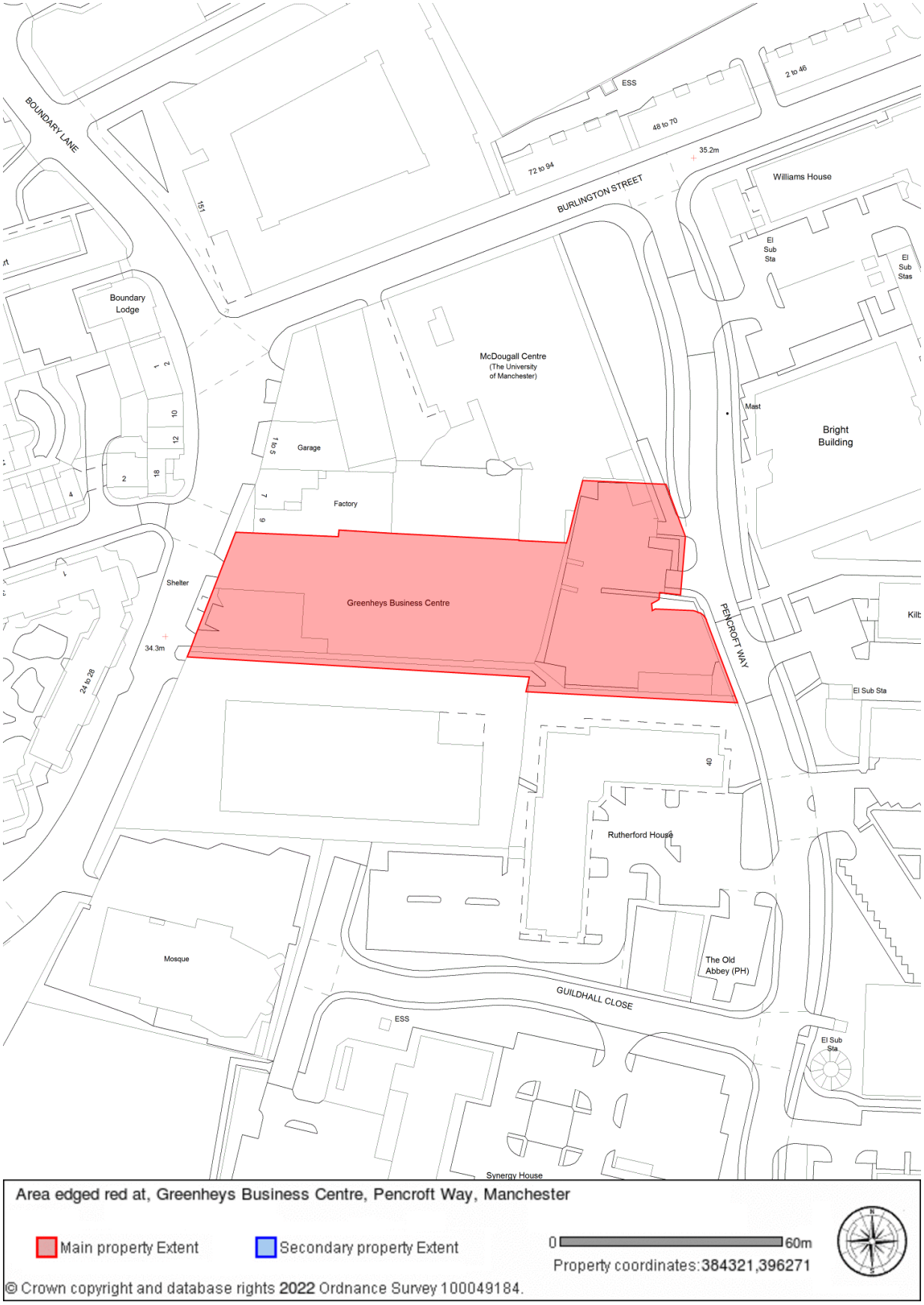
Ref: NX534 Figure 1

Project:

GREENHEYS BUSINESS CENTRE, PENCROFT WAY, MANCHESTER, M15 6JJ

Title:

Site Location Plan



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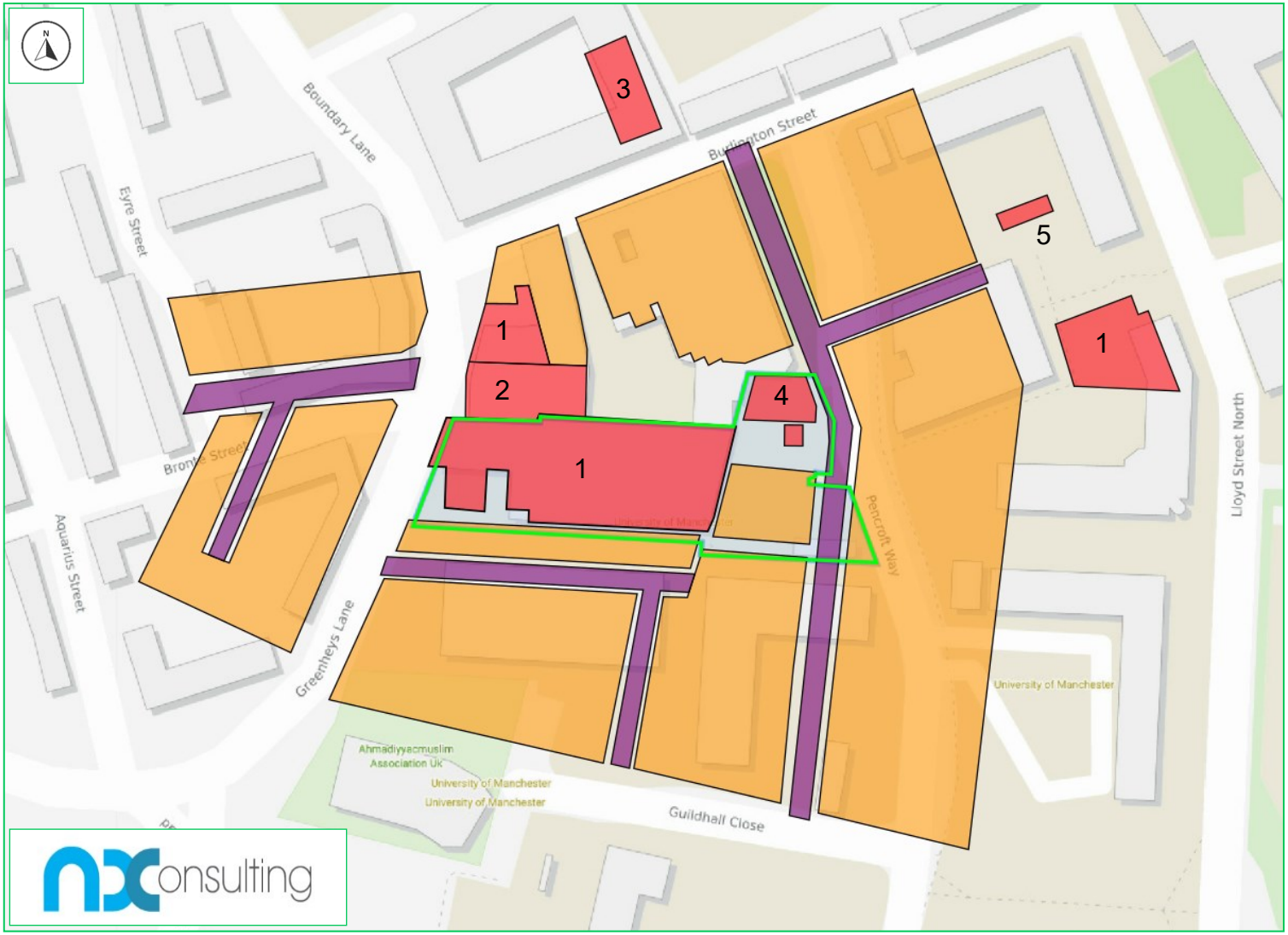
Ref: NX534 Figure 2

Project:

GREENHEYS BUSINESS CENTRE, PENCROFT WAY, MANCHESTER, M15 6JJ

Title:

Site Boundary Plan



Key	
	Approximate Site Boundary
	Denotes Significant Former Developments
	Denotes Subordinate Former Developments
	Denotes Former Roads
1	Former Garage
2	Former Factory
3	Former Clothing Works
4	Former Warehouse
5	Former Engineering Works

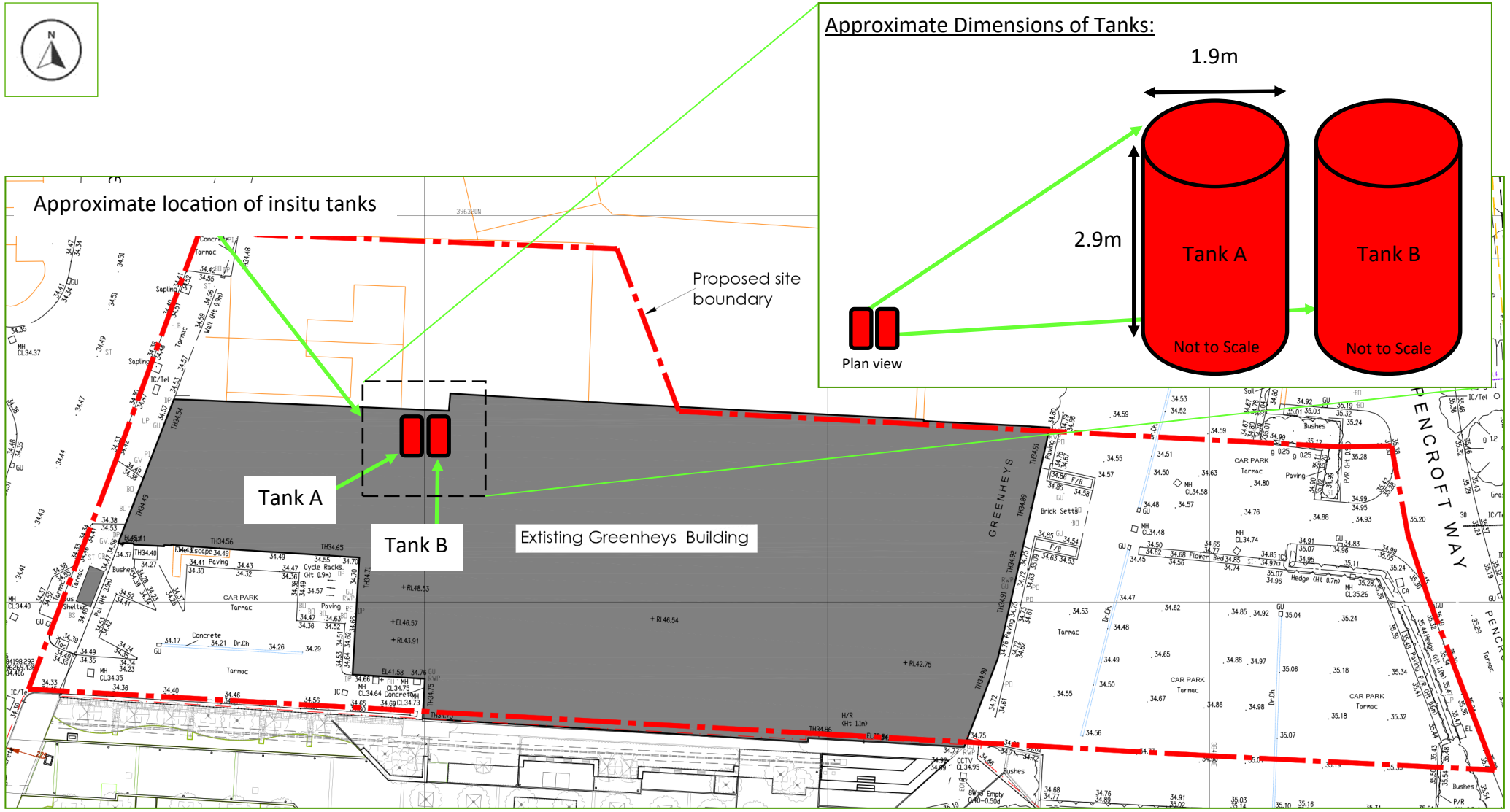
Ref: NX534 Figure 3: Plate 1

Project:

Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ

Title:

Conceptual Site Plan



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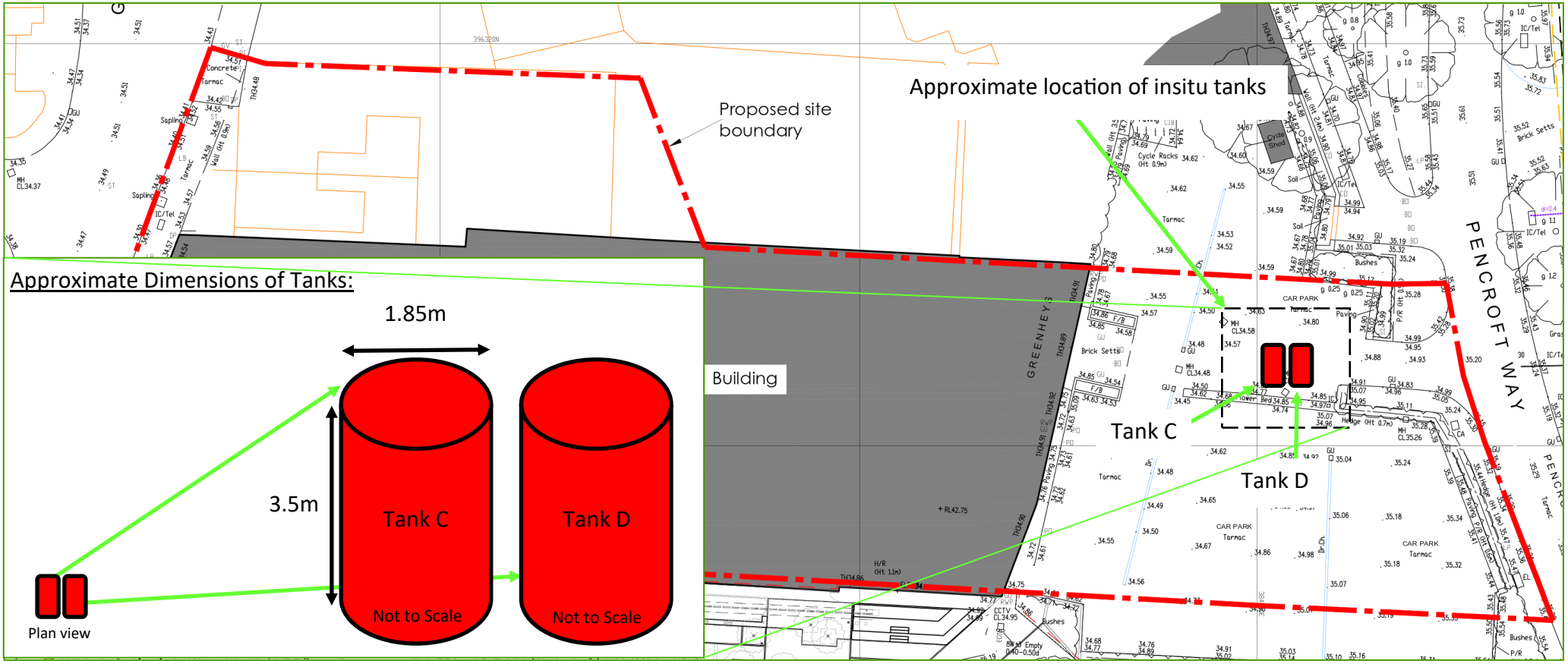
Ref: NX534 Figure 4 - Plate 1

Project:

Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ

Title:

Tank Location Plan



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Ref: NX534 Figure 4 - Plate 2

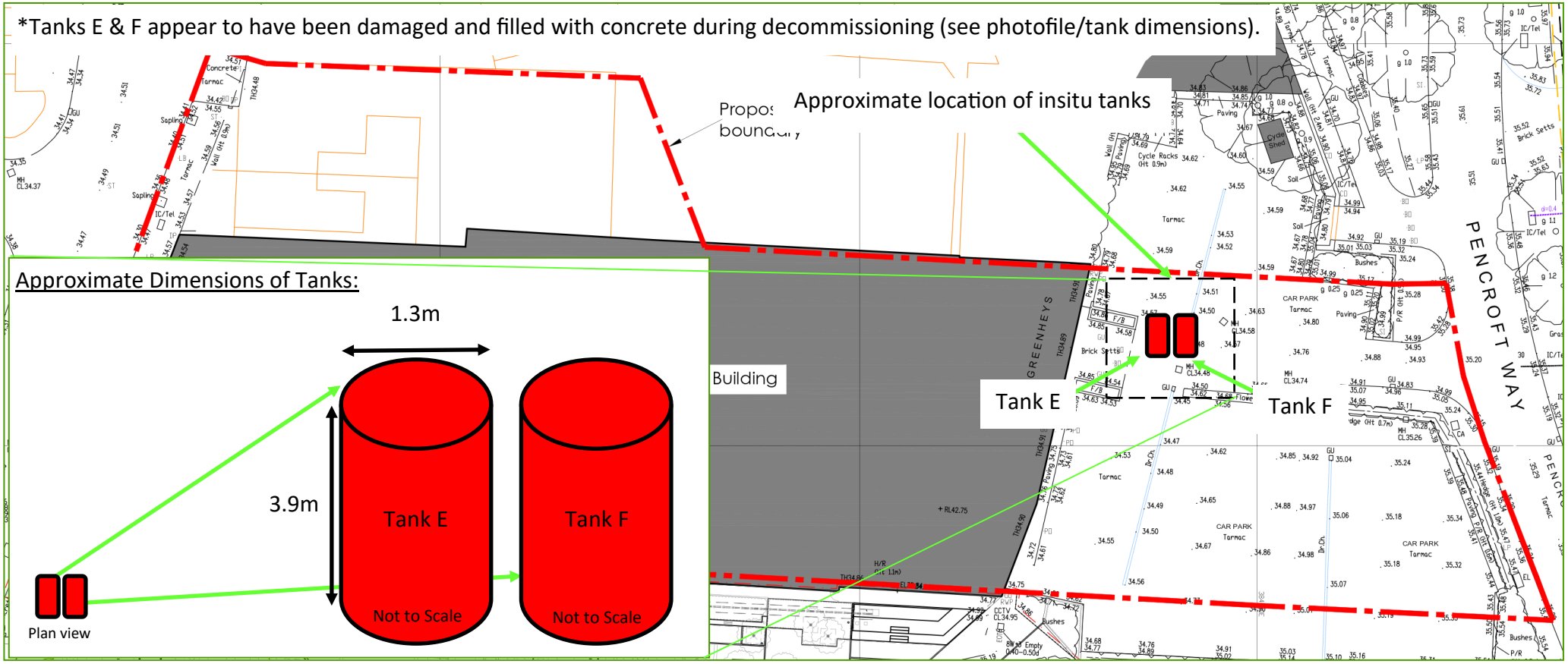
Project:

Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ

Title:

Tank Location Plan

*Tanks E & F appear to have been damaged and filled with concrete during decommissioning (see photofile/tank dimensions).



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Ref: NX534 Figure 4 - Plate 3

Project:

Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ

Title:

Tank Location Plan



Tank A and B, following removal from situ



Ref: NX534 Figure 5 - Plate 1	**Project:** **Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ**
	Title: **Tank Dimensions: Tank A and B Diameter**

Tank A Diameter: 1.9m



Tank B Diameter: 1.9m



nxconsulting	**Ref: NX534 Figure 5 - Plate 2**	**Project:** **Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ**
		Title: **Tank Dimensions: Tank A and B Diameter**

Tank A Length: 1.9m



Tank B Length: 1.9m



nxconsulting	**Ref: NX534 Figure 5 - Plate 3**	**Project:** **Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ**
		Title: **Tank Dimensions: Tank A and B Length**

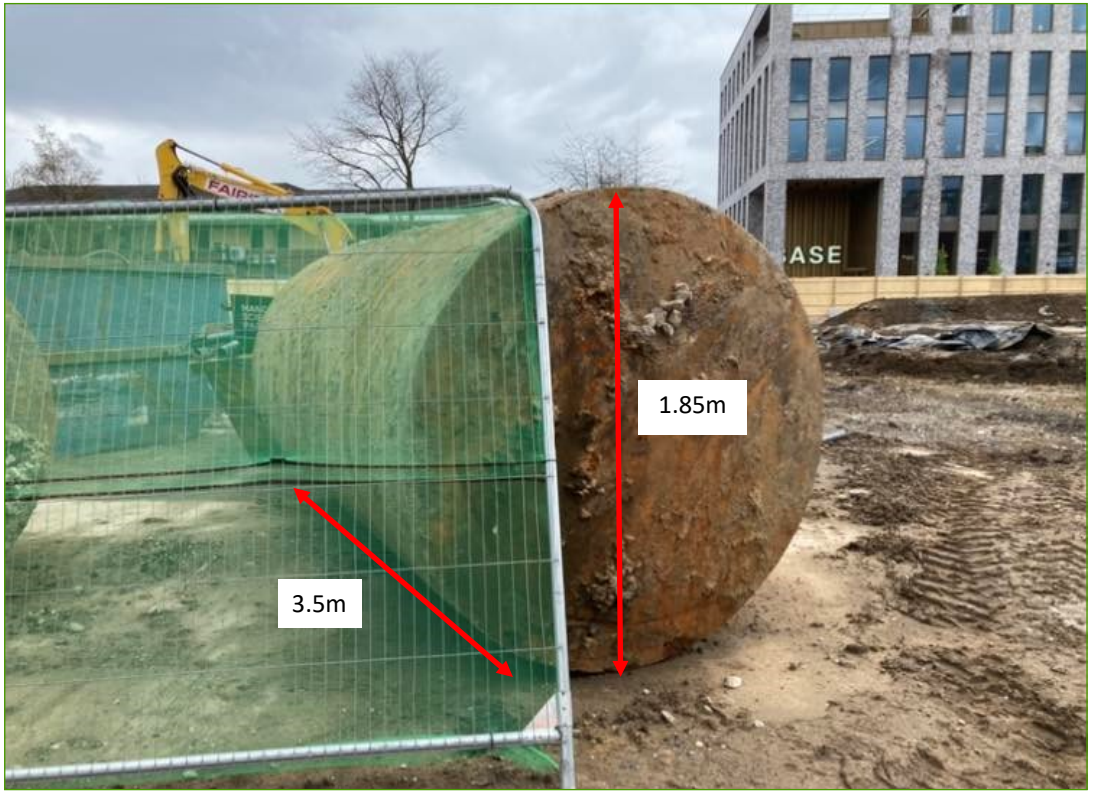
Tank C:





nxconsulting	**Ref: NX534 Figure 5 - Plate 4**	**Project:** **Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ**
		Title: **Tank Dimensions: Tank C**

Tank D:



Tank C and D, being removed from situ



nxconsulting	**Ref: NX534 Figure 5 - Plate 5**	**Project:** **Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ**
		Title: **Tank Dimensions: Tank D**

Tank E:





Ref: NX534 Figure 5 - Plate 6	**Project:** **Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ**
	Title: **Tank Dimensions: Tank E**

Tank E:



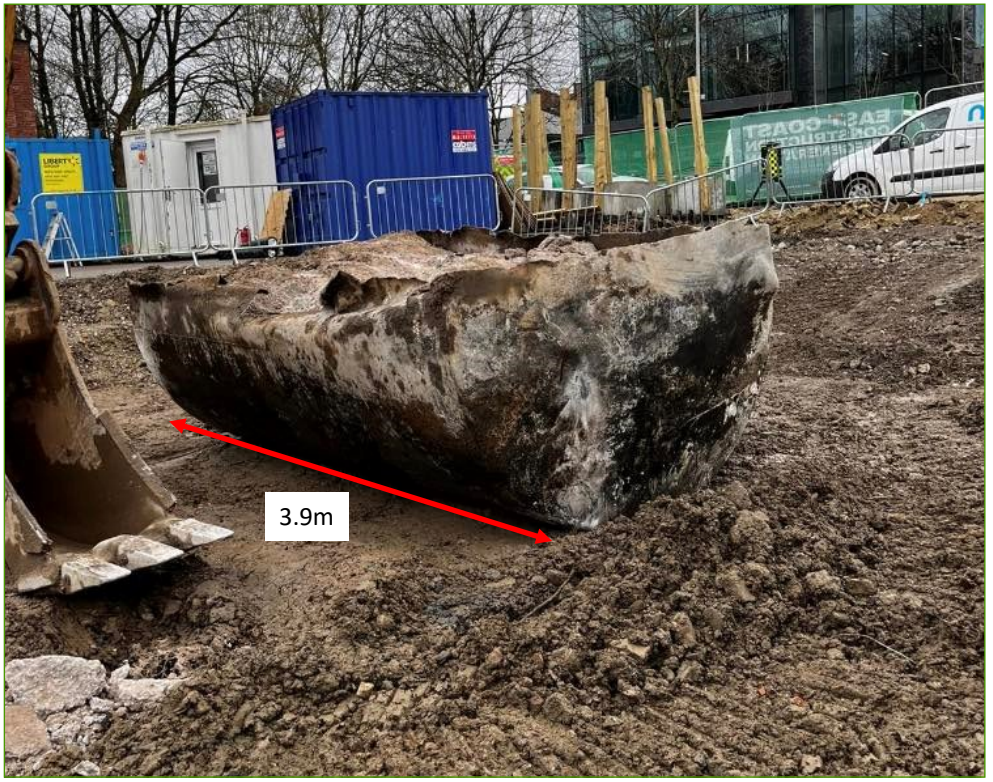
Tank E and F, being removed from situ



Ref: NX534 Figure 5 - Plate 7	**Project:** **Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ**
	Title: **Tank Dimensions: Tank E**

Tank F:

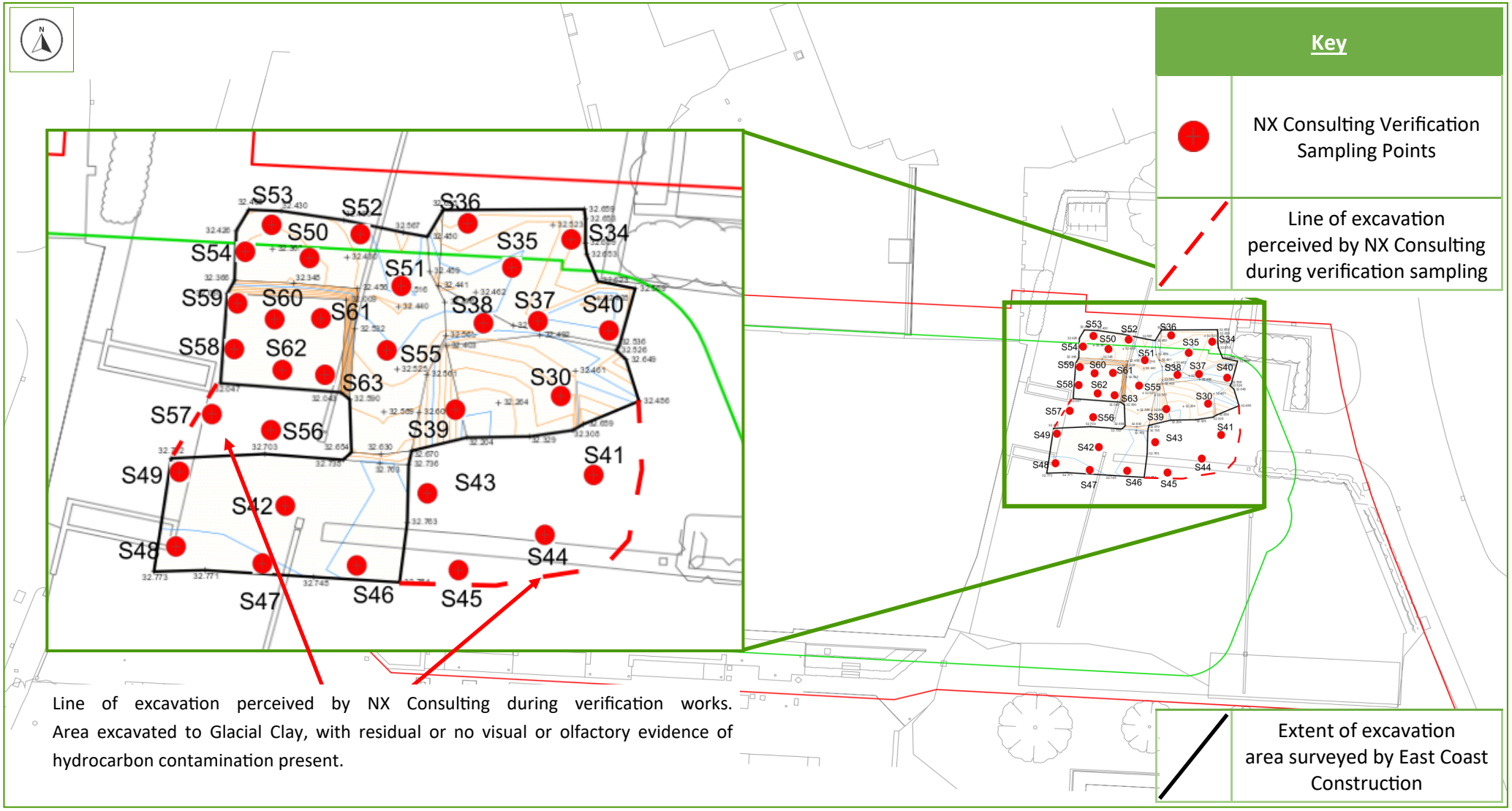




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Ref: NX534 Figure 5 - Plate 8	**Project:** **Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ**
	Title: **Tank Dimensions: Tank F**

Note: Samples S31, S32, S33 were taken within contaminated arisings during excavation. B1: S1-S3, B2: S1-S3, B3: S1-S3 were taken within bunded arisings (Ref: NX534 Bund Location Plan).

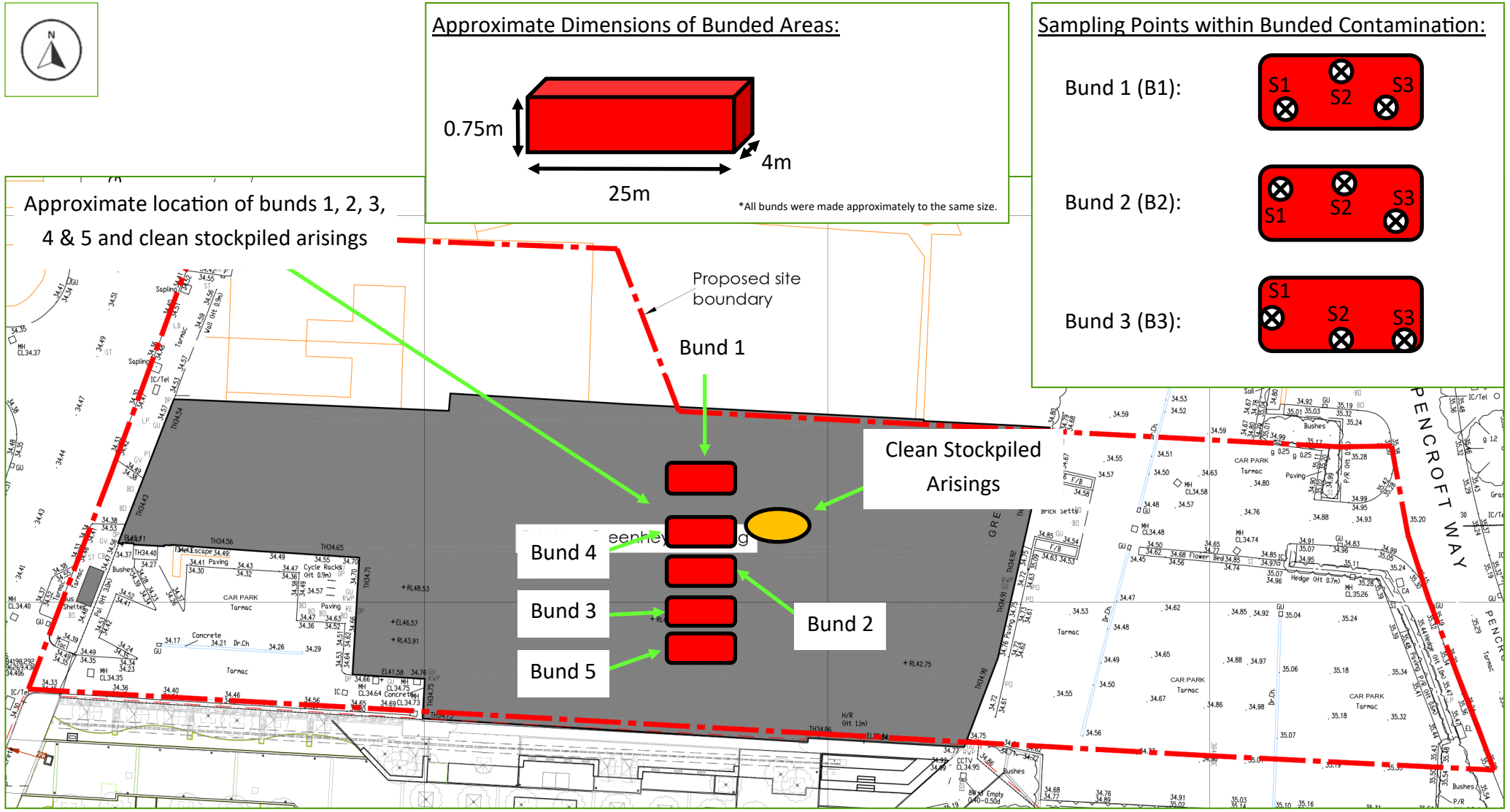


Line of excavation perceived by NX Consulting during verification works. Area excavated to Glacial Clay, with residual or no visual or olfactory evidence of hydrocarbon contamination present.

nxconsulting	**Ref: NX534 Figure 6 - Plate 1**	**Project:** Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ **Title:** Eastern Tanks (C, D, E, F) Verification Sampling Location Plan



nxconsulting	**Ref: NX534 Figure 6 - Plate 2**	**Project:** Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ **Title:** Western Tanks (A & B) Verification Sampling Location Plan



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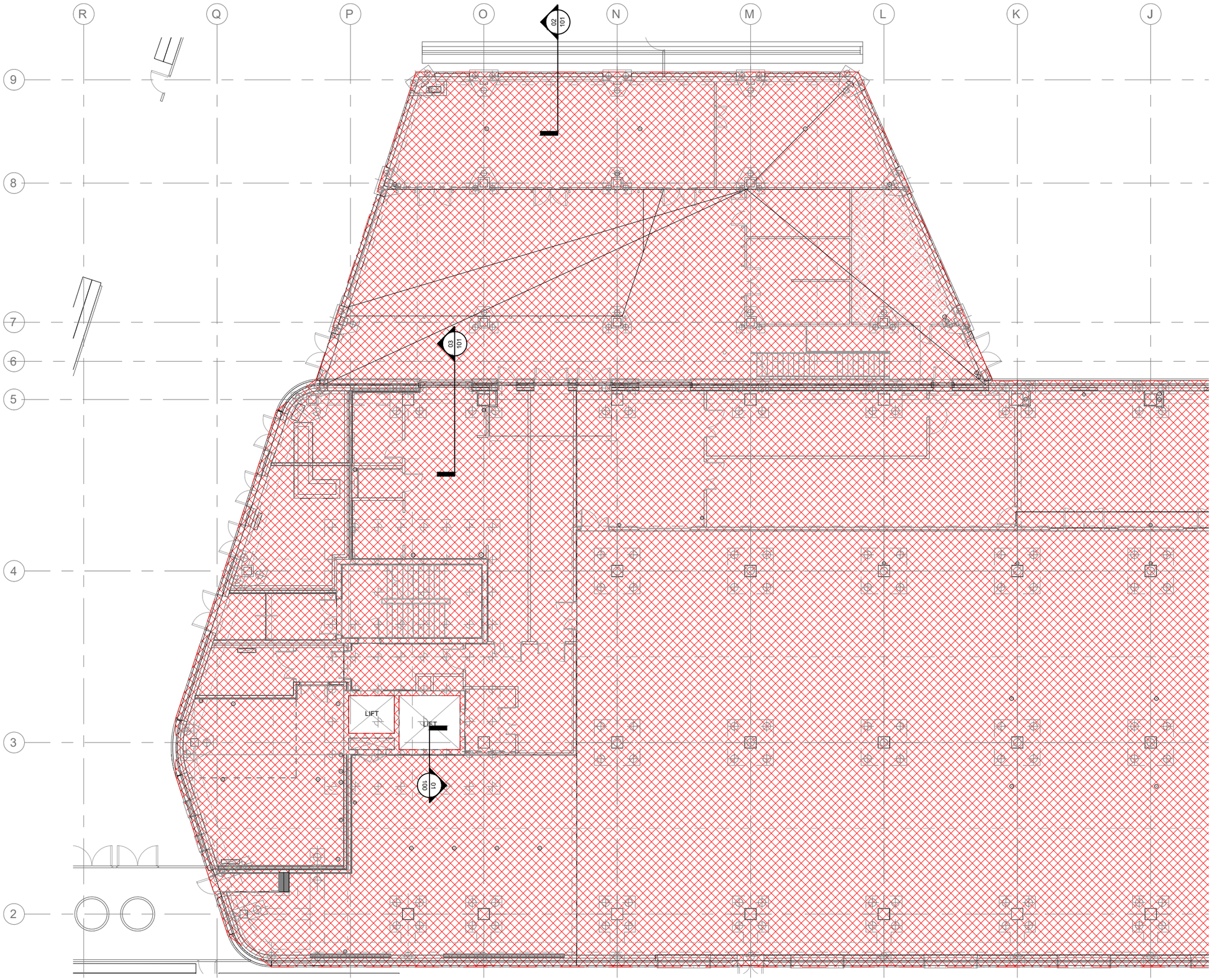
Ref: NX534 Figure 7 - Plate 1

Project:

Greenheys Business Centre, Pencroft Way, Manchester, M15 6JJ

Title:

Bund Location Plan - March 2024



LINKED MODEL SCHEDULE

Legend.

Juta GPH 0.6mm Gas Resistant Membrane Under Insulation

STATUS	REV	DATE	DESCRIPTION	DSG	DRW	CHK	APP
S3	P01	16.02.24	First issue	AJ	CH	AJ	SW

ALL REVISIONS

MAIN CONTRACTOR

CLIENT LOGO

WILLMOTT DIXON CONSTRUCTION

KEY PLAN

ORIGINATOR

Part of the STRI Group
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PROJECT NAME

Greenheys Manchester Science Park

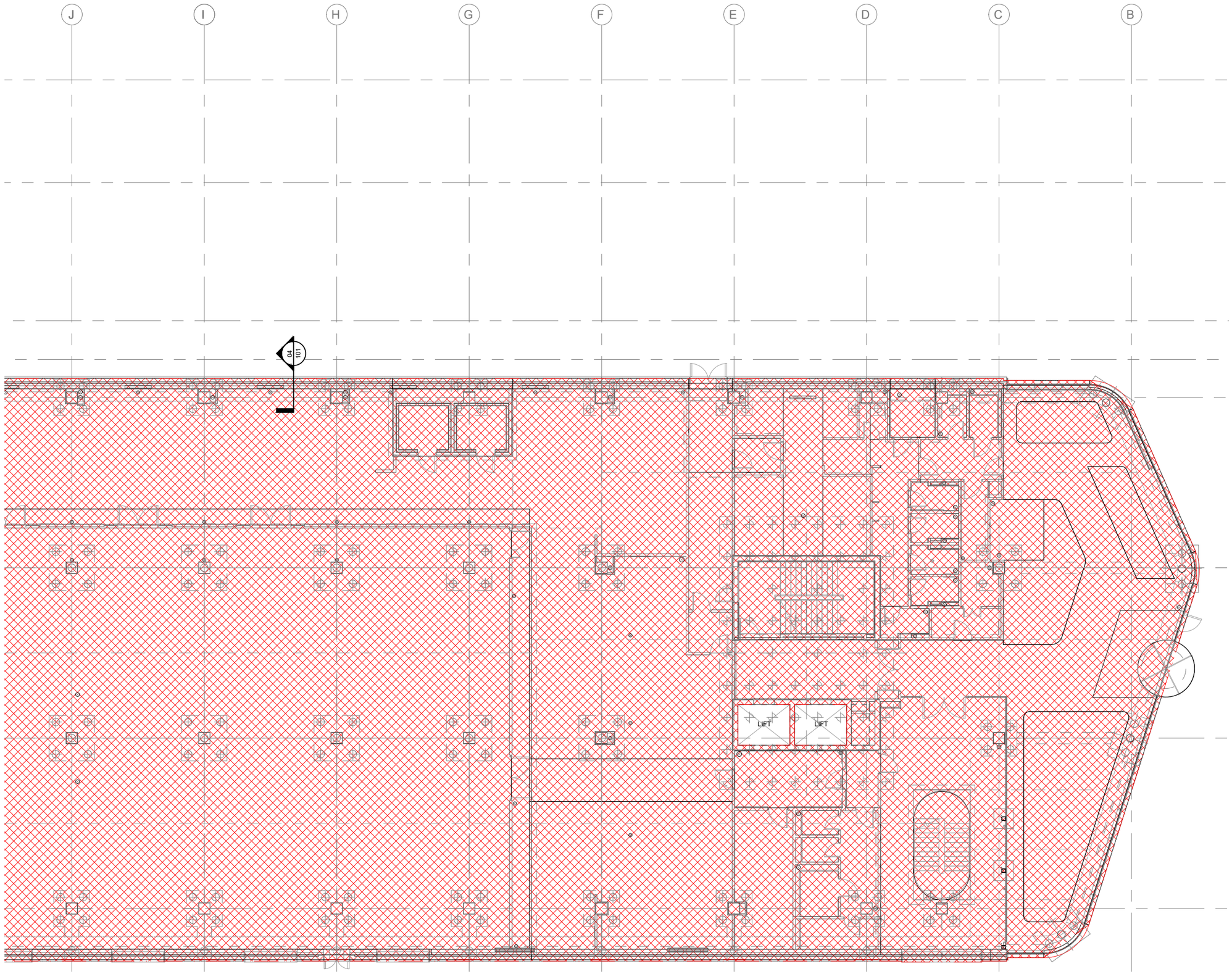
DRAWING TITLE

Ground Floor Layout (sheet 1 of 2)

SCALE @ A3	EPG REF	MODEL FILE NAME - REVISION
1:200	J000436	-

FIRST ISSUE DATE	PROJECT STAGE STATUS CODE
16/02/2024	S3 - Suitable for Review & Comment

PROJECT	ORIGINATOR	VOLUME	LEVEL	TYPE	ROLE	NUMBER	REV
GRE	EPG	ZZ	00	DR	Y	001	P01



LINKED MODEL SCHEDULE

Legend.

Juta GPH 0.6mm Gas Resistant Membrane Under Insulation

STATUS	REV	DATE	DESCRIPTION	DSG	DRW	CHK	APP
S3	P01	16.02.24	First issue	AJ	CH	AJ	SW

ALL REVISIONS

MAIN CONTRACTOR

CLIENT LOGO

WILLMOTT DIXON CONSTRUCTION

KEY PLAN

ORIGINATOR

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PROJECT NAME

Greenheys Manchester Science Park

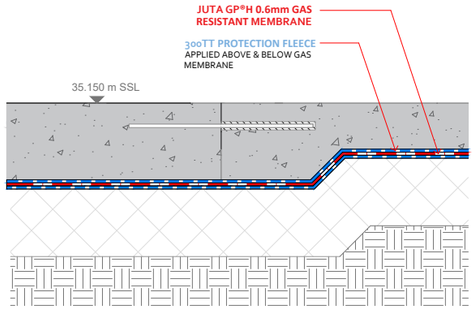
DRAWING TITLE

Ground Floor Layout (sheet 2 of 2)

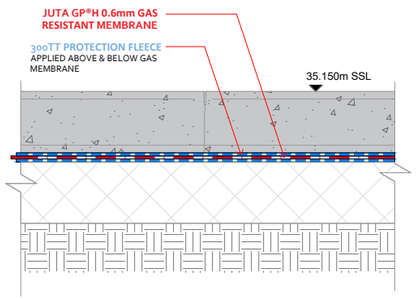
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FIRST ISSUE DATE	PROJECT STAGE STATUS CODE
16/02/2024	S3 - Suitable for Review & Comment

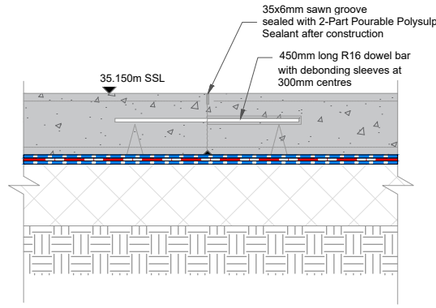
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GRE	EPG	ZZ	00	DR	Y	002	P01



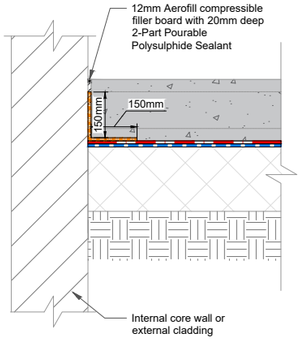
SLAB THICKING DETAIL



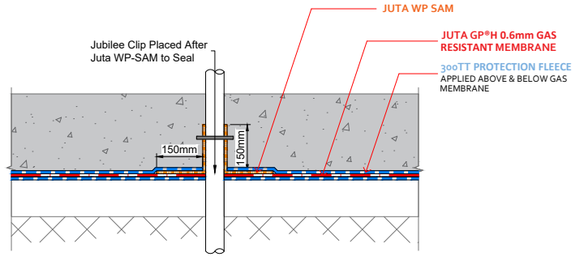
TYPICAL TRANSVERSE JOINT (T.J.)



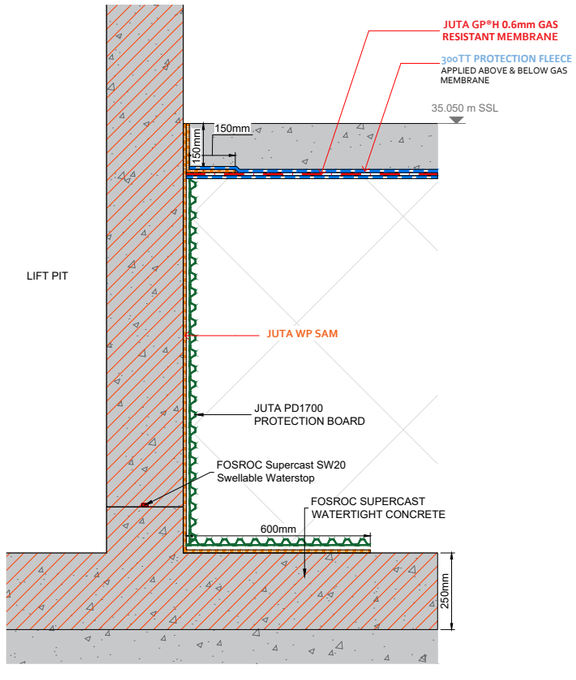
TYPICAL FORMED CONTRACTION JOINT (C.J)



TYPICAL ISOLATION JOINT (I.J.)



PIPE PENETRATION THROUGH GROUND FLOOR SLAB DETAIL



01 LIFT PIT DETAIL

LINKED MODEL SCHEDULE

S3	P02	08.03.24	Sections Updated	AJ | CH | AJ | SW
S3	P01	16.02.24	First issue	AJ | CH | AJ | SW
STATUS	REV	DATE	DESCRIPTION	DSG | DRW | CHK | APP

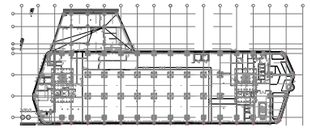
ALL REVISIONS

MAIN CONTRACTOR

CLIENT LOGO

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KEY PLAN



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PROJECT NAME

Greenheys Manchester Science Park

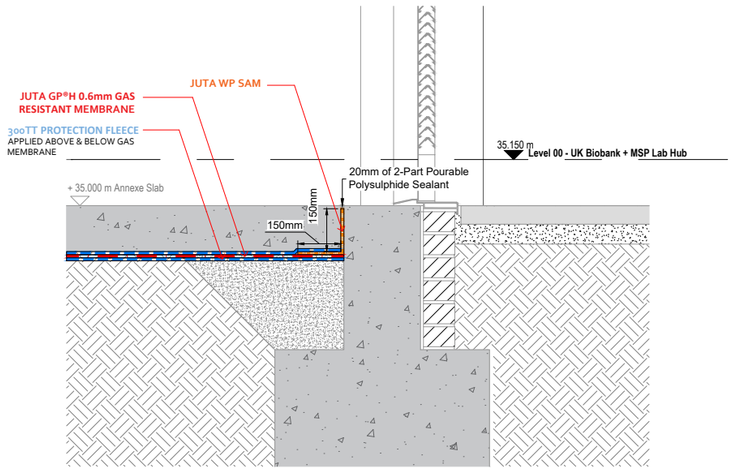
DRAWING TITLE

Sections (Sheet 1 of 2)

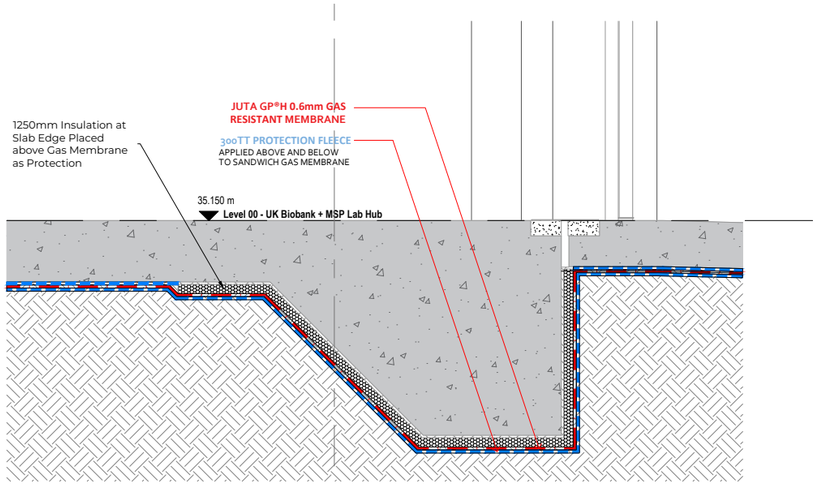
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1:20	J000436	-

FIRST ISSUE DATE	PROJECT STAGE STATUS CODE
16/02/2024	S3 - Suitable for Review & Comment

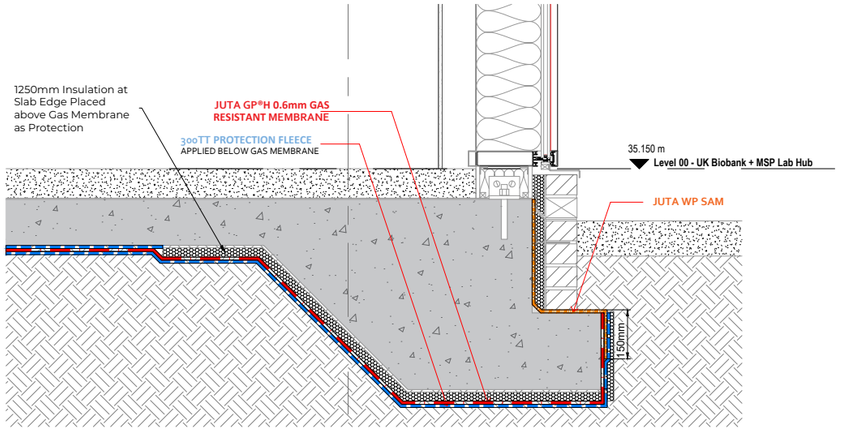
PROJECT	ORIGINATOR	VOLUME	LEVEL	TYPE	ROLE	NUMBER	REV
GRE	EPG	ZZ	00	DR	Y	100	P02



02 SLAB EDGE DETAIL



03 GROUND SLAB DETAIL AT INTERFACE WITH SERVICE YARD



04 SLAB THICKENING TO EDGE DETAIL

LINKED MODEL SCHEDULE

STATUS	REV	DATE	DESCRIPTION	DSG	DRW	CHK	APP
S3	P02	08.03.24	Sections Updated	AJ	CH	AJ	SW
S3	P01	16.02.24	First issue	AJ	CH	AJ	SW

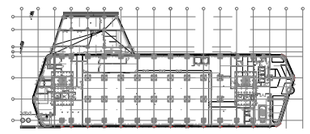
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PROJECT NAME
Greenheys Manchester Science Park

DRAWING TITLE
Sections (Sheet 2 of 2)

SCALE @ A3	EPG REF	MODEL FILE NAME - REVISION
1:20	J000436	-

FIRST ISSUE DATE	PROJECT STAGE STATUS CODE
16/02/2024	S3 - Suitable for Review & Comment

PROJECT	ORIGINATOR	VOLUME	LEVEL	TYPE	ROLE	NUMBER	REV
GRE	EPG	ZZ	00	DR	Y	101	P02

B - Fuel Tanks A, B, C, D, E & F: Engineers Logs & Photofiles

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 15/01/2024
Reporting Period: Week 15th January to 19th January 2024	
Weather: Sunny but cold. Ground hard due to recent cold weather conditions.	

Summary

15/01/2024

- Site Manager Dean was met on site with Jonathan and Mark Newton

- East Coast Construction (E.C.C) have just uncovered 2 x insitu metal tanks with approximate volume of 8222.33L per tank (using the calculation $V=\pi r^2h$, with the length as 2.9m, diameter as 1.9m & radius as 0.95m). Drawings and photographs of the tanks can be seen on associated documents.

- The two tanks were uncovered and recorded to be surrounded by concrete and brick bunding. Tanks appear to have been decommissioned and were discovered to have been filled with concrete.

- The first tank (Tank A – western tank of the two) was broke out and lifted out using 36T excavator on site. No visible tears/rips/cracks were noted within the bottom of the tank and no residue/liquid/contaminant appeared to be leaking from the base of the tank. A stain was present within the exterior of the bottom half of the tank, likely representing the contaminated water level surrounding the tank. Tank A was left within the northern area of the site upon hard standing.

- Contaminated (by hydrocarbon) water was observed beneath the tank when lifted out. A depth of 0.1m of water was recorded by the edges of the excavated tank, and 0.2m in the center.

- Dean informed NX that a visqueen covered, bunded, ramped area would be constructed within the southeastern corner of the site, and any spoil would be taken to there.

- The remaining tank (eastern tank - Tank B) is to be removed during the next site visit.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously recorded areas.

Monitoring

- Verification monitoring ongoing by NX Consulting.



Plate 1 – Two decommissioned tanks discovered, looking southwest. Tank A on the right side and Tank B on the left, both encased in concrete and brick bunding.



Plate 2 – Excavation along the northern face of brick bund, looking south.



Plate 3 – Tanks following breaking out, looking east.



Plate 4 – Tanks following breaking out, looking north.



Plate 5 – Tank A being removed from situ, looking north.



Plate 6 – Residual water within former Tank A location, looking south/southeast.



Plate 7 – Tank A orientated NE-SW, standing 1.9m tall, looking northwest.



Plate 8 – Tank A, 2.9m length, looking north/northeast.

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 17/01/2024
Reporting Period: Week 15th January to 19th January 2024	
Weather: Sunny but cold. Ground hard due to recent cold weather conditions. Snowfall on previous day.	

Summary

17/01/2024

- Site Manager Dean was met on site.

- East Coast Construction (E.C.C) have just uncovered 2 x insitu metal tanks with approximate volume of 8222.33L per tank (using the calculation $V=\pi r^2h$, with the length as 2.9m, diameter as 1.9m & radius as 0.95m). Drawings and photographs of the tanks can be seen on associated documents.

- The two tanks were uncovered and recorded to be surrounded by concrete and brick bunding. Tanks appear to have been decommissioned and were discovered to have been filled with concrete.

- The second tank (Tank B – eastern tank of the two) was broke out in the morning of the site visit and lifted out using 36T excavator on site. Tank B appeared more difficult to remove from the bunding as it was more incased on the east. No visible tears/rips/cracks were noted within the bottom of the tank and no residue/liquid/contaminant appeared to be leaking from the base of the tank. A stain was present within the exterior of the bottom half of the tank, likely representing the contaminated water level surrounding the tank. Tank B was left within the northern area of the site upon hard standing, next to Tank A.

- Contaminated (by hydrocarbon) water was observed beneath the tank when lifted out. A depth of 0.05m of water was recorded by the edges of the excavated tank, and 0.15m in the center. The water appeared shallower than beneath Tank A, but water head was recorded at a deeper depth.

- Dean informed NX that a Visqueen covered, bunded, ramped area would be constructed within the southeastern corner of the site, and any spoil would be taken to there.

- The remaining tank (eastern tank - Tank B) is to be removed during the next site visit.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously recorded areas.

Monitoring

- Verification monitoring ongoing by NX Consulting.

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Mark Newton	**Date:** 22nd January 2024
Reporting Period: Week 22nd to 26th January 2024	
Weather: Windy after heavy rain. Wet	

Summary

22/01/2024

- Site Manager (Dean of ECC) was met on site and briefed about NX verification sampling requirements.
- One arrival East Coast Construction (E.C.C) have removed and stockpiled fuel tanks on hardstanding to north. Tank bund remained insitu.
- Visqueen lined soil bund had been excavated to stockpile contaminated soils.
- Level of area of tank bund and modelled contamination plume had been reduced to 1.80m bgl to expose visibly hydrocarbon contaminated sand and gravel. No significant groundwater ingress noted.
- Under the observation of NX visibly contaminated soils excavated and placed in lined area with machines and dumper. Stiff brown Glacial Clay was exposed observed at depths circa 2.00m bgl. PID headspace used to verify residual soils (maximum concentration 14ppm) used to confirm location of verification samples. Samples taken at 4no locations (2no beneath the base and 2no elsewhere) see sampling location plan. No significant visual or olfactory evidence of hydrocarbon contaminated soils present within Glacial Till. MN instructed ECC to backfill with 'site won' 6F2 gravel and compact. See photos.
- Area to south to be completed on Wednesday 24th January 2024 as a result of incoming storm and adverse weather conditions.
- Dumper tyre punctures which slows works in the afternoon and resulted in small amount of contaminated soils to be stockpiled locally. Stockpile sealed with machine and to be removed to new bund on Wednesday 24th January 2024.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- MN attendance required 23rd January 2024 on standby.



Plate 1 – ECC Visqueen Impermeable Liner Placed in Holding Bund for Contaminated Soils



Plate 2 – Area of Tank Base and Reduced Level for Predicted Contaminated Soil Plume. Looking Northeasterly. 22nd January 2024 – 08:30am



Plate 3 – Reduced Level Dig of Predicted Plume Prior to Chasing out of Contamination Looking Westerly towards Greenheys Road. 22nd January 2024 – 08:30am



Plate 4 – Top of Hydrocarbon Contaminated Sand & Gravel Exposed at 1.80m bgl. 22nd January 2024 – 10:05pm.



Plate 5 – Contaminated Sand & Gravel Chased out and exposed Stiff brown Glacial Clay. 22nd January 2024 – 11:15am



Plate 6 – Chasing of Contaminated sand and gravel continues around tank bund



Plate 7 – No significant visual or olfactory evidence of hydrocarbon contamination on exposed clay and perched groundwater/rainwater 22nd January 2024 14:10pm



Plate 8 – Tank Base Removed and visible contamination chased out prior to placement of 6F2 within this area. 22nd January 2024 16:00pm



Plate 9 – Area of chased out hydrocarbon contaminated soils and gravel & former tanks/bund backfilled – 23rd January 2024 - 08:10am

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 25th January 2024
Reporting Period: Week 22nd to 26th January 2024	
Weather: Sunny, cold and windy. Heavy rain earlier in week, ground slightly wet.	

Summary

25/01/2024

- Site Manager (Dean of ECC) was present on site today, and lead excavation works.

- Following from yesterdays works, areas north, northeast and east surrounding the 2no. discovered tanks have been excavated and chased out successfully. A well was discovered at the western end of insitu concrete slab, and will be revisiting Monday with an archeologist present on site.

- The material beneath the stockpile of 'clean' site won soils within the west (next to western boundary/Greenheys Lane) will be moved and contamination chasing will be undertaken on Friday.

- A total of 4 Visqueen lined soil bunded areas have now been constructed to store excavated contaminated soils within. 2 more were constructed today for the volume of contaminated arisings that were being produced.

- Under the observation of NX visibly contaminated soils excavated and placed in lined area with machines and dumper. Stiff brown Glacial Clay was exposed observed at depths circa 2.00m bgl. PID headspace used to verify residual soils (maximum concentration 18ppm) used to confirm location of verification samples. Samples taken at various locations (varying beneath contaminated soils and wall of excavations) see sampling location plan. No significant visual or olfactory evidence of hydrocarbon contaminated soils present within Glacial Till. MT instructed ECC to backfill with 'site won' 6F2 gravel and compact. See photos.

- As of 14:00, all material successfully chased out surrounding tank to the north and east, besides well area which is being visited on Monday with the presence of archeologist on site.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- MT returning tomorrow (26/01/2024) to monitor excavations in the west. Attendance also required early next week Monday 29th January 2024 for well area, and MN on standby.

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 26th January 2024
Reporting Period: Week 22nd to 26th January 2024	
Weather: Sunny, cold and windy. Heavy rain earlier in week, ground slightly wet.	

Summary

26/01/2024

- Site Manager (Dean of ECC) was present on site today.

- Immediate areas surrounding the 2no. discovered tanks have been excavated and chased out successfully.

- Material is going off site but few loads a day, and space running out within 2 bunded areas (stockpiled within the southwest of site).
- All stockpiles smoothed with bucket.

- A total of 4 Visqueen lined soil bunded areas have now been constructed to store excavated contaminated soils within.

- Under the observation of NX visibly contaminated soils excavated and placed in lined area with machines and dumper. Stiff brown Glacial Clay was exposed observed at depths circa 2.00m bgl. PID headspace used to verify residual soils (maximum concentration 15pm) used to confirm location of verification samples. Samples taken at 6no locations (varying beneath contaminated soils and wall of excavations) see sampling location plan. No significant visual or olfactory evidence of hydrocarbon contaminated soils present within Glacial Till. MT instructed ECC to backfill with 'site won' 6F2 gravel and compact. See photos.

- Returning tomorrow to excavate further surrounding areas.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- MT attendance required for following 2 days of week, and MN on standby.

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 29th January 2024
Reporting Period: Week 29th to 2nd February 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground slightly wet.	

Summary

29/01/2024

- Site Manager (Dean of ECC) was present on site today.

- Following from last weeks works, all areas surrounding the 2no. discovered tanks have been excavated and chased out successfully, besides the brick circular feature discovered yesterday and the material beneath the stockpile of 'clean' site won soils within the west (next to western boundary/Greenheys Lane). The areas where material has been chased out, 'clean' site won 6F2 stone has been laid in place of former material. Clean arisings are stockpiled in the north and south.

- A total of 4 Visqueen lined soil bunded areas have now been constructed to store excavated contaminated soils within. Stockpiled material bladed and covered to manage migration.

- Area of well is inspected by archeologist on site, 08:00am by Salford Archeology. After inspection by archeologist it was concluded that the well is actually a relic feature and no further features are present beneath the surface. No visual or olfactory evidence of hydrocarbon/solvent contamination was observed within 'well area'/area of archeologists concern.

- Due to heavy rain on site, further areas to the north/northwest will not be investigated today. Areas of potentially unrecorded contamination to the north/northwest will be investigated tomorrow/when weather conditions permit.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- MT attendance required throughout week, and MN on standby.



Plate 1 – Clean 6F2 stone comprising areas grubbing has been completed on, with all contamination chased out. Clean stockpile of arisings present within the northwest of site, looking west.



Plate 2 – Clean 6F2 stone comprising areas grubbing has been completed on, with all contamination chased out.



Plate 3 – Possible well/dove cot observed during excavation, under archaeological examination.

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 30th January 2024
Reporting Period: Week 29th to 2nd February 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground slightly wet.	

Summary

30/01/2024

- Site Manager (Dean of ECC) was present on site today.

- Final area of contamination chased out by the possible well following archeological examination. All areas of contamination have been chased out surrounding the tanks with clean site won 6F2 laid in place of contaminated strata.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- No further attendance required as all contamination has been chased out following grubbing.

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 13th March 2024
Reporting Period: Week 11th to 15th March 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

13/03/2024

- Site Manager (Dean of ECC) was present on site today and briefed about the NX verification sampling requirements.

- Under the observation of NX Consulting, visibly contaminated arisings are being placed within bunded areas by machines and dumper. Bunded areas are lined with visqueen and taped together to restrict migration of contaminated soils.

- Immediate areas to the north, south and east of tanks have been excavated to allow removal of tanks. Tanks are to be lifted out of situ shortly after lunch. The strata surrounding the tanks to the west is to be excavated tomorrow.

- Clean arisings situated above contamination have been stockpiled separately from contaminated strata. Clean arisings have also been used to manage excess water (from recent rainfall and adverse weather conditions) within the excavated areas.

- The following Chemical samples were taken:
  - S30, S31, S32 taken within contaminated strata, S34 taken within verified area.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- Further attendance required from NX Consulting until grubbing complete.



Plate 1 – Two decommissioned tanks discovered in the east of site, looking south. Tank C on the right side and Tank D on the left. No visible bunding of concrete or brick. Possible brick bund beneath (Date: 13/03/2024, Time: 10:00am).



Plate 2 – Contamination of strata surrounding tanks.



Plate 3 – Clay beneath contaminated strata.



Plate 4 – Excavation surrounding tanks.

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 14th March 2024
Reporting Period: Week 11th to 15th March 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

14/03/2024

- Site Manager (Dean of ECC) and Jonathan were present on site today and met with Matthew Tomkinson.

- Upon arrival to site, a new visqueen lined soil bunded area has been formed to start the day (Bund 2). Contamination surrounding the recently discovered tanks is now being excavated and stored within Bund 2.

- Area to the north of tanks C & D has been chased out as far as possible to the northern boundary of the site, by the site cabins. Contaminated strata observed to be present under the northern boundary but had become less concentrated (weaker/lighter colour and fainter smell). Deposits appeared to be approximately 200-300mm thick. Contamination sampled and to remain in situ as it is not within the site boundary. Contamination recorded by WS04 install were recorded to be approximately 100-150mm thick at maximum and appeared to be significantly fainter in aroma than contamination noted surrounding the tanks.

- Arisings above contamination have been stockpiled separately from contaminated strata. Clean arisings have also been used to manage excess water within the excavated areas.

- S34-S38 taken within verified areas (base samples within clay beneath contaminated strata).

- Tanks appear to have been sat on 300mm thick brick/cement bund. The bund beneath the tanks will be excavated and removed tomorrow.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- Further attendance required until grubbing complete.



Plate 1 – Area of two decommissioned tanks discovered, looking southwest. (Date: 14/03/2024, Time: 08:30am).



Plate 2 – Location of tanks following removal of tanks and bunding, looking southwest. (Date: 14/03/2024, Time: 11:51am).



Plate 3 – Clean strata to the northeast of tanks. (Date: 14/03/2024, Time: 09:30am).



Plate 4 – Brick/cement bunding beneath tanks. (Date: 14/03/2024, Time: 11:32am).

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 20th March 2024
Reporting Period: Week 18th to 22nd March 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

20/03/2024

- Pete of ECC was present on site today and lead the days works with Matthew Tomkinson in attendance.
- Rainfall ongoing all day with water accumulating within excavations.
- Upon arrival to site, ECC were completing works in the west of site (for attenuation tank) until 1pm and then returned to the eastern area to continue work within excavation area.
- A new bunded area has been formed to start the excavation works with MT 1pm, Bund 4. Shortly after formation (prior to visqueen laid down) the days works were ended due to worsening weather conditions.
- Bund construction is to resume tomorrow morning. Excavation of recently discovered obstruction will begin at 8am. Obstruction encountered earlier during the week due to the northwest of Tanks C and D. Obstruction maybe be more tanks. TBC.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- Further attendance until grubbing complete. MT required on site 8am 21/03/2024.



Plate 1 – Area of two decommissioned tanks discovered, looking west. (Date: 20/03/2024, Time: 12:55pm).



Plate 2 – Water accumulated through heavy rain and surface water within excavation. (Date: 20/03/2024, Time: 12:58pm).



Plate 3 – Bund 4, looking east. (Date: 20/03/2024, Time: 13:30pm).

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 21st March 2024
Reporting Period: Week 18th to 22nd March 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

21/03/2024

- Pete of ECC was present on site today and lead the days works with Matthew Tomkinson in attendance. Rainfall on and off all day, with a period of heavy rainfall between 10:30-13:00.

- Upon arrival to site Bund 4 formation was completed with visqueen laid down first thing to accommodate space for excavated contaminated arisings. Grubbing works proceeded after this.

- Another tanker will be arriving to site tomorrow morning and all rainwater/surface water will be removed from areas of the excavation (specifically northwestern area). Further breaking out of obstruction will be done tomorrow to prevent further accumulation of water.

- Samples taken today: S42, S43, S44 within clean clay (base of verified areas). Samples also taken:
  - S45, S46 taken within strata above contaminated strata within southern face where 600mm of black contamination was recorded (0.8m and 1.0m respectively).
  - S47, S48 were taken within the strata above contaminated strata within southwestern face where 600mm of black contamination was recorded (1.2m and 1.0m respectively).
  - S49 taken within the contaminated strata at 1.4mbgl.
  - PID readings above the contamination recorded 0.0-0.4ppm, and 0.2-3.2ppm within the contaminated strata.

- Under the observation of NX, all material has been successfully chased out to the southwest of tanks as far as feasibly possible. Residual contaminated strata (with fainter odour and lighter colour) is remaining in situ within area to the south of tanks C & D (see photofile). Further excavation of contamination would require disruption of southern area of the site which has previously been turned over. ECC reported a wall was present during enabling works where black contaminated strata was not recorded to be present on the southern side. Black/grey contaminated strata remaining in situ has been logged, sampled for chemical analysis and measured with PID monitor.

- Remaining chasing out, breaking and removal of concrete/possible tanks/obstruction will be undertaken first thing in the morning (22/03/2024).

- Bund 4 is approximately 50% full following today's works.

- A large stockpile is present within the west of the wider site following yesterday's works. Stockpile comprises excavating arisings from attenuation tank excavation.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- Further attendance until grubbing complete. MT required on site 8am 22/03/2024.



Plate 1 – Southwestern corner of grubbing following works. (Date: 21/03/2024, Time: 10:52am).



Plate 2 – Southwestern area of site following all contamination chased out within SW of excavation (left of staff). Area to the south of new obstruction awaiting breaking and grubbing (right of staff). (Date: 21/03/2024, Time: 11:07am).



Plate 3 – Bund 4 approximately 50% full, looking east. (Date: 21/03/2024, Time: 12:31pm).



Plate 4 – Large stockpile of excavated clean stone following 21/03/24 attenuation tank works. (Date: 21/03/2024, Time: 12:29pm).

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 22th March 2024
Reporting Period: Week 18th to 22nd March 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

22/03/2024

- Pete of ECC was present on site today and lead the days works with Matthew Tomkinson in attendance. Pete had to leave at 13:30 for a dentist's appointment so site work ended early.

- No progress upon arrival to site, as ECC and NX waiting for tanker to arrive so water can be pumped from excavation to allow grubbing to start (tanker essential to drain excess rainwater from excavation). An engineer from ECC arrived at 11:00am on site to record dimensions of excavation with Pogo. A tanker from Whitelocks arrived shortly after and water was drained from excavation.

- Slight rainfall on and off all day, generally warmer and drier weather than previous days. Excavation was not impacted by weather (during the day).

- Bund 5 was formed during the morning to allow space for contaminated arisings. Bund 5 is situated south of Bund 3 and was measured to the same dimensions (25x7x0.5m). Approximate bund sizes and locations can be viewed within NX534 Bund Location Plan.

- Under NX observation, excavations took place to the north and to the east of the new tanks/obstruction. Grubbing is now completed in these areas. Grubbing reaching the areas of the site boundary in the north, and clean stone (of backfill from previously chased out areas) in the east. Verification photos and samples were taken beneath the clean clay where no olfactory or visual evidence of contamination was found. Chemical samples were also taken within residual contamination (black/dark grey contaminated) remaining insitu (north – S52, and samples taken to the south – S48 & 49).

- All material has been successfully chased out to the north and east of tanks. Remaining chasing out required in small area (2x7m) to the south of tanks. Breaking and removal of concrete/possible tanks/obstruction will be undertaken first thing in the new week. Excavations indicated that potential tank base may be 250mm into the CLAY. TBC across the area on Monday morning following pecking and excavation.

- Samples taken today:

- S50, base to N of tanks, 2m. PID reading 0.4ppm.
- S51, base to NE of tanks, 2m. PID reading 0.8ppm.
- S52, sample of black contamination in northern face. Not chased out as not our site (to the north). Strata onsite chased out as much as possible (considering spalling and collapse of wall). Strata appears to be thinning progressing away from area of excavation. PID reading 29.2ppm.
- S53, 1m bgl in N face, above contamination. PID reading 0.3ppm.
- S54, wall sample within western face of chased out strata. PID reading 0.2ppm.
- S55, base to E of tanks. PID reading 1.5ppm.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- Further attendance until grubbing complete. MT required on site 8am 25/03/2024.



Plate 1 – Rainwater accumulated within northwestern corner of excavation works. (Date: 22/03/2024, Time: : m).



Plate – Grubbing within area to north of tanks, looking southwest. (Date: 22/03/2024, Time: :42am).

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 25th March 2024
Reporting Period: Week 25th to 29th March 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

25/03/2024

- Pete of ECC was present on site today and lead the days works with Matthew Tomkinson. Slight rainfall on and off all day, generally warmer weather than previous days.

- Under NX observation, MT arrived at 10:00am to start chasing final contamination located (within 2x7m) to the south of tanks. All chased out besides potential area to the west; to be examined after tanks and bunding have been removed. Verification photos and samples were taken beneath the clean clay where no olfactory or visual evidence of contamination was found.

- Pecking, breaking and removal commenced at 12:00pm, allowing removal of 'obstruction'. Obstruction was discovered to be a further two fuel tanks, named E & F (Tank E on the western side, Tank F on the eastern side). Tanks were successfully removed from situ successfully and stored upon area of tarmacadam with tanks C & D. Tanks E & F appear to be similar size to Tanks C & D but appear have had the tops/surface removed prior to decommissioning.

- Rainwater influx into excavation prevented progression as unable to use pecker to break the base of the bund. Works will be continued tomorrow as a tanker will be present onsite to remove rainwater from excavation. No validation samples taken so far within tank base due to water delaying progression. Bunding kept insitu within base and western face of bund to control water.

- Stone crushed for remainder of the day to generate 6F2 for backfill tomorrow.

Samples taken today:

- S56, base to S of tanks, 2m. PID reading 0.3ppm.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- Further attendance until grubbing complete. MT required on site 8am 26/03/2024.



Plate 1 – Insite tanks undergoing pecking, looking N/NE (Date: 25/03/2024, Time: 11:30pm).



Plate 2 – Grubbing within area to south of tanks, looking southeast. (Date: 25/03/2024, Time: 11:30pm).



Plate 3 – Decommissioned tank removed from situ (eastern one and first to be removed), (Date: 25/03/2024, Time: 12:30pm).



Plate 4 – Grubbing to the east of obstruction/tanks, looking south(Date: 25/03/2024, Time: 13:45pm).

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 26th March 2024
Reporting Period: Week 25th to 29th March 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

26/03/2024 and morning of 27/03/2024

- Pete of ECC was present on site today and lead the days works with Matthew Tomkinson in attendance.

- Under the observation of NX, ECC excavated and chased final contamination within excavation. Tanker arrived at 10:30 to remove water prior to excavation.

- Verification photos and samples were taken in the clean clay beneath the bunding on the tank base, where no olfactory or visual evidence of contamination was found (S60, 61, 62, 63). No olfactory or visual evidence of hydrocarbon or solvent contamination was recorded beneath the tank base or bunding.

- The western face of the bund was removed at 12:00pm, and samples were taken within the western face (underlying pile matt of previously turned over area of the site). Approximately 450mm thick band of black contaminated strata was present within the western face behind the bund. PID readings within the strata ranged from 150ppm to 400ppm so this material was removed via grubbing.

- A pragmatic approach was taken to chasing out the contamination to the west. Localised areas of contamination were present where high concentrations of VOC's (100 ppm+) were recorded. This material was deemed unsuitable and was removed from situ and stored in Bund 5. Following grubbing to the west, contaminated strata with high concentrations of VOC's was all chased out and only a thin band (100mm thick) of residual (dark grey) contamination remained insitu. PID readings within residual contamination peaked at 28.4ppm. Strata remaining insitu had similar characteristics to other areas where the band of contamination has become thinner and less volatile in smell and lower PID readings (such as beneath the tarmacadam off site to the north of tanks).

- No groundwater was recorded coming in through any contaminated strata. Surface water (from recent rainfall) was recorded seeping into the excavation with a moderate ingress, through 6F2 of grubbed areas.

- Jim from ECC arrived midday to inspect the site. Jim confirmed that Bunds 1-5 and other stockpiles of material (eg. cobbles/boulder stockpile, metal rebar piles) will be going off site this week starting 28/03/2024. Approximately 40 loads a day will be going off site and this will continue into the next week until all material is removed.

- Site won stone used to back fill excavation for remainder of the day (and following morning, MT site visit at 10:00am 27/03/2024 to check back fill progress and to give chemical samples to DETS driver).

Samples taken today:

- S57, western face behind bunding, yellow sand and gravel 1m. PID reading 0.7ppm.
- S58, western face behind bunding, black contamination 1m. PID reading 194ppm.
- S59, western face behind bunding, clean clay base sample 1m. PID reading 0.9ppm.
- S60, Tank Base, 2.7m. PID reading 0.8ppm.
- S61, Tank Base, 2.7m. PID reading 0.9ppm.
- S62, Tank Base, 2.9m. PID reading 0.6ppm.
- S63, Tank Base, 2.7m. PID reading 0.3ppm.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- Grubbing complete. MT required on site likely 28/03/2024, for verification works during bund removal.



Plate 1 – Surfacewater pump removal from excavation (Date: 26/03/2024, (10:30pm).



Plate – Pecking of tank base following removal of tanks, looking southeast. (Date: 26/03/2024, Time: 11:00pm).



Plate 3 – Grubbing of western face of tank bunding, looking southwest. Black band approximately 450mm thick being chased out, (Date: 26/03/2024, Time: 12:30pm).



Plate 4 – Grubbing of western face of tank bunding, looking southwest. Black band approximately 450mm thick chased out to approximately 100mm thick (with peak PID readings of 28.1ppm), (Date: 26/03/2024, Time: 14:00pm).



Plate 5 – Infilling of stone within excavation, looking west (Date: 26/03/2024, Time: 15:30pm).

Next Generation Engineering Consultancy Services

Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 28th March 2024
Reporting Period: Week 25th to 29th March 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

28/03/2024

- Matthew Tomkinson (MT) in attendance on site with Pete from ECC leading the works. Nothing to report on site due to difficulty sending bunded arisings to the tip. MT left site as bund not expected to be emptied today.

- Progress removing bunded arisings off site during the day, MT called back to site at 15:00 to examine ground beneath the area of Bund 5. VOC readings with PID taken upon the base of former Bund 5. PID readings are also taken on residual material from Bund 5 placed on top of Bund 3:

PID Readings (ppm):
- West of Bund 3 surface: 4.1, 0.7, 0.4
- East of Bund 3 surface: 3.7, 0.6, 0.8
- Middle of Bund 3 surface: 0.4, 0.3, 0.3
- Base of Bund 5: 0.3, 0.2, 0.2

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- Grubbing complete. MT required on site likely 02/04/2024, for verification works during bund removal of the next and remaining bunds.



Plate 1 – Area of former Bund 5 (following removal off site), looking west (Date: 28/03/2024, Time: 15:15pm).



Plate 2 – Area of Bund 3, looking east. (Date: 28/03/2024, Time: 15:15pm).



Plate 3 – Base of former Bund 5, looking east. PID readings taken within base record between 0.2-0.3ppm, (Date: 28/03/2024, Time: 15:15pm).

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Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 2nd April 2024
Reporting Period: Week 1st to 5th April 2024	
Weather: Dry, cold and windy. No rain during day.	

Summary

02/04/2024

- Pete was met on site by Matthew Tomkinson.

- Half of the volume of arisings within Bund 3 removed by 10:00am. Kirk on site crushing stone (site won boulders/cobbles) and laying piling matt within the area of former tank excavation (C, D, E and F).

- By 14:00 – all material within Bund 3 had gone off site and Bund 2 material has started to leave site too. Material stopped leaving site after 3pm as the tips closes after 3pm and will continue to be removed from site tomorrow morning.

- Strata beneath former Bund 3 comprised 'clean' site won stone. No visual or olfactory evidence of solvent or hydrocarbon contamination was observed beneath the visqueen line soil Bund 3.

- VOC readings were taken using a PID monitor upon the ground beneath visqueen lined Bund 3 and the immediate surrounding area (ppm):
  - 0.3, 0.2, 0.2, 0.6, 0.8ppm.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- Grubbing complete. MT required on site 03/04/2024 for further verification works involving the removal of bunded arisings.



Plate 1 – Area of former Bund 2, 3 and 5 (following removal off site), looking west. PID readings ranging between 0.2-1.6ppm, (Date: 02/04/2024, Time: 14:00pm).



Plate 2 – Stockpiled arisings of remains of bund 2 & 3, looking northwest. (Date: 02/04/2024, Time: 14:00pm).



Plate 3 – Stockpiled arisings of remains of bund 2 & 3, looking south, (Date: 02/04/2024, Time: 14:00pm).



Plate 4 – Ground to the west of bunds 2 & 3, looking south, (Date: 02/04/2024, Time: 14:00pm).

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Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 3rd April 2024
Reporting Period: Week 1st to 5th April 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

03/04/2024

- Kirk and ECC engineer from ECC on site and met with Matthew Tomkinson (MT). Eamon (Whitelocks) on site too.

- On arrival no material had gone off site and contaminated soils remained within visqueen lined soil bunds. No material gone off site by 11:00am due to difficulties at the tip.

- Kirk present on site crushing stone (site won boulders/cobbles) and laying piling matt within excavation area of tanks C, D, E, F.

- Excavator window smashed during pecking (early morning 03/04/24) as cobble fired at windscreen.

- By 14:00 – 6no wagon loads of Bund 4 material has gone off throughout day. The tip reportedly stops accepting loads after 3pm. Approximately 4no. wagon loads to be taken off site to tip from bunded material. Remainder of material from Bund 4 and Bund 1 likely to start being taken off site tomorrow. Kirk will be managing Bund 1 on tarmac.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank area and previously excavated trial pits and as part of the site turnover.

Monitoring

- Grubbing complete. MT required on site likely 04/04/2024, for verification works of bunded arisings removal of the stockpiled material.

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Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 4th April 2024
Reporting Period: Week 1st to 5th April 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

04/04/2024

- Pete and Kirk on site and met with Matthew Tomkinson. Eamon replaced by John to operate Whitelocks excavator.

- On arrival all remaining arisings are being taken off site to tip. Final material from Bund 2 and 4 has gone off site to the tip by 8:30am.

- VOC readings taken within the base visqueen lined soil Bund 2 and Bund 4 ranged from 0.1ppm to 0.3ppm when using PID (8 readings taken). Strata beneath and surrounding former Bund 2 and 4 comprised 'clean' site won stone. No visual or olfactory evidence of solvent or hydrocarbon contamination was observed beneath Bund 2 or Bund 4.

- Bund 1 (final bund present on site to date) is removed from 9:00am onwards. Bund 1 arisings are being removed with care to ensure tarmac stays intact/undamaged, and that visqueen stays in place to prevent migration.

- Excavator window still smashed but Kirk managed to still use the excavator to peck boulders and cobbles.

- Wagon loads of bunded arisings going off site to tip upon Braidwood wagons. 6F2/crushed stone arriving on site from P'Oconnor wagons.

- Progress slowed as the tip reportedly stopped sending wagons to collect arisings as the day progressed, and multiple wagons reportedly 'broke down'. One more wagon load of soil remaining from Bund 1 left in bund and scheduled to leave tomorrow morning (MT instructed to leave site at 15:35pm and return tomorrow after Burnley site visit).

- Photographs and PID readings taken upon tarmacadam and residual soil left on tarmacadam ranged between 0.1ppm to 0.4ppm (6 readings taken across base of currently exposed Bund 1 area). Tarmacadam appears undamaged with no cracks or breaks to surface following use of excavator. No visual or olfactory evidence of contamination upon surface of tarmacadam.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank areas and previously excavated trial pits and as part of the site turnover.

Monitoring

- MT required at site tomorrow to verify final load of Bund 1 arisings has left.



Plate 1 – Area of former Bund 2 and 4 (following removal off site from stockpile), looking east. PID readings in ground below stockpile and bunds ranging from 0.1ppm to 0.3ppm. (Date: 04/04/2024, Time: 09:00pm).



Plate 2 – Area of former Bund 2 and 4 (following removal off site from stockpile), looking east. PID readings in ground below stockpile and bunds ranging from 0.1ppm to 0.3ppm. (Date: 04/04/2024, Time: 09:00pm).



Plate 3 – Material from bund 1 going offsite, (Date: 04/04/2024, Time: 09:00pm).



Plate 4 – Material remaining from bund 1 to go offsite, (Date: 04/04/2024, Time: 15:00pm).



Plate 5 – Tarmacadam surface beneath bund 1, no visible damages and no visual or olfactory evidence of hydrocarbon contamination. PID readings ranging between 0.1ppm and 0.4ppm on residual material and surface of tarmacadam. (Date: 04/04/2024, Time: 15:00pm).

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Greenheys Business Centre Enabling Works

ENGINEERS REPORT

Prepared By: Matthew Tomkinson	**Date:** 5th April 2024
Reporting Period: Week 1st to 5th April 2024	
Weather: Rainy, cold and windy. On and off heavy rain throughout the day, ground is wet.	

Summary

05/04/2024

- Pete and Kirk from ECC on site and John from Whitelocks.

- On arrival to site, the final load of contaminated material from Bund 1 has been taken off site. Verification observations, sampling and photographs of the tarmacadam surface surrounding and beneath visqueen lined soil Bund 1 were taken.

- Photographs and PID readings taken across entire surface of tarmacadam and surrounding area. Readings ranged between 0.1ppm to 0.4ppm (9 total readings taken across base of Bund 1 area). Tarmacadam appears undamaged with no cracks or breaks to surface following use of excavator. No visual or olfactory evidence of contamination present beneath Bund 1 or upon surface of the tarmacadam.

- Piling rig set up within southwestern area of the site and begun drilling at 11:55am.

- MT left the site at 12:30pm. Pete from ECC confirmed that ECC would be leaving site next week. NX no longer required on site for remainder of remediation/enabling works.

Unrecorded Contamination

- ECC confirmed that no additional visual or olfactory evidence of hydrocarbon/solvent contamination was observed within areas other than the tank areas and previously excavated trial pits and as part of the site turnover.

Monitoring

- NX no longer required on site as grubbing, verification and bund removal works are complete.



Plate 1 – Area of former Bund 1 (following removal off site), looking southwest/west (Date: 05/04/2024, Time: 11:55am).



Plate 2 – Surface of tarmacadam following removal of bund 1, looking west. (Date: 05/04/2024, Time: 11:55am).



Plate 3 – Area of discovered tanks in the east of site Piling matt and 6F5 laid over excavation. (Date: 4/2024, Time: 12: am).



Plate 4 – Greenheys Business Centre site, looking west. (Date: 4/2024, Time: 12:30am).

C - NX Verification Testing Results (Chemical)

Certificate of Analysis

Certificate Number	24-01869	*Issued:*	05-Feb-24

Client NX Consulting Ltd
Station House
Stamford New Road
Altricham
WA14 1EP

Our Reference	24-01869
Client Reference	NX534
Order No	NX534
Contract Title	Greenheys, Fuel Tank Removal Verification Samples Manchester
Description	23 Soil samples, 6 Leachate prepared by DETS samples.
Date Received	30-Jan-24
Date Started	30-Jan-24
Date Completed	05-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 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples Manchester Science Park

				Lab No	2292566	2292567	2292568	2292569	2292570	2292571
				.Sample ID	S1	S2	S3 - Tank Base	S4 - Tank Base	S5	S6
				Depth	1.90	1.90	2.20	2.20	2.20	2.20
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
				Sampling Time	1000	1000	1000	1000	1300	1400
Test	**Method**	**LOD**	**Units**							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	5.2	5.5	7.5	8.2	5.1	4.4
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.4	0.4	0.4	0.6	0.5	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.1	0.1	0.2	0.3	0.1
Chromium	DETSC 2301#	0.15	mg/kg	25	22	23	22	26	18
Copper	DETSC 2301#	0.2	mg/kg	28	25	32	29	28	22
Lead	DETSC 2301#	0.3	mg/kg	15	20	12	12	11	9.7
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	32	28	32	30	32	23
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	72	73	70	61	79	56
Inorganics										
pH	DETSC 2008#		pH	7.9	7.9	8.3	8.2	8.0	8.2
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Sulphide	DETSC 2024*	10	mg/kg	43	20	35	27	35	< 10
Sulphate as SO4, Total	DETSC 2321#	100	mg/kg	510	421	532	533	429	384
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.10	0.03	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	0.04	< 0.01	< 0.01	< 0.01	0.02	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

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Summary of Chemical Analysis
Soil Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples Manchester Science Park

			Lab No	2292566	2292567	2292568	2292569	2292570	2292571
			.Sample ID	S1	S2	S3 - Tank Base	S4 - Tank Base	S5	S6
			Depth	1.90	1.90	2.20	2.20	2.20	2.20
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
			Sampling Time	1000	1000	1000	1000	1300	1400
Test	**Method**	**LOD**	**Units**						
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.04	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

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Summary of Chemical Analysis
Soil Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples

				Lab No	2292572	2292573	2292574	2292575	2292576	2292577
				.Sample ID	S7	S8	S9	S10	S11	S12
				Depth	2.20	2.20	2.00	2.10	2.10	1.70
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
				Sampling Time	1400	1515	1515	0900	1000	1000
Test	**Method**	**LOD**	**Units**							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg		5.2	5.2	5.4	5.1	4.8	6.9
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		0.4	0.5	0.4	0.5	0.4	0.3
Cadmium	DETSC 2301#	0.1	mg/kg		0.2	0.1	0.1	0.1	0.1	0.1
Chromium	DETSC 2301#	0.15	mg/kg		25	26	27	24	25	12
Copper	DETSC 2301#	0.2	mg/kg		25	27	27	26	28	11
Lead	DETSC 2301#	0.3	mg/kg		10	11	11	10	16	8.0
Mercury	DETSC 2325#	0.05	mg/kg		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg		32	33	33	30	32	15
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg		62	65	64	62	64	44
Inorganics										
pH	DETSC 2008#		pH		8.1	8.1	8.0	8.0	8.1	8.2
Cyanide, Total	DETSC 2130#	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Sulphide	DETSC 2024*	10	mg/kg		39	20	31	31	35	27
Sulphate as SO4, Total	DETSC 2321#	100	mg/kg		516	470	476	501	460	263
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.15
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		0.02	0.02	< 0.01	< 0.01	0.02	0.06
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg		< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg		< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

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Summary of Chemical Analysis
Soil Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples

			Lab No	2292572	2292573	2292574	2292575	2292576	2292577
			.Sample ID	S7	S8	S9	S10	S11	S12
			Depth	2.20	2.20	2.00	2.10	2.10	1.70
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
			Sampling Time	1400	1515	1515	0900	1000	1000
Test	**Method**	**LOD**	**Units**						
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

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Summary of Chemical Analysis
Soil Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples

				Lab No	2292578	2292579	2292580	2292581	2292582	2292583
				.Sample ID	S13	S14	S15	S16	S17	S18
				Depth	2.00	2.00	2.20	1.50	2.20	2.30
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
				Sampling Time	1000	1100	1230	1230	1230	1400
Test	**Method**	**LOD**	**Units**							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg		5.0	8.0	5.7	21	5.4	6.4
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		0.4	0.4	0.4	0.9	0.4	0.4
Cadmium	DETSC 2301#	0.1	mg/kg		0.2	0.1	0.1	0.2	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg		24	16	25	14	26	26
Copper	DETSC 2301#	0.2	mg/kg		24	16	25	21	27	27
Lead	DETSC 2301#	0.3	mg/kg		10	21	11	53	30	13
Mercury	DETSC 2325#	0.05	mg/kg		< 0.05	< 0.05	< 0.05	0.13	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg		29	16	32	16	33	33
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg		68	42	68	54	72	71
Inorganics										
pH	DETSC 2008#		pH		8.0	8.1	8.3	9.4	8.0	8.2
Cyanide, Total	DETSC 2130#	0.1	mg/kg		< 0.1	< 0.1	< 0.1	0.1	0.1	0.3
Sulphide	DETSC 2024*	10	mg/kg		20	< 10	35	20	27	20
Sulphate as SO4, Total	DETSC 2321#	100	mg/kg		454	545	482	1510	430	544
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		< 0.01	0.07	< 0.01	< 0.01	0.08	0.05
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		0.03	0.16	0.05	< 0.01	0.10	0.08
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	0.09	0.04	0.40	0.08	0.07
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg		< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg		< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg		< 0.03	0.08	< 0.03	0.05	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg		< 0.03	0.04	< 0.03	0.06	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg		< 0.03	< 0.03	< 0.03	0.04	< 0.03	< 0.03

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Summary of Chemical Analysis
Soil Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples

			Lab No	2292578	2292579	2292580	2292581	2292582	2292583
			.Sample ID	S13	S14	S15	S16	S17	S18
			Depth	2.00	2.00	2.20	1.50	2.20	2.30
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
			Sampling Time	1000	1100	1230	1230	1230	1400
Test	**Method**	**LOD**	**Units**						
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.18	< 0.03	0.28	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	0.04	< 0.03	0.05	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.13	< 0.03	0.24	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.11	< 0.03	0.22	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.03	< 0.03	0.07	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	0.03	< 0.03	0.07	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.05	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.04	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	0.58	< 0.10	1.2	< 0.10	< 0.10
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

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Summary of Chemical Analysis
Soil Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples

			Lab No	2292584	2292585	2292586	2292587	2292588
			.Sample ID	S19	S20	S21	S22	S23
			Depth	1.60	2.10	2.20	2.20	2.20
			Other ID					
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
			Sampling Time	1400	0900	1000	1100	1230
Test	**Method**	**LOD**	**Units**					
Metals								
Arsenic	DETSC 2301#	0.2	mg/kg	9.1	5.5	7.1	5.9	7.4
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	0.2	0.5	0.4	0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.1	0.2	0.1	0.1
Chromium	DETSC 2301#	0.15	mg/kg	17	13	25	26	23
Copper	DETSC 2301#	0.2	mg/kg	14	10	26	27	14
Lead	DETSC 2301#	0.3	mg/kg	7.5	6.6	13	10	8.7
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	23	13	33	34	23
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	51	38	66	68	43
Inorganics								
pH	DETSC 2008#		pH	8.2	8.3	8.0	8.1	8.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.2	0.2	< 0.1	0.2
Sulphide	DETSC 2024*	10	mg/kg	27	16	51	27	< 10
Sulphate as SO4, Total	DETSC 2321#	100	mg/kg	364	335	531	484	225
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.08	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	0.02	< 0.01	< 0.01	0.21	0.02
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	0.03	0.02	0.03	0.09	0.02
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10
PAHs								
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo).

Summary of Chemical Analysis
Soil Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples

			Lab No	2292584	2292585	2292586	2292587	2292588
			.Sample ID	S19	S20	S21	S22	S23
			Depth	1.60	2.10	2.20	2.20	2.20
			Other ID					
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
			Sampling Time	1400	0900	1000	1100	1230
Test	**Method**	**LOD**	**Units**					
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenols								
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

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Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples Manchester Science Park

			Lab No	2292566	2292567	2292568	2292569	2292570	2292571
			.Sample ID	S1	S2	S3 - Tank Base	S4 - Tank Base	S5	S6
			Depth	1.90	1.90	2.20	2.20	2.20	2.20
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
			Sampling Time	1000	1000	1000	1000	1300	1400
Test	**Method**	**LOD**	**Units**						
VOCs									
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Key: * -not accredited.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples Manchester Science Park

			Lab No	2292566	2292567	2292568	2292569	2292570	2292571
			.Sample ID	S1	S2	S3 - Tank Base	S4 - Tank Base	S5	S6
			Depth	1.90	1.90	2.20	2.20	2.20	2.20
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
			Sampling Time	1000	1000	1000	1000	1300	1400
Test	**Method**	**LOD**	**Units**						
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs									
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Key: * -not accredited.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples Manchester Science Park

			Lab No	2292566	2292567	2292568	2292569	2292570	2292571
			.Sample ID	S1	S2	S3 - Tank Base	S4 - Tank Base	S5	S6
			Depth	1.90	1.90	2.20	2.20	2.20	2.20
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
			Sampling Time	1000	1000	1000	1000	1300	1400
Test	**Method**	**LOD**	**Units**						
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1	0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Key: * -not accredited.

Summary of Chemical Analysis
Leachate Samples

Our Ref 24-01869
Client Ref NX534
Contract Title Greenheys, Fuel Tank Removal Verification Samples Manchester Science Park

			Lab No	2292589	2292590	2292591	2292592	2292593	2292594
			.Sample ID	S1	S2	S3 - Tank Base	S4 - Tank Base	S5	S6
			Depth	1.90	1.90	2.20	2.20	2.20	2.20
			Other ID						
			Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024	22/01/2024
			Sampling Time	1000	1000	1000	1000	1300	1400
Test	**Method**	**LOD**	**Units**						
Preparation									
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y	Y	Y
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	77	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Key: * -not accredited.

Information in Support of the Analytical Results

Our Ref 24-01869
Client Ref NX534
Contract Greenheys, Fuel Tank Removal Verification Samples Manchester Science Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2292566	S1 1.90 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days), VOC (7 days)	
2292567	S2 1.90 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days), VOC (7 days)	
2292568	S3 - Tank Base 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days), VOC (7 days)	
2292569	S4 - Tank Base 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days), VOC (7 days)	
2292570	S5 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days), VOC (7 days)	
2292571	S6 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days), VOC (7 days)	
2292572	S7 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292573	S8 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292574	S9 2.00 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292575	S10 2.10 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292576	S11 2.10 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292577	S12 1.70 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292578	S13 2.00 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292579	S14 2.00 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292580	S15 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292581	S16 1.50 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292582	S17 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292583	S18 2.30 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292584	S19 1.60 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292585	S20 2.10 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292586	S21 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292587	S22 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292588	S23 2.20 SOIL	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L	pH + Conductivity (7 days)	
2292589	S1 1.90 LEACHATE	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L		
2292590	S2 1.90 LEACHATE	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L		
2292591	S3 - Tank Base 2.20 LEACHATE	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L		
2292592	S4 - Tank Base 2.20 LEACHATE	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L		
2292593	S5 2.20 LEACHATE	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L		
2292594	S6 2.20 LEACHATE	22/01/24	GJ 250ml, GJ 60ml x2, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Information in Support of the Analytical Results

Our Ref 24-01869
Client Ref NX534
Contract Greenheys, Fuel Tank Removal Verification Samples Manchester Science Park

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number 24-05816 *Issued:* 25-Mar-24

Client NX Consulting Ltd
Station House
Stamford New Road
Altricham
WA14 1EP

Our Reference 24-05816

Client Reference ~ NX534

Order No ~ NX534

Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

Description 10 Soil samples, 4 Leachate prepared by DETS samples.

Date Received 19-Mar-24

Date Started 19-Mar-24

Date Completed 25-Mar-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 24-05816
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

	Lab No	2314188	2314189	2314190	2314191	2314192	2314193
	Sample ID ~	S30	S39	S40	S41	B2-S1	B2-S2
	Depth ~	1.50	1.80	1.60	1.00		
	Other ID ~						
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	12/03/2024	12/03/2024	12/03/2024	12/03/2024	15/03/2024	15/03/2024
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	5.8	4.7	6.0	5.4	5.2	5.2
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	< 0.2	0.4	0.4	0.3	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.3	0.2
Chromium	DETSC 2301#	0.15	mg/kg	28	11	26	25	14	14
Copper	DETSC 2301#	0.2	mg/kg	23	9.2	21	21	13	15
Lead	DETSC 2301#	0.3	mg/kg	12	5.3	8.6	9.9	22	32
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.07
Nickel	DETSC 2301#	1	mg/kg	34	15	32	33	14	16
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	64	39	58	59	40	46
Inorganics							
pH	DETSC 2008#		pH	7.9	8.1	7.9	8.0	8.5	8.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	1.1	< 0.5	0.8	0.9	< 0.5	0.7
Sulphide	DETSC 2024*	10	mg/kg	< 10	< 10	17	17	46	67
Sulphate as SO4, Total	DETSC 2321#	100	mg/kg	229	131	321	316	526	1280
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	0.53	0.68	9.8	3.5
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	0.51	1.1	25	31
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	34	34
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	0.18	0.69
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	1.8	1.5
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	3.8	4.0
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	4.4	3.9
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Summary of Chemical Analysis
Soil Samples

Our Ref 24-05816
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

			Lab No	2314188	2314189	2314190	2314191	2314192	2314193
			Sample ID ~	S30	S39	S40	S41	B2-S1	B2-S2
			Depth ~	1.50	1.80	1.60	1.00		
			Other ID ~						
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	12/03/2024	12/03/2024	12/03/2024	12/03/2024	15/03/2024	15/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.26
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.10
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.07
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.13	0.39
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.04	0.09
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.17	0.37
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.16	0.33
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.06	0.11
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.07	0.12
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.06	0.10
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.04
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.04	0.09
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.04
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	0.73	2.2
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Summary of Chemical Analysis
Soil Samples

Our Ref 24-05816
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

			Lab No	2314194	2314195	2314196	2314197
			Sample ID ~	B2-S3	B3-S1	B3-S2	B3-S3
			Depth ~				
			Other ID ~				
			Sample Type ~	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	15/03/2024	15/03/2024	15/03/2024	15/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	4.5	5.8	4.8	4.1
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	0.5	0.6	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.1	0.2	0.4	0.2
Chromium	DETSC 2301#	0.15	mg/kg	13	13	13	14
Copper	DETSC 2301#	0.2	mg/kg	10	15	14	11
Lead	DETSC 2301#	0.3	mg/kg	19	40	35	18
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.06	0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	15	14	12	14
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	34	54	61	50
Inorganics							
pH	DETSC 2008#		pH	8.4	9.7	11.2	8.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5	0.7	0.6	0.5
Sulphide	DETSC 2024*	10	mg/kg	63	71	59	110
Sulphate as SO4, Total	DETSC 2321#	100	mg/kg	726	1190	1550	592
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	2.5	3.2	5.7	5.4
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	25	8.2	22	36
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	26	12	20	42
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg	0.46	0.11	0.22	0.61
Ethylbenzene	DETSC 3321#	0.01	mg/kg	1.3	0.45	1.2	2.7
Toluene	DETSC 3321#	0.01	mg/kg	3.3	0.94	3.4	5.4
Xylene	DETSC 3321#	0.01	mg/kg	3.0	1.3	2.8	5.4
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01

Summary of Chemical Analysis
Soil Samples

Our Ref 24-05816
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

			Lab No	2314194	2314195	2314196	2314197
			Sample ID ~	B2-S3	B3-S1	B3-S2	B3-S3
			Depth ~				
			Other ID ~				
			Sample Type ~	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	15/03/2024	15/03/2024	15/03/2024	15/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.12	0.04	0.08	0.09
Anthracene	DETSC 3303	0.03	mg/kg	0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.18	0.05	0.11	0.10
Pyrene	DETSC 3303#	0.03	mg/kg	0.16	0.05	0.10	0.10
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.07	< 0.03	0.04	0.04
Chrysene	DETSC 3303	0.03	mg/kg	0.07	< 0.03	0.05	0.05
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.06	< 0.03	0.04	0.04
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.05	< 0.03	0.03	0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.69	0.15	0.43	0.45
Phenols							
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	4.5	< 0.3

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-05816
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

	Lab No	2314188	2314189	2314190	2314191
	Sample ID ~	S30	S39	S40	S41
	Depth ~	1.50	1.80	1.60	1.00
	Other ID ~				
	Sample Type ~	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	12/03/2024	12/03/2024	12/03/2024	12/03/2024
	Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**		
VOCs					
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	0.12	0.14
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	0.05
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-05816
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

			Lab No	2314188	2314189	2314190	2314191
			Sample ID ~	S30	S39	S40	S41
			Depth ~	1.50	1.80	1.60	1.00
			Other ID ~				
			Sample Type ~	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	12/03/2024	12/03/2024	12/03/2024	12/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs							
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-05816
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

			Lab No	2314188	2314189	2314190	2314191
			Sample ID ~	S30	S39	S40	S41
			Depth ~	1.50	1.80	1.60	1.00
			Other ID ~				
			Sample Type ~	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	12/03/2024	12/03/2024	12/03/2024	12/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	1.5	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Summary of Chemical Analysis
Leachate Samples

Our Ref 24-05816
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

			Lab No	2314198	2314199	2314200	2314201
			Sample ID ~	S30	S39	S40	S41
			Depth ~	1.50	1.80	1.60	1.00
			Other ID ~				
			Sample Type ~	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date ~	12/03/2024	12/03/2024	12/03/2024	12/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0

Summary of Asbestos Analysis
Soil Samples

Our Ref 24-05816
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2314192	B2-S1	SOIL	NAD	none	Vicky Convery
2314193	B2-S2	SOIL	NAD	none	Vicky Convery
2314194	B2-S3	SOIL	NAD	none	Vicky Convery
2314195	B3-S1	SOIL	NAD	none	Vicky Convery
2314196	B3-S2	SOIL	Amosite	Amosite present as fibre bundles	Vicky Convery
2314197	B3-S3	SOIL	NAD	none	Vicky Convery

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 24-05816
Client Ref ~ NX534
Contract ~ Greenheys Pencroft Way Fuel Tank Verification

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2314188	S30 1.50 SOIL	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314189	S39 1.80 SOIL	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314190	S40 1.60 SOIL	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314191	S41 1.00 SOIL	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314192	B2-S1 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314193	B2-S2 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314194	B2-S3 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314195	B3-S1 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314196	B3-S2 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314197	B3-S3 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314198	S30 1.50 LEACHATE	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314199	S39 1.80 LEACHATE	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314200	S40 1.60 LEACHATE	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314201	S41 1.00 LEACHATE	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314202	B2-S2 LEACHATE	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314203	B3-S2 LEACHATE	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

***** -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

Information in Support of the Analytical Results

Our Ref 24-05816
Client Ref ~ NX534
Contract ~ Greenheys Pencroft Way Fuel Tank Verification

End of Report

Certificate of Analysis

Certificate Number 24-06301 *Issued:* 02-Apr-24

Client NX Consulting Ltd
Station House
Stamford New Road
Altricham
WA14 1EP

Our Reference 24-06301

Client Reference ~ NX534

Order No ~ NX534

Contract Title ~ Greenheys Eastern Fuel Tank Removal

Description 12 Soil samples, 5 Leachate prepared by DETS samples.

Date Received 25-Mar-24

Date Started 25-Mar-24

Date Completed 02-Apr-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 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2317015	2317016	2317017	2317018	2317019	2317020
			Sample ID ~	S42 - Base	S43 - Base	S44 - Base	S45 - Sface	S46 - Sface	S47 - SW face
			Depth ~	2.00	2.00	2.10	0.80	1.00	1.20
			Other ID ~						
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	2.0	26	1.1	0.12	0.08	0.08
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	1.4	15	1.0	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	0.02	3.5	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1			< 0.1

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

				Lab No	2317015	2317016	2317017	2317018	2317019	2317020
				Sample ID ~	S42 - Base	S43 - Base	S44 - Base	S45 - Sface	S46 - Sface	S47 - SW face
				Depth ~	2.00	2.00	2.10	0.80	1.00	1.20
				Other ID ~						
				Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date ~	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024
				Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg		< 0.1		< 0.1			< 0.1
PAH 16 Total	DETSC 3301	1.6	mg/kg		< 1.6		< 1.6			< 1.6

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

	Lab No	2317021	2317022	2317023	2317024	2317025	2317026
	Sample ID ~	S48 - SW face	S50 - Base	S51 - Base	S53 - N face	S54 - W face	S55 - Base
	Depth ~	1.00	2.00	2.00	1.00	1.50	2.30
	Other ID ~						
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	21/03/2024	22/03/2024	22/03/2024	22/03/2024	22/03/2024	22/03/2024
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Petroleum Hydrocarbons							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	0.08	< 0.01	< 0.01	< 0.01	0.05	5.5
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	4.1
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	4.1	1.6	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Fluorene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Anthracene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Pyrene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Chrysene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

				Lab No	2317021	2317022	2317023	2317024	2317025	2317026
				Sample ID ~	S48 - SW face	S50 - Base	S51 - Base	S53 - N face	S54 - W face	S55 - Base
				Depth ~	1.00	2.00	2.00	1.00	1.50	2.30
				Other ID ~						
				Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date ~	21/03/2024	22/03/2024	22/03/2024	22/03/2024	22/03/2024	22/03/2024
				Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg			< 0.1			< 0.1
PAH 16 Total	DETSC 3301	1.6	mg/kg			< 1.6			< 1.6

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

	Lab No	2317015	2317016	2317018	2317019	2317021	2317022	2317024		
	Sample ID ~	S42 - Base	S43 - Base	S45 - Sface	S46 - Sface	S48 - SW face	S50 - Base	S53 - N face		
	Depth ~	2.00	2.00	0.80	1.00	1.00	2.00	1.00		
	Other ID ~									
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
	Sampling Date ~	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024	22/03/2024	22/03/2024		
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s		
Test	**Method**	**LOD**	**Units**							
VOCs										
Vinyl Chloride	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,1-dichloroethane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
2,2-dichloropropane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Bromochloromethane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Chloroform	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,1-dichloropropene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Carbon tetrachloride	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Benzene	DETSC 3431	0.01	mg/kg		0.19		< 0.01		0.12	
1,2-dichloroethane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Trichloroethylene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,2-dichloropropane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Dibromomethane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Bromodichloromethane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Toluene	DETSC 3431	0.01	mg/kg		0.02		< 0.01		0.08	
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Tetrachloroethylene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,3-dichloropropane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Dibromochloromethane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,2-dibromoethane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Chlorobenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Ethylbenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		0.09	
m+p-Xylene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		0.19	
o-Xylene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		0.01	
Styrene	DETSC 3431*	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Bromoform	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Isopropylbenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Bromobenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
n-propylbenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
2-chlorotoluene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
4-chlorotoluene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Tert-butylbenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

	Lab No	2317015	2317016	2317018	2317019	2317021	2317022	2317024
	Sample ID ~	S42 - Base	S43 - Base	S45 - Sface	S46 - Sface	S48 - SW face	S50 - Base	S53 - N face
	Depth ~	2.00	2.00	0.80	1.00	1.00	2.00	1.00
	Other ID ~							
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024	22/03/2024	22/03/2024
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		0.03	
sec-butylbenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
p-isopropyltoluene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
n-butylbenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
Naphthalene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
MTBE	DETSC 3431*	0.01	mg/kg		< 0.01		< 0.01		< 0.01	
SVOCs										
Phenol	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Naphthalene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Acenaphthylene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Acenaphthene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

	Lab No	2317015	2317016	2317018	2317019	2317021	2317022	2317024
	Sample ID ~	S42 - Base	S43 - Base	S45 - Sface	S46 - Sface	S48 - SW face	S50 - Base	S53 - N face
	Depth ~	2.00	2.00	0.80	1.00	1.00	2.00	1.00
	Other ID ~							
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	21/03/2024	21/03/2024	21/03/2024	21/03/2024	21/03/2024	22/03/2024	22/03/2024
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Fluorene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Phenanthrene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Anthracene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Fluoranthene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Pyrene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	0.1		< 0.1		< 0.1		< 0.1
Benzo(a)anthracene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Chrysene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Benzo(b)fluoranthene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Benzo(k)fluoranthene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Benzo(a)pyrene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Indeno(123cd)pyrene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Dibenzo(ah)anthracene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
Benzo(ghi)perylene	DETSC 3433	0.1	mg/kg			< 0.1		< 0.1		< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1		< 0.1		< 0.1		< 0.1

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

Lab No	2317025	2317026
Sample ID ~	S54 - W face	S55 - Base
Depth ~	1.50	2.30
Other ID ~		
Sample Type ~	SOIL	SOIL
Sampling Date ~	22/03/2024	22/03/2024
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
VOCs					
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2317025	2317026
			Sample ID ~	S54 - W face	S55 - Base
			Depth ~	1.50	2.30
			Other ID ~		
			Sample Type ~	SOIL	SOIL
			Sampling Date ~	22/03/2024	22/03/2024
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	
Naphthalene	DETSC 3431	0.01	mg/kg	< 0.01	
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	
SVOCs					
Phenol	DETSC 3433	0.1	mg/kg		< 0.1
Aniline	DETSC 3433*	0.1	mg/kg		< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg		< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg		< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg		< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg		< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg		< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg		< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg		< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg		< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg		< 0.1
Naphthalene	DETSC 3433	0.1	mg/kg		
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg		< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg		< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg		< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg		< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg		< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg		< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg		< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg		< 0.1
Acenaphthylene	DETSC 3433	0.1	mg/kg		
3-Nitroaniline	DETSC 3433*	0.1	mg/kg		< 0.1
Acenaphthene	DETSC 3433	0.1	mg/kg		
4-Nitrophenol	DETSC 3433*	0.1	mg/kg		< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg		< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg		< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg		< 0.1

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

Lab No	2317025	2317026
Sample ID ~	S54 - W face	S55 - Base
Depth ~	1.50	2.30
Other ID ~		
Sample Type ~	SOIL	SOIL
Sampling Date ~	22/03/2024	22/03/2024
Sampling Time ~	n/s	n/s

Test	Method	LOD	Units		
Diethylphthalate	DETSC 3433	0.1	mg/kg		< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg		< 0.1
Fluorene	DETSC 3433	0.1	mg/kg		
4-Nitroaniline	DETSC 3433*	0.1	mg/kg		< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg		< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg		< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg		< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg		< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg		< 0.1
Phenanthrene	DETSC 3433	0.1	mg/kg		
Anthracene	DETSC 3433	0.1	mg/kg		
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg		< 0.1
Fluoranthene	DETSC 3433	0.1	mg/kg		
Pyrene	DETSC 3433	0.1	mg/kg		
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg		< 0.1
Benzo(a)anthracene	DETSC 3433	0.1	mg/kg		
Chrysene	DETSC 3433	0.1	mg/kg		
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg		< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg		< 0.1
Benzo(b)fluoranthene	DETSC 3433	0.1	mg/kg		
Benzo(k)fluoranthene	DETSC 3433	0.1	mg/kg		
Benzo(a)pyrene	DETSC 3433	0.1	mg/kg		
Indeno(123cd)pyrene	DETSC 3433	0.1	mg/kg		
Dibenzo(ah)anthracene	DETSC 3433	0.1	mg/kg		
Benzo(ghi)perylene	DETSC 3433	0.1	mg/kg		
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg		< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg		< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg		< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg		< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg		< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg		< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg		< 0.1

Summary of Chemical Analysis
Leachate Samples

Our Ref 24-06301
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2317027	2317028	2317029	2317030	2317031
			Sample ID ~	S42 - Base	S44 - Base	S47 - SW face	S51 - Base	S55 - Base
			Depth ~	2.00	2.10	1.20	2.00	2.30
			Other ID ~					
			Sample Type ~	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date ~	21/03/2024	21/03/2024	21/03/2024	22/03/2024	22/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Preparation								
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y	Y	Y
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Information in Support of the Analytical Results

Our Ref 24-06301
Client Ref ~ NX534
Contract ~ Greenheys Eastern Fuel Tank Removal

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2317015	S42 - Base 2.00 SOIL	21/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2317016	S43 - Base 2.00 SOIL	21/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317017	S44 - Base 2.10 SOIL	21/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317018	S45 - Sface 0.80 SOIL	21/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317019	S46 - Sface 1.00 SOIL	21/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317020	S47 - SW face 1.20 SOIL	21/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317021	S48 - SW face 1.00 SOIL	21/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317022	S50 - Base 2.00 SOIL	22/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317023	S51 - Base 2.00 SOIL	22/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317024	S53 - N face 1.00 SOIL	22/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317025	S54 - W face 1.50 SOIL	22/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317026	S55 - Base 2.30 SOIL	22/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317027	S42 - Base 2.00 LEACHATE	21/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2317028	S44 - Base 2.10 LEACHATE	21/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317029	S47 - SW face 1.20 LEACHATE	21/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317030	S51 - Base 2.00 LEACHATE	22/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317031	S55 - Base 2.30 LEACHATE	22/03/24	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

***** -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

Information in Support of the Analytical Results

Our Ref 24-06301
Client Ref ~ NX534
Contract ~ Greenheys Eastern Fuel Tank Removal

$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 24-06622 *Issued:* 09-Apr-24

Client NX Consulting Ltd
Station House
Stamford New Road
Altricham
WA14 1EP

Our Reference 24-06622

Client Reference ~ NX534

Order No ~ NX534

Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Description One Soil sample.

Date Received 02-Apr-24

Date Started 02-Apr-24

Date Completed 09-Apr-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

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Summary of Chemical Analysis
Soil Samples

Our Ref 24-06622
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Lab No	2318983
Sample ID ~	S56
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	25/03/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	4.9
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.1
Chromium	DETSC 2301#	0.15	mg/kg	27
Copper	DETSC 2301#	0.2	mg/kg	30
Lead	DETSC 2301#	0.3	mg/kg	13
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05
Nickel	DETSC 2301#	1	mg/kg	33
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Zinc	DETSC 2301#	1	mg/kg	72
Inorganics				
pH	DETSC 2008#		pH	9.7
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	1.0
Sulphide	DETSC 2024*	10	mg/kg	24
Sulphate as SO4, Total	DETSC 2321#	100	mg/kg	418
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06622
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Lab No	2318983
Sample ID ~	S56
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	25/03/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06622
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Lab No	2318983
Sample ID ~	S56
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	25/03/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
VOCs				
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	0.13
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06622
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Lab No	2318983
Sample ID ~	S56
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	25/03/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06622
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Lab No	2318983
Sample ID ~	S56
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	25/03/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1

Information in Support of the Analytical Results

Our Ref 24-06622
Client Ref ~ NX534
Contract ~ Greenheys Eastern Fuel Tank Verification Sample

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2318983	S56 SOIL	25/03/24	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days), VOC (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

***** -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Certificate of Analysis

Certificate Number	24-06624	*Issued:*	09-Apr-24

Client NX Consulting Ltd
Station House
Stamford New Road
Altricham
WA14 1EP

Our Reference	24-06624
Client Reference ~	NX534
Order No ~	NX534
Contract Title ~	Greenheys Eastern Fuel Tank Verification Sample
Description	One Soil sample.
Date Received	02-Apr-24
Date Started	02-Apr-24
Date Completed	09-Apr-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 24-06624
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Lab No	2319009
Sample ID ~	S58
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	26/03/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	14
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.2
Chromium	DETSC 2301#	0.15	mg/kg	18
Copper	DETSC 2301#	0.2	mg/kg	13
Lead	DETSC 2301#	0.3	mg/kg	11
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05
Nickel	DETSC 2301#	1	mg/kg	23
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Zinc	DETSC 2301#	1	mg/kg	50
Inorganics				
pH	DETSC 2008#		pH	7.2
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	1.1
Sulphide	DETSC 2024*	10	mg/kg	100
Sulphate as SO4, Total	DETSC 2321#	100	mg/kg	472
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	0.46
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	7.7
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	54
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	15
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	7.5
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	2.7
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	26
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.10
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.10
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.10
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	26
Benzene	DETSC 3321#	0.01	mg/kg	< 0.10
Ethylbenzene	DETSC 3321#	0.01	mg/kg	2.3
Toluene	DETSC 3321#	0.01	mg/kg	1.8
Xylene	DETSC 3321#	0.01	mg/kg	5.6
MTBE	DETSC 3321	0.01	mg/kg	< 0.10

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06624
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Lab No	2319009
Sample ID ~	S58
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	26/03/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	0.05
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	0.04
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.04
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.12
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06624
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Lab No	2319009
Sample ID ~	S58
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	26/03/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
VOCs				
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	0.05
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	0.11
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	0.10
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	0.23
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	0.04
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	0.31

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06624
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Lab No	2319009
Sample ID ~	S58
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	26/03/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	0.31
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01
SVOCs				
Phenol	DETSC 3433	0.1	mg/kg	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	0.7
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06624
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Verification Sample

Lab No	2319009
Sample ID ~	S58
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	26/03/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	0.3
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	3.5
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1

Information in Support of the Analytical Results

Our Ref 24-06624
Client Ref ~ NX534
Contract ~ Greenheys Eastern Fuel Tank Verification Sample

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2319009	S58 SOIL	26/03/24	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

***** -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 24-06626 *Issued:* 09-Apr-24

Client NX Consulting Ltd
Station House
Stamford New Road
Altricham
WA14 1EP

Our Reference 24-06626

Client Reference ~ NX534

Order No ~ NX534

Contract Title ~ Greenheys Eastern Fuel Tank Removal

Description 6 Soil samples, 3 Leachate prepared by DETS samples.

Date Received 02-Apr-24

Date Started 02-Apr-24

Date Completed 09-Apr-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 24-06626
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2319011	2319012	2319013	2319014	2319015	2319016
			Sample ID ~	S57	S59	S60	S61	S62	S63
			Depth ~						
			Other ID ~						
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	26/03/2024	26/03/2024	26/03/2024	26/03/2024	26/03/2024	26/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	9.4	5.3	6.7			4.9
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2	0.3	0.4			0.3
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.2	< 0.1			< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	11	27	21			18
Copper	DETSC 2301#	0.2	mg/kg	12	23	22			24
Lead	DETSC 2301#	0.3	mg/kg	6.2	11	9.6			11
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05			< 0.05
Nickel	DETSC 2301#	1	mg/kg	8.0	33	28			25
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5			< 0.5
Zinc	DETSC 2301#	1	mg/kg	42	87	58			54
Inorganics									
pH	DETSC 2008#		pH	7.3	8.3	8.5			8.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1			< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5	1.1	1.3			1.4
Sulphide	DETSC 2024*	10	mg/kg	12	32	32			24
Sulphate as SO4, Total	DETSC 2321#	100	mg/kg	175	248	300			840
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	22	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	2.6	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	6.0	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	0.87	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	1.5	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	0.40	< 0.01	< 0.01	< 0.01	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	2.1	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	0.19	< 0.01	< 0.01	< 0.01	< 0.01

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06626
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2319011	2319012	2319013	2319014	2319015	2319016
			Sample ID ~	S57	S59	S60	S61	S62	S63
			Depth ~						
			Other ID ~						
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	26/03/2024	26/03/2024	26/03/2024	26/03/2024	26/03/2024	26/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	< 0.03			< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03			< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10			< 0.10
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3			< 0.3

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-06626
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2319011	2319012	2319014	2319016
			Sample ID ~	S57	S59	S61	S63
			Depth ~				
			Other ID ~				
			Sample Type ~	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	26/03/2024	26/03/2024	26/03/2024	26/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
VOCs							
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	0.05	0.07	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	0.03	0.03	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	0.06	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	0.06	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	0.02	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	0.03	< 0.01	< 0.01

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-06626
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2319011	2319012	2319014	2319016
			Sample ID ~	S57	S59	S61	S63
			Depth ~				
			Other ID ~				
			Sample Type ~	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	26/03/2024	26/03/2024	26/03/2024	26/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
Naphthalene	DETSC 3431	0.01	mg/kg			< 0.01	
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01
SVOCs							
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3433	0.1	mg/kg			< 0.1	
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3433	0.1	mg/kg			< 0.1	
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3433	0.1	mg/kg			< 0.1	

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 24-06626
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2319011	2319012	2319014	2319016
			Sample ID ~	S57	S59	S61	S63
			Depth ~				
			Other ID ~				
			Sample Type ~	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	26/03/2024	26/03/2024	26/03/2024	26/03/2024
			Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3433	0.1	mg/kg			< 0.1	
Anthracene	DETSC 3433	0.1	mg/kg			< 0.1	
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	DETSC 3433	0.1	mg/kg			< 0.1	
Pyrene	DETSC 3433	0.1	mg/kg			< 0.1	
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	DETSC 3433	0.1	mg/kg			< 0.1	
Chrysene	DETSC 3433	0.1	mg/kg			< 0.1	
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3433	0.1	mg/kg			< 0.1	
Benzo(k)fluoranthene	DETSC 3433	0.1	mg/kg			< 0.1	
Benzo(a)pyrene	DETSC 3433	0.1	mg/kg			< 0.1	
Indeno(123cd)pyrene	DETSC 3433	0.1	mg/kg			< 0.1	
Dibenzo(ah)anthracene	DETSC 3433	0.1	mg/kg			< 0.1	
Benzo(ghi)perylene	DETSC 3433	0.1	mg/kg			< 0.1	
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Summary of Chemical Analysis
Leachate Samples

Our Ref 24-06626
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2319017	2319018	2319019
			Sample ID ~	S60	S62	S63
			Depth ~			
			Other ID ~			
			Sample Type ~	LEACHATE	LEACHATE	LEACHATE
			Sampling Date ~	26/03/2024	26/03/2024	26/03/2024
			Sampling Time ~	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Preparation						
BS EN 12457 10:1	DETSC 1009*			Y	Y	Y
Petroleum Hydrocarbons						
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0	< 1.0

Information in Support of the Analytical Results

Our Ref 24-06626
Client Ref ~ NX534
Contract ~ Greenheys Eastern Fuel Tank Removal

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2319011	S57 SOIL	26/03/24	GJ 250ml, GJ 60ml, PT 1L		
2319012	S59 SOIL	26/03/24	GJ 250ml, GJ 60ml, PT 1L		
2319013	S60 SOIL	26/03/24	GJ 250ml, GJ 60ml, PT 1L		
2319014	S61 SOIL	26/03/24	GJ 250ml, GJ 60ml, PT 1L		
2319015	S62 SOIL	26/03/24	GJ 250ml, GJ 60ml, PT 1L		
2319016	S63 SOIL	26/03/24	GJ 250ml, GJ 60ml, PT 1L		
2319017	S60 LEACHATE	26/03/24	GJ 250ml, GJ 60ml, PT 1L		
2319018	S62 LEACHATE	26/03/24	GJ 250ml, GJ 60ml, PT 1L		
2319019	S63 LEACHATE	26/03/24	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

***** -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 24-06297 *Issued:* 03-Apr-24

Client NX Consulting Ltd
Station House
Stamford New Road
Altricham
WA14 1EP

Our Reference 24-06297

Client Reference ~ NX534

Order No ~ NX534

Contract Title ~ Greenheys Eastern Fuel Tank Removal

Description 2 Soil samples, 2 Leachate prepared by DETS samples.

Date Received 25-Mar-24

Date Started 25-Mar-24

Date Completed 03-Apr-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

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Summary of Chemical Analysis
Soil Samples

Our Ref 24-06297
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2317008	2317009
			Sample ID ~	S49	S52
			Depth ~	1.40	1.50
			Other ID ~	South	North
			Sample Type ~	SOIL	SOIL
			Sampling Date ~	21/03/2024	22/03/2024
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	0.31	2.3
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	5.9	29
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	12
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10	12
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	0.34
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	19
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	< 0.5	< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	< 0.6	< 0.6
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	< 1.4	< 1.4
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	< 10	< 10
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	< 10	12
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	0.74
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	0.34
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	0.50
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01
PAHs					
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06297
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2317008	2317009
			Sample ID ~	S49	S52
			Depth ~	1.40	1.50
			Other ID ~	South	North
			Sample Type ~	SOIL	SOIL
			Sampling Date ~	21/03/2024	22/03/2024
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06297
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2317008	2317009
			Sample ID ~	S49	S52
			Depth ~	1.40	1.50
			Other ID ~	South	North
			Sample Type ~	SOIL	SOIL
			Sampling Date ~	21/03/2024	22/03/2024
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
VOCs					
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	0.03
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06297
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2317008	2317009
			Sample ID ~	S49	S52
			Depth ~	1.40	1.50
			Other ID ~	South	North
			Sample Type ~	SOIL	SOIL
			Sampling Date ~	21/03/2024	22/03/2024
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01
SVOCs					
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1

Summary of Chemical Analysis
Soil Samples

Our Ref 24-06297
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2317008	2317009
			Sample ID ~	S49	S52
			Depth ~	1.40	1.50
			Other ID ~	South	North
			Sample Type ~	SOIL	SOIL
			Sampling Date ~	21/03/2024	22/03/2024
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1

Summary of Chemical Analysis
Leachate Samples

Our Ref 24-06297
Client Ref ~ NX534
Contract Title ~ Greenheys Eastern Fuel Tank Removal

			Lab No	2317010	2317011
			Sample ID ~	S49	S52
			Depth ~	1.40	1.50
			Other ID ~	South	North
			Sample Type ~	LEACHATE	LEACHATE
			Sampling Date ~	21/03/2024	22/03/2024
			Sampling Time ~	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
BS EN 12457 10:1	DETSC 1009*			Y	Y
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C6-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aliphatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aliphatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C5-C7	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C7-C8	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C8-C10	DETSC 3322	0.1	ug/l	< 0.1	< 0.1
Aromatic C10-C12	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C12-C16	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C16-C21	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C21-C35	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C35-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Aromatic C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0
Ali/Aro C10-C44	DETSC 3072*	1	ug/l	< 1.0	< 1.0

Information in Support of the Analytical Results

Our Ref 24-06297
Client Ref ~ NX534
Contract ~ Greenheys Eastern Fuel Tank Removal

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2317008	S49 1.40 SOIL	21/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317009	S52 1.50 SOIL	22/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317010	S49 1.40 LEACHATE	21/03/24	GJ 250ml, GJ 60ml, PT 1L		
2317011	S52 1.50 LEACHATE	22/03/24	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

***** -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 24-06319 *Issued:* 26-Mar-24

Client NX Consulting Ltd
Station House
Stamford New Road
Altricham
WA14 1EP

Our Reference 24-06319

Client Reference ~ NX534

Order No ~ NX534

Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

Description One Soil sample.

Date Received 19-Mar-24

Date Started 25-Mar-24

Date Completed 26-Mar-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 Asbestos Analysis

Samples

Our Ref 24-06319
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

Lab No	Sample ID	Sample Location	Material Type	Result	Comment*	Analyst

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 24-06319
Client Ref ~ NX534
Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

Lab No	2317201
Sample ID ~	B3-S2
Depth ~	
Other ID ~	
Sample Type ~	
Sampling Date ~	15/03/2024
Sampling Time ~	

Test	**Method**	**Units**	
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**0.002**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	0.002
Quantification by PCOM (c)	DETSC 1102	Mass %	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na
Breakdown of Gravimetric Analysis (a)			
Mass of Sample		g	1539.29
ACMs present*		type	
Mass of ACM in sample		g	
% ACM by mass		%	
% asbestos in ACM		%	
% asbestos in sample		%	
Breakdown of Detailed Gravimetric Analysis (b)			
% Amphibole bundles in sample		Mass %	0.002
% Chrysotile bundles in sample		Mass %	na
Breakdown of PCOM Analysis (c)			
% Amphibole fibres in sample		Mass %	na
% Chrysotile fibres in sample		Mass %	na
Breakdown of Potentially Respirable Fibre Analysis (d)			
Amphibole fibres		Fibres/g	na
Chrysotile fibres		Fibres/g	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
denotes deviating sample

Information in Support of the Analytical Results

Our Ref 24-06319
Client Ref ~ NX534
Contract ~ Greenheys Pencroft Way Fuel Tank Verification

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2317201	B3-S2 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

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

Key:

~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
-MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 24-05816 *Issued:* 25-Mar-24

Client NX Consulting Ltd
Station House
Stamford New Road
Altricham
WA14 1EP

Our Reference 24-05816

Client Reference ~ NX534

Order No ~ NX534

Contract Title ~ Greenheys Pencroft Way Fuel Tank Verification

Description 2 Soil samples, 4 Leachate prepared by DETS samples.

Date Received 19-Mar-24

Date Started 19-Mar-24

Date Completed 25-Mar-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

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 24-05816
Client Ref NX534
Contract Title Greenheys Pencroft Way Fuel Tank Verification
Sample Id B2-S2
Sample Numbers 2314193 2314202
Date Analysed 25/03/2024

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values: Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.7	3	5	6
DETSC 2003# Loss On Ignition	%	1.6	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	10.0	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	2.2	100	n/a	n/a
DETSC 2008# pH	pH Units	8.4	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	< 1.0	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate): Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	0.63	< 0.01	0.5	2	25
DETSC 2306 Barium as Ba	14	0.14	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	< 0.25	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	0.67	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	1.2	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	0.68	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.31	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	1800	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	140	1.4	10	150	500
DETSC 2055 Sulphate as SO4	36000	360	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	84000	840	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.0
DETSC 2009 Conductivity uS/cm	121.0
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.096

Stage 1

Volume of Leachant L2*	0.942
Volume of Eluate VE1*	0.89

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

WASTE ACCEPTANCE CRITERIA TESTING ANALYTICAL REPORT

Our Ref 24-05816
Client Ref NX534
Contract Title Greenheys Pencroft Way Fuel Tank Verification
Sample Id B3-S2
Sample Numbers 2314196 2314203
Date Analysed 25/03/2024

Test Results On Waste

Determinand and Method Reference	Units	Result	WAC Limit Values Inert Waste	SNRHW	Hazardous Waste
DETSC 2084# Total Organic Carbon	%	0.6	3	5	6
DETSC 2003# Loss On Ignition	%	2.0	n/a	n/a	10
DETSC 3321# BTEX	mg/kg	7.6	6	n/a	n/a
DETSC 3401# PCBs (7 congeners)	mg/kg	< 0.01	1	n/a	n/a
DETSC 3311# TPH (C10 - C40)	mg/kg	< 10	500	n/a	n/a
DETSC 3301 PAHs	mg/kg	< 1.6	100	n/a	n/a
DETSC 2008# pH	pH Units	11.2	n/a	>6	n/a
DETSC 2073* Acid Neutralisation Capacity (pH4)	mol/kg	1.4	n/a	TBE	TBE
DETSC 2073* Acid Neutralisation Capacity (pH7)	mol/kg	< 1.0	n/a	TBE	TBE

Test Results On Leachate

Determinand and Method Reference	Conc in Eluate ug/l 10:1	Amount Leached* mg/kg LS10	WAC Limit Values (Limit values for LS10 Leachate) Inert Waste	SNRHW	Hazardous Waste
DETSC 2306 Arsenic as As	1.6	0.016	0.5	2	25
DETSC 2306 Barium as Ba	13	0.13	20	100	300
DETSC 2306 Cadmium as Cd	< 0.030	< 0.02	0.04	1	5
DETSC 2306 Chromium as Cr	0.36	< 0.1	0.5	10	70
DETSC 2306 Copper as Cu	0.75	< 0.02	2	50	100
DETSC 2306 Mercury as Hg	< 0.010	< 0.002	0.01	0.2	2
DETSC 2306 Molybdenum as Mo	2.1	< 0.1	0.5	10	30
DETSC 2306 Nickel as Ni	< 0.50	< 0.1	0.4	10	40
DETSC 2306 Lead as Pb	1.2	< 0.05	0.5	10	50
DETSC 2306 Antimony as Sb	0.6	< 0.05	0.06	0.7	5
DETSC 2306 Selenium as Se	< 0.25	< 0.03	0.1	0.5	7
DETSC 2306 Zinc as Zn	< 1.3	< 0.01	4	50	200
DETSC 2055 Chloride as Cl	1900	< 100	800	15,000	25,000
DETSC 2055* Fluoride as F	< 100	< 0.1	10	150	500
DETSC 2055 Sulphate as SO4	49000	490	1000	20,000	50,000
DETSC 2009* Total Dissolved Solids	70000	700	4000	60,000	100,000
DETSC 2130 Phenol Index	< 100	< 1	1	n/a	n/a
DETSC 2085 Dissolved Organic Carbon	< 2000	< 50	500	800	1000

TBE - To Be Evaluated
SNRHW - Stable Non-Reactive Hazardous Waste

Additional Information

DETSC 2008 pH	7.3
DETSC 2009 Conductivity uS/cm	99.2
* Temperature*	17.0

Mass of Sample Kg*	0.110
Mass of dry Sample Kg*	0.097

Stage 1

Volume of Leachant L2*	0.958
Volume of Eluate VE1*	0.9

Disclaimer: *The WAC limit values are provided for guidance only. DETS does not accept responsibility for errors or omissions. Values are correct at time of issue.*

V.2.06 ** DETS are accredited for the testing of leachates and not the leachate preparation stage which is unaccredited.*

Information in Support of the Analytical Results

Our Ref 24-05816
Client Ref ~ NX534
Contract ~ Greenheys Pencroft Way Fuel Tank Verification

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2314188	S30 1.50 SOIL	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314189	S39 1.80 SOIL	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314190	S40 1.60 SOIL	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314191	S41 1.00 SOIL	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314192	B2-S1 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314193	B2-S2 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314194	B2-S3 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314195	B3-S1 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314196	B3-S2 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314197	B3-S3 SOIL	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314198	S30 1.50 LEACHATE	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314199	S39 1.80 LEACHATE	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314200	S40 1.60 LEACHATE	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314201	S41 1.00 LEACHATE	12/03/24	GJ 250ml, GJ 60ml x2, PT 1L		
2314202	B2-S2 LEACHATE	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		
2314203	B3-S2 LEACHATE	15/03/24	GJ 250ml, GJ 60ml x2, PT 1L (.)		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results

***** -not accredited.

-MCERTS (accreditation only applies if report carries the MCERTS logo).

$ -subcontracted.

n/s -not supplied.

I/S -insufficient sample.

U/S -unsuitable sample.

t/f -to follow.

nd -not detected.

Information in Support of the Analytical Results

Our Ref 24-05816
Client Ref ~ NX534
Contract ~ Greenheys Pencroft Way Fuel Tank Verification

End of Report

D - Example Contractor Consignment Notes

REF: SIGBRAIDD1

BRAIDWOOD
DON'T BE LATE IN THE MORNING

Ticket Number: 13767

Roy Braidwood & Sons Transport Limited
Worsley Trading Estate
Lester Road
Little Hulton
Manchester
M38 0PT

Tel 0161 799 3801
E Mail matthew@braidwood.info

Details

Collect From	Deliver To
	EAST COAST CONSTRUCTION PENCROFT WAY GREENHAYS M15 6JJ
Contact	**Contact**
Tel	**Tel**

Customer: EAST COAST CONSTRUCTION (N.E.) LTD
Reference 144/93428
Registration: W500RBS
Job Type AGG
Driver: BERNARD BRAIDWOOD
Products: 6F5 RECYCLED
Weight: 20000

Signed By:
Signature:

Signed By: Dean sier
Signature:



Signed On: **Signed At:**
Departed On: **Departed At:**

Signed On: 01/03/2024 **Signed At:** 0624
Departed On: **Departed At:**

REF: SIGBRAIDD1

BRAIDWOOD

DON'T BE LATE IN THE MORNING

Ticket Number: 19020

Roy Braidwood & Sons Transport Limited
Worsley Trading Estate
Lester Road
Little Hulton
Manchester
M38 0PT

Tel 0161 799 3801
E Mail matthew@braidwood.info

Details

Collect From	**Deliver To**
EAST COAST CONSTRUCTION PENCROFT WAY GREENHAYS M15 6JJ	
Contact	**Contact**
Tel	**Tel**

Customer:	EAST COAST CONSTRUCTION (N.E.) LTD	**Reference**	144/94124
Registration:	V900RBS	**Job Type**	MUC
Driver:	TONY GREENHALGH		
Products:	NON-HAZARDOUS OFF SITE		
Weight:	1		

Signed By:	Peter Arnold	**Signed By:**	
Signature:		**Signature:**	
Signed On:	02/04/2024	**Signed At:**	1313
Departed On:		**Departed At:**	
Signed On:		**Signed At:**	
Departed On:		**Departed At:**	

REF: SIGBRAIDD1

BRAIDWOOD

DON'T BE LATE IN THE MORNING

Ticket Number: 19791

Roy Braidwood & Sons Transport Limited
Worsley Trading Estate
Lester Road
Little Hulton
Manchester
M38 0PT

Tel 0161 799 3801
E Mail matthew@braidwood.info

Details

Collect From	**Deliver To**
EAST COAST CONSTRUCTION PENCROFT WAY GREENHAYS M15 6JJ	
Contact	**Contact**
Tel	**Tel**

Customer:	EAST COAST CONSTRUCTION (N.E.) LTD	**Reference**	144/94324
Registration:	X300RBS	**Job Type**	MUC
Driver:	KAMIL PASULA		
Products:	NON-HAZARDOUS OFF SITE (WET)		
Weight:	1		

Signed By:	Peter Arnold	**Signed By:**	
Signature:		**Signature:**	
Signed On:	05/04/2024	**Signed At:**	1334
Departed On:		**Departed At:**	
Signed On:		**Signed At:**	
Departed On:		**Departed At:**	

REF: SIGBRAIDD1

BRAIDWOOD

DON'T BE LATE IN THE MORNING

Ticket Number: 9037

Roy Braidwood & Sons Transport Limited
Worsley Trading Estate
Lester Road
Little Hulton
Manchester
M38 0PT

Tel 0161 799 3801
E Mail matthew@braidwood.info

Details

Collect From

EAST COAST CONSTRUCTION
PENCROFT WAY

GREENHAYS

M15 6JJ

Contact

Tel

Deliver To

Contact

Tel

Customer: EAST COAST CONSTRUCTION (N.E.) LTD

Reference 144/92750

Registration: V100RBS

Job Type MUC

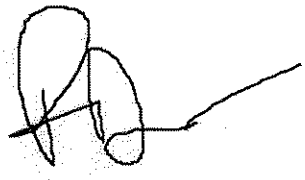
Driver: JAMES ECCLES

Products: NON-HAZARDOUS OFF SITE

Weight: 1

Signed By: Peter Arnold

Signature:



Signed On: 01/02/2024 **Signed At:** 0904

Departed On: **Departed At:**

Signed By:

Signature:

Signed On: **Signed At:**

Departed On: **Departed At:**

61 Mosley Road
Trafford Park
Manchester
M17 1GJ

P. P. O'CONNOR
Committed To Excellence

www.ppoconnor.co.uk
salesledger@ppoconnor.co.uk

WASTE CARRIERS LICENCE NO: CBDU101751

CONVEYANCE NOTE / PROOF OF DELIVERY

TICKET NO:	**53422**	**DATE:**	06-Mar-2024
CUSTOMER:	FGD Ltd	**DEPOT:**	P33
DELIVERY/COLLECTION ADDRESS: c/o East Coast Construction, Greenhey's Business Centre Manchester, M15 6JJ		**ORDER NO:**	MAN348606
		HAULIER:	PP O'Connor Plant Ltd
		VEHICLE REG:	MV23 WWM
		SITE CONTACT:	-

PRODUCT DESCRIPTION	QUANTITY	
6F5 Gritstone	**GROSS WEIGHT**	31,966
	TARE WEIGHT	12,400
	NET WEIGHT	19,566

TIME ARRIVED ONSITE:	10:11	**CASH CUSTOMER:**
TIME FINISHED ONSITE:	10:11	
WAITING TIME/DAYWORK:	0.00	**DRIVER NAME:** WAYNE MC TERNAN

SIGNED ON BEHALF OF THE CUSTOMER, I ACKNOWLEDGE THE DETAILS ON THIS TICKET AS CORRECT AND ARE SUBJECT TO OUR CONDITIONS OF SALE

PRINT NAME: Peter Arnold **CUSTOMER SIGNATURE** Peter

ALL RECYCLED PRODUCTS ARE PRODUCED IN COMPLIANCE WITH THE WRAP QUALITY PROTOCOL.
THIS MATERIAL IS SOLD SUBJECT TO THE TERMS AND CONDITIONS AS SHOW ON YOUR QUOTATION.
ALL VEHICLES ENTER CUSTOMERS PROPERTY AT CUSTOMER'S RISK. ALL GOODS ARE CARRIED SUBJECT TO RHA CONDITIONS OF ARRIAGE 1998. COPY AVAILABLE ON REQUEST.

CONVEYANCE NOTE 231347

Customer

F-C-D

FINCH AGGREGATES

6 Trident Park, Trident Way, Blackburn, Lancashire BB1 3NU
Tel: 01254 311149 • Fax: 01254 696558

Address

Green Leys
Business Park.
Droylsden
263339
118465

Time

Delivery Date 5-3-24

Place of Loading BV

Registration Number PE18NFS

Name of Driver Dale

Description of Materials

6F5.

	Tonnes
Gross weight	3194
Tare weight	1200
Net weight	1994

Goods Signed For / On Behalf Of The Customer

It is the the customers responsibility to provide adequate site access. Neither the Company or the driver can be held responsible for damage whilst under the customers instruction.

The drivers decision as to the safety or otherwise of the delivery point will be final.

Printed Name

Signature

WAITING TIME

A charge for waiting time will be made if the vehicle is held or delayed on site.

Arrived on site at

Off Site at

Printed Name

Signature

Signed For / On Behalf Of The Customer

Ticket Number 240829

Subject to our standard terms and conditions of sale which are available on our website at www.finchaggregates.co.uk or on request.

118465

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