ARCADIS Design & Consultancy for natural and built assets

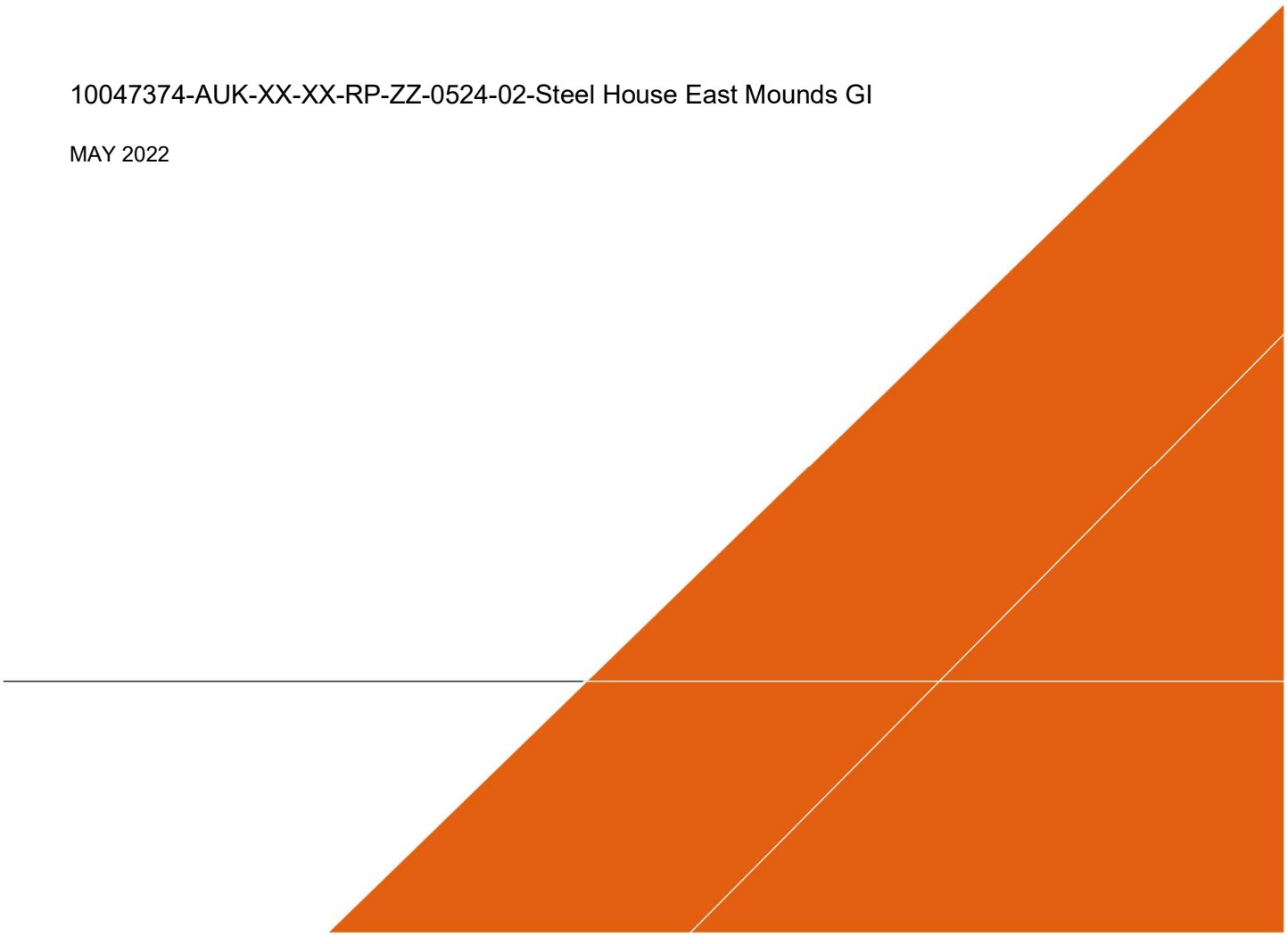
# STEEL HOUSE EAST MOUNDS, TEESWORKS, REDCAR

## Ground Investigation

South Tees Development Corporation

10047374-AUK-XX-XX-RP-ZZ-0524-02-Steel House East Mounds GI

MAY 2022



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**Steel House East Mounds, Teesworks, Ground Investigation**

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# VERSION CONTROL

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| DRAFT | 03/05/2022 | D. Wood | Draft for comment |
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# 1 Introduction

## 1.1 Project Background

The site consists of an area of land located to the east of Steel House within the Teesworks site, Redcar. The site location is shown below and on Figure 1 in Appendix A.

*Figure 1: Land East of Steel House – Approximate Redline Boundary*

Arcadis understand that the site is being considered for future development. The site is currently occupied by raised landscape mounds and engineering operations to level the area will be required prior to any future development. This report has been prepared to support the planning application for the engineering operations associated with the removal of mounds and installation of haul road and associated works. To characterise and further understand the material located within the mounds, Arcadis undertook a shallow soil investigation of the mounded material only.

## 1.2 Contract Details

Arcadis (UK) Limited (Arcadis) was appointed by South Tees Development Corporation (STDC) to undertake a shallow soil ground investigation on the raised landscape mounds present on the site, and to provide consultancy advice on reuse / removal of the material to help facilitate the redevelopment of the land.

The work was carried out in accordance with the "*Prairie Site, Warrenby Site and the SLEMS Ground Investigations Provision of Consultancy Services* Agreement between Tees Valley Combined Authority and Arcadis.

## 1.3 Scope of Works

The scope of works as carried out by Arcadis, on behalf of STDC is detailed below:

- Management and technical supervision of the site works;
- Direct the site works to ensure compliance with existing site management protocols and procedures;

- Excavation of 14no. trial pits into the mounds on site to a target depth of 4.5m or refusal, or until natural material was encountered;
- Soil sampling for in-field assessment and submission to Chemtech Environmental, Exploration & Testing Associates (ETA) and Thomas Research Services (TRS) laboratories for chemical, geotechnical and petrological testing;
- Specify the requirements for laboratory analysis;
- Analysis of the results of the ground investigation;
- Preparation of an interpretive technical report including an assessment of identified environmental and geotechnical risks associated with the material assessed (*this document*).

## 1.4 Project Aims and Objectives

The aim of the project is to provide advice on material composition encountered so a suitable way of managing the material can be identified. This is in order to support the submission of a planning application for the site preparation engineering works. Engineering works are anticipated to cover the removal of mounds to approximately 5.10m AOD with the excavated material intended to be used elsewhere on the wider Teesworks site.

## 1.5 Report Aims

The aim of this report is to use the available information to consider the material contained within the landscape mounds from an environmental and geotechnical perspective with a view on determining if the material is suitable for use elsewhere on Teesworks.

Within this report Arcadis has provided an overview of the findings of the site investigation and used the information to prepare this interpretative technical report.

## 1.6 Reliability / Limitations of Information

A complete list of Arcadis Study Limitations is presented in Appendix B.

It should be noted that ground conditions between exploratory locations may vary from those identified during this ground investigation; any design should take this into consideration.

# 2 Site Conceptualisation

STDC supplied the following Phase I Environmental Site Assessment (ESA) for the site:

- *TS1 Steel House and Surrounding Area – Phase 1 Geo-Environmental Desk Study*, prepared by CH2m Hill for Homes and Communities Agency, report ref. 678079_TS1_001 dated August 2017 and marked Final [CH2M 2017]

In addition, the following documents were also reviewed:

- *Landfill Closure Report for CLE31 Teesside*, prepared by Tata Steel, Ref. 160536. June 2015
- *Former SSI Steelworks Area B Steel House- Environmental Risk Assessment.* Prepared by Arcadis ref Redcar Steelworks-AUK-XX-XX-RP-GE-0001-01-SSI2B_GI_ERA. August 2018
- *Former Steelworks Land, South Tees Outline Remedial Strategy*, Prepared for South Tees Development Corporation by Wood, Ref 41825-wood-XX-XX-RP-OC-0001_S0_P01. June 2019.
- *Warrenby 3B Area, Former Steelworks, Redcar*, *Phase II Environmental Site Assessment,* prepared by Arcadis, ref. 10035117-AUK-XX-XX-RP-ZZ-0051-P2-Warrenby3B_ESA. September 2020.
- *Steel House – Volume 2 Environmental Statement (December 2020) Chapter H Ground Conditions.* Prepared by Arcadis for Teesworks. December 2020.
- *Warrenby 3A, Long Acres, Teesworks, Redcar, Combined Environmental & Geotechnical Site Assessment*, prepared by Arcadis, ref. 10035117-AUK-XX-XX-RP-ZZ-0224-01-Warrenby3A_Report, dated March 2022.

This section incorporates a review of the above documents, publicly available records, and data collected as part of the site investigation works (presented in Appendix C).

## 2.1 Site Location

The site is located in in the north-east of the Teesworks site, to the east of Steel House. The centre of site is located at approximately National Grid Reference: 457971, 524312 and an indicative post code for the site is TS10 5QW.

The site elevation generally ranges from approximately 6m to 16m above Ordnance Datum (AOD).

A Site Location Plan is presented on Figure 1 within Appendix A.

## 2.2 Site Description

The site is occupied by a sinuous mound, approximately 10m in height above the surrounding land. The southern and western faces of the mound are covered by semi mature deciduous trees and scrub with the remainder of the mound covered by grassed areas. At the time of the site walkover, works had recently been completed to remove trees from parts of the site and to form an access route to the west.

The site is bound by a wooded area and Steel House to the west, the A1085 Trunk Road to the south, Darlington to Saltburn railway to the north (beyond which is the Warrenby 3B / CLE31 area), and by a gas governor house (disused), access track and further mounds to the east with Coatham Marsh beyond. The disused gas governor is believed to be associated with the former coke oven gas main which fed the Redcar Coke Ovens and blast furnace. A series of utility marker posts are present to the east of the access track. These mark the route of the Breagh Pipeline which transfers North Sea gas to the Teesside Gas Processing Plant. The Breagh pipeline is protected by a wayleave which encroaches onto the easternmost part of the site (no exploratory holes were excavated within the wayleave).

## 2.3 Site History

Information from the document review and historical maps (presented in Appendix C) is provided below;

| Map Date | Item |
|---|---|
| 1857 | **Site**: site is marshland part of Coatham Marsh.<br>**Off site:** Middlesbrough to Redcar Railway Line (Darlington and Saltburn Branch) railway line is present to the north of site. |
| 1893 - 1913 | **Site**: Mounds are present on site. Railway running from Redcar Iron Works in northwest to Wiley Bridge Plantation to south of site.<br>**Off site:** Redcar iron works approximately 200m to the northwest. Between 1893 and 1913 a slag wool works and slag brick works are developed. |
| 1927 | **Site**: Railway running northwest to southeast between Iron Works and Dormanstown.<br>**Off site:** Dormanstown constructed to the south. Redcar Iron Works now labelled Redcar Iron & Steel Works. |
| 1938 - 1953 | **Site:** Mounds no longer marked.<br>**Off site**: Dormanstown expanded |
| 1974 - 1975 | **Site**: no change<br>**Off site**: electricity substation developed to west of site (along western boundary). Buildings associated with the Iron Works (to the northwest) were largely demolished. Industrial estate constructed south of site. Land to the east of site marked as "landscaped embankment & main tipping area for tunnel spoil" on British Steel Drawing RPS110. |
| 1977 | **Off site**: CLE31 present approximately 200m north of site, was licensed to accept waste from 1977 and was reported to predominantly accept steelmaking slag with minor amounts of canteen and paper waste from the works. The site was closed in 2002 and no more waste has been deposited. No competent basal liner is present underlying the landfill. |
| 1980 – 1983 | **Site:** vegetation / trees marked.<br>**Off site:** Steel House constructed immediately west of site. Darlington to Saltburn line has been reconstructed and now bounds the north edge of site. Area beyond the railway now marked "workings". |
| 1991 – present day | **Site / Off Site**: in present day configuration |

## 2.4 Geology

Historical borehole logs from the British Geological Survey (BGS) data and from Arcadis 2020 (boreholes progressed immediately north of site) indicate a substantial thickness of Made Ground underlies much of the wider area. The logs indicate the predominantly slag rich Made Ground is underlain by Tidal Flat Deposits predominantly comprising sand, silt and clay with localised pockets of peat. These deposits were underlain by Glaciolacustrine Deposits of laminated silts and clays and Glacial Till predominantly comprising slightly gravelly clay.

Bedrock beneath the site is anticipated to comprise the Redcar Mudstone Formation comprising predominantly grey mudstones.

Exerts from the BGS mapping data are presented as Figure 2 in Appendix A.

Site Specific Geology

The following table provides an overview of the site-specific geology encountered during the investigation across the site. The full geology encountered is provided on the trial pit logs alongside photos within Appendix C, a trial pit location plan is provided as Figure 3 within Appendix A.

| Unit | Basal Depth (m AOD) | Thickness (m) | Comment |
|---|---|---|---|
| Made Ground | 4.30* – 11.00*<br>**base not proven* | 2.50* - 4.80*<br>**base not proven* | Site surfacing comprised of vegetation over soft clay with frequent rootlets.<br>The Made Ground encountered during the trial pit investigation predominantly comprised granular material with a fine-grained component and low to medium cobble/boulder content of slag, demolition rubble, with varying amounts of waste materials including plastic, metal, wood, tyres, and glass.<br>In 2no. locations cream sand with occasional shells was identified, based on the elevation (between 7.10 to 7.60m AOD) it is thought that this represents reworked natural deposits. |

Trial pits were not advanced to natural deposits given the depth of Made Ground identified on site and the scope of these works. Reasons for shallow termination above target depth (4.5m bgl) included hard strata, or pit stability.

Made Ground was noted to be composed of:

- **Granular Made Ground (GMG):** identified at the majority of locations as a very sandy cobbly gravel. Typically containing some percentage of slag but slag did not make up the majority of the soil matrix. Typically containing some construction waste (brick, concrete, metal, wood).
- **Waste:** Waste elements were noted in trial pits generally within the GMG. At certain locations the waste element of the soil matrix was more dominant, and included plastics, metal, wood, wires, tyres, glass, and in limited cases viscous oil.

## 2.5 Obstructions

Large boulders of slag and concrete were encountered within the trial pits. No structures were encountered; however it should be noted that obstructions may be encountered in areas not investigated.

## 2.6 Hydrogeology

The hydrogeological map for the area (Sheet 1: Hydrogeological Map of England and Wales, 1:625,000 scale) indicates that groundwater beneath the site within the Redcar Mudstone Formation. The site is not located within a Groundwater Source Protection Zone.

Arcadis 2020 reports groundwater within the Tidal Flat Deposits to rest at 2.349m AOD and between 2.256 to 2.525 within the Redcar Mudstone formation along the northern boundary of site.

Made Ground

Groundwater was not encountered in any of the trial pits excavated as part of the intrusive investigation.

## 2.7 Hydrology

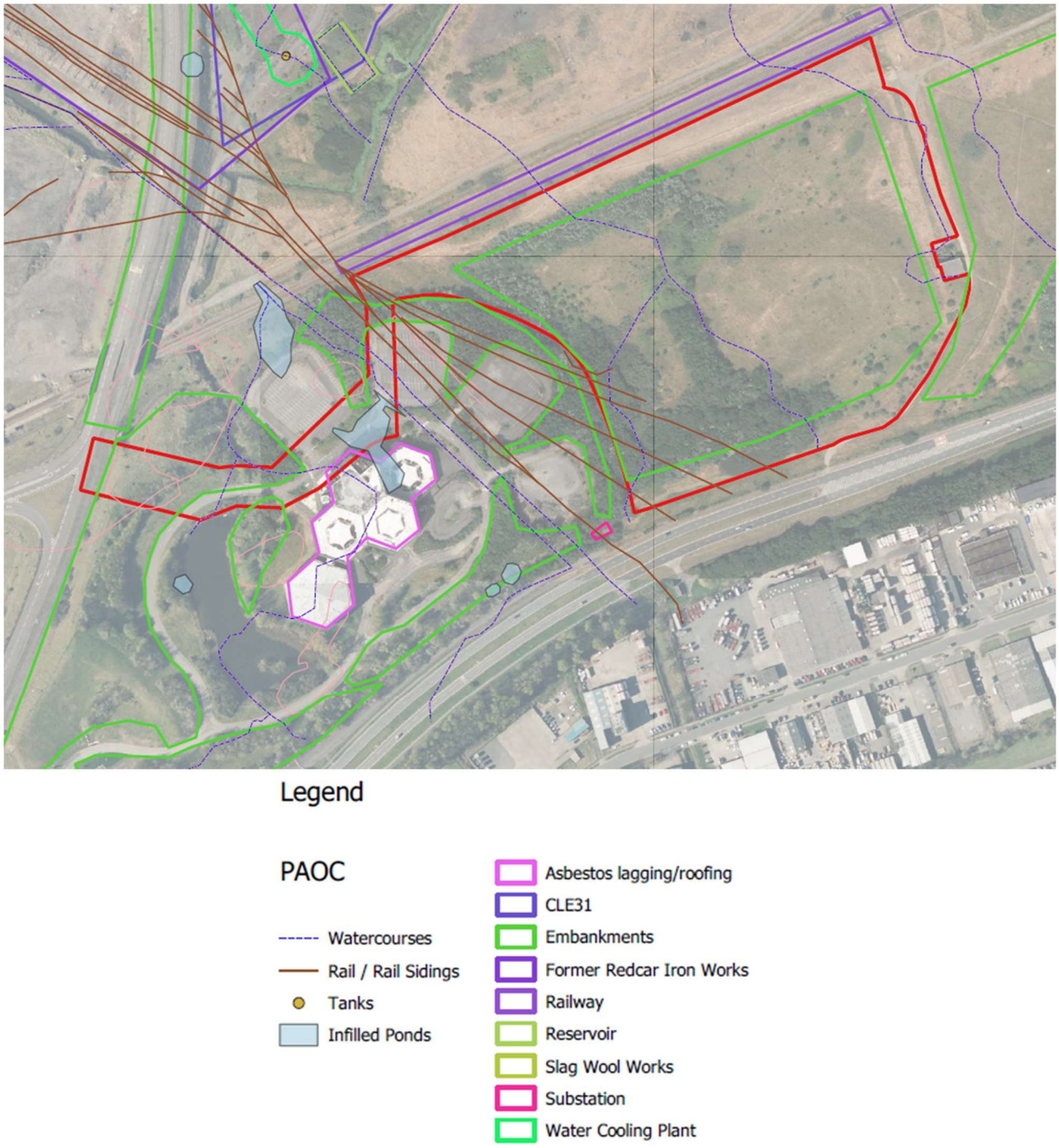
The Fleet watercourse is located to the north offsite. To the west the Mill Race is culverted beyond Steel House before connecting up with the Fleet watercourse to the northwest of site. This watercourse eventually discharges to an intertidal section of the River Tees via the Dabholm Gut.

Offsite the River Tees located ~2km to the west of the site and this section of the river is noted to be intertidal.

## 2.8 Potential Areas of Concern

Based on a review of the documents listed in Section 2, historical mapping (including site plans) the following non exhaustive potential areas of concern (PAOC) in relation to land contamination have been identified. The PAOC are summarised on Figure 4 and in Appendix A.

*Figure 4: Potential Areas of Concern. Redline - boundary of the LEoSH area. Made Ground PAOC not shown.*



# 3 Potential Contamination Sources

Based on the information reviewed in this report, the following potential contamination sources have been identified:

### 3.1.1 On-Site

On-site sources have been identified associated with Made Ground and potential contaminants of concern (CoC) associated with former site uses. The table below summarises the most significant potential on-site sources and the primary contaminants associated with these sources. The identified CoC are considered to represent those likely to be present from other less significant sources.

| Potential On-Site sources | Primary Contaminants |
|---|---|
| Made Ground including slag / waste deposits | Metals including heavy metals, polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons, cyanide, thiocyanate, semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs), sulphate, pH, ammonia, and asbestos. |
| Railways and sidings | Metals, asbestos, TPH, PAH, VOC, SVOC, PCB, and pH. |

### 3.1.2 Off-Site

Potentially contaminated land uses have been identified in the vicinity of the site, the most pertinent of which are presented in the table with potentially associated contaminants.

| Potential Off-Site sources | Distance from site boundary (approximate) | Primary Contaminants |
|---|---|---|
| Warrenby landfill / CLE31 | 60m north | Metals, TPH, PAHs, VOC, SVOC, cyanide, thiocyanate, sulphate, pH, ammonia, asbestos, and ground gas. |
| Former Iron Works, Slag Brick Works, Slag Wool Works and potentially coke works | 170m north | Metals, refractory materials, asbestos, TPH, PAH, cyanides, thiocyanate, SVOCs, ammonia, sulphate, acids and bases (pH) |
| Railways and sidings | 35m west (stretching onto site along north-south axis) | Metals, asbestos, TPH, PAH, VOC, SVOC, PCB, and pH. |
| Transformers and substations | 10m west | TPH and PCBs |
| Made Ground including slag – used for filling / reprofiling works | Surrounding site to north, east and west. | Metals including heavy metals, PAHs, TPH, cyanide, thiocyanate, SVOCs, VOCs, sulphate, pH, ammonia, and asbestos. |

Contaminants of concern in green are of low mobility and have therefore been discounted based on distance from source to site.

Based on the inferred groundwater flow direction, position relative to the site and the above ground nature of the materials being assessed the risk of Contaminants of Concern from PAOC migrating into the mound material is considered low.

## 3.2 Contamination Sources Assessment

The contamination assessment will be undertaken in two ways – contaminants that are dependent upon the material composition (e.g., metals, inorganics, asbestos and PAHs) will be assessed separately for each material type and contaminants that are associated with a particular point source (e.g. hydrocarbons) will be assessed based on the likely source.

Laboratory certificates are presented in Appendix D.

### 3.2.1 Made Ground

Asbestos

Asbestos (amosite, chrysotile, crocidolite) was identified as loose insulation in 3no. samples of Made Ground, in 2 locations the asbestos fibres are associated with the waste rich layers, with the other sample identified in material underlying a waste rich layer. All locations were

1no. sample identified asbestos as loose fibres, this sample was from a granular Made Ground containing limited waste elements (plastics).

Asbestos was quantified at 0.001 to 0.326% (peak mass in SHO-TS1_AUK_TP111 at 2.20m bgl within a waste rich layer). Asbestos detections are shown on Figure 5 within Appendix A.

Metals and Inorganics

Metals that were identified in all of the soil samples included aluminium, antimony, arsenic, barium, chromium, copper, iron, lead, magnesium, manganese, nickel, silicon, vanadium and zinc.

Cyanide was detected above the method detection limit (MDL) in 5no. soil samples, free cyanide was not detected above MDL. Soluble sulphate was measured above the MDL in all samples at concentrations ranging between 19mg/l to 1,150mg/l. Soil samples were noted to be slightly basic to strongly basic (alkaline) with pH levels ranging between 12.1 and 7.4.

Polycyclic Aromatic Hydrocarbons

Concentrations of PAH were measured in 24 of the 27 Made Ground samples with a maximum total PAH concentration of 511.9 mg/kg (SHO-TS1_AUK_TP102 at 2.50m bgl in Made Ground with a higher percentage of waste). This is considered to be an outlier with the average total PAH concentration being 46.5mg/kg.

Typically made ground samples assessed contained PAH compounds with no significant difference noted between material considered surfacing, granular made ground or made ground containing more waste.

Total Petroleum Hydrocarbons

Concentrations of TPH were detected above the MDL in 26 of the 27 samples. 2no. samples reported concentrations of total hydrocarbons above 1,000mg/kg;

- SHO-TS1_AUK_TP102 recorded a concentration of 3,849.6mg/kg at 2.50m bgl, oily material and waste was noted within the soil matrix at this location at the depth the sample was collected. The analysis indicates the contamination to be predominantly mid-heavy fraction aromatic compounds.
- SHO-TS1_AUK_TP112 recorded a concentration of 1,017.2mg/kg at 1.50m bgl, no visual or olfactory evidence of hydrocarbon impact was noted at this location and limited waste elements were noted (plastic). The analysis indicates the contamination to be predominantly mid-heavy fraction aromatic compounds.

Other Contaminants

PCBs were not noted above MDL within any of the samples assessed.

Concentrations of VOC and SVOC were noted within 15 of 27 samples, typically marginally above MDL. VOCs and SVOCs were noted at their highest concentrations within SHO-TS1_AUK_TP102 at 2.50m bgl.

## 3.3 Non-Aqueous Phase Liquid

During the ground investigation suspected hydrocarbon contamination (observed as non aqueous phase liquid (NAPL)) was identified within SHO-TS1_AUK_TP102. To delineate the potential impact, SHO-TS1_AUK_TP108 to SHO-TS1_AUK_TP111 were excavated at the four compass points around the location.

A strong hydrocarbon odour was noted within SHO-TS1_AUK_TP109 to the north. No other potential hydrocarbon impacts were noted during the investigation.

*Plate 1: Potential hydrocarbon impact identified within SHO-TS1_AUK_TP102*

Based on the spatial spread of the identified hydrocarbon impact, it is suspected that it is related to a discrete dumping event and is localised around the SHO-TS1_AUK_TP102 area within a waste rich layer between 2.00 to 4.00m bgl based on soil samples taken from this horizon. A sample was collected from the underlying horizon at 4.70m bgl and reported lower concentrations of TPH and PAH.

## 3.4 Slag Testing Data

A total of 15no. samples of slag recovered from exploratory holes were submitted for petrographic and expansion examination. At the time of writing the results are still pending and will be presented as Appendix E when received.

# 4 Material Re-use

This report has used information obtained from the recent ground investigation to assess the potential contamination risks to human health, ecological receptors, built property from contaminants in soils in relation to their potential reuse elsewhere on the Teesworks site.

## 4.1 Material Type

### 4.1.1 Composition of Landscape Mounds

The ground investigation data has identified that the bulk of the waste mass contains granular Made Ground deposits with varied percentages of slag present within the matrix. Within this layer waste materials, including; brick, concrete, metals, wood, plastic and glass were noted. A covering layer of more cohesive Made Ground was noted overlying the granular Made Ground within all intrusive locations.

Cream coloured granular material has been identified and is thought to represent Tidal Flat Deposits moved during creation of a tunnel upon the former Redcar steelworks site.

## 4.2 Material Suitability

### 4.2.1 Selection of Soil GAC

The suitability of reuse assessment has been undertaken based on excavation and reuse under a future generic commercial end use which is considered to be sufficiently conservative to also cover industrial end uses.

Potentially active pollutant linkages and contaminants of concern (CoC) in relation to human health risks have been identified in the initial CSM as:

A. Vapour inhalation of indoor and outdoor air from volatile contamination in soils, (potential CoC include volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs)),

B. Vapour inhalation of indoor and outdoor air from volatile contamination in shallow groundwater, (potential CoC include VOCs and SVOCs)

C. Dermal contact/ingestion of soil (potential CoC include heavy metals, organic/inorganic compounds)

D. Dust inhalation (potential CoC include asbestos and heavy metals)

Commercial and industrial workers are the primary receptor of concern for any contamination risk. The risk would be influenced by the duration and location of the staff work regimes. For the basis of this assessment, it is assumed that site workers will be on-site for a “standard” 8 hour working day.

Commercial end use assumes a pre-1970s commercial property is present at the site with some open areas uncovered by hardstanding and is therefore regarded as conservative for a redevelopment scenario as new structures are assumed to be constructed to current standards.

To assess potential linkages A, C and D above, generic assessment criteria (GAC) have been chosen, based on an assumed industrial/commercial end use. Criteria published by authoritative industry bodies and commonly accepted by regulators for use under the planning regime for development sites have been used first. For contaminants for which no published values are available, Arcadis derived criteria (developed following the CLEA framework (v1.07)) or foreign national criteria have been used.

The GAC comprise (in order of priority):

- LQM/CIEH Suitable for Use Levels (S4UL) (LQM / CIEH, 2015),
- Department of Environment Food and Rural Affairs (DEFRA) Category 4 Screening Levels (C4SL) (DEFRA, 2012),
- Arcadis derived generic assessment criteria based on CLEA v1.07,

- United States Environmental Protection Agency (U.S. EPA) Regional Screening Levels (RSLs) (USEPA, 2018)

Wood derived GAC, based on CLEA v1.07 which were presented in the Wood 2019 report [41825-wood-XX-XX-RP-OC-0001_S0_P01], for benzo(a)pyrene and naphthalene. It is understood that these values were acceptable to the regulator for this site and as such they have been retained here.

Arcadis derived site specific assessment criteria for free cyanide for the Prairie site [10035117-AUK-XX-XX-RP-ZZ-0088-01-Prairie_Risk Assessment]. It is understood that these values were acceptable to the regulator for this site and as such they have been retained here.

Soil organic matter recorded in 27no. soil samples obtained from the site ranged from 1.0 to 11.3%. The organic matter analysis indicated mean values of 3.9% in the Made Ground. The S4UL selected as GAC are those for a commercial end use assuming a soil organic matter (SOM) content of 1% (suitably conservative).

The selected human health GAC for soil are presented in Appendix F

#### 4.2.1.1 Risk Assessment

Human Health

Potential risks to human health via intake of a range of contaminants from shallow soils (Made Ground including slag materials) were assessed using Generic Assessment Criteria (GAC). None of the contaminants for which GAC are available exceeded the criteria and therefore no unacceptable risks have been identified from contact with or ingestion of soils on the site based on the current dataset. Soil pH was noted to be basic / alkaline. Contaminants without GACs have been reviewed and no potentially significant risks have been identified based on the current dataset. As such the materials are considered suitable for reuse.

Asbestos was found in 4 of the 27no. samples tested and was quantified at 0.001 to 0.326% and described as loose insulation (3 samples) or loose asbestos fibres (1 sample) (amosite, chrysotile, crocidolite). The location of these samples is shown on Figure 5 in Appendix A, with each of the three samples containing asbestos insulation located close to each other in the north of the site.

Loose asbestos insulation may be friable which would make any works to move this material notifiable to the HSE, as such a licensed asbestos contractor would need to be engaged for the works. The presence of quantifiable levels of asbestos in soil warrants further consideration under any reuse scenario. Asbestos in shallow soils in areas without buildings or hardstanding has the potential to become airborne and available for inhalation, particularly during construction, posing chronic risks to human health.

Additional assessment may be required dependent on the reuse scenario to further delineate the asbestos impact within the material and determine its suitability for reuse under a specific scenario including necessary mitigation measures. It is likely that a clean cover system in areas of soft landscaping can be utilised to mitigate the risk to site occupiers and neighbouring land users.

Soil containing more than 0.1% asbestos, if disposed of off-site, may be classified as hazardous waste and attract significantly higher disposal costs. Additional testing would be required to confirm the quantity of asbestos and delineate any areas above the threshold.

Non-Aqueous Phase Liquid (NAPL)

The intrusive investigation identified the presence of NAPL within waste dominated strata at the intrusive location SHO-TS1_AUK_TP109, in the north of the site. Trial pits excavated to delineate the waste / NAPL did not report further NAPL presence. It is thought that the NAPL is isolated to this area within the waste strata. This material should be removed and/ or treated and should not be included within the soil to be reused within earthworks.

Buildings and Structures

This material is proposed to be reused elsewhere on Teesworks as bulk fill. It is not yet known if buildings or structures will be placed on this material. However, this Made Ground may give rise to conditions which are chemically aggressive to concrete and subsurface infrastructure.

Guidance on the assessment and mitigation of potential aggressive ground conditions is provided in BRE publication *Special Digest 1: Concrete in Aggressive Ground:* 2017. BRE SD1 sets a number of design sulphate classes (DS1 to DS5) and Aggressive Chemical Environment for Concrete classes (ACEC) based on soil pH, sulphate concentration in soil, leachate and groundwater, and the presence of other potentially aggressive ions such as chloride and ammonia.

All samples of soil analysed were found to be alkaline in nature with an average pH of 9.7 (maximum 12.1). Concentrations of water-soluble sulphate in soil were typically consistent with Design Sulphate class DS-2, ACEC 2.

The most sensitive built receptor is generally plastic water supply pipes, which can be affected by permeation of hydrocarbons and organic solvents into the pipe. The available chemical data for soil samples has been reviewed against the UK Water Industry Research (UKWIR) criteria to provide an indication of the potential acceptability of polyethylene (PE) pipes in brownfield land (Water UK, 2014), although an exact comparison is not possible due to differences in the determinant suites tested.

Concentrations of VOCs, SVOCs, phenols and petroleum hydrocarbons measured in soils are in excess of the criteria for unprotected PE water pipes. Additional testing should be carried out prior to re-use for any proposed new water supply pipe route, or barrier pipe or similar could be used.

### 4.2.2 Geotechnical

Geotechnical laboratory testing has been undertaken on selected samples. The report is presented as Appendix G.

The majority of material deposited at site consists of granular Made Ground containing varying amounts of slag. Particle size distribution testing indicates this to consist predominantly of Class 1A Fill as defined in Series 600 of the Specification for Highway Works (SHW). A proportion of material was found to consist of “oversize” material which will need to be screened out, as well any cohesive (clay) material, or deleterious materials (scrap metal, timber, plastic or putrescible materials). Other than this simple physical segregation, it is anticipated that the materials present within the mounds will be geotechnically suitable for reuse as bulk fill material when placed to an engineering specification.

Samples of slag were submitted for specialist testing to confirm the potential for expansion. Results were not available at the time of writing. Compaction testing showed the slag appeared to crush when compacted. Petrology results will assess the material composition of the slag and allow comment on whether the crushing under compaction is a function of the material type. Further thought will be given to other potential compaction methods once petrology data is available.

### 4.2.3 Topsoil

A layer of cohesive Made Ground was identified overlying the granular Made Ground deposits at all locations. This material (4no. samples) underwent testing in line with BS3882 *Specification for Topsoil*. The report is appended within Appendix D.

The samples were reported as “Clay Loams” with varied clay, silt and sand content. Nutrient concentrations within the 3no. samples were compliant for use as a low fertility topsoil (low phosphorous and potassium concentrations mean the soils are not suitable for multipurpose topsoil). Concentrations of phytotoxic contaminants (copper, nickel, and zinc) were all noted to be compliant with multipurpose and low fertility topsoil criteria.

BS8601 *Specification for Subsoil and Requirements for Use*, sets out criteria for subsoil. Based on the soil texture, stone content, and phytotoxic contaminant concentrations the samples are considered suitable for use as a subsoil.

The shallow cohesive material identified on-site is considered suitable for use as a low fertility topsoil or subsoil.

### 4.2.4 Suitability for Reuse

The samples tested represent granular Made Ground containing slag, which is commonly found as fill material across the wider Teesworks site.

On the basis of the samples tested, the granular Made Ground deposits are considered suitable for reuse following recovery via an appropriate process. The inclusions of other materials within these deposits, such as metal, plastic, wood, and loose asbestos insulation, are themselves not considered suitable for reuse and would have to be separated from the granular Made Ground deposits as part of the recovery process and removed to an appropriate disposal facility.

Prior to soils being reused on site, it is necessary to confirm that these are not considered a waste. To ensure this is the case, all materials handled on the Teesworks site will be subject to the DoWCoP arrangements and will be subject to a Materials Management Plan.

# 5 Conclusions and Recommendations

Shallow soil investigation of the mounds present on the Land East of Steel House revealed the mounds to be predominantly composed of granular Made Ground with varying proportions of the matrix containing waste elements.

Human Health

Hydrocarbon impacts were noted locally around SHO-TS1_AUK_TP102 alongside a discrete horizon of waste. Concentrations of hydrocarbons measured in soil samples are not thought to pose a risk to human health based on a commercial / industrial end use scenario.

Concentrations of Contaminants of Concern (CoC) did not exceed assessment criteria protective of human health, and the risk to human health from CoC is considered to be low.

Asbestos fibres (1no. sample) and loose insulation (3no. samples) were identified in soil samples. Asbestos insultation is potentially friable, if this is the case, working with the material would be notifiable to HSE and should be carried out y a licensed contractor, the material would be considered hazardous waste.

Asbestos is potentially hazardous when inhaled and therefore pollutant linkage D (inhalation of dust) is considered potentially active as surface soils may become airborne during construction or if incorporated into soft landscaping without any cover.

Structures

Concentrations of VOCs, SVOCs, phenols and petroleum hydrocarbons measured in soils are in excess of the criteria for unprotected PE water pipes. Additional testing should be carried out prior to re-use for any proposed new water supply pipe route, or barrier pipe or similar could be used.

Design sulphate (DS) and Aggressive Chemical Environment for Concrete classes (ACEC) have been defined for the soils on site, the majority of the soils fall under DS-2, ACEC-2.

Geotechnical

Material has been predominantly assessed as Class 1A as defined in Series 600 of the Specification for Highway Works (SHW).

Slag material has been identified within the Granular Made Ground, there is potential for expansion. Engineering controls should be considered to minimise the impact on future developments.

Slag was noted to crush under compaction, this will need to be further assessed. Petrology data is pending which may help understand this material behaviour.

Topsoil

Shallow cohesive Made Ground was assessed in accordance with BS3882 *Specification for Topsoil*. The material was found to be non-compliant with multipurpose end use but was suitable for use as low fertility topsoil. This material is also considered suitable for use as subsoil (BS 8061) .

**Suitability for Reuse**

Waste horizons have been identified in limited locations within the mounds overlying the site, waste material is unsuitable for reuse and will need to be segregated and appropriately disposed of. The waste material has predominantly been identified in the north of site near to SHO-TS1_AUK_TP102. Presence of NAPL and loose asbestos insulation within the waste horizon mean this material is likely to be considered hazardous waste and may need to be removed by a specialist contract licensed to handle asbestos waste.

Material located within the mounds has, when not impacted by waste material, been found to be suitable for use within an earthwork platform typically being classified as Class 1A  Well Graded Granular Fill as defined in Series 600 SHW. However, material was noted to crush during lab compaction testing (4.5kg method) which is used to mimic heavy construction equipment. It may therefore be necessary to use alternate compaction plant with this material and a field trial would be beneficial. Pending the outcome of a field trial and the

outstanding petrology information, it is anticipated that this material will be suitable for use within the Teesworks redevelopment as bulk fill.

## 5.1 Recommendations

- Material from the mounds is considered suitable for re-use on the wider Teesworks site based on material composition and chemical concentrations. Material will require screening / management to ensure waste elements are removed before re-use.
- Removal of asbestos insulation may be licensable work and a specialist insulation contractor should be contracted to carry out this phase of segregation and disposal.
- A field compaction trial should be carried out to confirm the most suitable compaction method and plant.
- As material is to be reused as a bulk fill elsewhere on Teesworks, prior to this re-use a Materials Management Plan will be required.

# APPENDIX A

## Figures

Legend

0 100 200 300 m

Notes:

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CONTACT ARCADIS IN CASE OF ANY QUERIES.

N

**Title:Steel House Mounds GI Redline**

**Site:**
**Teesworks - Steel House Mounds**

**Client:**
**South Tees Development Corporation**

**Project:**
**10047374**

**Figure 1**

**Date: 24/05/2022**
**Drawn By: DW**
**DRG No: 10047374-AUK-XX-XX-RP-ZZ-0525-02-LEoSH Redline**

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## Legend

- Trial Pit
- Steel House Mounds Redline boundary

N

Notes:



CONTACT ARCADIS IN CASE OF ANY QUERIES.

**Title: Steel House Mounds Trial Pit Location Plan**

**Site:**
**Teesworks - Steel House Mounds**

**Client:**
**South Tees Development Corporation**

**Project:**
**10047374**

**Figure 3**

**Date: 24/05/2022**
**Drawn By: JH**
**DRG No: 10047374-AUK-XX-XX-DR-ZZ-0527-02-LEoSH TP Plan**

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0 100 200 m

N

Notes:

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CONTACT ARCADIS IN CASE OF ANY QUERIES.

**Title: Steel House Mounds GI Asbestos observations**

**Site:**
**Redcar Steelworks - Steel House Mounds**

**Client:**
**South Tees Developement Corporation**

**Project:**
**10035117**

**Figure 7**

**Date: 24/05/22**
**Drawn By: JH**
**DRG No: 10047374-AUK-XX-XX-DR-ZZ-0531-02-Leosh Asb detections**

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## Legend

GBR BGS 1:50k Superficial Deposits
1: Tidal Flat Deposits
2: Wind Blown Sand
3: Glaciolacustrine Deposits
4: Glacial Till

GBR BGS 1:50k Bedrock
5: Redcar Mudstone Formation

N

Notes:



CONTACT ARCADIS IN CASE OF ANY QUERIES.

**Title: Steel House Mounds Geology**

**Site:**
**Teesworks - Steel House Mounds**

**Client:**
**South Tees Development Corporation**

**Project:**
**10047374**

**Figure 2**

**Date: 24/05/2022**
**Drawn By: JH**
**DRG No: 10047374-AUK-XX-XX-DR-ZZ-0526-02-LEoSH Geology**

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0 50 100 m

## Legend

N

### PAOC

- Watercourses
- Rail / Rail Sidings
- Tanks
- Infilled Ponds
- Asbestos lagging/roofing
- CLE31
- Embankments
- Former Redcar Iron Works
- Railway
- Reservoir
- Slag Wool Works
- Substation
- Water Cooling Plant

Notes:



CONTACT ARCADIS IN CASE OF ANY QUERIES.

**Title: Steel House Mounds - Potential Areas of Concern (PAOC)**

**Site:**
**Teesworks - Steel House Mounds**

**Client:**
**South Tees Development Corporation**

**Project:**
**10047374**

**Figure 4**

**Date: 24/05/2022**
**Drawn By: JH**
**DRG No: 10047374-AUK-XX-XX-DR-ZZ-0527-02-LEoSH PAOC**

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DO NOT SCALE

Millimetres 100 0 10

N

COATHAM MARSH

NETWORK RAIL LINE

STEEL HOUSE

A66 TRUNK ROAD

STEEL HOUSE GATE



## NOTES

1. Do not scale from this drawing.

## KEY

- STDC OWNERSHIP BOUNDARY
- STEEL HOUSE EAST MOUND REMOVAL BOUNDARY

| Rev. | Date | Description | By | Chk'd | App'd |
|---|---|---|---|---|---|

**STDC**
Teesside Management Offices,
Redcar, TS10 5QW
www.southteesdc.com

South Tees Development Corporation

Project Title:

TEESWORKS
The UK's largest industrial zone

Drawing Name:

# STEEL HOUSE EAST MOUND REMOVAL LOCATION PLAN

| | |
|---|---|
| Drawn by: KW | Date: APR 2022 |
| Checked by: LCD | Date: APR 2022 |
| Approved by:JMc | Date: APR 2022 |

| Drawing Number: | Revision: |
|---|---|
| TSWK-STDC-STH-ZZ-DR-C-0007 | - |

| Drawing Scale: | Page Size: |
|---|---|
| 1:2500 | A1 |

# APPENDIX B

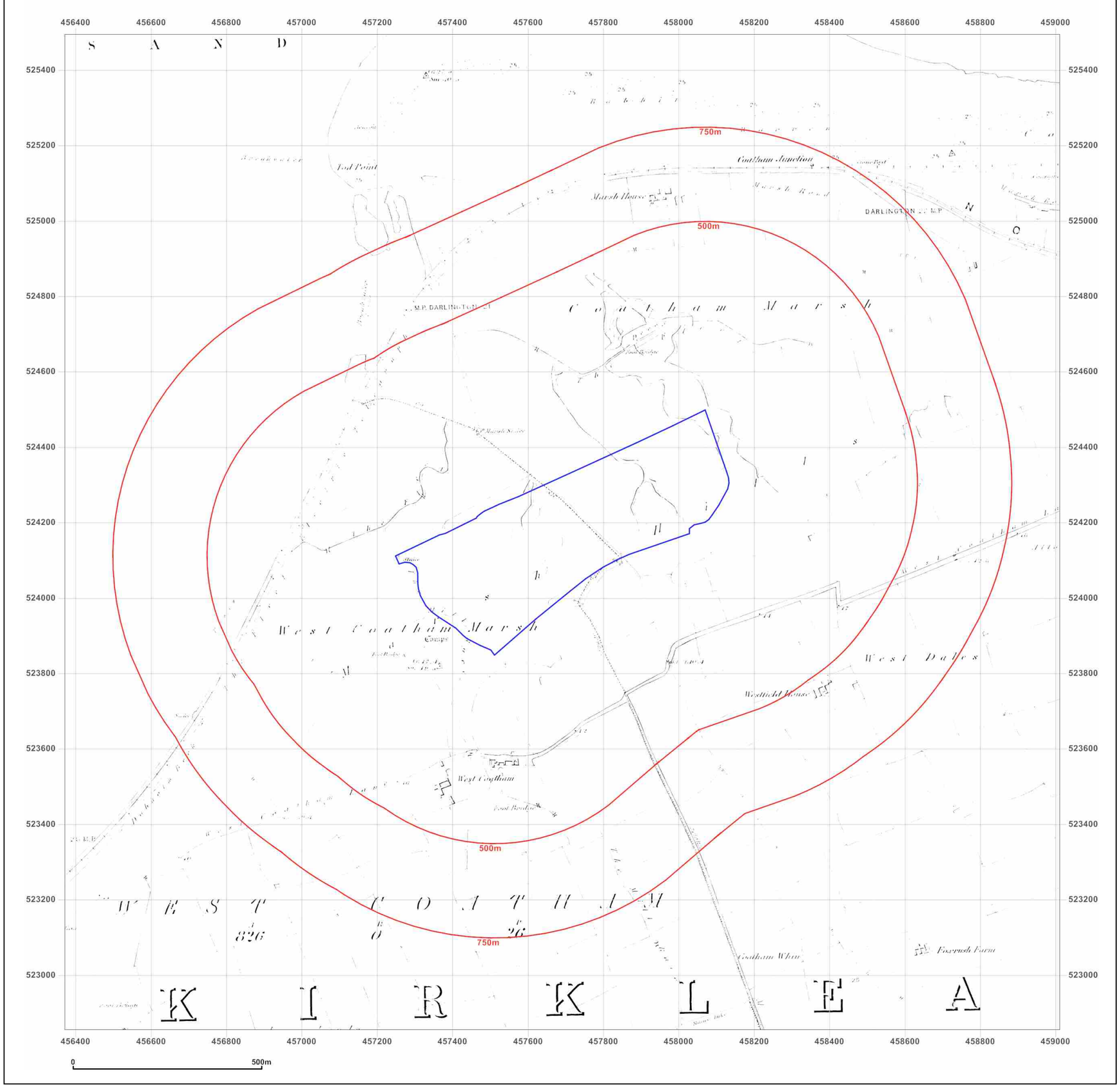
## Study Limitations

**IMPORTANT**: This section should be read before reliance is placed on any of the information, opinions, advice, recommendations or conclusions contained in this report.

1. This report has been prepared by Arcadis UK Ltd (Arcadis), with all reasonable skill, care and diligence within the terms of the Appointment and with the resources and manpower agreed with **STDC** (the 'Client'). Arcadis does not accept responsibility for any matters outside the agreed scope.
2. This report has been prepared for the sole benefit of the Client unless agreed otherwise in writing.
3. Unless stated otherwise, no consultations with authorities or funders or other interested third parties have been carried out. Arcadis are unable to give categorical assurance that the findings will be accepted by these third parties as such bodies may have unpublished, more stringent objectives. Further work may be required by these parties.
4. All work carried out in preparing this report has used, and is based on, Arcadis' professional knowledge and understanding of current relevant legislation. Changes in legislation or regulatory guidance may cause the opinion or advice contained in this report to become inappropriate or incorrect. In giving opinions and advice, pending changes in legislation, of which Arcadis is aware, have been considered. Following delivery of the report, Arcadis have no obligation to advise the Client or any other party of such changes or their repercussions.
5. This report is only valid when used in its entirety. Any information or advice included in the report should not be relied upon until considered in the context of the whole report.
6. Whilst this report and the opinions made are correct to the best of Arcadis' belief, Arcadis cannot guarantee the accuracy or completeness of any information provided by third parties.
7. This report has been prepared based on the information reasonably available during the project programme. All information relevant to the scope may not have been received.
8. This report refers, within the limitations stated, to the condition of the Site at the time of the inspections. No warranty is given as to the possibility of changes in the condition of the Site since the time of the investigation.
9. The content of this report represents the professional opinion of experienced environmental consultants. Arcadis does not provide specialist legal or other professional advice. The advice of other professionals may be required.
10. Where intrusive investigation techniques have been employed they have been designed to provide a reasonable level of assurance on the conditions. Given the discrete nature of sampling, no investigation technique is capable of identifying all conditions present in all areas. In some cases the investigation is further limited by site operations, underground obstructions and above ground structures. Unless otherwise stated, areas beyond the boundary of the site have not been investigated.
11. If below ground intrusive investigations have been conducted as part of the scope, service tracing for safe location of exploratory holes has been carried out. The location of underground services shown on any drawing in this report has been determined by visual observations and electromagnetic techniques. No guarantee can be given that all services have been identified. Additional services, structures or other below ground obstructions, not indicated on the drawing, may be present on Site.
12. Unless otherwise stated the report provides no comment on the nature of building materials, operational integrity of the facility or on any regulatory compliance issue

# APPENDIX C

## Site Data (Maps and Intrusive Logs)

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**Client Ref:** PO_14043848
**Report Ref:** GS-7224471
**Grid Ref:** 457690, 524174

**Map Name:** County Series

**Map date:** **1857**

**Scale:** 1:10,560

**Printed at:** 1:10,560

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Surveyed 1855
Revised N/A
Edition 1857
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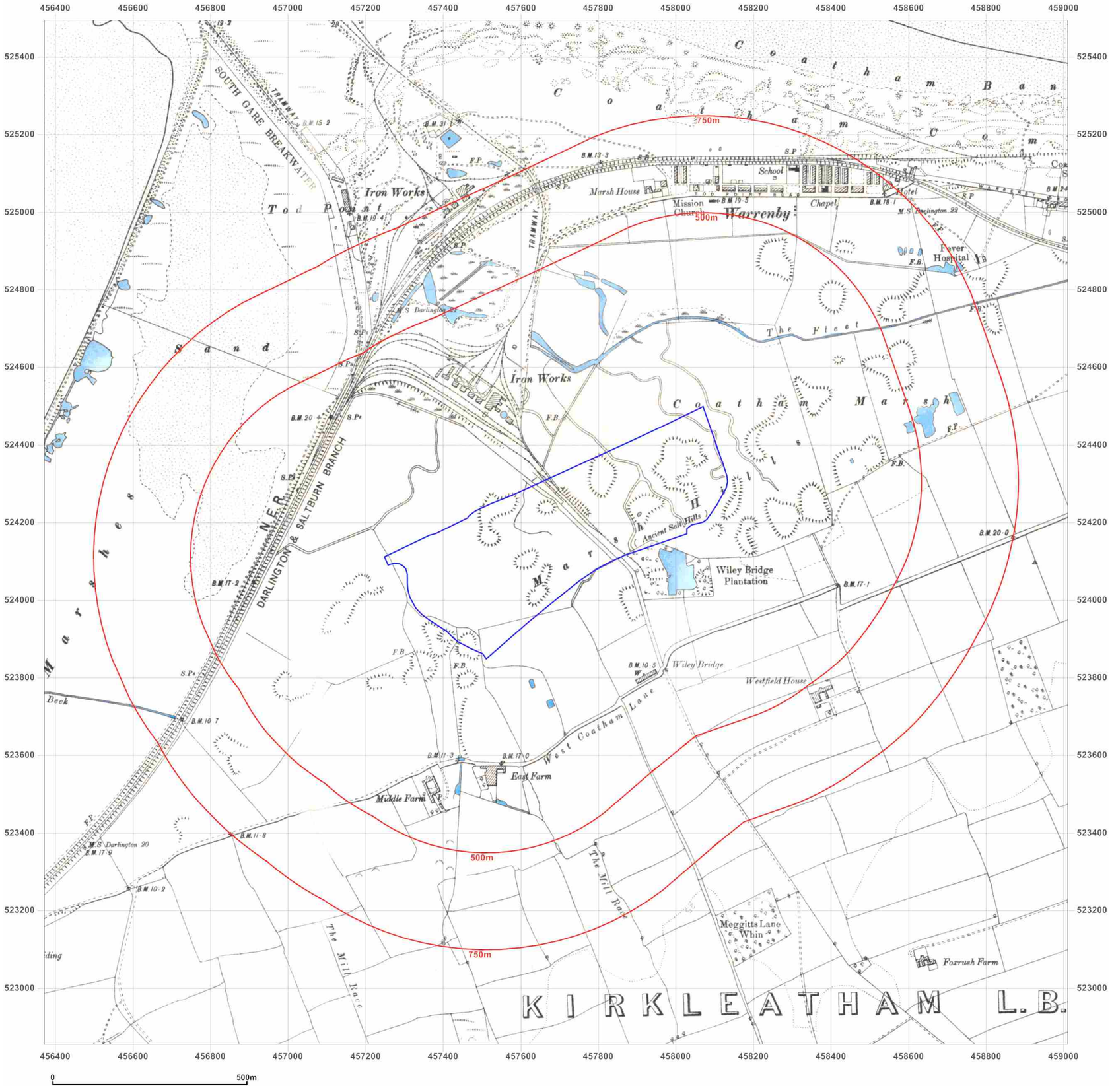


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**Grid Ref:** 457690, 524174

**Map Name:** County Series

**Map date:** **1893**

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**Printed at:** 1:10,560

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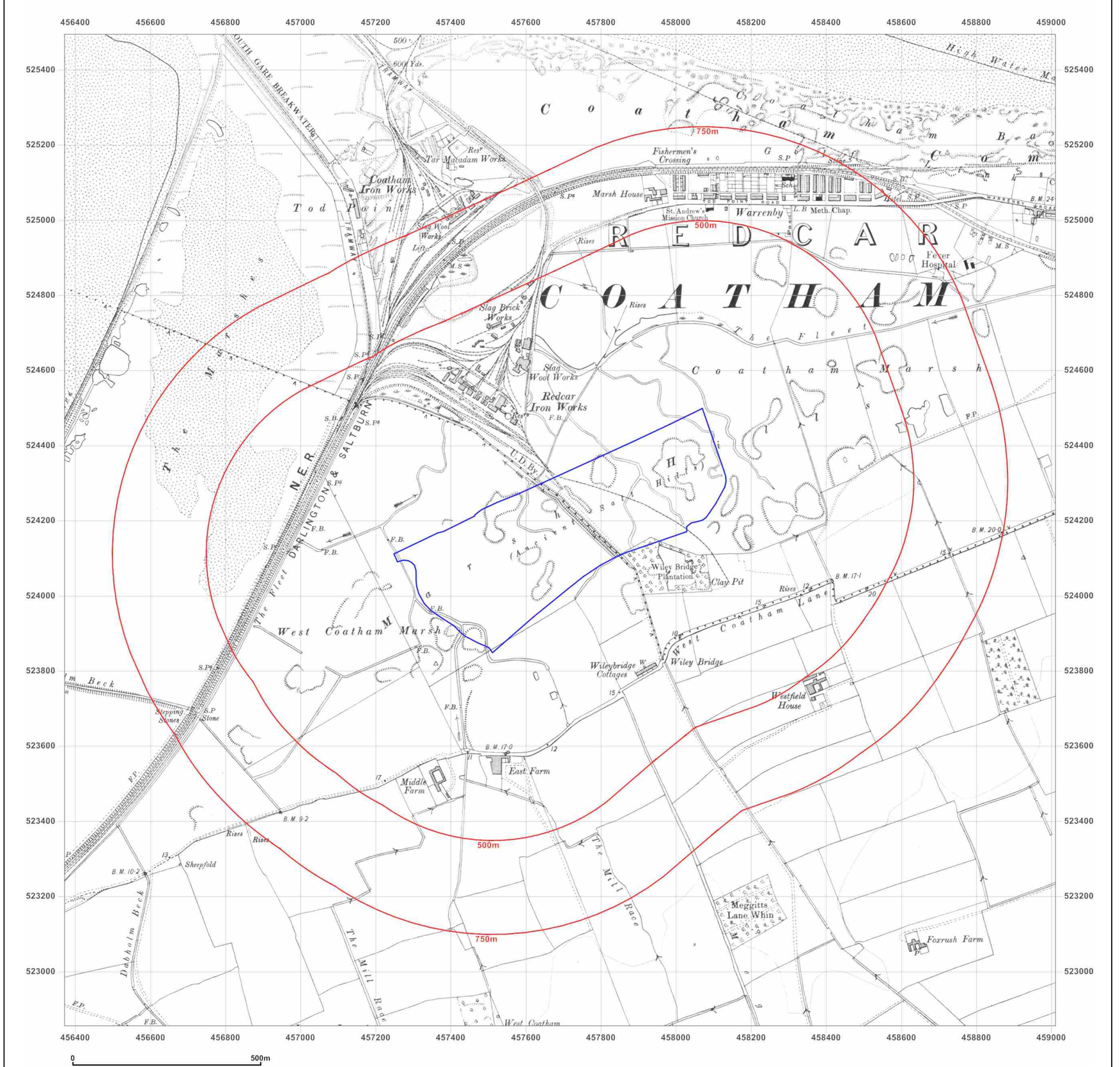


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**Grid Ref:** 457690, 524174

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**Map date:** **1913**

**Scale:** 1:10,560

**Printed at:** 1:10,560

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Edition N/A
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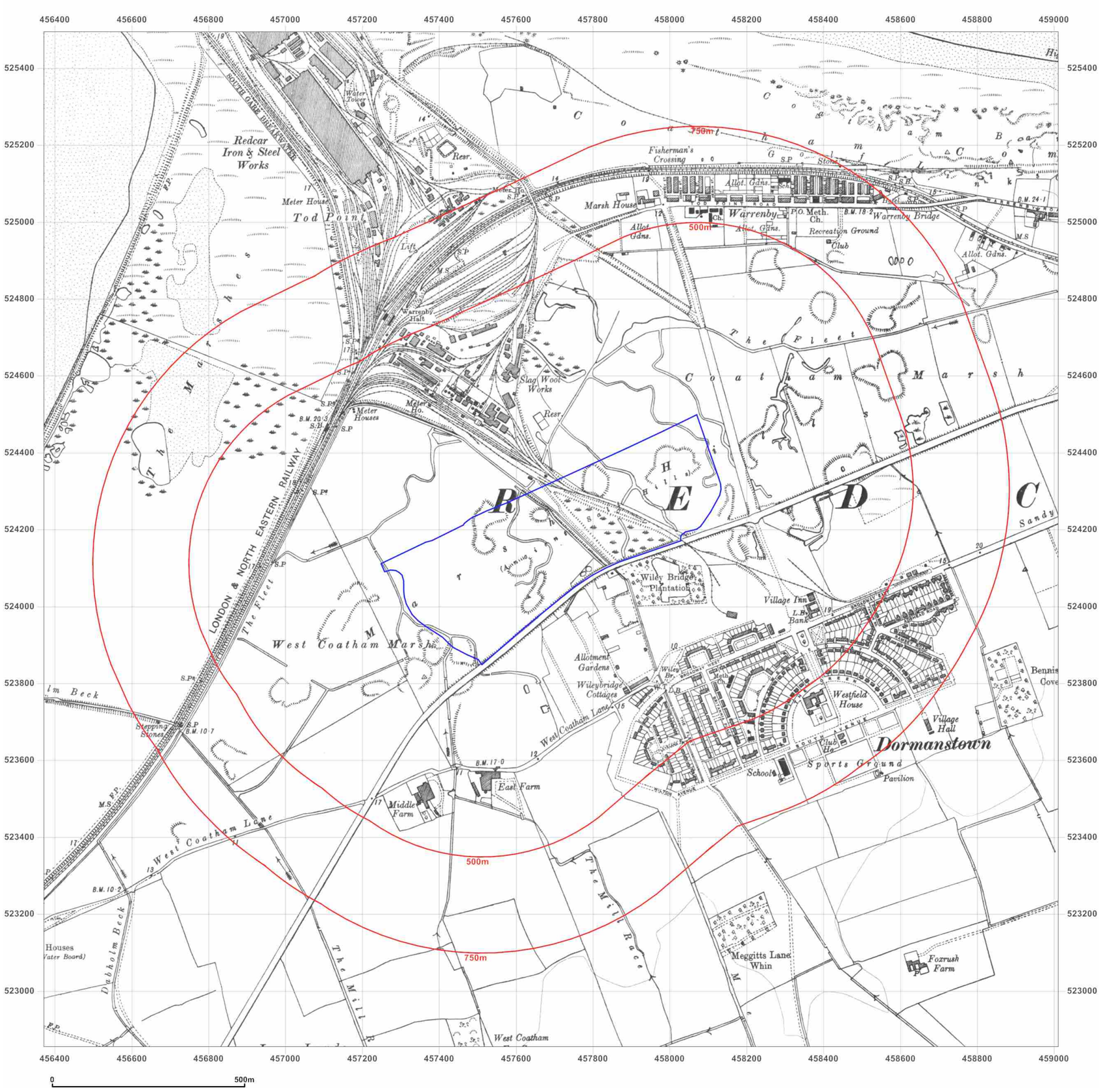


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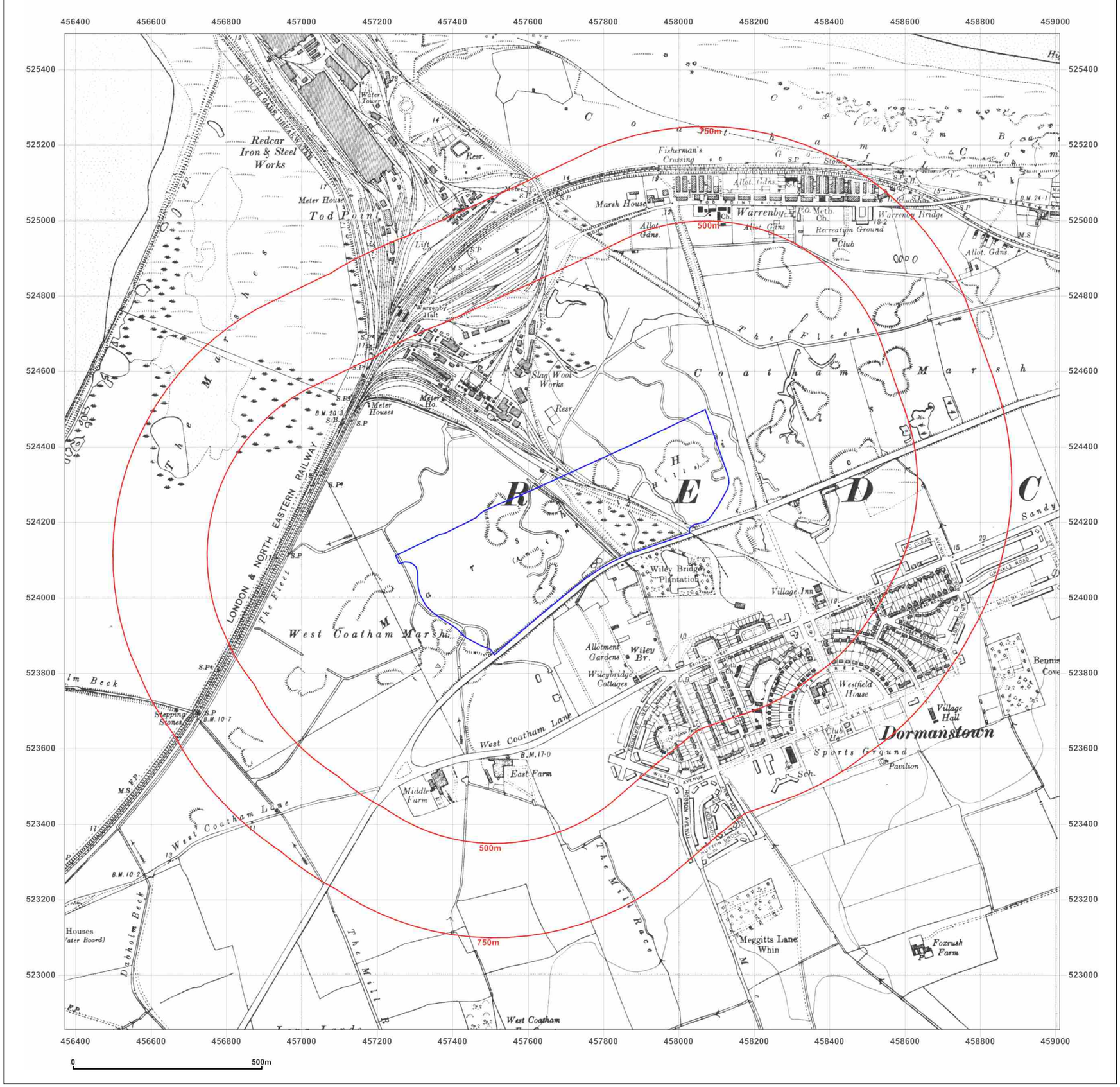


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**Grid Ref:** 457690, 524174

**Map Name:** County Series

**Map date:** **1938**

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**Printed at:** 1:10,560

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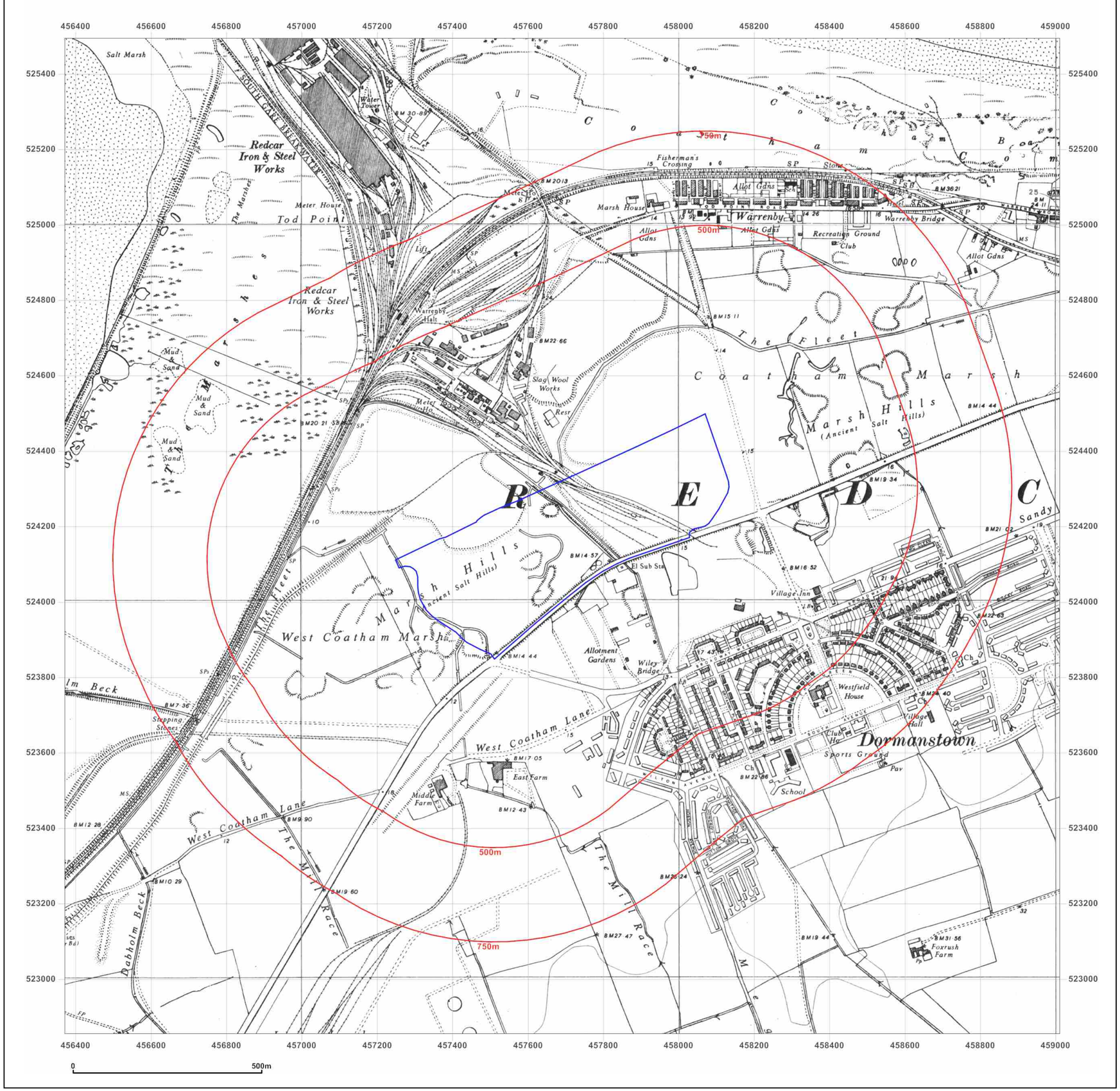


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**Grid Ref:** 457690, 524174

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**Map date:** **1952-1953**

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**Printed at:** 1:10,560

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Edition 1953
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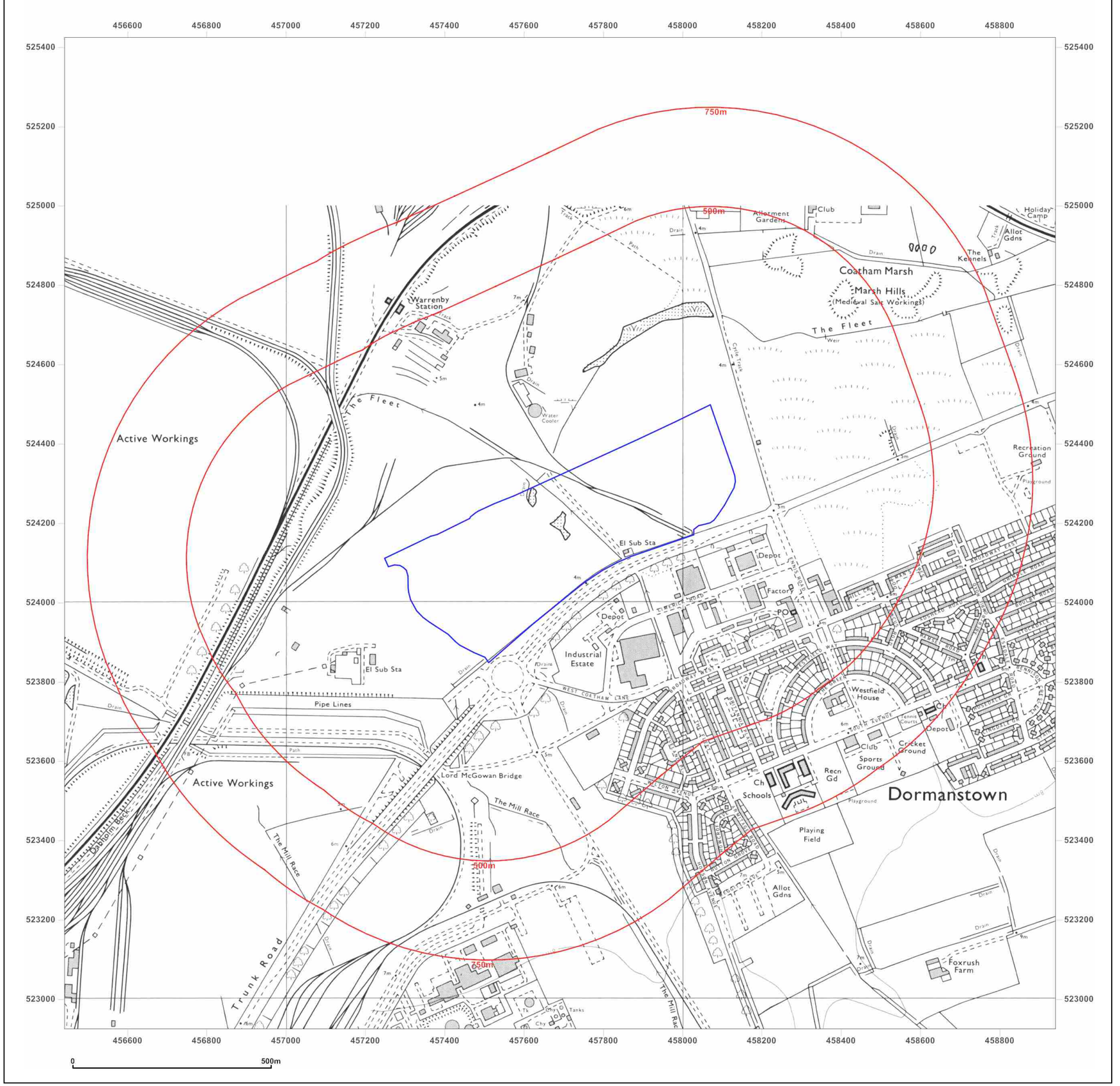


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**Client Ref:** PO_14043848
**Report Ref:** GS-7224471
**Grid Ref:** 457690, 524174

**Map Name:** National Grid

**Map date:** **1974**

**Scale:** 1:10,000

**Printed at:** 1:10,000

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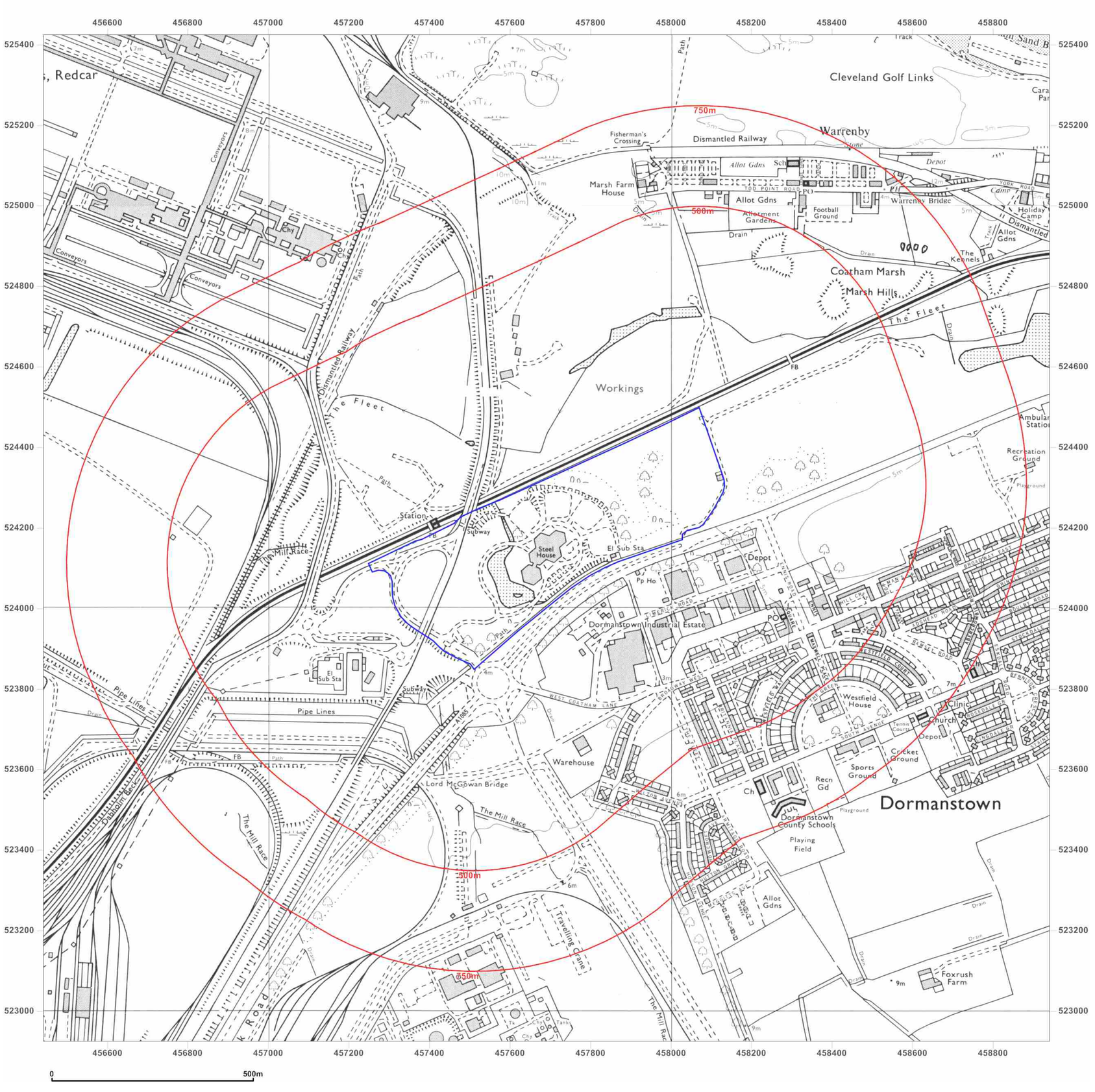


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**Report Ref:** GS-7224471
**Grid Ref:** 457690, 524174

**Map Name:** National Grid

**Map date:** **1980-1983**

**Scale:** 1:10,000

**Printed at:** 1:10,000

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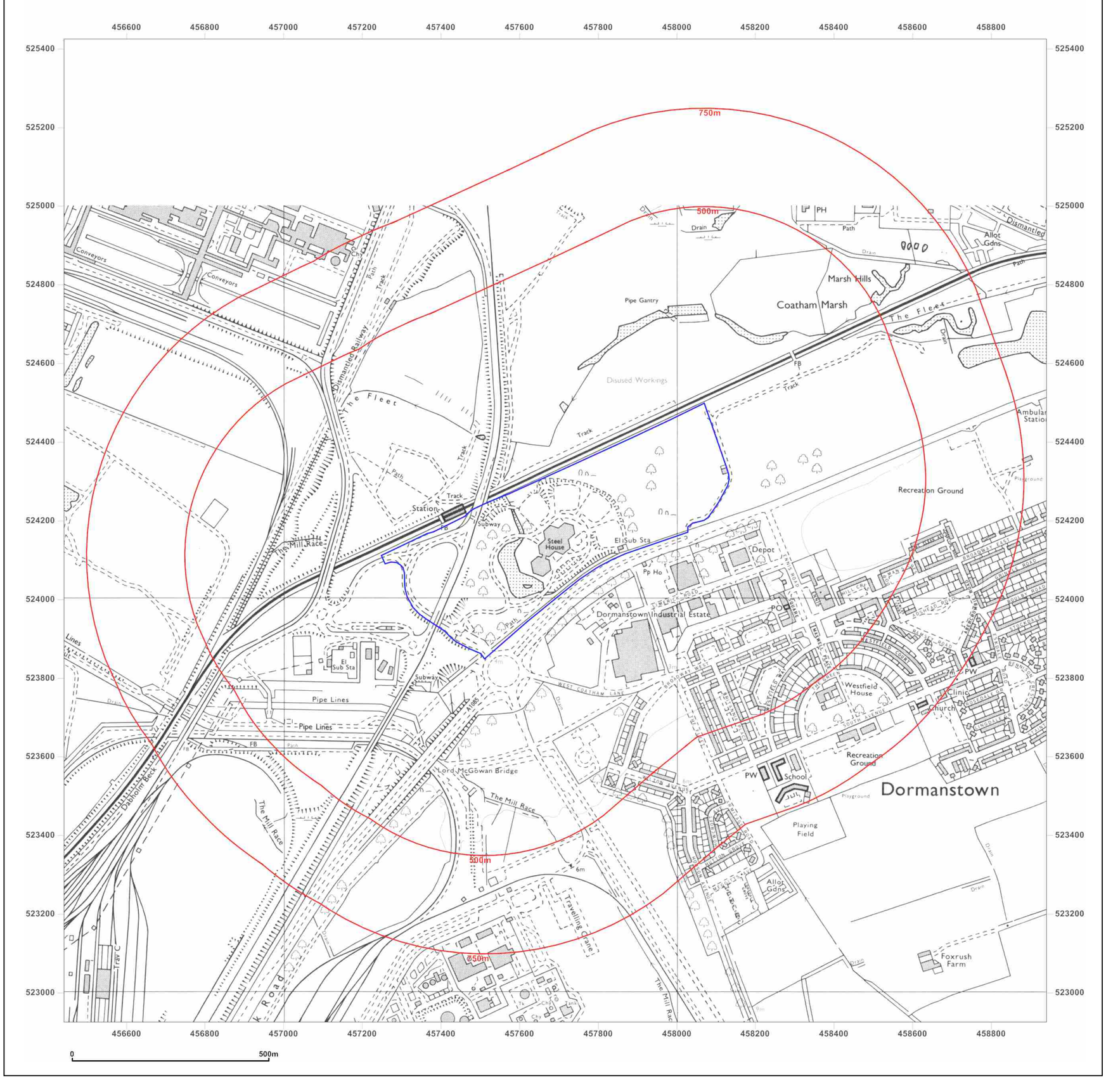


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**Report Ref:** GS-7224471
**Grid Ref:** 457690, 524174

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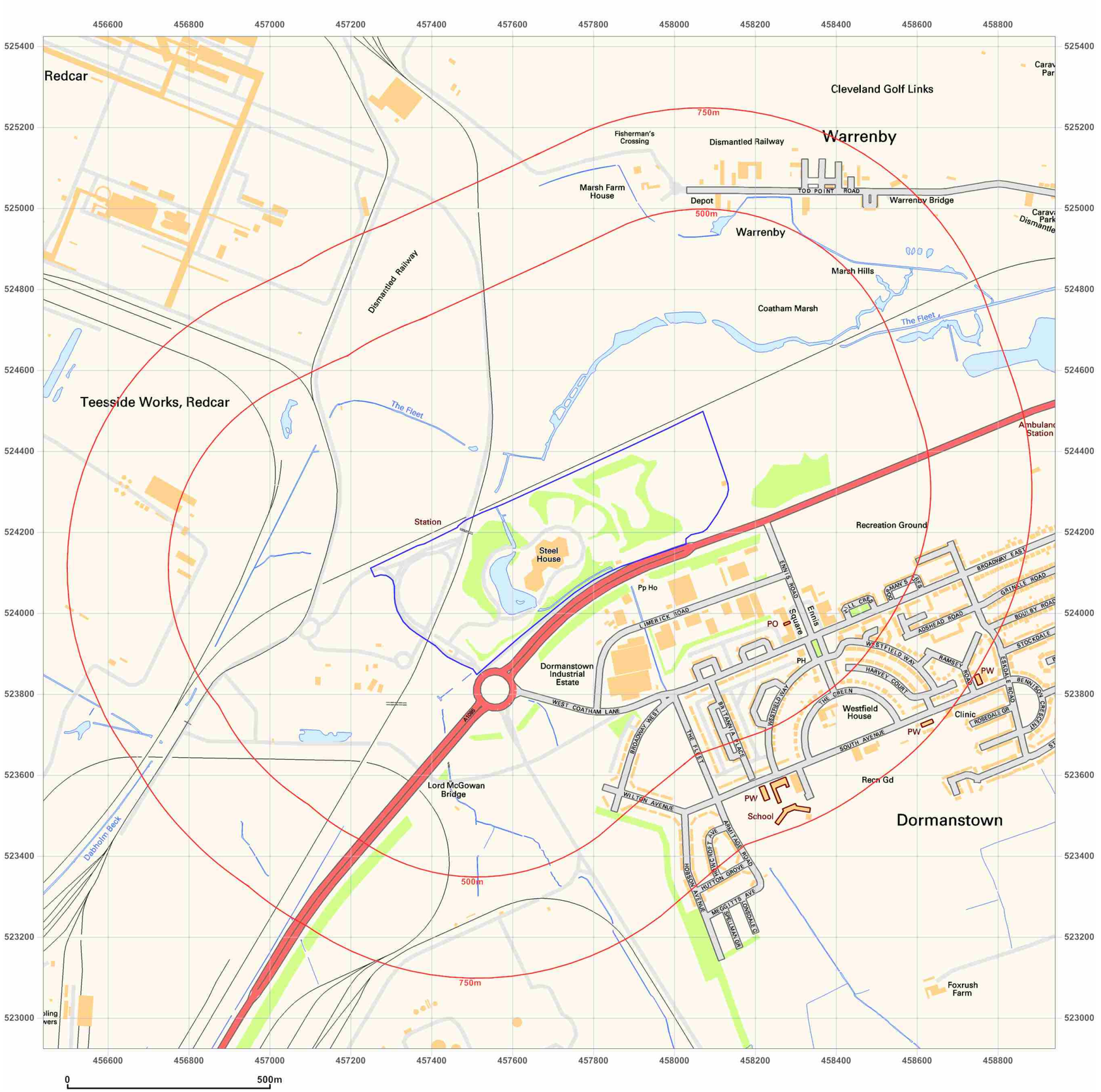


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**Site Details:**

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**Report Ref:** GS-7224471
**Grid Ref:** 457690, 524174

**Map Name:** National Grid

**Map date:** **2001**

**Scale:** 1:10,000

**Printed at:** 1:10,000

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2001

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**Site Details:**

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**Client Ref:** PO_14043848
**Report Ref:** GS-7224471
**Grid Ref:** 457690, 524174

**Map Name:** National Grid
**Map date:** **2010**
**Scale:** 1:10,000
**Printed at:** 1:10,000

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2010

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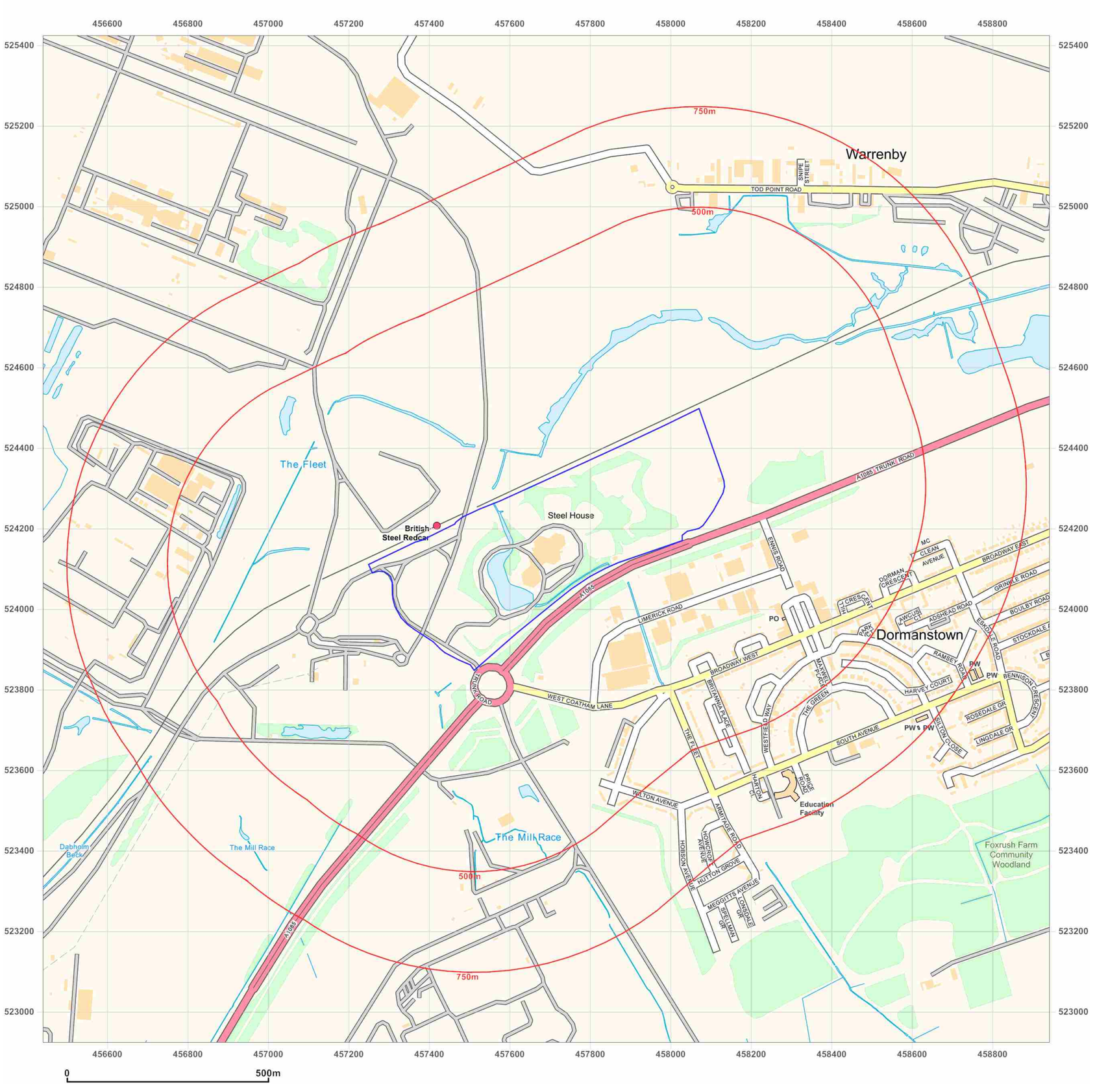


Groundsure INSIGHTS

**Site Details:**

Site 3, Redcar, North East England, TS10 1DZ

**Client Ref:** PO_14043848
**Report Ref:** GS-7224471
**Grid Ref:** 457690, 524174

**Map Name:** National Grid

**Map date:** **2020**

**Scale:** 1:10,000

**Printed at:** 1:10,000

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2020

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## Photos

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|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Plate 1.

View of western bund showing area of recent tree clearance. Steel House in middle distance to west.

Plate 2.

View of central area of site looking east.

| | | | |
|---|---|---|---|
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| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Plate 3. View east from mound towards Coatham Marsh.

Blue peg marks TP 106.

Brown building (off site) houses gas governor.

Approx boundary marked red.

Plate 4.

View of mounds on site looking west from adjoining site.

| | | | |
|---|---|---|---|
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| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Plate 5.

Scrub vegetation on southern bund viewed from Trunk Road.

Plate 6

View of mounds looking west and gas governor on site boundary.

Marker in foreground is Breagh Pipeline.

| | | | |
|---|---|---|---|
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| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Plate 7.

View along northern boundary looking west.

Rail line behind palisade fence.

Steel house in distance.

Plate 8.

Disused gas governor on eastern boundary.

| | | | |
|---|---|---|---|
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| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

Plate 9.

Marker post for Breagh pipeline off site to east.

| | | | |
|---|---|---|---|
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| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Plate 10

TP101. Granular Made Ground.

April 2022.

| | | | |
|---|---|---|---|
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| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Plate 11

TP101
Arisings.

April 2022.

| | | | |
|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

ARCADIS Design & Consultancy for natural and built assets

1 Whitehall Riverside
Leeds
LS1 4BN

Plate 12

TP102 Predominantly slag fill with discrete layers of waste/wire etc.

April 2022.

| | | | |
|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Leeds
LS1 4BN

Plate 13.

Layer of NAPL contaminated material TP102.

| | | | |
|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Leeds
LS1 4BN

Plate 14

TP102. NAPL contaminated fill.

| | | | |
|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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**Leeds**
**LS1 4BN**

Plate 15

TP103.
Granular fill

| | | | |
|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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**Leeds**
**LS1 4BN**

Plate 16

TP103 arisings.

| | | | |
|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Leeds
LS1 4BN

Plate 17.

TP109 mixed fill.

| | | | |
|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Leeds
LS1 4BN

Plate 18.

TP109 Arisings. Note tyre and pipes.

| | | | |
|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Plate 19

Mixed Fill Types
TP111

April 2022.

| | | | |
|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Leeds
LS1 4BN

Plate 20

TP111
Arisings.

April 2022.

| | | | |
|---|---|---|---|
| **CLIENT:** | South Tees Development Corporation | | |
| **Project:** | 10035117 | **Site Name:** | Teesworks – Land East of Steel House |

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Leeds
LS1 4BN

Plate 21

TP111

April 2022.

# ARCADIS Trial Pit Log

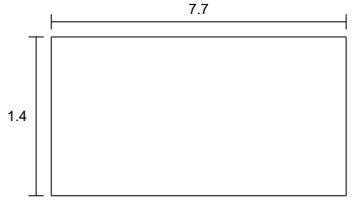
**PRELIMINARY**

**SHO-TS1_AUK_TP101**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **14.47** | **01/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457850.78** | **524330.78** | **01/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| 0.20 | ES1 | | | | | MADE GROUND: Grass over "soft" light brown sandy CLAY | | (0.30) | | |
| | | | | | | MADE GROUND: "Loose" light bluish grey very sandy cobbly fine to coarse, angular to subangular GRAVEL with occasional metal fragments, boulders (50-90cm) and rare brick. Sand is fine to coarse. Cobbles are angular to subangular of slag. | | 0.30 | 14.17 | |
| | | | | | | | | (2.70) | | |
| 3.50 | B3 | | | | | MADE GROUND: "Dense" reddish brown very sandy cobbly fine to coarse subangular to subrounded GRAVEL. Sand is fine to coarse. cobbles are angular to subrounded of slag. | | 3.00 | 11.47 | |
| 3.50 | B4 | | | | | | | (1.00) | | |
| 3.50 | ES2 | | | | | | | 4.00 | 10.47 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None
Stability: Initially unstable, becoming more compact with depth.
Groundwater (description): Dry

Remarks

Terminated due to maximum excavator arm extent.

Termination Depth: 4.00m

AGS

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50tonne excavator**

Logged By: **JK**

Checked By:

# ARCADIS Trial Pit Log

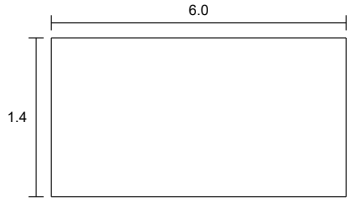
**PRELIMINARY**

**SHO-TS1_AUK_TP102**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **10.20** | **02/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457957.08** | **524370.91** | **02/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| | | | | | | MADE GROUND: Brown TOPSOIL with frequent roots and rootlets. | | (0.10) 0.10 | 10.10 | |
| 0.20 | ES1 | | | | | MADE GROUND: "Soft" light brown slightly sandy gravelly CLAY. Gravel is fine to medium subrounded to subangular. | | (0.35) 0.45 | 9.75 | |
| 1.80 | B3 | | | | | MADE GROUND: "Medium dense" grey to dark brown very sandy cobbly fine to coarse subrounded to angular GRAVEL. Cobbles are subrounded angular with occasional metal fragments and wood. | | (1.55) 2.00 | 8.20 | |
| 2.50 | ES2 | | | | | MADE GROUND: "Medium dense" bluish dark grey very sandy cobbly fine to coarse angular to subrounded GRAVEL. Contains frequent plastic bags, metal wires and industrial waste. Cobbles are subangular to subrounded of slag. Strong hydrocarbon odour and oily sheen. | | (2.00) 4.00 | 6.20 | |
| 4.70<br>4.70<br>4.70 | B5<br>B6<br>ES4 | | | | | MADE GROUND: "Medium dense" brownish grey very sandy cobbly fine to coarse angular to subrounded GRAVEL. Cobbles are subangular to subrounded of slag. | | (0.80) 4.80 | 5.40 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None

Stability: Stable

Groundwater (description): Dry

Remarks

Terminated due to maximum excavator arm extent.

Termination Depth: 4.80m

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50 tonne excavator**

Logged By: **OG**

Checked By:

# ARCADIS Trial Pit Log

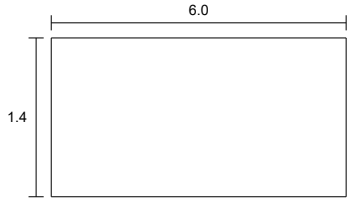
**PRELIMINARY**

**SHO-TS1_AUK_TP103**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **8.07** | **03/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **458051.21** | **524404.21** | **03/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| 0.15 | ES1 | | | | | MADE GROUND: "Soft" brown slightly sandy gravelly CLAY with frequent roots. Gravel is fine to medium, well rounded. | | (0.50) | | |
| | | | | | | | | 0.50 | 7.57 | |
| 1.00 | B2 | | | | | MADE GROUND: "Dense" dark bluish grey sandy cobbly fine to coarse subangular to very angular GRAVEL of slag. | | | | |
| 1.00 | B4 | | | | | | | | | |
| 1.00 | ES3 | | | | | | | (3.30) | | |
| 3.50 | B5 | | | | | | | | | |
| | | | | | | | | 3.80 | 4.27 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None

Stability: Very stable.

Groundwater (description): Dry

Remarks

Terminated due to maximum excavator arm extent.

Termination Depth: 3.80m

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50 tonne excavator**

Logged By: **OG**

Checked By:

# ARCADIS Trial Pit Log

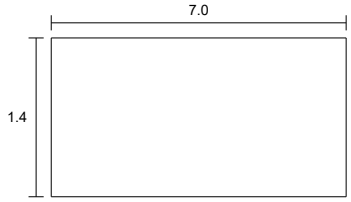
**PRELIMINARY**

**SHO-TS1_AUK_TP104**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **11.83** | **02/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457906.68** | **524265.38** | **02/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| 0.10 | ES1 | | | | | MADE GROUND: Grass over "soft" brown slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium subangular to subrounded. | | (0.40) | | |
| | | | | | | MADE GROUND: Light reddish brown very sandy cobbly fine to coarse subangular to subrounded GRAVEL with occasional boulders. Sand is fine to coarse. Cobbles are angular to subrounded of slag. | | 0.40<br>(1.10) | 11.42 | |
| 1.60<br>1.60<br>1.60 | B3<br>B4<br>ES2 | | | | | MADE GROUND: Dark grey sandy cobbly fine to coarse angular to subrounded GRAVEL with occasional boulders. Sand is fine to coarse. Cobbles are angular to subrounded slag. | | 1.50<br>(2.50) | 10.32 | |
| 4.00 | B5 | | | | | | | 4.00 | 7.82 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None

Stability: Minor spalling.

Groundwater (description): Dry

Remarks

Terminated due to maximum excavator arm extent.

Termination Depth: 4.00m

# ARCADIS Trial Pit Log

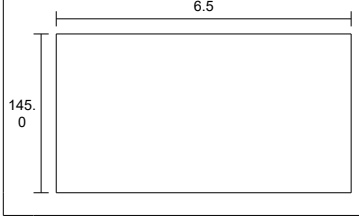
**PRELIMINARY**

**SHO-TS1_AUK_TP105**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **11.42** | **02/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457995.37** | **524305.76** | **02/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| 0.10 | ES1 | | | | | MADE GROUND: "Soft" brown slightly gravelly CLAY. | | (0.30) | | |
| | | | | | | MADE GROUND: "Medium dense" bluish grey very sandy cobbly GRAVEL. Gravel is fine to coarse, subrounded to angular. Cobbles are subrounded to subangular of slag. | | 0.30 | 11.12 | |
| 1.00 | B2 | | | | | | | | | |
| 1.00 | ES4 | | | | | | | (1.80) | | |
| | | | | | | MADE GROUND: "Loose" light brown sandy cobbly fine to coarse subrounded to subangular GRAVEL of slag. | | 2.10 | 9.32 | |
| | | | | | | | | (1.70) | | |
| 3.80 | B6 | | | | | "Loose" light brownish cream slightly gravelly SAND with occasional shells. Gravel is fine to medium well rounded. (Possible MADE GROUND). | | 3.80 | 7.62 | |
| 4.00 | B5 | | | | | | | (0.40) | | |
| 4.00 | ES3 | | | | | | | 4.20 | 7.22 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None
Stability: Initially stable becoming less dense with depth.
Groundwater (description): Dry

Remarks

Terminated due to maximum excavator arm extent.

Termination Depth: 4.20m

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50 to be excavator**

Logged By: **OG**

Checked By:

# ARCADIS Trial Pit Log

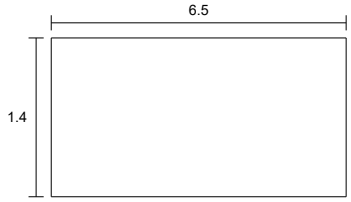
**PRELIMINARY**

**SHO-TS1_AUK_TP106**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **10.51** | **04/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **458071.47** | **524329.97** | **04/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| 0.10 | ES1 | | | | | MADE GROUND: grass over "soft" brown sandy gravelly CLAY with frequent roots and rootlets. | | (0.15) | | |
| | | | | | | MADE GROUND: "Loose" brownish grey very sandy cobbly fine to coarse subangular GRAVEL of slag. Cobbles are subrounded to angular with rare plastic and metal fragments. | | 0.15 | 10.36 | |
| 2.50 | B3 | | | | | | | (3.25) | | |
| 2.50 | B4 | | | | | | | | | |
| 2.50 | ES2 | | | | | | | | | |
| | | | | | | "Very loose" light creamish brown fine to medium slightly gravelly SAND. Gravel is fine to coarse subrounded with occasional subangular to subrounded cobbles. (Possible MADE GROUND). | | 3.40 | 7.11 | |
| | | | | | | | | (0.40) | | |
| | | | | | | "Loose" light creamish brown sandy cobbly subangular to rounded GRAVEL. Cobbles are subrounded. (Possible MADE GROUND). | | 3.80 | 6.71 | |
| 4.00 | B6 | | | | | | | (0.40) | | |
| 4.00 | ES5 | | | | | | | | | |
| | | | | | | | | 4.20 | 6.31 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None
Stability: Initially stable, then undermining with depth.
Groundwater (description): Dry

Remarks

Terminated due to maximum excavator arm extent.

Termination Depth: 4.20m

AGS

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50 tonne excavator**

Logged By: **OG**

Checked By:

# ARCADIS Trial Pit Log

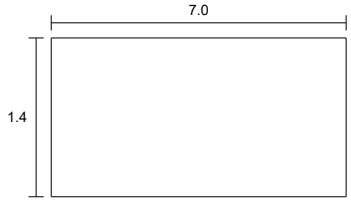
**PRELIMINARY**

**SHO-TS1_AUK_TP107**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **9.47** | **04/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **458069.85** | **524253.80** | **04/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| | | | | | | MADE GROUND: grass over "soft" brown slightly sandy gravelly CLAY with frequent rootlets and roots. | | (0.30) | | |
| 0.20 | ES1 | | | | | | | 0.30 | 9.17 | |
| | | | | | | MADE GROUND: "Loose" brown very gravelly fine to coarse SAND with occasional cobbles. Gravel is fine to coarse subangular of slag. | | (0.90) | | |
| 1.00 | ES2 | | | | | | | 1.20 | 8.27 | |
| | | | | | | MADE GROUND: "Firm" reddish brown mottled white reworked sandy gravelly CLAY with occasional cobbles of concrete fragments and rebar. Gravel is medium to coarse subangular. | | (1.00) | | |
| 2.00 | B3 | | | | | | | | | |
| 2.00 | B8 | | | | | | | 2.20 | 7.27 | |
| | | | | | | MADE GROUND: "Medium dense" reddish grey sandy cobbly GRAVEL of slag. Gravel is fine to coarse subangular to angular. | | | | |
| 3.00 | B4 | | | | | | | | | |
| 3.00 | ES5 | | | | | | | (1.80) | | |
| | | | | | | MADE GROUND: "Medium dense" red, black and grey very sandy GRAVEL with occasional cobbles of slag and brick. Gravel is fine to coarse, subangular. | | 4.00 | 5.47 | |
| 4.20 | B6 | | | | | | | | | |
| 4.20 | B9 | | | | | | | (0.50) | | |
| 4.20 | ES7 | | | | | | | 4.50 | 4.97 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None

Stability: Very stable.

Groundwater (description): Dry

Remarks

Terminated due to maximum excavator arm extent.

Termination Depth: 4.50m

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50 tonne excavator**

Logged By: **OG**

Checked By:

# ARCADIS Trial Pit Log

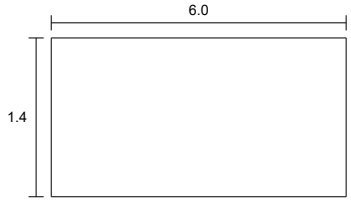
**PRELIMINARY**

**SHO-TS1_AUK_TP108**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **9.93** | **03/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457923.60** | **524356.30** | **03/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| | | | | | | MADE GROUND: "Soft" brown slightly sandy gravelly CLAY with frequent rootlets. Gravel is fine subrounded to rounded. | | (0.40) | | |
| | | | | | | MADE GROUND: "Loose" greyish brown sandy cobbly GRAVEL with rare wood and metal fragments. Gravel is fine to coarse subrounded to subangular of slag. | | 0.40 | 9.53 | |
| | | | | | | | | (2.30) | | |
| | | | | | | MADE GROUND: "Medium dense" bluish grey sandy cobbly GRAVEL Gravel is fine to coarse subangular to subrounded of slag. | | 2.70 | 7.23 | |
| 3.00 | B2 | | | | | | | (0.50) | | |
| 3.00 | ES1 | | | | | | | 3.20 | 6.73 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None

Stability: Very stable.

Groundwater (description): Dry

Remarks

Additional trial pit to assess the extent of contamination to the west. Terminated due to refusal in hard made ground.

Termination Depth: 3.20m

# ARCADIS Trial Pit Log

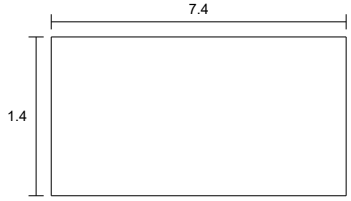
**PRELIMINARY**

**SHO-TS1_AUK_TP109**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **9.15** | **03/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457945.20** | **524390.00** | **03/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| | | | | | | MADE GROUND: "Soft" light brown slightly sandy gravelly CLAY with frequent rootlets and roots. | | (0.20) | | |
| | | | | | | MADE GROUND: "Very loose" light brown sandy cobbly fine to coarse subrounded to subangular GRAVEL with frequent waste of soft plastic, metal and wood. Cobbles are subrounded of slag. Strong Hydrocarbon odour. | | 0.20 | 8.95 | |
| | | | | | | | | (3.80) | | |
| 3.50<br>3.50 | B2<br>ES1 | | | | | | | 4.00 | 5.15 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None
Stability: Initially stable becoming less stable with depth, some undermining.
Groundwater (description): Dry

Remarks

Additional trial pit to assess the extent of contamination to the north. Terminated due to maximum excavator arm extent.

Termination Depth: 4.00m

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50 tonne excavator**

Logged By: **OG**

Checked By:

# ARCADIS Trial Pit Log

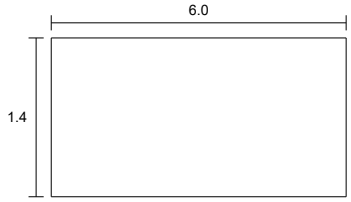
**PRELIMINARY**

**SHO-TS1_AUK_TP110**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **10.85** | **03/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457992.90** | **524399.80** | **03/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| | | | | | | MADE GROUND: "Very soft" to "soft" light reddish brown slightly sandy gravelly CLAY. Gravel is fine to medium subrounded. | | (0.20) | | |
| | | | | | | | | 0.20 | 10.65 | |
| | | | | | | MADE GROUND: "Dense" bluish grey and brown sandy cobbly fine to coarse subrounded to subangular GRAVEL with pockets of white fine Sand. Cobbles are subangular subrounded of slag. | | (3.30) | | |
| 2.50<br>2.50 | B2<br>ES1 | | | | | | | | | |
| | | | | | | | | 3.50 | 7.35 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None

Stability: Very stable.

Groundwater (description): Dry

Remarks

Additional trial pit to assess the extent of contamination to the east. Terminated due to refusal in hard made ground.

Termination Depth: 3.50m

AGS

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50 tonne excavator**

Logged By: **OG**

Checked By:

# ARCADIS Trial Pit Log

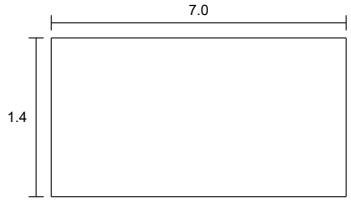
**PRELIMINARY**

**SHO-TS1_AUK_TP111**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **8.77** | **03/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457973.00** | **524366.00** | **03/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| | | | | | | MADE GROUND: "Soft "reddish brown slightly sandy gravelly CLAY with frequent roots. | | (0.40) | | |
| | | | | | | MADE GROUND: "Medium dense" bluish grey sandy cobbly fine to coarse angular to subrounded GRAVEL of a slag. | | 0.40<br>(0.10)<br>0.50 | 8.37<br>8.27 | |
| | | | | | | MADE GROUND: "Medium dense" brown sandy cobbly GRAVEL with frequent waste including brick fragments, plastic, glass, wire and cables and rare tyres. | | (1.30) | | |
| | | | | | | MADE GROUND: Dark brown sandy cobbly fine to coarse angular to subangular GRAVEL with rare brick. fragments. | | 1.80 | 6.97 | |
| 2.20 | ES3 | | | | | | | | | |
| | | | | | | | | (2.40) | | |
| 4.00<br>4.00 | B2<br>ES1 | | | | | | | 4.20 | 4.57 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None
Stability: Moderately stable, some undermining at depth.
Groundwater (description): Dry

Remarks

Additional trial pit to assess the extent of contamination to the south. Terminated due to maximum excavator arm extent.

Termination Depth: 4.20m

AGS

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50 tonne excavator**

Logged By: **OG**

Checked By:

# ARCADIS Trial Pit Log

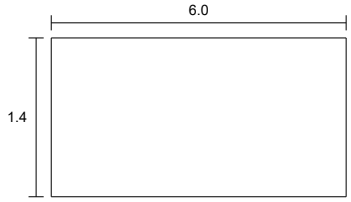
**PRELIMINARY**

**SHO-TS1_AUK_TP112**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **10.21** | **04/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457988.25** | **524230.69** | **04/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| | | | | | | MADE GROUND: "Soft" light brown slightly sandy gravelly CLAY with frequent roots and rootlets. | | (0.30) | | |
| | | | | | | | | 0.30 | 9.91 | |
| | | | | | | MADE GROUND: "Medium dense" to "dense" light brownish grey very sandy cobbly fine to coarse angular to subangular GRAVEL of slag with subrounded to subangular cobbles of slag. | | (2.20) | | |
| 1.50<br>1.50 | B2<br>ES1 | | | | | | | | | |
| | | | | | | | | 2.50 | 7.71 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None

Stability: Very stable.

Groundwater (description): Dry

Remarks

Additional observational trial pit. Terminated due to refusal in hard made ground.

Termination Depth: 2.50m

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50 tonne excavator**

Logged By: **OG**

Checked By:

# ARCADIS Trial Pit Log

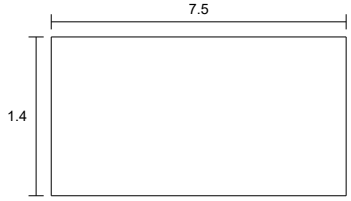
**PRELIMINARY**

**SHO-TS1_AUK_TP113**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **13.97** | **04/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457902.43** | **524215.99** | **04/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| | | | | | | MADE GROUND: "Soft" light brown slightly gravelly CLAY with frequent roots and rootlets. | | (0.40) | | |
| | | | | | | MADE GROUND: "Very dense" light brownish grey very sandy cobbly fine to coarse subangular to angular, GRAVEL. Cobbles are subrounded to angular of slag. | | 0.40<br>(0.40) | 13.57 | |
| | | | | | | MADE GROUND: "Medium dense" dark brown very sandy cobbly fine to coarse subrounded to subangular GRAVEL with rare plastic. Cobbles are subrounded to angular of slag. | | 0.80<br>(2.20) | 13.17 | |
| 1.50<br>1.50 | B2<br>ES1 | | | | | | | 3.00 | 10.97 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None

Stability: Very stable.

Groundwater (description): Dry

Remarks

Additional observational trial pit. Terminated due to refusal in hard made ground.

Termination Depth: 3.00m

# ARCADIS Trial Pit Log

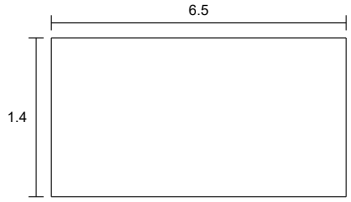
**PRELIMINARY**

**SHO-TS1_AUK_TP114**

| Project | Project No. | Ground Level (mAOD) | Start Date | Scale |
|---|---|---|---|---|
| **Steel House** | **10047374** | **11.38** | **04/03/2022** | **1:25** |
| Client | Easting (OS mE) | Northing (OS mN) | End Date | |
| **STDC** | **457867.58** | **524252.53** | **04/03/2022** | **Sheet 1 of 1** |

| SAMPLES | | TESTS | | | Water Strikes | STRATA | | Depth (Thickness) | Level | Install/ Backfill |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Type/ No. | Depth | Type/ No. | Results | | Description | Legend | | | |
| | | | | | | MADE GROUND: "Very soft" light brown very sandy gravelly CLAY with frequent rootlets and roots. | | (0.40) | | |
| | | | | | | MADE GROUND: "Very loose" light brown very sandy cobbly fine to coarse subrounded to subangular GRAVEL with frequent waste of plastic, metal, and brick, rare railway sleeper and, ladle bottom. Cobbles are subrounded to subangular of slag. | | 0.40 | 10.98 | |
| 2.00<br>2.00 | B2<br>ES1 | | | | | | | (3.60) | | |
| | | | | | | | | 4.00 | 7.38 | |

PLAN DETAILS




Long Axis Orientation:

Shoring / Support: None
Stability: Initially stable but coming less stable with depth.
Groundwater (description): Dry

Remarks

Additional observational trial pit. Terminated due to maximum excavator arm extent.

Termination Depth: 4.00m

AGS

**Unless otherwise stated:**
**Depth (m), Diameter (mm), Time (hhmm), Thickness (m), Level (mOD).**

Equipment Used: **50 tonne excavator**

Logged By: **OG**

Checked By:

# APPENDIX D

## Laboratory Certificates

# ANALYTICAL TEST REPORT

**Contract no:** 106848

**Contract name:** Steel House (SHO)

**Client reference:** -

**Clients name:** Hall Construction

**Clients address:** Stotforth Hill House
Windlestone, Rushyford
County Durham
DL17 0NF

**Samples received:** 09 March 2022

**Analysis started:** 09 March 2022

**Analysis completed:** 18 March 2022

**Report issued:** 18 March 2022

**Key**

| | |
|---|---|
| U | UKAS accredited test |
| M | MCERTS & UKAS accredited test |
| $ | Test carried out by an approved subcontractor |
| I/S | Insufficient sample to carry out test |
| N/S | Sample not suitable for testing |
| NAD | No Asbestos Detected |

**Approved by:**

Rachael Burton

Reporting Team Lead

# Chemtech Environmental Limited

# SAMPLE INFORMATION

**MCERTS (Soils):**

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

| Lab ref | Sample id | Depth (m) | Sample description | Material removed | % Removed | % Moisture |
|---|---|---|---|---|---|---|
| 106848-1 | SHO-TS1_AUK_TP101-S1 | 0.20 | Sandy Loamy Clay with Gravel & Roots | - | - | 19.7 |
| 106848-2 | SHO-TS1_AUK_TP101-S2 | 3.50 | Sandy Loamy Clay with Gravel & Roots | - | - | 7.0 |
| 106848-3 | SHO-TS1_AUK_TP102-S1 | 0.20 | Sandy Loamy Clay with Gravel & Roots | - | - | 16.6 |
| 106848-4 | SHO-TS1_AUK_TP102-S2 | 2.50 | Sandy Loamy Clay with Gravel & Roots | - | - | 20.9 |
| 106848-5 | SHO-TS1_AUK_TP102-S4 | 4.70 | Sandy Clayey Loam with Gravel & Roots | - | - | 11.5 |
| 106848-6 | SHO-TS1_AUK_TP103-S1 | 0.15 | Sandy Loamy Clay with Gravel & Roots | - | - | 12.6 |
| 106848-7 | SHO-TS1_AUK_TP103-S3 | 1.00 | Sandy Clayey Loam with Gravel & Roots | - | - | 5.6 |
| 106848-8 | SHO-TS1_AUK_TP104-S1 | 0.10 | Sandy Loamy Clay with Gravel & Roots | - | - | 22.2 |
| 106848-9 | SHO-TS1_AUK_TP104-S2 | 1.60 | Sandy Clayey Loam with Gravel & Roots | - | - | 8.9 |
| 106848-10 | SHO-TS1_AUK_TP105-S1 | 0.10 | Sandy Clayey Loam with Gravel & Roots | - | - | 12.7 |
| 106848-11 | SHO-TS1_AUK_TP105-S3 | 4.00 | Sandy Clayey Loam with Gravel & Roots | - | - | 5.7 |
| 106848-12 | SHO-TS1_AUK_TP105-S4 | 1.00 | Sandy Clayey Loam with Gravel & Roots | - | - | 9.8 |
| 106848-13 | SHO-TS1_AUK_TP106-S1 | 0.10 | Sandy Loamy Clay with Gravel & Roots | - | - | 21.1 |
| 106848-14 | SHO-TS1_AUK_TP106-S2 | 2.50 | Sandy Clayey Loam with Gravel & Roots | - | - | 9.1 |
| 106848-15 | SHO-TS1_AUK_TP106-S5 | 4.00 | Sandy Clayey Loam with Gravel & Roots | - | - | 5.8 |
| 106848-16 | SHO-TS1_AUK_TP107-S1 | 0.20 | Sandy Loamy Clay with Gravel & Roots | - | - | 18.2 |
| 106848-17 | SHO-TS1_AUK_TP107-S2 | 1.00 | Sandy Loamy Clay with Gravel & Roots | - | - | 15.7 |
| 106848-18 | SHO-TS1_AUK_TP107-S5 | 3.00 | Sandy Clayey Loam with Gravel & Roots | - | - | 9.3 |

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# SAMPLE INFORMATION

**MCERTS (Soils):**

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

| Lab ref | Sample id | Depth (m) | Sample description | Material removed | % Removed | % Moisture |
|---|---|---|---|---|---|---|
| 106848-19 | SHO-TS1_AUK_TP107-S7 | 4.20 | Sandy Clayey Loam with Gravel & Roots | - | - | 7.8 |
| 106848-20 | SHO-TS1_AUK_TP108-S1 | 3.00 | Sandy Clayey Loam with Gravel & Roots | - | - | 9.4 |
| 106848-21 | SHO-TS1_AUK_TP109-S1 | 3.50 | Sandy Clayey Loam with Gravel & Roots | - | - | 8.3 |
| 106848-22 | SHO-TS1_AUK_TP110-S1 | 2.50 | Sandy Loamy Clay with Gravel & Roots | - | - | 12.8 |
| 106848-23 | SHO-TS1_AUK_TP111-S1 | 4.00 | Sandy Clayey Loam with Gravel & Roots | - | - | 10.1 |
| 106848-24 | SHO-TS1_AUK_TP111-S3 | 2.20 | Sandy Clayey Loam with Gravel & Roots | - | - | 16.3 |
| 106848-25 | SHO-TS1_AUK_TP112-S1 | 1.50 | Sandy Clayey Loam with Gravel & Roots | - | - | 9.5 |
| 106848-26 | SHO-TS1_AUK_TP113-S1 | 1.50 | Sandy Clayey Loam with Gravel & Roots | - | - | 8.0 |
| 106848-27 | SHO-TS1_AUK_TP114-S1 | 2.00 | Sandy Clayey Loam with Gravel & Roots | - | - | 5.0 |

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# SOILS

| Lab number | | | 106848-1 | 106848-2 | 106848-3 | 106848-4 | 106848-5 | 106848-6 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP101-S1 | SHO-TS1_AUK_TP101-S2 | SHO-TS1_AUK_TP102-S1 | SHO-TS1_AUK_TP102-S2 | SHO-TS1_AUK_TP102-S4 | SHO-TS1_AUK_TP103-S1 |
| Depth (m) | | | 0.20 | 3.50 | 0.20 | 2.50 | 4.70 | 0.15 |
| Date sampled | | | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 03/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Aluminium (total) | CE127 | mg/kg Al | 18470 | 11227 | 16007 | 18868 | 34377 | 24431 |
| Antimony (total) | CE127 | mg/kg Sb | 0.6 | 0.9 | 0.4 | 2.8 | 1.4 | 0.6 |
| Arsenic (total) | CE127 | mg/kg As | 6.7 | 10 | 6.5 | 10 | 13 | 8.3 |
| Barium (total) | CE127 | mg/kg Ba | 159 | 226 | 181 | 287 | 738 | 324 |
| Beryllium (total) | CE127 | mg/kg Be | <1 | <1 | <1 | 1.3 | 3.2 | 2.0 |
| Boron (water soluble) | CE063 M | mg/kg B | 0.5 | 0.5 | 0.8 | 2.6 | 2.4 | 1.4 |
| Cadmium (total) | CE127 | mg/kg Cd | <0.2 | 0.3 | <0.2 | 1.7 | 0.4 | <0.2 |
| Chromium (total) | CE127 | mg/kg Cr | 51 | 580 | 98 | 89 | 87 | 60 |
| Chromium (VI) | CE146 | mg/kg CrVI | <1 | <1 | <1 | <1 | <1 | <1 |
| Copper (total) | CE127 | mg/kg Cu | 16 | 35 | 16 | 35 | 38 | 23 |
| Iron (total) | CE127 | mg/kg Fe | 29112 | 121295 | 34074 | 34593 | 46123 | 31271 |
| Lead (total) | CE127 | mg/kg Pb | 21 | 42 | 19 | 70 | 30 | 21 |
| Magnesium (total) | CE127 | mg/kg Mg | 13503 | 24676 | 12075 | 8602 | 13931 | 12139 |
| Manganese (total) | CE127 | mg/kg Mn | 676 | 40474 | 4657 | 2459 | 4585 | 1513 |
| Mercury (total) | CE127 | mg/kg Hg | <0.5 | <0.5 | <0.5 | 0.9 | <0.5 | <0.5 |
| Molybdenum (total) | CE127 | mg/kg Mo | 2.2 | 7.3 | 2.2 | 2.6 | 3.0 | 2.1 |
| Nickel (total) | CE127 | mg/kg Ni | 32 | 29 | 29 | 35 | 33 | 33 |
| Silicon (total) | CE127 | mg/kg Si | 743 | 317 | 750 | 828 | 319 | 556 |
| Vanadium (total) | CE127 | mg/kg V | 47 | 2406 | 262 | 147 | 195 | 79 |
| Zinc (total) | CE127 | mg/kg Zn | 69 | 118 | 70 | 152 | 61 | 59 |
| pH | CE004 M | units | 9.5 | 12.1 | 7.4 | 8.4 | 8.9 | 7.8 |
| Sulphate (2:1 water soluble) | CE061 U | mg/l $SO_4$ | 164 | 19 | 78 | 565 | 478 | 216 |
| Sulphur (free) | CE034 M | mg/kg S | <10 | <10 | <10 | 1255 | 421 | 101 |
| Cyanide (free) | CE077 | mg/kg CN | <1 | <1 | <1 | <1 | <1 | <1 |
| Cyanide (total) | CE077 | mg/kg CN | <1 | <1 | <1 | <1 | <1 | <1 |
| Thiocyanate | CE145 M | mg/kg SCN | <1 | <1 | <1 | <1 | 3.3 | <1 |
| Phenols (total) | CE078 | mg/kg PhOH | <0.5 | <0.5 | <0.5 | 3.2 | <0.5 | <0.5 |
| Total Organic Carbon (TOC) | CE197 | % w/w C | 2.9 | 0.6 | 2.0 | 3.8 | 2.9 | 1.5 |
| Estimate of OMC (calculated from TOC) | CE197 | % w/w | 5.0 | 1.1 | 3.4 | 6.5 | 4.9 | 2.7 |
| **PAH** | | | | | | | | |
| Naphthalene | CE087 M | mg/kg | 0.04 | <0.02 | <0.02 | 439.17 | 9.17 | <0.02 |
| Acenaphthylene | CE087 M | mg/kg | <0.02 | <0.02 | <0.02 | 6.84 | 2.98 | <0.02 |
| Acenaphthene | CE087 M | mg/kg | <0.02 | <0.02 | <0.02 | 6.87 | 17.11 | <0.02 |
| Fluorene | CE087 U | mg/kg | <0.02 | <0.02 | <0.02 | 10.48 | 23.23 | <0.02 |
| Phenanthrene | CE087 M | mg/kg | 0.09 | 0.24 | <0.02 | 21.42 | 32.42 | <0.02 |
| Anthracene | CE087 U | mg/kg | <0.02 | 0.04 | <0.02 | 5.03 | 11.26 | <0.02 |
| Fluoranthene | CE087 M | mg/kg | 0.11 | 0.31 | <0.02 | 4.10 | 18.40 | <0.02 |
| Pyrene | CE087 M | mg/kg | 0.11 | 0.29 | <0.02 | 4.04 | 14.34 | <0.02 |
| Benzo(a)anthracene | CE087 U | mg/kg | 0.08 | 0.16 | <0.02 | 3.71 | 7.67 | <0.02 |
| Chrysene | CE087 M | mg/kg | 0.09 | 0.22 | <0.03 | 8.22 | 7.24 | <0.03 |

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# SOILS

| Lab number | | | 106848-1 | 106848-2 | 106848-3 | 106848-4 | 106848-5 | 106848-6 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP101-S1 | SHO-TS1_AUK_TP101-S2 | SHO-TS1_AUK_TP102-S1 | SHO-TS1_AUK_TP102-S2 | SHO-TS1_AUK_TP102-S4 | SHO-TS1_AUK_TP103-S1 |
| Depth (m) | | | 0.20 | 3.50 | 0.20 | 2.50 | 4.70 | 0.15 |
| Date sampled | | | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 03/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Benzo(b)fluoranthene | CE087 M | mg/kg | 0.12 | 0.25 | <0.02 | 0.44 | 7.51 | <0.02 |
| Benzo(k)fluoranthene | CE087 M | mg/kg | 0.05 | 0.10 | <0.03 | 0.40 | 3.27 | <0.03 |
| Benzo(a)pyrene | CE087 U | mg/kg | 0.08 | 0.12 | <0.02 | 0.47 | 6.45 | <0.02 |
| Indeno(123cd)pyrene | CE087 M | mg/kg | 0.07 | 0.13 | <0.02 | 0.29 | 4.57 | <0.02 |
| Dibenz(ah)anthracene | CE087 M | mg/kg | <0.02 | 0.02 | <0.02 | 0.19 | 0.91 | <0.02 |
| Benzo(ghi)perylene | CE087 M | mg/kg | 0.07 | 0.12 | <0.02 | 0.22 | 4.04 | <0.02 |
| PAH (total of USEPA 16) | CE087 | mg/kg | 0.90 | 1.99 | <0.34 | 512 | 171 | <0.34 |
| **TPH** | | | | | | | | |
| VPH Aromatic (>EC5-EC7) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | 1.25 | <0.01 | <0.01 |
| VPH Aromatic (>EC7-EC8) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | 6.56 | <0.01 | <0.01 |
| VPH Aromatic (>EC8-EC10) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | 29 | 0.03 | <0.01 |
| EPH Aromatic (>EC10-EC12) | CE250 | mg/kg | <1 | 8 | <1 | 725 | 8 | 8 |
| EPH Aromatic (>EC12-EC16) | CE250 | mg/kg | <1 | 27 | <1 | 741 | 30 | 25 |
| EPH Aromatic (>EC16-EC21) | CE250 | mg/kg | <1 | 17 | <1 | 525 | 36 | 14 |
| EPH Aromatic (>EC21-EC35) | CE250 | mg/kg | 6 | 90 | <1 | 1237 | 161 | 73 |
| EPH Aromatic (>EC35-EC44) | CE250 | mg/kg | 2 | 16 | <1 | 42 | 34 | 13 |
| VPH Aliphatic (>C5-C6) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | 0.4 | <0.1 | <0.1 |
| VPH Aliphatic (>C6-C8) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | 3.4 | <0.1 | <0.1 |
| VPH Aliphatic (>C8-C10) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | 55 | 0.24 | <0.1 |
| EPH Aliphatic (>C10-C12) | CE250 | mg/kg | <6 | <6 | <6 | 133 | <6 | <6 |
| EPH Aliphatic (>C12-C16) | CE250 | mg/kg | <6 | 17 | <6 | 55 | <6 | 13 |
| EPH Aliphatic (>C16-C35) | CE250 | mg/kg | <15 | 28 | <15 | 273 | <15 | 17 |
| EPH Aliphatic (>C35-C44) | CE250 | mg/kg | <10 | <10 | <10 | 22 | <10 | <10 |
| **Volatiles** | | | | | | | | |
| MTBE | CE192 U | mg/kg | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Benzene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | 1.25 | <0.01 | <0.01 |
| Toluene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | 6.56 | <0.01 | <0.01 |
| Ethylbenzene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | 3.76 | <0.01 | <0.01 |
| m & p-Xylene | CE192 U | mg/kg | <0.02 | <0.02 | <0.02 | 16.78 | <0.02 | <0.02 |
| o-Xylene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | 8.09 | <0.01 | <0.01 |
| Dichlorodifluoromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Vinyl chloride | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromomethane | CE174 | mg/kg | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Chloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trichlorofluoromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trans-1,2-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 2,2-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

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# SOILS

| Lab number | | | 106848-1 | 106848-2 | 106848-3 | 106848-4 | 106848-5 | 106848-6 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP101-S1 | SHO-TS1_AUK_TP101-S2 | SHO-TS1_AUK_TP102-S1 | SHO-TS1_AUK_TP102-S2 | SHO-TS1_AUK_TP102-S4 | SHO-TS1_AUK_TP103-S1 |
| Depth (m) | | | 0.20 | 3.50 | 0.20 | 2.50 | 4.70 | 0.15 |
| Date sampled | | | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 03/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Cis-1,2-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromochloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chloroform | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,1-Trichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Carbon tetrachloride | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibromomethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromodichloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| cis-1,3-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| trans-1,3-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,2-Trichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Tetrachloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibromochloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dibromoethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,1,2-Tetrachloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Styrene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | 0.64 | <0.01 | <0.01 |
| Tribromomethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Isopropylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | 0.02 | <0.01 | <0.01 |
| Bromobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,2,2-Tetrachloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,3-Trichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Propylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | 0.12 | <0.01 | <0.01 |
| 2-Chlorotoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 4-Chlorotoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3,5-Trimethylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | 0.66 | <0.01 | <0.01 |
| tert-Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,4-Trimethylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | 2.33 | <0.01 | <0.01 |
| sec-Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 4-Isopropyltoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,4-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dibromo-3-chloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,4-Trichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

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# SOILS

| Lab number | | | 106848-1 | 106848-2 | 106848-3 | 106848-4 | 106848-5 | 106848-6 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP101-S1 | SHO-TS1_AUK_TP101-S2 | SHO-TS1_AUK_TP102-S1 | SHO-TS1_AUK_TP102-S2 | SHO-TS1_AUK_TP102-S4 | SHO-TS1_AUK_TP103-S1 |
| Depth (m) | | | 0.20 | 3.50 | 0.20 | 2.50 | 4.70 | 0.15 |
| Date sampled | | | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 03/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Hexachloro-1,3-butadiene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,3-Trichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| **Semi-volatiles** | | | | | | | | |
| N-Nitrosodimethylamine | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | 0.6 | <0.1 | <0.1 |
| Bis(2-chloroethyl)ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Chlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,3-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,4-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,2-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroisopropyl)ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 3&4-Methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | 3.2 | <0.1 | <0.1 |
| N-Nitrosodi-n-propylamine | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachloroethane | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Isophorone | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dimethylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | 3.5 | <0.1 | <0.1 |
| 2-Nitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroethoxy)methane | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,2,4-Trichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chloroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachlorobutadiene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chloro-3-methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methylnaphthalene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | 80.3 | 3.8 | <0.1 |
| 1-Methylnaphthalene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | 60.0 | 3.8 | <0.1 |
| Hexachlorocyclopentadiene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4,6-Trichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4,5-Trichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Chloronaphthalene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,6-Dinitrotoluene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 3-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dinitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Nitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | 24.4 | <0.1 |
| 2,4-Dinitrotoluene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzofuran | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | 2.3 | 23.9 | <0.1 |
| Diethyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |

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# SOILS

| Lab number | | | 106848-1 | 106848-2 | 106848-3 | 106848-4 | 106848-5 | 106848-6 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP101-S1 | SHO-TS1_AUK_TP101-S2 | SHO-TS1_AUK_TP102-S1 | SHO-TS1_AUK_TP102-S2 | SHO-TS1_AUK_TP102-S4 | SHO-TS1_AUK_TP103-S1 |
| Depth (m) | | | 0.20 | 3.50 | 0.20 | 2.50 | 4.70 | 0.15 |
| Date sampled | | | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 03/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| 4-Chlorophenylphenyl ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methyl-4,6-dinitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Bromophenylphenyl ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pentachlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Carbazole | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | 2.0 | 5.4 | <0.1 |
| Di-n-butyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Butylbenzyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-ethylhexyl)phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Di-n-octyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **PCB** | | | | | | | | |
| PCB Congener 77 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 81 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 105 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 114 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 118 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 123 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 126 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 156 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 157 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 167 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 169 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB Congener 189 | CE181 | mg/kg | - | <0.006 | - | <0.006 | - | - |
| PCB (total of WHO 12) | CE181 | mg/kg | - | <0.061 | - | <0.061 | - | - |
| **Subcontracted analysis** | | | | | | | | |
| Asbestos (qualitative) | $ | - | NAD | NAD | NAD | Amosite, Chrysotile | NAD | NAD |
| Form of Asbestos | $ | - | - | - | - | Loose Insulation | - | - |
| Asbestos (quantitative) | $ | % w/w | - | - | - | 0.028 | - | - |

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# SOILS

| Lab number | | | 106848-7 | 106848-8 | 106848-9 | 106848-10 | 106848-11 | 106848-12 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP103-S3 | SHO-TS1_AUK_TP104-S1 | SHO-TS1_AUK_TP104-S2 | SHO-TS1_AUK_TP105-S1 | SHO-TS1_AUK_TP105-S3 | SHO-TS1_AUK_TP105-S4 |
| Depth (m) | | | 1.00 | 0.10 | 1.60 | 0.10 | 4.00 | 1.00 |
| Date sampled | | | 03/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Aluminium (total) | CE127 | mg/kg Al | 27204 | 14984 | 17644 | 29280 | 8571 | 12115 |
| Antimony (total) | CE127 | mg/kg Sb | 1.6 | 0.4 | 1.0 | 1.3 | 1.4 | 1.6 |
| Arsenic (total) | CE127 | mg/kg As | 18 | 6.9 | 22 | 20 | 8.3 | 22 |
| Barium (total) | CE127 | mg/kg Ba | 589 | 136 | 524 | 476 | 241 | 311 |
| Beryllium (total) | CE127 | mg/kg Be | 1.5 | <1 | 1.4 | 3.3 | <1 | 1.2 |
| Boron (water soluble) | CE063 M | mg/kg B | 1.8 | 0.9 | 0.5 | 1.2 | 0.6 | 2.2 |
| Cadmium (total) | CE127 | mg/kg Cd | 1.0 | 0.2 | 0.7 | 0.6 | 7.5 | 1.1 |
| Chromium (total) | CE127 | mg/kg Cr | 2328 | 181 | 526 | 167 | 284 | 146 |
| Chromium (VI) | CE146 | mg/kg CrVI | <1 | <1 | <1 | <1 | <1 | <1 |
| Copper (total) | CE127 | mg/kg Cu | 77 | 18 | 44 | 26 | 28 | 154 |
| Iron (total) | CE127 | mg/kg Fe | 177864 | 33974 | 104486 | 43574 | 73195 | 64598 |
| Lead (total) | CE127 | mg/kg Pb | 71 | 27 | 53 | 64 | 263 | 276 |
| Magnesium (total) | CE127 | mg/kg Mg | 26141 | 6604 | 14588 | 15661 | 8853 | 9905 |
| Manganese (total) | CE127 | mg/kg Mn | 52290 | 3919 | 29348 | 5413 | 19898 | 13964 |
| Mercury (total) | CE127 | mg/kg Hg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Molybdenum (total) | CE127 | mg/kg Mo | 17 | 2.8 | 8.0 | 2.5 | 4.4 | 4.9 |
| Nickel (total) | CE127 | mg/kg Ni | 35 | 27 | 34 | 27 | 13 | 36 |
| Silicon (total) | CE127 | mg/kg Si | 389 | 461 | 336 | 300 | 342 | 294 |
| Vanadium (total) | CE127 | mg/kg V | 1200 | 111 | 1035 | 378 | 1858 | 567 |
| Zinc (total) | CE127 | mg/kg Zn | 274 | 79 | 129 | 215 | 1535 | 790 |
| pH | CE004 M | units | 10.7 | 7.7 | 10.5 | 8.0 | 11.3 | 10.6 |
| Sulphate (2:1 water soluble) | CE061 U | mg/l $SO_4$ | 15 | 121 | 78 | 461 | 41 | 382 |
| Sulphur (free) | CE034 M | mg/kg S | 19 | 10 | 25 | 146 | 25 | 136 |
| Cyanide (free) | CE077 | mg/kg CN | <1 | <1 | <1 | <1 | <1 | <1 |
| Cyanide (total) | CE077 | mg/kg CN | 3.9 | <1 | 1.8 | <1 | <1 | 13 |
| Thiocyanate | CE145 M | mg/kg SCN | 1.5 | 2.0 | 1.7 | 1.0 | 1.1 | 4.8 |
| Phenols (total) | CE078 | mg/kg PhOH | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Total Organic Carbon (TOC) | CE197 | % w/w C | 0.9 | 3.2 | 1.8 | 1.8 | 0.6 | 5.8 |
| Estimate of OMC (calculated from TOC) | CE197 | % w/w | 1.5 | 5.5 | 3.1 | 3.0 | 1.1 | 9.9 |
| **PAH** | | | | | | | | |
| Naphthalene | CE087 M | mg/kg | 0.76 | <0.02 | 0.19 | 0.07 | 0.55 | 1.35 |
| Acenaphthylene | CE087 M | mg/kg | 0.02 | <0.02 | 0.02 | 0.02 | 0.13 | 0.25 |
| Acenaphthene | CE087 M | mg/kg | 0.25 | <0.02 | 0.10 | 0.02 | 0.12 | 1.33 |
| Fluorene | CE087 U | mg/kg | 0.12 | <0.02 | 0.05 | 0.02 | 0.17 | 1.07 |
| Phenanthrene | CE087 M | mg/kg | 2.87 | 0.03 | 0.75 | 0.32 | 1.26 | 4.95 |
| Anthracene | CE087 U | mg/kg | 0.57 | <0.02 | 0.16 | 0.10 | 0.35 | 1.11 |
| Fluoranthene | CE087 M | mg/kg | 6.75 | 0.05 | 1.72 | 1.44 | 2.30 | 8.35 |
| Pyrene | CE087 M | mg/kg | 6.23 | 0.04 | 1.66 | 1.21 | 2.23 | 8.06 |
| Benzo(a)anthracene | CE087 U | mg/kg | 4.32 | 0.03 | 1.13 | 0.73 | 1.60 | 5.35 |
| Chrysene | CE087 M | mg/kg | 4.96 | 0.03 | 1.36 | 0.71 | 1.62 | 5.69 |

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# SOILS

| Lab number | | | 106848-7 | 106848-8 | 106848-9 | 106848-10 | 106848-11 | 106848-12 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP103-S3 | SHO-TS1_AUK_TP104-S1 | SHO-TS1_AUK_TP104-S2 | SHO-TS1_AUK_TP105-S1 | SHO-TS1_AUK_TP105-S3 | SHO-TS1_AUK_TP105-S4 |
| Depth (m) | | | 1.00 | 0.10 | 1.60 | 0.10 | 4.00 | 1.00 |
| Date sampled | | | 03/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Benzo(b)fluoranthene | CE087 M | mg/kg | 7.15 | 0.04 | 1.75 | 0.99 | 2.14 | 8.78 |
| Benzo(k)fluoranthene | CE087 M | mg/kg | 2.58 | <0.03 | 0.71 | 0.30 | 0.84 | 3.23 |
| Benzo(a)pyrene | CE087 U | mg/kg | 5.38 | 0.03 | 1.30 | 0.54 | 1.66 | 7.12 |
| Indeno(123cd)pyrene | CE087 M | mg/kg | 4.60 | 0.03 | 1.19 | 0.58 | 1.44 | 6.04 |
| Dibenz(ah)anthracene | CE087 M | mg/kg | 0.89 | <0.02 | 0.21 | 0.10 | 0.25 | 1.06 |
| Benzo(ghi)perylene | CE087 M | mg/kg | 4.03 | 0.03 | 1.04 | 0.47 | 1.18 | 5.44 |
| PAH (total of USEPA 16) | CE087 | mg/kg | 51.5 | <0.34 | 13.4 | 7.62 | 17.8 | 69.2 |
| **TPH** | | | | | | | | |
| VPH Aromatic (>EC5-EC7) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| VPH Aromatic (>EC7-EC8) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| VPH Aromatic (>EC8-EC10) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| EPH Aromatic (>EC10-EC12) | CE250 | mg/kg | 3 | 9 | 3 | 7 | 1 | 9 |
| EPH Aromatic (>EC12-EC16) | CE250 | mg/kg | 5 | 25 | 7 | 22 | 3 | 24 |
| EPH Aromatic (>EC16-EC21) | CE250 | mg/kg | 8 | 14 | 8 | 14 | 4 | 21 |
| EPH Aromatic (>EC21-EC35) | CE250 | mg/kg | 54 | 81 | 50 | 75 | 26 | 116 |
| EPH Aromatic (>EC35-EC44) | CE250 | mg/kg | 17 | 14 | 20 | 12 | 10 | 19 |
| VPH Aliphatic (>C5-C6) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| VPH Aliphatic (>C6-C8) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| VPH Aliphatic (>C8-C10) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| EPH Aliphatic (>C10-C12) | CE250 | mg/kg | <6 | <6 | <6 | <6 | <6 | <6 |
| EPH Aliphatic (>C12-C16) | CE250 | mg/kg | <6 | 13 | <6 | 12 | <6 | 11 |
| EPH Aliphatic (>C16-C35) | CE250 | mg/kg | <15 | 20 | 27 | 17 | <15 | 20 |
| EPH Aliphatic (>C35-C44) | CE250 | mg/kg | <10 | <10 | 11 | <10 | <10 | <10 |
| **Volatiles** | | | | | | | | |
| MTBE | CE192 U | mg/kg | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Benzene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Toluene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Ethylbenzene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| m & p-Xylene | CE192 U | mg/kg | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o-Xylene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dichlorodifluoromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Vinyl chloride | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromomethane | CE174 | mg/kg | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Chloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trichlorofluoromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trans-1,2-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 2,2-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

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# SOILS

| Lab number | | | 106848-7 | 106848-8 | 106848-9 | 106848-10 | 106848-11 | 106848-12 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP103-S3 | SHO-TS1_AUK_TP104-S1 | SHO-TS1_AUK_TP104-S2 | SHO-TS1_AUK_TP105-S1 | SHO-TS1_AUK_TP105-S3 | SHO-TS1_AUK_TP105-S4 |
| Depth (m) | | | 1.00 | 0.10 | 1.60 | 0.10 | 4.00 | 1.00 |
| Date sampled | | | 03/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Cis-1,2-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromochloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chloroform | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,1-Trichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Carbon tetrachloride | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibromomethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromodichloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| cis-1,3-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| trans-1,3-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,2-Trichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Tetrachloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibromochloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dibromoethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,1,2-Tetrachloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Styrene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Tribromomethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Isopropylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,2,2-Tetrachloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,3-Trichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Propylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 2-Chlorotoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 4-Chlorotoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3,5-Trimethylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| tert-Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,4-Trimethylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| sec-Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 4-Isopropyltoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,4-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dibromo-3-chloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,4-Trichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

# Chemtech Environmental Limited

# SOILS

| Lab number | | | 106848-7 | 106848-8 | 106848-9 | 106848-10 | 106848-11 | 106848-12 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP103-S3 | SHO-TS1_AUK_TP104-S1 | SHO-TS1_AUK_TP104-S2 | SHO-TS1_AUK_TP105-S1 | SHO-TS1_AUK_TP105-S3 | SHO-TS1_AUK_TP105-S4 |
| Depth (m) | | | 1.00 | 0.10 | 1.60 | 0.10 | 4.00 | 1.00 |
| Date sampled | | | 03/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Hexachloro-1,3-butadiene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,3-Trichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| **Semi-volatiles** | | | | | | | | |
| N-Nitrosodimethylamine | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroethyl)ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Chlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,3-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,4-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,2-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroisopropyl)ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 3&4-Methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| N-Nitrosodi-n-propylamine | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachloroethane | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Isophorone | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dimethylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Nitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroethoxy)methane | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,2,4-Trichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chloroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachlorobutadiene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chloro-3-methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methylnaphthalene | CE189 | mg/kg | 0.1 | <0.1 | <0.1 | 0.1 | 0.2 | 0.9 |
| 1-Methylnaphthalene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.7 |
| Hexachlorocyclopentadiene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4,6-Trichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4,5-Trichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Chloronaphthalene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,6-Dinitrotoluene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 3-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dinitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Nitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 1.6 |
| 2,4-Dinitrotoluene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzofuran | CE189 | mg/kg | 0.3 | <0.1 | <0.1 | <0.1 | 0.3 | 1.6 |
| Diethyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |

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# SOILS

| **Lab number** | | | 106848-7 | 106848-8 | 106848-9 | 106848-10 | 106848-11 | 106848-12 |
|---|---|---|---|---|---|---|---|---|
| **Sample id** | | | SHO-TS1_AUK_TP103-S3 | SHO-TS1_AUK_TP104-S1 | SHO-TS1_AUK_TP104-S2 | SHO-TS1_AUK_TP105-S1 | SHO-TS1_AUK_TP105-S3 | SHO-TS1_AUK_TP105-S4 |
| **Depth (m)** | | | 1.00 | 0.10 | 1.60 | 0.10 | 4.00 | 1.00 |
| **Date sampled** | | | 03/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 | 02/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| 4-Chlorophenylphenyl ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methyl-4,6-dinitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Bromophenylphenyl ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pentachlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Carbazole | CE189 | mg/kg | 0.5 | <0.1 | <0.1 | <0.1 | 0.3 | 0.7 |
| Di-n-butyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Butylbenzyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-ethylhexyl)phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Di-n-octyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **PCB** | | | | | | | | |
| PCB Congener 77 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 81 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 105 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 114 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 118 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 123 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 126 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 156 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 157 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 167 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 169 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB Congener 189 | CE181 | mg/kg | <0.006 | - | <0.006 | - | - | <0.006 |
| PCB (total of WHO 12) | CE181 | mg/kg | <0.061 | - | <0.061 | - | - | <0.061 |
| **Subcontracted analysis** | | | | | | | | |
| Asbestos (qualitative) | $ | - | NAD | NAD | NAD | NAD | NAD | NAD |
| Form of Asbestos | $ | - | - | - | - | - | - | - |
| Asbestos (quantitative) | $ | % w/w | - | - | - | - | - | - |

# Chemtech Environmental Limited

# SOILS

| Lab number | | | 106848-13 | 106848-14 | 106848-15 | 106848-16 | 106848-17 | 106848-18 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP106-S1 | SHO-TS1_AUK_TP106-S2 | SHO-TS1_AUK_TP106-S5 | SHO-TS1_AUK_TP107-S1 | SHO-TS1_AUK_TP107-S2 | SHO-TS1_AUK_TP107-S5 |
| Depth (m) | | | 0.10 | 2.50 | 4.00 | 0.20 | 1.00 | 3.00 |
| Date sampled | | | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Aluminium (total) | CE127 | mg/kg Al | 22516 | 23157 | 22519 | 22250 | 26190 | 21661 |
| Antimony (total) | CE127 | mg/kg Sb | 0.8 | 0.9 | 0.7 | 0.5 | 0.6 | 1.3 |
| Arsenic (total) | CE127 | mg/kg As | 13 | 12 | 5.7 | 10 | 8.9 | 17 |
| Barium (total) | CE127 | mg/kg Ba | 394 | 507 | 697 | 334 | 427 | 553 |
| Beryllium (total) | CE127 | mg/kg Be | 2.2 | 2.2 | 2.1 | 1.7 | 2.1 | 2.5 |
| Boron (water soluble) | CE063 M | mg/kg B | 1.0 | 1.8 | 1.4 | 1.0 | 1.8 | <0.5 |
| Cadmium (total) | CE127 | mg/kg Cd | 4.9 | 1.2 | 0.4 | 0.3 | 0.2 | 0.4 |
| Chromium (total) | CE127 | mg/kg Cr | 101 | 319 | 241 | 106 | 104 | 894 |
| Chromium (VI) | CE146 | mg/kg CrVI | <1 | <1 | <1 | <1 | <1 | <1 |
| Copper (total) | CE127 | mg/kg Cu | 38 | 68 | 32 | 22 | 20 | 53 |
| Iron (total) | CE127 | mg/kg Fe | 33136 | 78119 | 38345 | 31600 | 30957 | 81455 |
| Lead (total) | CE127 | mg/kg Pb | 73 | 82 | 40 | 50 | 37 | 65 |
| Magnesium (total) | CE127 | mg/kg Mg | 13922 | 19318 | 12761 | 8114 | 12455 | 27036 |
| Manganese (total) | CE127 | mg/kg Mn | 4206 | 15018 | 7730 | 2408 | 2594 | 19013 |
| Mercury (total) | CE127 | mg/kg Hg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Molybdenum (total) | CE127 | mg/kg Mo | 2.2 | 4.6 | 3.7 | 2.5 | 1.7 | 4.9 |
| Nickel (total) | CE127 | mg/kg Ni | 31 | 29 | 18 | 27 | 27 | 26 |
| Silicon (total) | CE127 | mg/kg Si | 395 | 321 | 343 | 625 | 519 | 364 |
| Vanadium (total) | CE127 | mg/kg V | 164 | 1681 | 297 | 112 | 147 | 1918 |
| Zinc (total) | CE127 | mg/kg Zn | 222 | 167 | 87 | 118 | 94 | 138 |
| pH | CE004 M | units | 8.3 | 10.5 | 10.1 | 8.1 | 8.5 | 12.0 |
| Sulphate (2:1 water soluble) | CE061 U | mg/l $SO_4$ | 217 | 324 | 382 | 248 | 405 | 33 |
| Sulphur (free) | CE034 M | mg/kg S | 52 | 76 | 204 | 86 | 72 | 69 |
| Cyanide (free) | CE077 | mg/kg CN | <1 | <1 | <1 | <1 | <1 | <1 |
| Cyanide (total) | CE077 | mg/kg CN | <1 | <1 | <1 | <1 | <1 | <1 |
| Thiocyanate | CE145 M | mg/kg SCN | 1.0 | 1.6 | 2.3 | 4.8 | <1 | <1 |
| Phenols (total) | CE078 | mg/kg PhOH | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Total Organic Carbon (TOC) | CE197 | % w/w C | 3.4 | 1.9 | 0.6 | 2.1 | 1.6 | 2.5 |
| Estimate of OMC (calculated from TOC) | CE197 | % w/w | 5.9 | 3.2 | 1.0 | 3.6 | 2.7 | 4.3 |
| **PAH** | | | | | | | | |
| Naphthalene | CE087 M | mg/kg | 0.04 | 0.07 | <0.02 | <0.02 | 0.05 | 0.14 |
| Acenaphthylene | CE087 M | mg/kg | <0.02 | 0.02 | <0.02 | <0.02 | 0.03 | 0.04 |
| Acenaphthene | CE087 M | mg/kg | <0.02 | 0.05 | <0.02 | <0.02 | <0.02 | 0.05 |
| Fluorene | CE087 U | mg/kg | <0.02 | 0.04 | <0.02 | <0.02 | 0.03 | 0.05 |
| Phenanthrene | CE087 M | mg/kg | 0.08 | 0.62 | 0.19 | 0.07 | 0.49 | 0.85 |
| Anthracene | CE087 U | mg/kg | 0.03 | 0.11 | <0.02 | <0.02 | 0.07 | 0.21 |
| Fluoranthene | CE087 M | mg/kg | 0.47 | 1.10 | 0.31 | 0.16 | 0.70 | 1.20 |
| Pyrene | CE087 M | mg/kg | 0.43 | 1.22 | 0.22 | 0.13 | 0.56 | 1.07 |
| Benzo(a)anthracene | CE087 U | mg/kg | 0.29 | 0.66 | 0.09 | 0.09 | 0.33 | 0.98 |
| Chrysene | CE087 M | mg/kg | 0.29 | 0.69 | 0.14 | 0.10 | 0.38 | 1.04 |

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# SOILS

| Lab number | | | 106848-13 | 106848-14 | 106848-15 | 106848-16 | 106848-17 | 106848-18 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP106-S1 | SHO-TS1_AUK_TP106-S2 | SHO-TS1_AUK_TP106-S5 | SHO-TS1_AUK_TP107-S1 | SHO-TS1_AUK_TP107-S2 | SHO-TS1_AUK_TP107-S5 |
| Depth (m) | | | 0.10 | 2.50 | 4.00 | 0.20 | 1.00 | 3.00 |
| Date sampled | | | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Benzo(b)fluoranthene | CE087 M | mg/kg | 0.40 | 0.88 | 0.15 | 0.13 | 0.42 | 1.41 |
| Benzo(k)fluoranthene | CE087 M | mg/kg | 0.17 | 0.30 | 0.06 | 0.05 | 0.16 | 0.62 |
| Benzo(a)pyrene | CE087 U | mg/kg | 0.23 | 0.55 | 0.06 | 0.08 | 0.26 | 0.97 |
| Indeno(123cd)pyrene | CE087 M | mg/kg | 0.24 | 0.53 | 0.10 | 0.08 | 0.22 | 0.83 |
| Dibenz(ah)anthracene | CE087 M | mg/kg | 0.05 | 0.10 | <0.02 | <0.02 | 0.04 | 0.18 |
| Benzo(ghi)perylene | CE087 M | mg/kg | 0.21 | 0.47 | 0.17 | 0.06 | 0.19 | 0.66 |
| PAH (total of USEPA 16) | CE087 | mg/kg | 2.92 | 7.42 | 1.50 | 0.93 | 3.93 | 10.3 |
| **TPH** | | | | | | | | |
| VPH Aromatic (>EC5-EC7) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| VPH Aromatic (>EC7-EC8) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| VPH Aromatic (>EC8-EC10) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| EPH Aromatic (>EC10-EC12) | CE250 | mg/kg | <1 | 8 | <1 | 6 | 9 | 9 |
| EPH Aromatic (>EC12-EC16) | CE250 | mg/kg | 2 | 22 | 2 | 19 | 20 | 23 |
| EPH Aromatic (>EC16-EC21) | CE250 | mg/kg | 2 | 16 | 2 | 12 | 16 | 19 |
| EPH Aromatic (>EC21-EC35) | CE250 | mg/kg | 12 | 79 | 13 | 62 | 64 | 68 |
| EPH Aromatic (>EC35-EC44) | CE250 | mg/kg | 3 | 13 | 7 | 10 | 16 | 16 |
| VPH Aliphatic (>C5-C6) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| VPH Aliphatic (>C6-C8) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| VPH Aliphatic (>C8-C10) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| EPH Aliphatic (>C10-C12) | CE250 | mg/kg | <6 | <6 | <6 | <6 | <6 | <6 |
| EPH Aliphatic (>C12-C16) | CE250 | mg/kg | <6 | 10 | <6 | 9 | <6 | <6 |
| EPH Aliphatic (>C16-C35) | CE250 | mg/kg | <15 | 29 | <15 | <15 | <15 | 21 |
| EPH Aliphatic (>C35-C44) | CE250 | mg/kg | <10 | <10 | <10 | <10 | <10 | <10 |
| **Volatiles** | | | | | | | | |
| MTBE | CE192 U | mg/kg | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Benzene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Toluene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Ethylbenzene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| m & p-Xylene | CE192 U | mg/kg | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o-Xylene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dichlorodifluoromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Vinyl chloride | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromomethane | CE174 | mg/kg | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Chloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trichlorofluoromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trans-1,2-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 2,2-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

# Chemtech Environmental Limited

# SOILS

| Lab number | | | 106848-13 | 106848-14 | 106848-15 | 106848-16 | 106848-17 | 106848-18 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP106-S1 | SHO-TS1_AUK_TP106-S2 | SHO-TS1_AUK_TP106-S5 | SHO-TS1_AUK_TP107-S1 | SHO-TS1_AUK_TP107-S2 | SHO-TS1_AUK_TP107-S5 |
| Depth (m) | | | 0.10 | 2.50 | 4.00 | 0.20 | 1.00 | 3.00 |
| Date sampled | | | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Cis-1,2-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromochloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chloroform | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,1-Trichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Carbon tetrachloride | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibromomethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromodichloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| cis-1,3-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| trans-1,3-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,2-Trichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Tetrachloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibromochloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dibromoethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,1,2-Tetrachloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Styrene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Tribromomethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Isopropylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,2,2-Tetrachloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,3-Trichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Propylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 2-Chlorotoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 4-Chlorotoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3,5-Trimethylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| tert-Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,4-Trimethylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| sec-Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 4-Isopropyltoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,4-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dibromo-3-chloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,4-Trichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

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# SOILS

| Lab number | | | 106848-13 | 106848-14 | 106848-15 | 106848-16 | 106848-17 | 106848-18 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP106-S1 | SHO-TS1_AUK_TP106-S2 | SHO-TS1_AUK_TP106-S5 | SHO-TS1_AUK_TP107-S1 | SHO-TS1_AUK_TP107-S2 | SHO-TS1_AUK_TP107-S5 |
| Depth (m) | | | 0.10 | 2.50 | 4.00 | 0.20 | 1.00 | 3.00 |
| Date sampled | | | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Hexachloro-1,3-butadiene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,3-Trichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| **Semi-volatiles** | | | | | | | | |
| N-Nitrosodimethylamine | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroethyl)ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Chlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,3-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,4-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,2-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroisopropyl)ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 3&4-Methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| N-Nitrosodi-n-propylamine | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachloroethane | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Isophorone | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dimethylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Nitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroethoxy)methane | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,2,4-Trichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chloroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachlorobutadiene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chloro-3-methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methylnaphthalene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.4 |
| 1-Methylnaphthalene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.3 |
| Hexachlorocyclopentadiene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4,6-Trichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4,5-Trichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Chloronaphthalene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,6-Dinitrotoluene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 3-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dinitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Nitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dinitrotoluene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzofuran | CE189 | mg/kg | <0.1 | 0.1 | <0.1 | <0.1 | <0.1 | 0.2 |
| Diethyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |

# Chemtech Environmental Limited

# SOILS

| **Lab number** | | | 106848-13 | 106848-14 | 106848-15 | 106848-16 | 106848-17 | 106848-18 |
|---|---|---|---|---|---|---|---|---|
| **Sample id** | | | SHO-TS1_AUK_TP106-S1 | SHO-TS1_AUK_TP106-S2 | SHO-TS1_AUK_TP106-S5 | SHO-TS1_AUK_TP107-S1 | SHO-TS1_AUK_TP107-S2 | SHO-TS1_AUK_TP107-S5 |
| **Depth (m)** | | | 0.10 | 2.50 | 4.00 | 0.20 | 1.00 | 3.00 |
| **Date sampled** | | | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| 4-Chlorophenylphenyl ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methyl-4,6-dinitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Bromophenylphenyl ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pentachlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Carbazole | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Di-n-butyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Butylbenzyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-ethylhexyl)phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Di-n-octyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **PCB** | | | | | | | | |
| PCB Congener 77 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 81 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 105 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 114 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 118 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 123 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 126 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 156 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 157 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 167 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 169 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB Congener 189 | CE181 | mg/kg | - | <0.006 | - | - | <0.006 | - |
| PCB (total of WHO 12) | CE181 | mg/kg | - | <0.061 | - | - | <0.061 | - |
| **Subcontracted analysis** | | | | | | | | |
| Asbestos (qualitative) | $ | - | NAD | NAD | NAD | NAD | NAD | NAD |
| Form of Asbestos | $ | - | - | - | - | - | - | - |
| Asbestos (quantitative) | $ | % w/w | - | - | - | - | - | - |

# Chemtech Environmental Limited

# SOILS

| Lab number | | | 106848-19 | 106848-20 | 106848-21 | 106848-22 | 106848-23 | 106848-24 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP107-S7 | SHO-TS1_AUK_TP108-S1 | SHO-TS1_AUK_TP109-S1 | SHO-TS1_AUK_TP110-S1 | SHO-TS1_AUK_TP111-S1 | SHO-TS1_AUK_TP111-S3 |
| Depth (m) | | | 4.20 | 3.00 | 3.50 | 2.50 | 4.00 | 2.20 |
| Date sampled | | | 04/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Aluminium (total) | CE127 | mg/kg Al | 21756 | 16387 | 26116 | 30478 | 42501 | 18673 |
| Antimony (total) | CE127 | mg/kg Sb | 0.9 | 0.9 | 2.6 | 3.2 | 1.1 | 11 |
| Arsenic (total) | CE127 | mg/kg As | 16 | 9.1 | 12 | 8.4 | 15 | 28 |
| Barium (total) | CE127 | mg/kg Ba | 646 | 362 | 535 | 419 | 182 | 667 |
| Beryllium (total) | CE127 | mg/kg Be | 2.7 | 1.3 | 1.7 | 3.9 | 5.3 | 2.5 |
| Boron (water soluble) | CE063 M | mg/kg B | <0.5 | 1.2 | 1.1 | 2.2 | 3.5 | 2.4 |
| Cadmium (total) | CE127 | mg/kg Cd | 0.3 | 0.5 | 0.9 | 3.6 | 1.0 | 6.8 |
| Chromium (total) | CE127 | mg/kg Cr | 829 | 401 | 1265 | 392 | 196 | 206 |
| Chromium (VI) | CE146 | mg/kg CrVI | <1 | <1 | <1 | <1 | <1 | <1 |
| Copper (total) | CE127 | mg/kg Cu | 37 | 33 | 51 | 54 | 49 | 112 |
| Iron (total) | CE127 | mg/kg Fe | 76501 | 69498 | 63178 | 35384 | 44319 | 49022 |
| Lead (total) | CE127 | mg/kg Pb | 45 | 57 | 79 | 195 | 107 | 119 |
| Magnesium (total) | CE127 | mg/kg Mg | 27202 | 21143 | 12925 | 19551 | 20636 | 17774 |
| Manganese (total) | CE127 | mg/kg Mn | 22196 | 15629 | 11069 | 10051 | 7341 | 5190 |
| Mercury (total) | CE127 | mg/kg Hg | <0.5 | <0.5 | 1.0 | 6.4 | 0.9 | 4.3 |
| Molybdenum (total) | CE127 | mg/kg Mo | 3.9 | 3.5 | 6.2 | 4.6 | 3.5 | 7.8 |
| Nickel (total) | CE127 | mg/kg Ni | 17 | 22 | 21 | 82 | 26 | 43 |
| Silicon (total) | CE127 | mg/kg Si | 338 | 307 | 334 | 347 | 321 | 632 |
| Vanadium (total) | CE127 | mg/kg V | 1909 | 1524 | 484 | 338 | 325 | 374 |
| Zinc (total) | CE127 | mg/kg Zn | 108 | 165 | 212 | 442 | 180 | 599 |
| pH | CE004 M | units | 11.8 | 10.8 | 9.3 | 10.0 | 9.1 | 8.8 |
| Sulphate (2:1 water soluble) | CE061 U | mg/l $SO_4$ | 44 | 177 | 25 | 422 | 691 | 345 |
| Sulphur (free) | CE034 M | mg/kg S | 71 | 47 | 155 | 661 | 831 | 117 |
| Cyanide (free) | CE077 | mg/kg CN | <1 | <1 | <1 | <1 | <1 | <1 |
| Cyanide (total) | CE077 | mg/kg CN | <1 | <1 | <1 | <1 | <1 | 1.3 |
| Thiocyanate | CE145 M | mg/kg SCN | <1 | 1.4 | 2.1 | 6.7 | 1.5 | 3.8 |
| Phenols (total) | CE078 | mg/kg PhOH | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Total Organic Carbon (TOC) | CE197 | % w/w C | 0.8 | 1.3 | 2.1 | 4.8 | 2.2 | 6.5 |
| Estimate of OMC (calculated from TOC) | CE197 | % w/w | 1.4 | 2.2 | 3.6 | 8.3 | 3.8 | 11.3 |
| **PAH** | | | | | | | | |
| Naphthalene | CE087 M | mg/kg | 0.05 | 0.38 | 0.43 | 1.35 | 0.23 | 1.44 |
| Acenaphthylene | CE087 M | mg/kg | <0.02 | 0.04 | 0.05 | 0.11 | <0.02 | <0.02 |
| Acenaphthene | CE087 M | mg/kg | 0.03 | 0.11 | 0.04 | 0.12 | 0.04 | <0.02 |
| Fluorene | CE087 U | mg/kg | 0.03 | 0.08 | 0.06 | 0.17 | 0.04 | <0.02 |
| Phenanthrene | CE087 M | mg/kg | 0.48 | 1.31 | 0.36 | 1.87 | 0.52 | 0.24 |
| Anthracene | CE087 U | mg/kg | 0.07 | 0.25 | 0.08 | 0.33 | 0.12 | 0.07 |
| Fluoranthene | CE087 M | mg/kg | 0.75 | 4.33 | 0.49 | 5.37 | 1.02 | 0.24 |
| Pyrene | CE087 M | mg/kg | 0.66 | 3.68 | 0.45 | 4.70 | 0.87 | 0.24 |
| Benzo(a)anthracene | CE087 U | mg/kg | 0.38 | 2.01 | 0.27 | 0.97 | 0.43 | 0.17 |
| Chrysene | CE087 M | mg/kg | 0.46 | 2.19 | 0.30 | 1.28 | 0.53 | 0.17 |

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# SOILS

| Lab number | | | 106848-19 | 106848-20 | 106848-21 | 106848-22 | 106848-23 | 106848-24 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP107-S7 | SHO-TS1_AUK_TP108-S1 | SHO-TS1_AUK_TP109-S1 | SHO-TS1_AUK_TP110-S1 | SHO-TS1_AUK_TP111-S1 | SHO-TS1_AUK_TP111-S3 |
| Depth (m) | | | 4.20 | 3.00 | 3.50 | 2.50 | 4.00 | 2.20 |
| Date sampled | | | 04/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Benzo(b)fluoranthene | CE087 M | mg/kg | 0.59 | 2.64 | 0.40 | 1.00 | 0.64 | 0.29 |
| Benzo(k)fluoranthene | CE087 M | mg/kg | 0.21 | 0.99 | 0.16 | 0.32 | 0.21 | 0.10 |
| Benzo(a)pyrene | CE087 U | mg/kg | 0.33 | 1.70 | 0.23 | 0.51 | 0.40 | 0.15 |
| Indeno(123cd)pyrene | CE087 M | mg/kg | 0.36 | 1.57 | 0.23 | 0.56 | 0.38 | 0.17 |
| Dibenz(ah)anthracene | CE087 M | mg/kg | 0.06 | 0.30 | 0.04 | 0.11 | 0.07 | 0.03 |
| Benzo(ghi)perylene | CE087 M | mg/kg | 0.31 | 1.30 | 0.20 | 0.47 | 0.34 | 0.16 |
| PAH (total of USEPA 16) | CE087 | mg/kg | 4.79 | 22.9 | 3.80 | 19.2 | 5.83 | 3.46 |
| **TPH** | | | | | | | | |
| VPH Aromatic (>EC5-EC7) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| VPH Aromatic (>EC7-EC8) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| VPH Aromatic (>EC8-EC10) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 | 0.06 | <0.01 | <0.01 |
| EPH Aromatic (>EC10-EC12) | CE250 | mg/kg | 9 | 12 | 8 | 17 | 14 | 10 |
| EPH Aromatic (>EC12-EC16) | CE250 | mg/kg | 19 | 25 | 18 | 41 | 35 | 25 |
| EPH Aromatic (>EC16-EC21) | CE250 | mg/kg | 16 | 23 | 15 | 61 | 39 | 23 |
| EPH Aromatic (>EC21-EC35) | CE250 | mg/kg | 65 | 100 | 65 | 257 | 236 | 105 |
| EPH Aromatic (>EC35-EC44) | CE250 | mg/kg | 15 | 23 | 13 | 22 | 47 | 22 |
| VPH Aliphatic (>C5-C6) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| VPH Aliphatic (>C6-C8) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| VPH Aliphatic (>C8-C10) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| EPH Aliphatic (>C10-C12) | CE250 | mg/kg | <6 | <6 | <6 | 17 | <6 | 7 |
| EPH Aliphatic (>C12-C16) | CE250 | mg/kg | <6 | <6 | <6 | 13 | 8 | <6 |
| EPH Aliphatic (>C16-C35) | CE250 | mg/kg | 24 | 88 | <15 | 76 | 442 | 26 |
| EPH Aliphatic (>C35-C44) | CE250 | mg/kg | <10 | 16 | <10 | <10 | 67 | <10 |
| **Volatiles** | | | | | | | | |
| MTBE | CE192 U | mg/kg | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Benzene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Toluene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Ethylbenzene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | 0.04 | <0.01 | <0.01 |
| m & p-Xylene | CE192 U | mg/kg | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| o-Xylene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dichlorodifluoromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Vinyl chloride | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromomethane | CE174 | mg/kg | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 | <0.03 |
| Chloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trichlorofluoromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trans-1,2-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 2,2-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

# Chemtech Environmental Limited

# SOILS

| Lab number | | | 106848-19 | 106848-20 | 106848-21 | 106848-22 | 106848-23 | 106848-24 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP107-S7 | SHO-TS1_AUK_TP108-S1 | SHO-TS1_AUK_TP109-S1 | SHO-TS1_AUK_TP110-S1 | SHO-TS1_AUK_TP111-S1 | SHO-TS1_AUK_TP111-S3 |
| Depth (m) | | | 4.20 | 3.00 | 3.50 | 2.50 | 4.00 | 2.20 |
| Date sampled | | | 04/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Cis-1,2-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromochloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chloroform | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,1-Trichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Carbon tetrachloride | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Trichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibromomethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromodichloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| cis-1,3-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| trans-1,3-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,2-Trichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Tetrachloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dibromochloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dibromoethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Chlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,1,2-Tetrachloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Styrene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Tribromomethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Isopropylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Bromobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,1,2,2-Tetrachloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,3-Trichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Propylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 2-Chlorotoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 4-Chlorotoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3,5-Trimethylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| tert-Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,4-Trimethylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| sec-Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,3-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 4-Isopropyltoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,4-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2-Dibromo-3-chloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,4-Trichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

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# SOILS

| Lab number | | | 106848-19 | 106848-20 | 106848-21 | 106848-22 | 106848-23 | 106848-24 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP107-S7 | SHO-TS1_AUK_TP108-S1 | SHO-TS1_AUK_TP109-S1 | SHO-TS1_AUK_TP110-S1 | SHO-TS1_AUK_TP111-S1 | SHO-TS1_AUK_TP111-S3 |
| Depth (m) | | | 4.20 | 3.00 | 3.50 | 2.50 | 4.00 | 2.20 |
| Date sampled | | | 04/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| Hexachloro-1,3-butadiene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 1,2,3-Trichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| **Semi-volatiles** | | | | | | | | |
| N-Nitrosodimethylamine | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroethyl)ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Chlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,3-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,4-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,2-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroisopropyl)ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 3&4-Methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| N-Nitrosodi-n-propylamine | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachloroethane | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Isophorone | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dimethylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Nitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroethoxy)methane | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,2,4-Trichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chloroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachlorobutadiene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chloro-3-methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methylnaphthalene | CE189 | mg/kg | 0.2 | 0.2 | 0.3 | <0.1 | <0.1 | 0.2 |
| 1-Methylnaphthalene | CE189 | mg/kg | <0.1 | <0.1 | 0.3 | 1.4 | <0.1 | <0.1 |
| Hexachlorocyclopentadiene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | 1.4 | <0.1 | <0.1 |
| 2,4,6-Trichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4,5-Trichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Chloronaphthalene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,6-Dinitrotoluene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 3-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dinitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Nitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dinitrotoluene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzofuran | CE189 | mg/kg | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.1 |
| Diethyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |

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# SOILS

| Lab number | | | 106848-19 | 106848-20 | 106848-21 | 106848-22 | 106848-23 | 106848-24 |
|---|---|---|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP107-S7 | SHO-TS1_AUK_TP108-S1 | SHO-TS1_AUK_TP109-S1 | SHO-TS1_AUK_TP110-S1 | SHO-TS1_AUK_TP111-S1 | SHO-TS1_AUK_TP111-S3 |
| Depth (m) | | | 4.20 | 3.00 | 3.50 | 2.50 | 4.00 | 2.20 |
| Date sampled | | | 04/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 | 03/03/2022 |
| **Test** | **Method** | **Units** | | | | | | |
| 4-Chlorophenylphenyl ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methyl-4,6-dinitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Bromophenylphenyl ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pentachlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Carbazole | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Di-n-butyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Butylbenzyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-ethylhexyl)phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Di-n-octyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| **PCB** | | | | | | | | |
| PCB Congener 77 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 81 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 105 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 114 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 118 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 123 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 126 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 156 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 157 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 167 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 169 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB Congener 189 | CE181 | mg/kg | - | - | - | - | - | - |
| PCB (total of WHO 12) | CE181 | mg/kg | - | - | - | - | - | - |
| **Subcontracted analysis** | | | | | | | | |
| Asbestos (qualitative) | $ | - | NAD | NAD | Amosite, Chrysotile | NAD | NAD | Crocidolite, Amosite, Chrysotile |
| Form of Asbestos | $ | - | - | - | Loose Insulation | - | - | Loose Insulation |
| Asbestos (quantitative) | $ | % w/w | - | - | 0.005 | - | - | 0.326 |

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# SOILS

| **Lab number** | | | 106848-25 | 106848-26 | 106848-27 |
|---|---|---|---|---|---|
| **Sample id** | | | SHO-TS1_AUK_TP112-S1 | SHO-TS1_AUK_TP113-S1 | SHO-TS1_AUK_TP114-S1 |
| **Depth (m)** | | | 1.50 | 1.50 | 2.00 |
| **Date sampled** | | | 04/03/2022 | 04/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | |
| Aluminium (total) | CE127 | mg/kg Al | 17829 | 32516 | 18479 |
| Antimony (total) | CE127 | mg/kg Sb | 2.2 | 1.4 | 0.9 |
| Arsenic (total) | CE127 | mg/kg As | 16 | 25 | 12 |
| Barium (total) | CE127 | mg/kg Ba | 625 | 855 | 461 |
| Beryllium (total) | CE127 | mg/kg Be | 2.4 | 4.9 | 3.1 |
| Boron (water soluble) | CE063 M | mg/kg B | 1.2 | 2.8 | 3.0 |
| Cadmium (total) | CE127 | mg/kg Cd | 1.2 | 0.4 | 0.4 |
| Chromium (total) | CE127 | mg/kg Cr | 1171 | 166 | 151 |
| Chromium (VI) | CE146 | mg/kg CrVI | <1 | <1 | <1 |
| Copper (total) | CE127 | mg/kg Cu | 81 | 55 | 36 |
| Iron (total) | CE127 | mg/kg Fe | 138213 | 68962 | 33083 |
| Lead (total) | CE127 | mg/kg Pb | 125 | 100 | 55 |
| Magnesium (total) | CE127 | mg/kg Mg | 34165 | 20029 | 17420 |
| Manganese (total) | CE127 | mg/kg Mn | 36627 | 10384 | 4609 |
| Mercury (total) | CE127 | mg/kg Hg | <0.5 | <0.5 | <0.5 |
| Molybdenum (total) | CE127 | mg/kg Mo | 10 | 4.8 | 4.6 |
| Nickel (total) | CE127 | mg/kg Ni | 48 | 40 | 26 |
| Silicon (total) | CE127 | mg/kg Si | 777 | 837 | 701 |
| Vanadium (total) | CE127 | mg/kg V | 3965 | 496 | 289 |
| Zinc (total) | CE127 | mg/kg Zn | 355 | 139 | 116 |
| pH | CE004 M | units | 11.7 | 10.0 | 9.1 |
| Sulphate (2:1 water soluble) | CE061 U | mg/l $SO_4$ | 51 | 1150 | 718 |
| Sulphur (free) | CE034 M | mg/kg S | 28 | 267 | 97 |
| Cyanide (free) | CE077 | mg/kg CN | <1 | <1 | <1 |
| Cyanide (total) | CE077 | mg/kg CN | 2.3 | <1 | <1 |
| Thiocyanate | CE145 M | mg/kg SCN | 9.7 | 2.7 | 2.5 |
| Phenols (total) | CE078 | mg/kg PhOH | <0.5 | <0.5 | <0.5 |
| Total Organic Carbon (TOC) | CE197 | % w/w C | 2.3 | 1.1 | 0.9 |
| Estimate of OMC (calculated from TOC) | CE197 | % w/w | 4.0 | 1.9 | 1.6 |
| **PAH** | | | | | |
| Naphthalene | CE087 M | mg/kg | 1.19 | 0.14 | 0.06 |
| Acenaphthylene | CE087 M | mg/kg | 4.06 | <0.02 | <0.02 |
| Acenaphthene | CE087 M | mg/kg | 2.27 | 0.05 | 0.04 |
| Fluorene | CE087 U | mg/kg | 1.39 | 0.03 | 0.02 |
| Phenanthrene | CE087 M | mg/kg | 43.48 | 0.51 | 0.31 |
| Anthracene | CE087 U | mg/kg | 8.20 | 0.11 | 0.07 |
| Fluoranthene | CE087 M | mg/kg | 34.55 | 0.96 | 0.67 |
| Pyrene | CE087 M | mg/kg | 22.40 | 0.89 | 0.67 |
| Benzo(a)anthracene | CE087 U | mg/kg | 9.72 | 0.63 | 0.45 |
| Chrysene | CE087 M | mg/kg | 9.27 | 0.70 | 0.55 |

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# SOILS

| Lab number | | | 106848-25 | 106848-26 | 106848-27 |
|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP112-S1 | SHO-TS1_AUK_TP113-S1 | SHO-TS1_AUK_TP114-S1 |
| Depth (m) | | | 1.50 | 1.50 | 2.00 |
| Date sampled | | | 04/03/2022 | 04/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | |
| Benzo(b)fluoranthene | CE087 M | mg/kg | 10.22 | 0.94 | 0.77 |
| Benzo(k)fluoranthene | CE087 M | mg/kg | 4.24 | 0.40 | 0.30 |
| Benzo(a)pyrene | CE087 U | mg/kg | 7.45 | 0.66 | 0.48 |
| Indeno(123cd)pyrene | CE087 M | mg/kg | 6.71 | 0.62 | 0.53 |
| Dibenz(ah)anthracene | CE087 M | mg/kg | 1.22 | 0.11 | 0.09 |
| Benzo(ghi)perylene | CE087 M | mg/kg | 5.64 | 0.56 | 0.47 |
| PAH (total of USEPA 16) | CE087 | mg/kg | 172 | 7.30 | 5.48 |
| **TPH** | | | | | |
| VPH Aromatic (>EC5-EC7) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 |
| VPH Aromatic (>EC7-EC8) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 |
| VPH Aromatic (>EC8-EC10) | CE067 | mg/kg | <0.01 | <0.01 | <0.01 |
| EPH Aromatic (>EC10-EC12) | CE250 | mg/kg | 16 | 8 | 7 |
| EPH Aromatic (>EC12-EC16) | CE250 | mg/kg | 68 | 20 | 15 |
| EPH Aromatic (>EC16-EC21) | CE250 | mg/kg | 248 | 17 | 12 |
| EPH Aromatic (>EC21-EC35) | CE250 | mg/kg | 550 | 77 | 49 |
| EPH Aromatic (>EC35-EC44) | CE250 | mg/kg | 74 | 15 | 10 |
| VPH Aliphatic (>C5-C6) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 |
| VPH Aliphatic (>C6-C8) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 |
| VPH Aliphatic (>C8-C10) | CE067 | mg/kg | <0.1 | <0.1 | <0.1 |
| EPH Aliphatic (>C10-C12) | CE250 | mg/kg | <6 | <6 | <6 |
| EPH Aliphatic (>C12-C16) | CE250 | mg/kg | 7 | <6 | <6 |
| EPH Aliphatic (>C16-C35) | CE250 | mg/kg | 37 | 20 | <15 |
| EPH Aliphatic (>C35-C44) | CE250 | mg/kg | 16 | <10 | <10 |
| **Volatiles** | | | | | |
| MTBE | CE192 U | mg/kg | <0.02 | <0.02 | <0.02 |
| Benzene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 |
| Toluene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 |
| Ethylbenzene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 |
| m & p-Xylene | CE192 U | mg/kg | <0.02 | <0.02 | <0.02 |
| o-Xylene | CE192 U | mg/kg | <0.01 | <0.01 | <0.01 |
| Dichlorodifluoromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Chloromethane | CE174 | mg/kg | <0.01 | <0.01 | 0.02 |
| Vinyl chloride | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Bromomethane | CE174 | mg/kg | <0.03 | <0.03 | <0.03 |
| Chloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Trichlorofluoromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Trans-1,2-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 2,2-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |

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# SOILS

| Lab number | | | 106848-25 | 106848-26 | 106848-27 |
|---|---|---|---|---|---|
| Sample id | | | SHO-TS1_AUK_TP112-S1 | SHO-TS1_AUK_TP113-S1 | SHO-TS1_AUK_TP114-S1 |
| Depth (m) | | | 1.50 | 1.50 | 2.00 |
| Date sampled | | | 04/03/2022 | 04/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | |
| Cis-1,2-Dichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Bromochloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Chloroform | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,1,1-Trichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Carbon tetrachloride | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,1-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,2-Dichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Trichloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,2-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Dibromomethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Bromodichloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| cis-1,3-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| trans-1,3-Dichloro-1-propene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,1,2-Trichloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Tetrachloroethene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,3-Dichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Dibromochloromethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,2-Dibromoethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Chlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,1,1,2-Tetrachloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Styrene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Tribromomethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Isopropylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Bromobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,1,2,2-Tetrachloroethane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,2,3-Trichloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Propylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 2-Chlorotoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 4-Chlorotoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,3,5-Trimethylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| tert-Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,2,4-Trimethylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| sec-Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,3-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 4-Isopropyltoluene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,4-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,2-Dichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| Butylbenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,2-Dibromo-3-chloropropane | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,2,4-Trichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |

# Chemtech Environmental Limited

# SOILS

| **Lab number** | | | 106848-25 | 106848-26 | 106848-27 |
|---|---|---|---|---|---|
| **Sample id** | | | SHO-TS1_AUK_TP112-S1 | SHO-TS1_AUK_TP113-S1 | SHO-TS1_AUK_TP114-S1 |
| **Depth (m)** | | | 1.50 | 1.50 | 2.00 |
| **Date sampled** | | | 04/03/2022 | 04/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | |
| Hexachloro-1,3-butadiene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| 1,2,3-Trichlorobenzene | CE174 | mg/kg | <0.01 | <0.01 | <0.01 |
| **Semi-volatiles** | | | | | |
| N-Nitrosodimethylamine | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Phenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroethyl)ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2-Chlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 1,3-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 1,4-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2-Methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 1,2-Dichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroisopropyl)ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 3&4-Methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| N-Nitrosodi-n-propylamine | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Hexachloroethane | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Nitrobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Isophorone | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2,4-Dimethylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2-Nitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroethoxy)methane | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2,4-Dichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 1,2,4-Trichlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 4-Chloroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Hexachlorobutadiene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 4-Chloro-3-methylphenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2-Methylnaphthalene | CE189 | mg/kg | 1.3 | <0.1 | <0.1 |
| 1-Methylnaphthalene | CE189 | mg/kg | 1.4 | <0.1 | <0.1 |
| Hexachlorocyclopentadiene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2,4,6-Trichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2,4,5-Trichlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2-Chloronaphthalene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Dimethyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2,6-Dinitrotoluene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 3-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2,4-Dinitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 4-Nitrophenol | CE189 | mg/kg | 11.9 | <0.1 | <0.1 |
| 2,4-Dinitrotoluene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Dibenzofuran | CE189 | mg/kg | 12.2 | <0.1 | <0.1 |
| Diethyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |

# Chemtech Environmental Limited

# SOILS

| **Lab number** | | | 106848-25 | 106848-26 | 106848-27 |
|---|---|---|---|---|---|
| **Sample id** | | | SHO-TS1_AUK_TP112-S1 | SHO-TS1_AUK_TP113-S1 | SHO-TS1_AUK_TP114-S1 |
| **Depth (m)** | | | 1.50 | 1.50 | 2.00 |
| **Date sampled** | | | 04/03/2022 | 04/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | |
| 4-Chlorophenylphenyl ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 4-Nitroaniline | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 2-Methyl-4,6-dinitrophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Azobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| 4-Bromophenylphenyl ether | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Hexachlorobenzene | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Pentachlorophenol | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Carbazole | CE189 | mg/kg | 5.5 | <0.1 | <0.1 |
| Di-n-butyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Butylbenzyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Bis(2-ethylhexyl)phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| Di-n-octyl phthalate | CE189 | mg/kg | <0.1 | <0.1 | <0.1 |
| **PCB** | | | | | |
| PCB Congener 77 | CE181 | mg/kg | - | - | - |
| PCB Congener 81 | CE181 | mg/kg | - | - | - |
| PCB Congener 105 | CE181 | mg/kg | - | - | - |
| PCB Congener 114 | CE181 | mg/kg | - | - | - |
| PCB Congener 118 | CE181 | mg/kg | - | - | - |
| PCB Congener 123 | CE181 | mg/kg | - | - | - |
| PCB Congener 126 | CE181 | mg/kg | - | - | - |
| PCB Congener 156 | CE181 | mg/kg | - | - | - |
| PCB Congener 157 | CE181 | mg/kg | - | - | - |
| PCB Congener 167 | CE181 | mg/kg | - | - | - |
| PCB Congener 169 | CE181 | mg/kg | - | - | - |
| PCB Congener 189 | CE181 | mg/kg | - | - | - |
| PCB (total of WHO 12) | CE181 | mg/kg | - | - | - |
| **Subcontracted analysis** | | | | | |
| Asbestos (qualitative) | $ | - | NAD | Amosite | NAD |
| Form of Asbestos | $ | - | - | Loose Fibre | - |
| Asbestos (quantitative) | $ | % w/w | - | 0.001 | - |

# Chemtech Environmental Limited

# PREPARED LEACHATES

| **Lab number** | | | 106848-4L | 106848-21L | 106848-23L | 106848-27L |
|---|---|---|---|---|---|---|
| **Sample id** | | | SHO-TS1_AUK_TP102-S2 | SHO-TS1_AUK_TP109-S1 | SHO-TS1_AUK_TP111-S3 | SHO-TS1_AUK_TP114-S1 |
| **Depth (m)** | | | 2.50 | 3.50 | 2.20 | 2.00 |
| **Date sampled** | | | 02/03/2022 | 03/03/2022 | 03/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | | |
| Antimony (dissolved) | CE128 | µg/l Sb | 134.1 | 14.1 | 6.7 | 1.3 |
| Arsenic (dissolved) | CE128 | µg/l As | 5.68 | 8.69 | 3.83 | 2.35 |
| Barium (dissolved) | CE128 | µg/l Ba | 21.5 | 15.0 | 28.6 | 29.5 |
| Beryllium (dissolved) | CE128 | µg/l Be | <0.06 | <0.06 | <0.06 | <0.06 |
| Boron (dissolved) | CE128 | µg/l B | 184 | 69 | 65 | 107 |
| Cadmium (dissolved) | CE128 | µg/l Cd | 0.11 | <0.07 | 0.13 | <0.07 |
| Chromium (dissolved) | CE128 | µg/l Cr | 0.6 | 1.4 | 2.1 | 2.2 |
| Chromium VI (dissolved) | CE050 | µg/l CrVI | <10 | <10 | <10 | <10 |
| Copper (dissolved) | CE128 | µg/l Cu | 2.7 | 12.0 | 36.8 | 2.0 |
| Iron (dissolved) | CE128 | µg/l Fe | 330 | 391 | 168 | 14 |
| Lead (dissolved) | CE128 | µg/l Pb | 2.7 | 2.5 | 0.7 | <0.2 |
| Magnesium (dissolved) | CE128 | mg/l Mg | 1.1 | 3.0 | 25.7 | 3.8 |
| Manganese (dissolved) | CE128 | µg/l Mn | 5.8 | 4.4 | 2.4 | 0.7 |
| Mercury (dissolved) | CE128 | µg/l Hg | 0.233 | 0.605 | 0.157 | <0.008 |
| Molybdenum (dissolved) | CE128 | µg/l Mo | 21.3 | 3.9 | 6.2 | 1.5 |
| Nickel (dissolved) | CE128 | µg/l Ni | 4.2 | 1.6 | 2.5 | <0.5 |
| Vanadium (dissolved) | CE128 | µg/l V | 28 | 106 | 37 | 62 |
| Zinc (dissolved) | CE128 | µg/l Zn | 14 | 7 | 4 | <1 |
| pH | CE213 [U] | units | 7.1 | 7.1 | 8.1 | 8.8 |
| Ammonia | CE012 [U] | µg/l N | 7712 | 307 | 597 | 180 |
| Chloride | CE049 [U] | mg/l Cl | 1.3 | 1.2 | 1.6 | 2.5 |
| Sulphate | CE049 [U] | mg/l $SO_4$ | 15 | 12 | 15 | 85 |
| Cyanide (total) | CE147 | µg/l CN | <5 | <5 | <5 | <5 |
| Phenols (total) | CE148 | µg/l PhOH | 247 | 27 | <10 | <10 |
| **PAH** | | | | | | |
| Naphthalene | CE051 | µg/l | 1038.8 | 80.9 | 1.2 | 1.0 |
| Acenaphthylene | CE051 | µg/l | 14.3 | 0.6 | <0.1 | <0.1 |
| Acenaphthene | CE051 | µg/l | 6.2 | 0.4 | 2.8 | 0.8 |
| Fluorene | CE051 | µg/l | 4.7 | 0.4 | 1.2 | 0.7 |
| Phenanthrene | CE051 | µg/l | 4.0 | 0.8 | 1.9 | 1.5 |
| Anthracene | CE051 | µg/l | 0.7 | <0.1 | 0.2 | <0.1 |
| Fluoranthene | CE051 | µg/l | 0.6 | 0.2 | 0.3 | 0.3 |
| Pyrene | CE051 | µg/l | 0.3 | 0.1 | 0.2 | 0.1 |
| Benzo(a)anthracene | CE051 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | CE051 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b)fluoranthene | CE051 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(k)fluoranthene | CE051 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)pyrene | CE051 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Indeno(123cd)pyrene | CE051 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenz(ah)anthracene | CE051 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |

# Chemtech Environmental Limited

# PREPARED LEACHATES

| **Lab number** | | | 106848-4L | 106848-21L | 106848-23L | 106848-27L |
|---|---|---|---|---|---|---|
| **Sample id** | | | SHO-TS1_AUK_TP102-S2 | SHO-TS1_AUK_TP109-S1 | SHO-TS1_AUK_TP111-S3 | SHO-TS1_AUK_TP114-S1 |
| **Depth (m)** | | | 2.50 | 3.50 | 2.20 | 2.00 |
| **Date sampled** | | | 02/03/2022 | 03/03/2022 | 03/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | | |
| Benzo(ghi)perylene | CE051 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| PAH (total of USEPA 16) | CE051 | µg/l | 1069.5 | 83.4 | 7.7 | 4.4 |
| **TPH** | | | | | | |
| VPH Aromatic (>EC5-EC7) | CE175 | µg/l | 21 | <1 | <1 | <1 |
| VPH Aromatic (>EC7-EC8) | CE175 | µg/l | 100 | 2 | <1 | <1 |
| VPH Aromatic (>EC8-EC10) | CE175 | µg/l | 213 | 4 | <1 | <1 |
| EPH Aromatic (>EC10-EC12) | CE251 | µg/l | 3719 | 76 | 1 | 24 |
| EPH Aromatic (>EC12-EC16) | CE251 | µg/l | 2779 | 130 | 3 | 61 |
| EPH Aromatic (>EC16-EC21) | CE251 | µg/l | 2304 | 48 | 3 | 44 |
| EPH Aromatic (>EC21-EC35) | CE251 | µg/l | 988 | 339 | <1 | 284 |
| EPH Aromatic (>EC35-EC44) | CE251 | µg/l | 164 | 164 | 61 | 139 |
| VPH Aliphatic (>C5-C6) | CE175 | µg/l | <1 | <1 | <1 | <1 |
| VPH Aliphatic (>C6-C8) | CE175 | µg/l | <1 | <1 | <1 | <1 |
| VPH Aliphatic (>C8-C10) | CE175 | µg/l | 185 | 20 | 1 | <1 |
| EPH Aliphatic (>C10-C12) | CE251 | µg/l | 42 | 5 | <1 | 3 |
| EPH Aliphatic (>C12-C16) | CE251 | µg/l | 53 | 14 | 5 | 6 |
| EPH Aliphatic (>C16-C35) | CE251 | µg/l | 167 | 50 | 3 | 40 |
| EPH Aliphatic (>C35-C44) | CE251 | µg/l | 22 | 23 | <1 | 17 |
| **Volatiles** | | | | | | |
| MTBE | CE057 U | µg/l | <2 | <2 | <2 | <2 |
| Benzene | CE057 U | µg/l | 21 | <1 | <1 | <1 |
| Toluene | CE057 U | µg/l | 100 | 2 | <1 | <1 |
| Ethylbenzene | CE057 U | µg/l | 29 | 2 | <1 | <1 |
| m & p-Xylene | CE057 U | µg/l | 106 | <2 | <2 | <2 |
| o-Xylene | CE057 U | µg/l | 79 | 2 | <1 | <1 |
| Dichlorodifluoromethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Chloromethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Vinyl chloride | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Bromomethane | CE066 | µg/l | <3 | <3 | <3 | <3 |
| Chloroethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Trichlorofluoromethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,1-Dichloroethene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Trans-1,2-Dichloroethene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,1-Dichloroethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 2,2-Dichloropropane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Cis-1,2-Dichloroethene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Bromochloromethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Chloroform | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,1,1-Trichloroethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Carbon tetrachloride | CE066 | µg/l | <1 | <1 | <1 | <1 |

# Chemtech Environmental Limited

# PREPARED LEACHATES

| **Lab number** | | | 106848-4L | 106848-21L | 106848-23L | 106848-27L |
|---|---|---|---|---|---|---|
| **Sample id** | | | SHO-TS1_AUK_TP102-S2 | SHO-TS1_AUK_TP109-S1 | SHO-TS1_AUK_TP111-S3 | SHO-TS1_AUK_TP114-S1 |
| **Depth (m)** | | | 2.50 | 3.50 | 2.20 | 2.00 |
| **Date sampled** | | | 02/03/2022 | 03/03/2022 | 03/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | | |
| 1,1-Dichloro-1-propene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,2-Dichloroethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Trichloroethene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,2-Dichloropropane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Dibromomethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Bromodichloromethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| cis-1,3-Dichloro-1-propene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloro-1-propene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,1,2-Trichloroethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Tetrachloroethene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,3-Dichloropropane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Dibromochloromethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,2-Dibromoethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Chlorobenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,1,1,2-Tetrachloroethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Styrene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Tribromomethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Isopropylbenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Bromobenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,1,2,2-Tetrachloroethane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,2,3-Trichloropropane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Propylbenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 2-Chlorotoluene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 4-Chlorotoluene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,3,5-Trimethylbenzene | CE066 | µg/l | 13 | <1 | <1 | <1 |
| tert-Butylbenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,2,4-Trimethylbenzene | CE066 | µg/l | 50 | <1 | <1 | <1 |
| sec-Butylbenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,3-Dichlorobenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 4-Isopropyltoluene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,4-Dichlorobenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,2-Dichlorobenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| Butylbenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,2-Dibromo-3-chloropropane | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,2,4-Trichlorobenzene | CE066 | µg/l | <1 | 2 | <1 | <1 |
| Hexachloro-1,3-butadiene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| 1,2,3-Trichlorobenzene | CE066 | µg/l | <1 | <1 | <1 | <1 |
| **Semi-volatiles** | | | | | | |
| N-Nitrosodimethylamine | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenol | CE065 | µg/l | 8.2 | <0.1 | <0.1 | <0.1 |

# Chemtech Environmental Limited

# PREPARED LEACHATES

| **Lab number** | | | 106848-4L | 106848-21L | 106848-23L | 106848-27L |
|---|---|---|---|---|---|---|
| **Sample id** | | | SHO-TS1_AUK_TP102-S2 | SHO-TS1_AUK_TP109-S1 | SHO-TS1_AUK_TP111-S3 | SHO-TS1_AUK_TP114-S1 |
| **Depth (m)** | | | 2.50 | 3.50 | 2.20 | 2.00 |
| **Date sampled** | | | 02/03/2022 | 03/03/2022 | 03/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | | |
| Bis(2-chloroethyl)ether | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Chlorophenol | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,3-Dichlorobenzene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,4-Dichlorobenzene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methylphenol | CE065 | µg/l | 42.6 | <0.1 | <0.1 | <0.1 |
| 1,2-Dichlorobenzene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroisopropyl)ether | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 3&4-Methylphenol | CE065 | µg/l | 117.6 | <0.1 | <0.1 | <0.1 |
| N-Nitrosodi-n-propylamine | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachloroethane | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrobenzene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Isophorone | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dimethylphenol | CE065 | µg/l | 251.7 | <0.1 | <0.1 | <0.1 |
| 2-Nitrophenol | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-chloroethoxy)methane | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dichlorophenol | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 1,2,4-Trichlorobenzene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chloroaniline | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Hexachlorobutadiene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chloro-3-methylphenol | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methylnaphthalene | CE065 | µg/l | 90.4 | 4.2 | <0.1 | <0.1 |
| 1-Methylnaphthalene | CE065 | µg/l | 95.1 | 4.0 | <0.1 | <0.1 |
| Hexachlorocyclopentadiene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4,6-Trichlorophenol | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4,5-Trichlorophenol | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Chloronaphthalene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Nitroaniline | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethyl phthalate | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,6-Dinitrotoluene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 3-Nitroaniline | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dinitrophenol | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Nitrophenol | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2,4-Dinitrotoluene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzofuran | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Diethyl phthalate | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Chlorophenylphenyl ether | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Nitroaniline | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 2-Methyl-4,6-dinitrophenol | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Azobenzene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| 4-Bromophenylphenyl ether | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |

# Chemtech Environmental Limited

# PREPARED LEACHATES

| **Lab number** | | | 106848-4L | 106848-21L | 106848-23L | 106848-27L |
|---|---|---|---|---|---|---|
| **Sample id** | | | SHO-TS1_AUK_TP102-S2 | SHO-TS1_AUK_TP109-S1 | SHO-TS1_AUK_TP111-S3 | SHO-TS1_AUK_TP114-S1 |
| **Depth (m)** | | | 2.50 | 3.50 | 2.20 | 2.00 |
| **Date sampled** | | | 02/03/2022 | 03/03/2022 | 03/03/2022 | 04/03/2022 |
| **Test** | **Method** | **Units** | | | | |
| Hexachlorobenzene | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Pentachlorophenol | CE065 | µg/l | 2.0 | <0.1 | <0.1 | <0.1 |
| Carbazole | CE065 | µg/l | 7.7 | <0.1 | <0.1 | <0.1 |
| Di-n-butyl phthalate | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Butylbenzyl phthalate | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Bis(2-ethylhexyl)phthalate | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |
| Di-n-octyl phthalate | CE065 | µg/l | <0.1 | <0.1 | <0.1 | <0.1 |

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# METHOD DETAILS

| METHOD | SOILS | METHOD SUMMARY | SAMPLE | STATUS | LOD | UNITS |
|---|---|---|---|---|---|---|
| CE127 | Aluminium (total) | Aqua regia digest, ICP-MS | Dry | | 9 | mg/kg Al |
| CE127 | Antimony (total) | Aqua regia digest, ICP-MS | Dry | | 0.2 | mg/kg Sb |
| CE127 | Arsenic (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg As |
| CE127 | Barium (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg Ba |
| CE127 | Beryllium (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg Be |
| CE063 | Boron (water soluble) | Hot water extract, ICP-OES | Dry | M | 0.5 | mg/kg B |
| CE127 | Cadmium (total) | Aqua regia digest, ICP-MS | Dry | | 0.2 | mg/kg Cd |
| CE127 | Chromium (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg Cr |
| CE146 | Chromium (VI) | Acid extraction, Colorimetry | Dry | | 1 | mg/kg CrVI |
| CE127 | Copper (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg Cu |
| CE127 | Iron (total) | Aqua regia digest, ICP-MS | Dry | | 38 | mg/kg Fe |
| CE127 | Lead (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg Pb |
| CE127 | Magnesium (total) | Aqua regia digest, ICP-MS | Dry | | 10 | mg/kg Mg |
| CE127 | Manganese (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg Mn |
| CE127 | Mercury (total) | Aqua regia digest, ICP-MS | Dry | | 0.5 | mg/kg Hg |
| CE127 | Molybdenum (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg Mo |
| CE127 | Nickel (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg Ni |
| CE127 | Silicon (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg Si |
| CE127 | Vanadium (total) | Aqua regia digest, ICP-MS | Dry | | 1 | mg/kg V |
| CE127 | Zinc (total) | Aqua regia digest, ICP-MS | Dry | | 5 | mg/kg Zn |
| CE004 | pH | Based on BS 1377, pH Meter | As received | M | - | units |
| CE061 | Sulphate (2:1 water soluble) | Aqueous extraction, ICP-OES | Dry | U | 10 | mg/l $SO_4$ |
| CE034 | Sulphur (free) | Solvent extraction, HPLC | Dry | M | 10 | mg/kg S |
| CE077 | Cyanide (free) | Extraction, Continuous Flow Colorimetry | As received | | 1 | mg/kg CN |
| CE077 | Cyanide (total) | Extraction, Continuous Flow Colorimetry | As received | | 1 | mg/kg CN |
| CE145 | Thiocyanate | Weak acid extraction, Colorimetry | Dry | M | 1 | mg/kg SCN |
| CE078 | Phenols (total) | Extraction, Continuous Flow Colorimetry | As received | | 0.5 | mg/kg PhOH |
| CE197 | Total Organic Carbon (TOC) | Carbon Analyser | Dry | | 0.1 | % w/w C |
| CE197 | Estimate of OMC (calculated from TOC) | Calculation from Total Organic Carbon | Dry | | 0.1 | % w/w |
| CE087 | Naphthalene | Solvent extraction, GC-MS | As received | M | 0.02 | mg/kg |
| CE087 | Acenaphthylene | Solvent extraction, GC-MS | As received | M | 0.02 | mg/kg |
| CE087 | Acenaphthene | Solvent extraction, GC-MS | As received | M | 0.02 | mg/kg |
| CE087 | Fluorene | Solvent extraction, GC-MS | As received | U | 0.02 | mg/kg |
| CE087 | Phenanthrene | Solvent extraction, GC-MS | As received | M | 0.02 | mg/kg |
| CE087 | Anthracene | Solvent extraction, GC-MS | As received | U | 0.02 | mg/kg |
| CE087 | Fluoranthene | Solvent extraction, GC-MS | As received | M | 0.02 | mg/kg |
| CE087 | Pyrene | Solvent extraction, GC-MS | As received | M | 0.02 | mg/kg |
| CE087 | Benzo(a)anthracene | Solvent extraction, GC-MS | As received | U | 0.02 | mg/kg |
| CE087 | Chrysene | Solvent extraction, GC-MS | As received | M | 0.03 | mg/kg |
| CE087 | Benzo(b)fluoranthene | Solvent extraction, GC-MS | As received | M | 0.02 | mg/kg |
| CE087 | Benzo(k)fluoranthene | Solvent extraction, GC-MS | As received | M | 0.03 | mg/kg |
| CE087 | Benzo(a)pyrene | Solvent extraction, GC-MS | As received | U | 0.02 | mg/kg |
| CE087 | Indeno(123cd)pyrene | Solvent extraction, GC-MS | As received | M | 0.02 | mg/kg |
| CE087 | Dibenz(ah)anthracene | Solvent extraction, GC-MS | As received | M | 0.02 | mg/kg |

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# METHOD DETAILS

| METHOD | SOILS | METHOD SUMMARY | SAMPLE | STATUS | LOD | UNITS |
|---|---|---|---|---|---|---|
| CE087 | Benzo(ghi)perylene | Solvent extraction, GC-MS | As received | M | 0.02 | mg/kg |
| CE087 | PAH (total of USEPA 16) | Solvent extraction, GC-MS | As received | | 0.34 | mg/kg |
| CE067 | VPH Aromatic (>EC5-EC7) | Headspace GC-FID | As received | | 0.01 | mg/kg |
| CE067 | VPH Aromatic (>EC7-EC8) | Headspace GC-FID | As received | | 0.01 | mg/kg |
| CE067 | VPH Aromatic (>EC8-EC10) | Headspace GC-FID | As received | | 0.01 | mg/kg |
| CE250 | EPH Aromatic (>EC10-EC12) | Solvent extraction, GCxGC-FID | As received | | 1 | mg/kg |
| CE250 | EPH Aromatic (>EC12-EC16) | Solvent extraction, GCxGC-FID | As received | | 1 | mg/kg |
| CE250 | EPH Aromatic (>EC16-EC21) | Solvent extraction, GCxGC-FID | As received | | 1 | mg/kg |
| CE250 | EPH Aromatic (>EC21-EC35) | Solvent extraction, GCxGC-FID | As received | | 1 | mg/kg |
| CE250 | EPH Aromatic (>EC35-EC44) | Solvent extraction, GCxGC-FID | As received | | 1 | mg/kg |
| CE067 | VPH Aliphatic (>C5-C6) | Headspace GC-FID | As received | | 0.1 | mg/kg |
| CE067 | VPH Aliphatic (>C6-C8) | Headspace GC-FID | As received | | 0.1 | mg/kg |
| CE067 | VPH Aliphatic (>C8-C10) | Headspace GC-FID | As received | | 0.1 | mg/kg |
| CE250 | EPH Aliphatic (>C10-C12) | Solvent extraction, GCxGC-FID | As received | | 6 | mg/kg |
| CE250 | EPH Aliphatic (>C12-C16) | Solvent extraction, GCxGC-FID | As received | | 6 | mg/kg |
| CE250 | EPH Aliphatic (>C16-C35) | Solvent extraction, GCxGC-FID | As received | | 15 | mg/kg |
| CE250 | EPH Aliphatic (>C35-C44) | Solvent extraction, GCxGC-FID | As received | | 10 | mg/kg |
| CE192 | MTBE | Headspace GC-FID | As received | U | 0.02 | mg/kg |
| CE192 | Benzene | Headspace GC-FID | As received | U | 0.01 | mg/kg |
| CE192 | Toluene | Headspace GC-FID | As received | U | 0.01 | mg/kg |
| CE192 | Ethylbenzene | Headspace GC-FID | As received | U | 0.01 | mg/kg |
| CE192 | m & p-Xylene | Headspace GC-FID | As received | U | 0.02 | mg/kg |
| CE192 | o-Xylene | Headspace GC-FID | As received | U | 0.01 | mg/kg |
| CE174 | Dichlorodifluoromethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Chloromethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Vinyl chloride | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Bromomethane | Headspace GC-MS | As received | | 0.03 | mg/kg |
| CE174 | Chloroethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Trichlorofluoromethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,1-Dichloroethene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Trans-1,2-Dichloroethene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,1-Dichloroethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 2,2-Dichloropropane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Cis-1,2-Dichloroethene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Bromochloromethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Chloroform | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,1,1-Trichloroethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Carbon tetrachloride | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,1-Dichloro-1-propene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,2-Dichloroethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Trichloroethene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,2-Dichloropropane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Dibromomethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Bromodichloromethane | Headspace GC-MS | As received | | 0.01 | mg/kg |

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# METHOD DETAILS

| METHOD | SOILS | METHOD SUMMARY | SAMPLE | STATUS | LOD | UNITS |
|---|---|---|---|---|---|---|
| CE174 | cis-1,3-Dichloro-1-propene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | trans-1,3-Dichloro-1-propene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,1,2-Trichloroethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Tetrachloroethene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,3-Dichloropropane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Dibromochloromethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,2-Dibromoethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Chlorobenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,1,1,2-Tetrachloroethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Styrene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Tribromomethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Isopropylbenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Bromobenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,1,2,2-Tetrachloroethane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,2,3-Trichloropropane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Propylbenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 2-Chlorotoluene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 4-Chlorotoluene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,3,5-Trimethylbenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | tert-Butylbenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,2,4-Trimethylbenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | sec-Butylbenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,3-Dichlorobenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 4-Isopropyltoluene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,4-Dichlorobenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,2-Dichlorobenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Butylbenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,2-Dibromo-3-chloropropane | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,2,4-Trichlorobenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | Hexachloro-1,3-butadiene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE174 | 1,2,3-Trichlorobenzene | Headspace GC-MS | As received | | 0.01 | mg/kg |
| CE189 | N-Nitrosodimethylamine | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Phenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Bis(2-chloroethyl)ether | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2-Chlorophenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 1,3-Dichlorobenzene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 1,4-Dichlorobenzene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2-Methylphenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 1,2-Dichlorobenzene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Bis(2-chloroisopropyl)ether | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 3&4-Methylphenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | N-Nitrosodi-n-propylamine | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Hexachloroethane | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Nitrobenzene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |

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# METHOD DETAILS

| METHOD | SOILS | METHOD SUMMARY | SAMPLE | STATUS | LOD | UNITS |
|---|---|---|---|---|---|---|
| CE189 | Isophorone | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2,4-Dimethylphenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2-Nitrophenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Bis(2-chloroethoxy)methane | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2,4-Dichlorophenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 1,2,4-Trichlorobenzene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 4-Chloroaniline | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Hexachlorobutadiene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 4-Chloro-3-methylphenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2-Methylnaphthalene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 1-Methylnaphthalene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Hexachlorocyclopentadiene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2,4,6-Trichlorophenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2,4,5-Trichlorophenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2-Chloronaphthalene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2-Nitroaniline | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Dimethyl phthalate | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2,6-Dinitrotoluene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 3-Nitroaniline | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2,4-Dinitrophenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 4-Nitrophenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2,4-Dinitrotoluene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Dibenzofuran | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Diethyl phthalate | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 4-Chlorophenylphenyl ether | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 4-Nitroaniline | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 2-Methyl-4,6-dinitrophenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Azobenzene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | 4-Bromophenylphenyl ether | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Hexachlorobenzene | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Pentachlorophenol | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Carbazole | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Di-n-butyl phthalate | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Butylbenzyl phthalate | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Bis(2-ethylhexyl)phthalate | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE189 | Di-n-octyl phthalate | Solvent extraction, GC-MS | As received | | 0.1 | mg/kg |
| CE181 | PCB Congener 77 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB Congener 81 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB Congener 105 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB Congener 114 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB Congener 118 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB Congener 123 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB Congener 126 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB Congener 156 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |

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# METHOD DETAILS

| METHOD | SOILS | METHOD SUMMARY | SAMPLE | STATUS | LOD | UNITS |
|---|---|---|---|---|---|---|
| CE181 | PCB Congener 157 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB Congener 167 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB Congener 169 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB Congener 189 | Solvent extraction, GC-MS | As received | | 0.006 | mg/kg |
| CE181 | PCB (WHO 12) | Solvent extraction, GC-MS | As received | | 0.072 | mg/kg |
| $ | Asbestos (qualitative) | HSG 248, Microscopy | Dry | U | - | - |
| $ | Asbestos (quantitative) | HSG 248, Microscopy & Gravimetry | Dry | U | 0.001 | % w/w |

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# METHOD DETAILS

| METHOD | PREPARED LEACHATES | METHOD SUMMARY | STATUS | LOD | UNITS |
|---|---|---|---|---|---|
| CE002 | Leachate preparation (EA) | L:S 10:1 | | - | - |
| CE128 | Antimony (dissolved) | ICP-MS | U | 0.1 | µg/l Sb |
| CE128 | Arsenic (dissolved) | ICP-MS | U | 0.06 | µg/l As |
| CE128 | Barium (dissolved) | ICP-MS | U | 0.6 | µg/l Ba |
| CE128 | Beryllium (dissolved) | ICP-MS | U | 0.06 | µg/l Be |
| CE128 | Boron (dissolved) | ICP-MS | U | 8 | µg/l B |
| CE128 | Cadmium (dissolved) | ICP-MS | U | 0.07 | µg/l Cd |
| CE128 | Chromium (dissolved) | ICP-MS | U | 0.2 | µg/l Cr |
| CE050 | Chromium VI (dissolved) | Colorimetry | U | 10 | µg/l CrVI |
| CE128 | Copper (dissolved) | ICP-MS | U | 0.4 | µg/l Cu |
| CE128 | Iron (dissolved) | ICP-MS | U | 3 | µg/l Fe |
| CE128 | Lead (dissolved) | ICP-MS | U | 0.2 | µg/l Pb |
| CE128 | Magnesium (dissolved) | ICP-MS | U | 0.01 | mg/l Mg |
| CE128 | Manganese (dissolved) | ICP-MS | U | 0.4 | µg/l Mn |
| CE128 | Mercury (dissolved) | ICP-MS | U | 0.008 | µg/l Hg |
| CE128 | Molybdenum (dissolved) | ICP-MS | U | 0.3 | µg/l Mo |
| CE128 | Nickel (dissolved) | ICP-MS | U | 0.5 | µg/l Ni |
| CE128 | Vanadium (dissolved) | ICP-MS | U | 0.3 | µg/l V |
| CE128 | Zinc (dissolved) | ICP-MS | U | 1 | µg/l Zn |
| CE213 | pH | Based on BS 1377, pH Meter | U | - | units |
| CE012 | Ammonia | Colorimetry | U | 10 | µg/l N |
| CE049 | Chloride | Ion Chromatography | U | 0.5 | mg/l Cl |
| CE049 | Sulphate | Ion Chromatography | U | 1.7 | mg/l $SO_4$ |
| CE147 | Cyanide (total) | Continuous Flow Colorimetry | | 5 | µg/l CN |
| CE148 | Phenols (total) | Continuous Flow Colorimetry | | 10 | µg/l PhOH |
| CE051 | Naphthalene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Acenaphthylene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Acenaphthene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Fluorene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Phenanthrene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Anthracene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Fluoranthene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Pyrene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Benzo(a)anthracene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Chrysene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Benzo(b)fluoranthene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Benzo(k)fluoranthene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Benzo(a)pyrene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Indeno(123cd)pyrene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Dibenz(ah)anthracene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | Benzo(ghi)perylene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE051 | PAH (total of USEPA 16) | Solvent extraction, GC-MS | | 1.6 | µg/l |
| CE175 | VPH Aromatic (>EC5-EC7) | Headspace GC-FID | | 1 | µg/l |
| CE175 | VPH Aromatic (>EC7-EC8) | Headspace GC-FID | | 1 | µg/l |

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# METHOD DETAILS

| METHOD | PREPARED LEACHATES | METHOD SUMMARY | STATUS | LOD | UNITS |
|---|---|---|---|---|---|
| CE175 | VPH Aromatic (>EC8-EC10) | Headspace GC-FID | | 1 | µg/l |
| CE251 | EPH Aromatic (>EC10-EC12) | Solvent extraction, GCxGC-FID | | 1 | µg/l |
| CE251 | EPH Aromatic (>EC12-EC16) | Solvent extraction, GCxGC-FID | | 1 | µg/l |
| CE251 | EPH Aromatic (>EC16-EC21) | Solvent extraction, GCxGC-FID | | 1 | µg/l |
| CE251 | EPH Aromatic (>EC21-EC35) | Solvent extraction, GCxGC-FID | | 1 | µg/l |
| CE251 | EPH Aromatic (>EC35-EC44) | Solvent extraction, GCxGC-FID | | 1 | µg/l |
| CE175 | VPH Aliphatic (>C5-C6) | Headspace GC-FID | | 1 | µg/l |
| CE175 | VPH Aliphatic (>C6-C8) | Headspace GC-FID | | 1 | µg/l |
| CE175 | VPH Aliphatic (>C8-C10) | Headspace GC-FID | | 1 | µg/l |
| CE251 | EPH Aliphatic (>C10-C12) | Solvent extraction, GCxGC-FID | | 1 | µg/l |
| CE251 | EPH Aliphatic (>C12-C16) | Solvent extraction, GCxGC-FID | | 1 | µg/l |
| CE251 | EPH Aliphatic (>C16-C35) | Solvent extraction, GCxGC-FID | | 1 | µg/l |
| CE251 | EPH Aliphatic (>C35-C44) | Solvent extraction, GCxGC-FID | | 1 | µg/l |
| CE057 | MTBE | Headspace GC-FID | U | 2 | µg/l |
| CE057 | Benzene | Headspace GC-FID | U | 1 | µg/l |
| CE057 | Toluene | Headspace GC-FID | U | 1 | µg/l |
| CE057 | Ethylbenzene | Headspace GC-FID | U | 1 | µg/l |
| CE057 | m & p-Xylene | Headspace GC-FID | U | 2 | µg/l |
| CE057 | o-Xylene | Headspace GC-FID | U | 1 | µg/l |
| CE066 | Dichlorodifluoromethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Chloromethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Vinyl chloride | Headspace GC-MS | | 1 | µg/l |
| CE066 | Bromomethane | Headspace GC-MS | | 3 | µg/l |
| CE066 | Chloroethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Trichlorofluoromethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,1-Dichloroethene | Headspace GC-MS | | 1 | µg/l |
| CE066 | Trans-1,2-Dichloroethene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,1-Dichloroethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | 2,2-Dichloropropane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Cis-1,2-Dichloroethene | Headspace GC-MS | | 1 | µg/l |
| CE066 | Bromochloromethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Chloroform | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,1,1-Trichloroethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Carbon tetrachloride | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,1-Dichloro-1-propene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,2-Dichloroethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Trichloroethene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,2-Dichloropropane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Dibromomethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Bromodichloromethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | cis-1,3-Dichloro-1-propene | Headspace GC-MS | | 1 | µg/l |
| CE066 | trans-1,3-Dichloro-1-propene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,1,2-Trichloroethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Tetrachloroethene | Headspace GC-MS | | 1 | µg/l |

# Chemtech Environmental Limited

# METHOD DETAILS

| METHOD | PREPARED LEACHATES | METHOD SUMMARY | STATUS | LOD | UNITS |
|---|---|---|---|---|---|
| CE066 | 1,3-Dichloropropane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Dibromochloromethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,2-Dibromoethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Chlorobenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,1,1,2-Tetrachloroethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Styrene | Headspace GC-MS | | 1 | µg/l |
| CE066 | Tribromomethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Isopropylbenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | Bromobenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,1,2,2-Tetrachloroethane | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,2,3-Trichloropropane | Headspace GC-MS | | 1 | µg/l |
| CE066 | Propylbenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 2-Chlorotoluene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 4-Chlorotoluene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,3,5-Trimethylbenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | tert-Butylbenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,2,4-Trimethylbenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | sec-Butylbenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,3-Dichlorobenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 4-Isopropyltoluene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,4-Dichlorobenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,2-Dichlorobenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | Butylbenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,2-Dibromo-3-chloropropane | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,2,4-Trichlorobenzene | Headspace GC-MS | | 1 | µg/l |
| CE066 | Hexachloro-1,3-butadiene | Headspace GC-MS | | 1 | µg/l |
| CE066 | 1,2,3-Trichlorobenzene | Headspace GC-MS | | 1 | µg/l |
| CE065 | N-Nitrosodimethylamine | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Phenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Bis(2-chloroethyl)ether | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2-Chlorophenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 1,3-Dichlorobenzene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 1,4-Dichlorobenzene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2-Methylphenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 1,2-Dichlorobenzene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Bis(2-chloroisopropyl)ether | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 3&4-Methylphenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | N-Nitrosodi-n-propylamine | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Hexachloroethane | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Nitrobenzene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Isophorone | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2,4-Dimethylphenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2-Nitrophenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Bis(2-chloroethoxy)methane | Solvent extraction, GC-MS | | 0.1 | µg/l |

# Chemtech Environmental Limited

# METHOD DETAILS

| METHOD | PREPARED LEACHATES | METHOD SUMMARY | STATUS | LOD | UNITS |
|---|---|---|---|---|---|
| CE065 | 2,4-Dichlorophenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 1,2,4-Trichlorobenzene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 4-Chloroaniline | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Hexachlorobutadiene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 4-Chloro-3-methylphenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2-Methylnaphthalene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 1-Methylnaphthalene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Hexachlorocyclopentadiene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2,4,6-Trichlorophenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2,4,5-Trichlorophenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2-Chloronaphthalene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2-Nitroaniline | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Dimethyl phthalate | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2,6-Dinitrotoluene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 3-Nitroaniline | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2,4-Dinitrophenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 4-Nitrophenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2,4-Dinitrotoluene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Dibenzofuran | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Diethyl phthalate | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 4-Chlorophenylphenyl ether | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 4-Nitroaniline | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 2-Methyl-4,6-dinitrophenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Azobenzene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | 4-Bromophenylphenyl ether | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Hexachlorobenzene | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Pentachlorophenol | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Carbazole | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Di-n-butyl phthalate | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Butylbenzyl phthalate | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Bis(2-ethylhexyl)phthalate | Solvent extraction, GC-MS | | 0.1 | µg/l |
| CE065 | Di-n-octyl phthalate | Solvent extraction, GC-MS | | 0.1 | µg/l |

# Chemtech Environmental Limited

# DEVIATING SAMPLE INFORMATION

**Comments**
Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.
For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.
Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

**Key**

| | |
|---|---|
| N | No (not deviating sample) |
| Y | Yes (deviating sample) |
| NSD | Sampling date not provided |
| NST | Sampling time not provided (waters only) |
| EHT | Sample exceeded holding time(s) |
| IC | Sample not received in appropriate containers |
| HP | Headspace present in sample container |
| NCF | Sample not chemically fixed (where appropriate) |
| OR | Other (specify) |

| Lab ref | Sample id | Depth (m) | Deviating | Tests (Reason for deviation) |
|---|---|---|---|---|
| 106848-1 | SHO-TS1_AUK_TP101-S1 | 0.20 | N | |
| 106848-2 | SHO-TS1_AUK_TP101-S2 | 3.50 | N | |
| 106848-3 | SHO-TS1_AUK_TP102-S1 | 0.20 | N | |
| 106848-4 | SHO-TS1_AUK_TP102-S2 | 2.50 | N | |
| 106848-5 | SHO-TS1_AUK_TP102-S4 | 4.70 | N | |
| 106848-6 | SHO-TS1_AUK_TP103-S1 | 0.15 | N | |
| 106848-7 | SHO-TS1_AUK_TP103-S3 | 1.00 | N | |
| 106848-8 | SHO-TS1_AUK_TP104-S1 | 0.10 | N | |
| 106848-9 | SHO-TS1_AUK_TP104-S2 | 1.60 | N | |
| 106848-10 | SHO-TS1_AUK_TP105-S1 | 0.10 | N | |
| 106848-11 | SHO-TS1_AUK_TP105-S3 | 4.00 | N | |
| 106848-12 | SHO-TS1_AUK_TP105-S4 | 1.00 | N | |
| 106848-13 | SHO-TS1_AUK_TP106-S1 | 0.10 | N | |
| 106848-14 | SHO-TS1_AUK_TP106-S2 | 2.50 | N | |
| 106848-15 | SHO-TS1_AUK_TP106-S5 | 4.00 | N | |

# Chemtech Environmental Limited

# DEVIATING SAMPLE INFORMATION

**Comments**
Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.
For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.
Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

**Key**

| | |
|---|---|
| N | No (not deviating sample) |
| Y | Yes (deviating sample) |
| NSD | Sampling date not provided |
| NST | Sampling time not provided (waters only) |
| EHT | Sample exceeded holding time(s) |
| IC | Sample not received in appropriate containers |
| HP | Headspace present in sample container |
| NCF | Sample not chemically fixed (where appropriate) |
| OR | Other (specify) |

| Lab ref | Sample id | Depth (m) | Deviating | Tests (Reason for deviation) |
|---|---|---|---|---|
| 106848-16 | SHO-TS1_AUK_TP107-S1 | 0.20 | N | |
| 106848-17 | SHO-TS1_AUK_TP107-S2 | 1.00 | N | |
| 106848-18 | SHO-TS1_AUK_TP107-S5 | 3.00 | N | |
| 106848-19 | SHO-TS1_AUK_TP107-S7 | 4.20 | N | |
| 106848-20 | SHO-TS1_AUK_TP108-S1 | 3.00 | N | |
| 106848-21 | SHO-TS1_AUK_TP109-S1 | 3.50 | N | |
| 106848-22 | SHO-TS1_AUK_TP110-S1 | 2.50 | N | |
| 106848-23 | SHO-TS1_AUK_TP111-S1 | 4.00 | N | |
| 106848-24 | SHO-TS1_AUK_TP111-S3 | 2.20 | N | |
| 106848-25 | SHO-TS1_AUK_TP112-S1 | 1.50 | N | |
| 106848-26 | SHO-TS1_AUK_TP113-S1 | 1.50 | N | |
| 106848-27 | SHO-TS1_AUK_TP114-S1 | 2.00 | N | |

# Chemtech Environmental Limited

# ADDITIONAL INFORMATION

**Notes**

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.
Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.
All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.
Methods, procedures and performance data are available on request.
Results reported herein relate only to the material supplied to the laboratory.
This report shall not be reproduced except in full, without prior written approval.
Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.
BTEX compounds are identified by retention time only and may include interference from co-eluting compounds.
All results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.
Analytical results are inclusive of stones, where applicable.

# DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

| | | | |
|---|---|---|---|
| **Lab ref** | 106848-1 | **Date received** | 09 March 2022 |
| **Contract name** | Teesworks - Steel House (SHO) | **Analysis started** | 09 March 2022 |
| **Sample ID** | SHO-TS1_AUK_TP101-S1 | **Analysis completed** | 16 March 2022 |
| **OS Grid reference** | Not supplied | **Report issued** | 16 March 2022 |
| **Date sampled** | 02 March 2022 | | |

| Test | Units | Result | Compliant with Multipurpose? (Y/N) | Compliant with specific purpose? (Y/N) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Acidic | Calcareous | Low Fertility | Low F Acidic | Low F Calcareous |
| **Texture** | | | | | | | | |
| Clay content | % w/w | 26 | | | | | | |
| Silt content | % w/w | 52 | | | | | | |
| Sand content | % w/w | 22 | | | | | | |
| Soil texture | **class** | **CLAY LOAM** | Y | Y | Y | Y | Y | Y |
| **Stone content** | | | | | | | | |
| >2mm | % w/w | 8 | Y | Y | Y | Y | Y | Y |
| >20mm | % w/w | 0 | Y | Y | Y | Y | Y | Y |
| >50mm | % w/w | 0 | Y | Y | Y | Y | Y | Y |
| **Mass loss on ignition** | | | | | | | | |
| Clay 5-20% | % w/w | - | - | - | - | - | - | - |
| Clay 20-35% | % w/w | 8.2 | Y | Y | Y | Y | Y | Y |
| pH | pH units | 9.5 | N | N | N | N | N | N |
| Carbonate (calcareous only) | % w/w $CaCO_3$ | 5.2 | | | Y | | | Y |
| Nitrogen (total) | % w/w N | 8.23 | Y | Y | Y | | | |
| Carbon:Nitrogen ratio | - | 0.4 | Y | Y | Y | Y | Y | Y |
| Phosphorus (extractable) | mg/l P | <10 | N | N | N | Y | Y | Y |
| Potassium (extractable) | mg/l K | 74 | N | N | N | | | |
| Magnesium (extractable) | mg/l Mg | 75 | Y | Y | Y | | | |
| Electrical conductivity | µS/cm | 167 | Y | | | | | |
| **Phytotoxic contaminants (by soil pH)** | | | | | | | | |
| Copper (Nitric acid extract) | mg/kg Cu | 24 | Y | Y | Y | Y | Y | Y |
| Nickel (Nitric acid extract) | mg/kg Ni | 49 | Y | Y | Y | Y | Y | Y |
| Zinc (Nitric acid extract) | mg/kg Zn | 93 | Y | Y | Y | Y | Y | Y |
| **VISIBLE CONTAMINANTS** | | | | | | | | |
| (air-dried soil) | % w/w | <0.1 | Y | Y | Y | Y | Y | Y |
| ...of which plastics | % w/w | <0.1 | Y | Y | Y | Y | Y | Y |
| Sharps | % w/w | None | Y | Y | Y | Y | Y | Y |

**DECLARATION**

I certify that this sample has been analysed in accordance with BS3882:2015.

**Signature** M. Harris

**Name** Megan Harris

**Position** Senior Reporting Administrator

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# DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

| | | | |
|---|---|---|---|
| **Lab ref** | 106848-6 | **Date received** | 09 March 2022 |
| **Contract name** | Teesworks - Steel House (SHO) | **Analysis started** | 09 March 2022 |
| **Sample ID** | SHO-TS1_AUK_TP103-S1 | **Analysis completed** | 16 March 2022 |
| **OS Grid reference** | Not supplied | **Report issued** | 16 March 2022 |
| **Date sampled** | 03 March 2022 | | |

| Test | Units | Result | Compliant with Multipurpose? (Y/N) | Compliant with specific purpose? (Y/N) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Acidic | Calcareous | Low Fertility | Low F Acidic | Low F Calcareous |
| **Texture** | | | | | | | | |
| Clay content | % w/w | 26 | | | | | | |
| Silt content | % w/w | 52 | | | | | | |
| Sand content | % w/w | 22 | | | | | | |
| Soil texture | **class** | **CLAY LOAM** | Y | Y | Y | Y | Y | Y |
| **Stone content** | | | | | | | | |
| >2mm | % w/w | 5 | Y | Y | Y | Y | Y | Y |
| >20mm | % w/w | 0 | Y | Y | Y | Y | Y | Y |
| >50mm | % w/w | 0 | Y | Y | Y | Y | Y | Y |
| **Mass loss on ignition** | | | | | | | | |
| Clay 5-20% | % w/w | - | - | - | - | - | - | - |
| Clay 20-35% | % w/w | 4.2 | N | Y | N | Y | Y | Y |
| pH | pH units | 7.8 | Y | N | Y | Y | N | Y |
| Carbonate (calcareous only) | % w/w $CaCO_3$ | 8.8 | | | Y | | | Y |
| Nitrogen (total) | % w/w N | 5.84 | Y | Y | Y | | | |
| Carbon:Nitrogen ratio | - | 0.3 | Y | Y | Y | Y | Y | Y |
| Phosphorus (extractable) | mg/l P | <10 | N | N | N | Y | Y | Y |
| Potassium (extractable) | mg/l K | 108 | N | N | N | | | |
| Magnesium (extractable) | mg/l Mg | 127 | Y | Y | Y | | | |
| Electrical conductivity | µS/cm | 122 | Y | | | | | |
| **Phytotoxic contaminants (by soil pH)** | | | | | | | | |
| Copper (Nitric acid extract) | mg/kg Cu | 28 | Y | Y | Y | Y | Y | Y |
| Nickel (Nitric acid extract) | mg/kg Ni | 41 | Y | Y | Y | Y | Y | Y |
| Zinc (Nitric acid extract) | mg/kg Zn | 65 | Y | Y | Y | Y | Y | Y |
| **VISIBLE CONTAMINANTS** | | | | | | | | |
| (air-dried soil) | % w/w | <0.1 | Y | Y | Y | Y | Y | Y |
| ...of which plastics | % w/w | <0.1 | Y | Y | Y | Y | Y | Y |
| Sharps | % w/w | None | Y | Y | Y | Y | Y | Y |

**DECLARATION**

I certify that this sample has been analysed in accordance with BS3882:2015.

**Signature** M. Harris

**Name** Megan Harris

**Position** Senior Reporting Administrator

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# DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

| | | | |
|---|---|---|---|
| **Lab ref** | 106848-10 | **Date received** | 09 March 2022 |
| **Contract name** | Teesworks - Steel House (SHO) | **Analysis started** | 09 March 2022 |
| **Sample ID** | SHO-TS1_AUK_TP105-S1 | **Analysis completed** | 16 March 2022 |
| **OS Grid reference** | Not supplied | **Report issued** | 16 March 2022 |
| **Date sampled** | 02 March 2022 | | |

| Test | Units | Result | Compliant with Multipurpose? (Y/N) | Compliant with specific purpose? (Y/N) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Acidic | Calcareous | Low Fertility | Low F Acidic | Low F Calcareous |
| **Texture** | | | | | | | | |
| Clay content | % w/w | 22 | | | | | | |
| Silt content | % w/w | 46 | | | | | | |
| Sand content | % w/w | 32 | | | | | | |
| Soil texture | **class** | **CLAY LOAM** | Y | Y | Y | Y | Y | Y |
| **Stone content** | | | | | | | | |
| >2mm | % w/w | 15 | Y | Y | Y | Y | Y | Y |
| >20mm | % w/w | 0 | Y | Y | Y | Y | Y | Y |
| >50mm | % w/w | 0 | Y | Y | Y | Y | Y | Y |
| **Mass loss on ignition** | | | | | | | | |
| Clay 5-20% | % w/w | - | - | - | - | - | - | - |
| Clay 20-35% | % w/w | 5.0 | Y | Y | Y | Y | Y | Y |
| pH | pH units | 8.0 | Y | N | Y | Y | N | Y |
| Carbonate (calcareous only) | % w/w $CaCO_3$ | 10.4 | | | Y | | | Y |
| Nitrogen (total) | % w/w N | 7.79 | Y | Y | Y | | | |
| Carbon:Nitrogen ratio | - | 0.2 | Y | Y | Y | Y | Y | Y |
| Phosphorus (extractable) | mg/l P | 507 | N | N | N | N | N | N |
| Potassium (extractable) | mg/l K | 99 | N | N | N | | | |
| Magnesium (extractable) | mg/l Mg | 88 | Y | Y | Y | | | |
| Electrical conductivity | µS/cm | 169 | Y | | | | | |
| **Phytotoxic contaminants (by soil pH)** | | | | | | | | |
| Copper (Nitric acid extract) | mg/kg Cu | 37 | Y | Y | Y | Y | Y | Y |
| Nickel (Nitric acid extract) | mg/kg Ni | 38 | Y | Y | Y | Y | Y | Y |
| Zinc (Nitric acid extract) | mg/kg Zn | 258 | Y | Y | Y | Y | Y | Y |
| **VISIBLE CONTAMINANTS** | | | | | | | | |
| (air-dried soil) | % w/w | <0.1 | Y | Y | Y | Y | Y | Y |
| ...of which plastics | % w/w | <0.1 | Y | Y | Y | Y | Y | Y |
| Sharps | % w/w | None | Y | Y | Y | Y | Y | Y |

**DECLARATION**

I certify that this sample has been analysed in accordance with BS3882:2015.

**Signature** M. Harris

**Name** Megan Harris

**Position** Senior Reporting Administrator

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# DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

| | | | |
|---|---|---|---|
| **Lab ref** | 106848-13 | **Date received** | 09 March 2022 |
| **Contract name** | Teesworks - Steel House (SHO) | **Analysis started** | 09 March 2022 |
| **Sample ID** | SHO-TS1_AUK_TP106-S1 | **Analysis completed** | 16 March 2022 |
| **OS Grid reference** | Not supplied | **Report issued** | 16 March 2022 |
| **Date sampled** | 04 March 2022 | | |

| Test | Units | Result | Compliant with Multipurpose? (Y/N) | Compliant with specific purpose? (Y/N) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Acidic | Calcareous | Low Fertility | Low F Acidic | Low F Calcareous |
| **Texture** | | | | | | | | |
| Clay content | % w/w | 24 | | | | | | |
| Silt content | % w/w | 50 | | | | | | |
| Sand content | % w/w | 27 | | | | | | |
| Soil texture | **class** | **CLAY LOAM** | Y | Y | Y | Y | Y | Y |
| **Stone content** | | | | | | | | |
| >2mm | % w/w | 25 | Y | Y | Y | Y | Y | Y |
| >20mm | % w/w | 0 | Y | Y | Y | Y | Y | Y |
| >50mm | % w/w | 0 | Y | Y | Y | Y | Y | Y |
| **Mass loss on ignition** | | | | | | | | |
| Clay 5-20% | % w/w | - | - | - | - | - | - | - |
| Clay 20-35% | % w/w | 9.7 | Y | Y | Y | Y | Y | Y |
| pH | pH units | 8.3 | Y | N | Y | Y | N | Y |
| Carbonate (calcareous only) | % w/w $CaCO_3$ | 3.9 | | | Y | | | Y |
| Nitrogen (total) | % w/w N | 8.71 | Y | Y | Y | | | |
| Carbon:Nitrogen ratio | - | 0.4 | Y | Y | Y | Y | Y | Y |
| Phosphorus (extractable) | mg/l P | <10 | N | N | N | Y | Y | Y |
| Potassium (extractable) | mg/l K | 81 | N | N | N | | | |
| Magnesium (extractable) | mg/l Mg | 92 | Y | Y | Y | | | |
| Electrical conductivity | µS/cm | 170 | Y | | | | | |
| **Phytotoxic contaminants (by soil pH)** | | | | | | | | |
| Copper (Nitric acid extract) | mg/kg Cu | 47 | Y | Y | Y | Y | Y | Y |
| Nickel (Nitric acid extract) | mg/kg Ni | 40 | Y | Y | Y | Y | Y | Y |
| Zinc (Nitric acid extract) | mg/kg Zn | 230 | Y | Y | Y | Y | Y | Y |
| **VISIBLE CONTAMINANTS** | | | | | | | | |
| (air-dried soil) | % w/w | <0.1 | Y | Y | Y | Y | Y | Y |
| ...of which plastics | % w/w | <0.1 | Y | Y | Y | Y | Y | Y |
| Sharps | % w/w | None | Y | Y | Y | Y | Y | Y |

**DECLARATION**

I certify that this sample has been analysed in accordance with BS3882:2015.

**Signature** M. Harris

**Name** Megan Harris

**Position** Senior Reporting Administrator

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# APPENDIX E

## Petrology (Pending)

# APPENDIX F

## GQRA – Summary of Soil Screen

*Table F1: Soil GAC Protective of Human Health*

| Contaminant of Concern | MDL | Units | Human Health (Commercial Worker) | GAC Source | Maximum Concentration Measured |
|---|---|---|---|---|---|
| **Metals** | | | | | |
| Aluminium | 1 | mg/kg | | | 42,500.6 |
| Antimony | 1 | mg/kg | 470 | USEPA | 11.4 |
| Arsenic | 0.2 | mg/kg | 640 | S4UL | 28.0 |
| Barium | 2 | mg/kg | 19,000 | Arcadis | 855.3 |
| Beryllium | 0.2 | mg/kg | 12 | S4UL | 5.3 |
| Boron, Water Soluble | 0.2 | mg/kg | 240,000 | S4UL | 3.5 |
| Cadmium | 0.1 | mg/kg | 190 | S4UL | 7.5 |
| Chromium | 0.15 | mg/kg | 8,600 | S4UL | 2,328.3 |
| Chromium, Hexavalent | 1 | mg/kg | 33 | S4UL | <MDL |
| Copper | 0.2 | mg/kg | 68,000 | S4UL | 154.2 |
| Iron | 25 | mg/kg | | | 177,864.0 |
| Lead | 0.3 | mg/kg | 2,300 | C4SL | 276.4 |
| Magnesium | 1 | mg/kg | | | 34,165.0 |
| Manganese | 20 | mg/kg | | | 52,290.1 |
| Mercury | 0.05 | mg/kg | *58** | S4UL | 6.4 |
| Molybdenum | 0.4 | mg/kg | 5,540 | Arcadis | 17.2 |
| Nickel | 1 | mg/kg | 980 | S4UL | 82.1 |
| Silicon | 10 | mg/kg | | | 837.1 |
| Vanadium | 0.8 | mg/kg | 9,000 | S4UL | 3,964.5 |
| Zinc | 1 | mg/kg | 730,000 | S4UL | 1,535.5 |
| **Inorganics** | | | | | |
| pH | | pH | - | | 12.1 |
| Sulphate Aqueous Extract as SO4 | 10 | mg/l | - | | 1,150.0 |
| Sulphur (free) | 0.01 | % | - | | 1,255.0 |
| Cyanide, Free | 0.1 | mg/kg | 66 | DQRA | <MDL |
| Cyanide, Total | 0.1 | mg/kg | - | | 12.6 |
| Thiocyanate | 0.6 | mg/kg | 230 | USEPA | 9.7 |
| Total Organic Carbon (TOC) | 0.1 | % | - | | 6.5 |
| Organic matter | 0.1 | % | - | | 11.3 |
| **Phenols** | | | | | |
| Phenol (total) | 0.3 | mg/kg | 760 | S4UL | 3.2 |
| **PAHs** | | | | | |
| Naphthalene | 0.03 | mg/kg | *1,900* | Wood | 439.2 |
| Acenaphthylene | 0.03 | mg/kg | *83000*** | S4UL | 6.8 |
| Acenaphthene | 0.03 | mg/kg | *84000*** | S4UL | 17.1 |
| Fluorene | 0.03 | mg/kg | *63000*** | S4UL | 23.2 |
| Phenanthrene | 0.03 | mg/kg | 22,000 | S4UL | 43.5 |
| Anthracene | 0.03 | mg/kg | 520,000 | S4UL | 11.3 |
| Fluoranthene | 0.03 | mg/kg | 23,000 | S4UL | 34.6 |
| Pyrene | 0.03 | mg/kg | 54,000 | S4UL | 22.4 |
| Benzo(a)anthracene | 0.03 | mg/kg | 170 | S4UL | 9.7 |
| Chrysene | 0.03 | mg/kg | 350 | S4UL | 9.3 |
| Benzo(b)fluoranthene | 0.03 | mg/kg | 44 | S4UL | 10.2 |
| Benzo(k)fluoranthene | 0.03 | mg/kg | 1,200 | S4UL | 4.2 |
| Benzo(a)pyrene | 0.03 | mg/kg | 77 | Wood | 7.5 |
| Indeno(1,2,3-c,d)pyrene | 0.03 | mg/kg | 500 | S4UL | 6.7 |
| Dibenzo(a,h)anthracene | 0.03 | mg/kg | 3.5 | S4UL | 1.2 |
| Benzo(g,h,i)perylene | 0.03 | mg/kg | 3,900 | S4UL | 5.6 |
| PAH - USEPA 16, Total | 0.1 | mg/kg | na | | 511.9 |
| **Petroleum Hydrocarbons** | | | | | |
| Aliphatic C5-C6 | 0.1 | mg/kg | *3200*** | S4UL | 0.4 |
| Aliphatic C6-C8 | 0.1 | mg/kg | *7800*** | S4UL | 3.4 |
| Aliphatic C8-C10 | 0.1 | mg/kg | *2000*** | S4UL | 54.6 |
| Aliphatic C10-C12 | 6 | mg/kg | *9700*** | S4UL | 133.2 |
| Aliphatic C12-C16 | 6 | mg/kg | *59000*** | S4UL | 55.4 |
| Aliphatic C16-C35 | 15 | mg/kg | 1,600,000 | S4UL | 442.5 |
| Aliphatic C35-C44 | 10 | mg/kg | 1,600,000 | S4UL | 66.5 |
| Aromatic C5-C7 | 0.01 | mg/kg | *26000*** | S4UL | 1.3 |
| Aromatic C7-C8 | 0.01 | mg/kg | *56000*** | S4UL | 6.6 |
| Aromatic C8-C10 | 0.01 | mg/kg | *3500*** | S4UL | 28.6 |
| Aromatic C10-C12 | 1 | mg/kg | *16000*** | S4UL | 725.1 |
| Aromatic C12-C16 | 1 | mg/kg | *36000*** | S4UL | 741.1 |
| Aromatic C16-C21 | 1 | mg/kg | 28,000 | S4UL | 525.3 |
| Aromatic C21-C35 | 1 | mg/kg | 28,000 | S4UL | 1,237.3 |
| Aromatic C35-C44 | 1 | mg/kg | 28,000 | S4UL | 73.9 |
| **PCBs** | | | | | |
| PCB 77 | 0.006 | mg/kg | - | | <MDL |
| PCB 81 | 0.006 | mg/kg | - | | <MDL |
| PCB 105 | 0.006 | mg/kg | - | | <MDL |
| PCB 114 | 0.006 | mg/kg | - | | <MDL |
| PCB 118 | 0.006 | mg/kg | - | | <MDL |
| PCB 123 | 0.006 | mg/kg | - | | <MDL |
| PCB 126 | 0.006 | mg/kg | - | | <MDL |
| PCB 156 | 0.006 | mg/kg | - | | <MDL |
| PCB 157 | 0.006 | mg/kg | - | | <MDL |
| PCB 167 | 0.006 | mg/kg | - | | <MDL |
| PCB 169 | 0.006 | mg/kg | - | | <MDL |
| PCB 189 | 0.006 | mg/kg | - | | <MDL |
| PCB 12 Total | 0.006 | mg/kg | na | | <MDL |
| **Asbestos** | | | | | |
| Detected | | | - | | 4no. Samples |
| Form of Asbestos | | | - | | Loose fibres |
| Quantitative | 0.001 | % | | | 0.326 |

*Table F1: Soil GAC Protective of Human Health*

| Contaminant of Concern | MDL | Units | Human Health (Commercial Worker) | GAC Source | Maximum Concentration Measured |
|---|---|---|---|---|---|

The following GACs have been used in order of availablity:

| | |
|---|---|
| S4UL: (Commercial End Use, 1% SOM) | LQM / CIEH (2015) The LQM / CIEH S4ULs for Human Health Risk Assessment. Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3223. All rights reserved. |
| C4SL: (Commerical End Us | Department for Environment, Food and Rural Affairs (DEFRA) (2014) SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document, December |
| Arcadis | Where published criteria above are not available, Arcadis has derived GAC based on EA guidance and assumptions in line with current industry standards and standard CLEA inputs for a commerical land use. |
| USEPA | GAC based on US Environmental Protection Agency (USEPA) Regional Screening Levels (RSL). Available at https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables |

Wood derived GAC based on CLEA v1.07 were presented in the Wood 2019 report for benzo(a)pyrene and naphthalene. It is understood that these values were acceptable to the regulator for this site and as such they have been retained here.

**Notes**

| | |
|---|---|
| GAC | Generic Assessment Criteria |
| na | Comprises multiple contaminant, no applicable GAC |
| *123** | S4UL exceeds the vapour saturation limit |
| *123*** | S4UL exceeds the solubility saturation limit |
| - | No applicable GAC readily available |
| | Elements present naturally in soil with typically low toxicity |
| <0.1 | Concentration less then the method detection limit |
| - | Not analysed |
| | Contaminant of Concern in excess of Human Health GAC |

*Table F2: Soil GAC Protective of Human Health*

| Contaminant of Concern | MDL | Units | Human Health (Commercial Worker) | GAC Source | Maximum Concentration Measured |
|---|---|---|---|---|---|
| **VOCs** | | | | | |
| MTBE | 0.02 | mg/kg | 210.0 | USEPA | <MDL |
| Benzene | 0.01 | mg/kg | 27.0 | S4UL | 1.25 |
| Toluene | 0.01 | mg/kg | 56,000.0 | S4UL | 6.56 |
| Ethylbenzene | 0.01 | mg/kg | 5,700.0 | S4UL | 3.76 |
| m+p-Xylene | 0.01 | mg/kg | 5,900.0 | S4UL | 16.78 |
| o-Xylene | 0.01 | mg/kg | 6,600.0 | S4UL | 8.09 |
| Dichlorodifluoromethane | 0.01 | mg/kg | - | | <MDL |
| Chloromethane | 0.01 | mg/kg | - | | 0.02 |
| Vinyl chloride | 0.01 | mg/kg | 0.059 | S4UL | <MDL |
| Bromomethane | 0.03 | mg/kg | - | | <MDL |
| Chloroethane | 0.01 | mg/kg | - | | <MDL |
| Trichlorofluoromethane | 0.01 | mg/kg | - | | <MDL |
| 1,1-Dichloroethene | 0.01 | mg/kg | 6.390 | Arcadis | <MDL |
| Trans-1,2-Dichloroethene | 0.01 | mg/kg | 49.30 | Arcadis | <MDL |
| 1,1-Dichloroethane | 0.01 | mg/kg | 16.0 | USEPA | <MDL |
| 2,2-Dichloropropane | 0.01 | mg/kg | - | | <MDL |
| Cis-1,2-Dichloroethene | 0.01 | mg/kg | 3.330 | Arcadis | <MDL |
| Bromochloromethane | 0.01 | mg/kg | 630.0 | USEPA | <MDL |
| Chloroform | 0.01 | mg/kg | 99.0 | S4UL | <MDL |
| 1,1,1-Trichloroethane | 0.01 | mg/kg | 660.0 | S4UL | <MDL |
| Carbon tetrachloride | 0.01 | mg/kg | 2.9 | S4UL | <MDL |
| 1,1-Dichloro-1-propene | 0.01 | mg/kg | - | | <MDL |
| 1,2-Dichloroethane | 0.01 | mg/kg | 0.670 | S4UL | <MDL |
| Trichloroethene | 0.01 | mg/kg | 0.280 | Arcadis | <MDL |
| 1,2-Dichloropropane | 0.01 | mg/kg | 11.0 | USEPA | <MDL |
| Dibromomethane | 0.01 | mg/kg | 99.0 | USEPA | <MDL |
| Bromodichloromethane | 0.01 | mg/kg | 1.3 | USEPA | <MDL |
| cis-1,3-Dichloro-1-propene | 0.01 | mg/kg | 8.2 | USEPA | <MDL |
| trans-1,3-Dichloro-1-propene | 0.01 | mg/kg | 8.2 | USEPA | <MDL |
| 1,1,2-Trichloroethane | 0.01 | mg/kg | 5.0 | USEPA | <MDL |
| Tetrachloroethene | 0.01 | mg/kg | 3.780 | Arcadis | <MDL |
| 1,3-Dichloropropane | 0.01 | mg/kg | 23,000.0 | USEPA | <MDL |
| Dibromochloromethane | 0.01 | mg/kg | 39.0 | USEPA | <MDL |
| 1,2-Dibromoethane | 0.01 | mg/kg | - | | <MDL |
| Chlorobenzene | 0.01 | mg/kg | 56.0 | S4UL | <MDL |
| 1,1,1,2-Tetrachloroethane | 0.01 | mg/kg | 110.0 | S4UL | <MDL |
| Styrene | 0.01 | mg/kg | 35,000.0 | USEPA | 0.64 |
| Tribromomethane | 0.01 | mg/kg | - | | <MDL |
| Isopropylbenzene | 0.01 | mg/kg | - | | 0.018 |
| Bromobenzene | 0.01 | mg/kg | 1,800.0 | USEPA | <MDL |
| 1,1,2,2-Tetrachloroethane | 0.01 | mg/kg | - | | <MDL |
| 1,2,3-Trichloropropane | 0.01 | mg/kg | 0.110 | USEPA | <MDL |
| Propylbenzene | 0.01 | mg/kg | - | | 0.12 |
| 2-Chlorotoluene | 0.01 | mg/kg | 23,000.0 | USEPA | <MDL |
| 4-Chlorotoluene | 0.01 | mg/kg | 23,000.0 | USEPA | <MDL |
| 1,3,5-Trimethylbenzene | 0.01 | mg/kg | 1,500.0 | USEPA | 0.66 |
| tert-Butylbenzene | 0.01 | mg/kg | 120,000.0 | USEPA | <MDL |
| 1,2,4-Trimethylbenzene | 0.01 | mg/kg | 1,800.0 | USEPA | 2.33 |
| sec-Butylbenzene | 0.01 | mg/kg | 120,000.0 | USEPA | <MDL |
| 1,3-Dichlorobenzene | 0.01 | mg/kg | 30.0 | S4UL | <MDL |
| 4-Isopropyltoluene | 0.01 | mg/kg | - | | <MDL |
| 1,4-Dichlorobenzene | 0.01 | mg/kg | 4,400.0 | S4UL | <MDL |
| 1,2-Dichlorobenzene | 0.01 | mg/kg | 30.0 | S4UL | <MDL |
| Butylbenzene | 0.01 | mg/kg | 58,000.0 | USEPA | <MDL |
| 1,2-Dibromo-3-chloropropane | 0.01 | mg/kg | 0.1 | USEPA | <MDL |
| 1,2,4-Trichlorobenzene | 0.01 | mg/kg | 220.0 | S4UL | <MDL |
| Hexachloro-1,3-butadiene | 0.01 | mg/kg | 31.0 | S4UL | <MDL |
| 1,2,3-Trichlorobenzene | 0.01 | mg/kg | 102.0 | S4UL | <MDL |

The following GACs have been used in order of availablity:

| | |
|---|---|
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| C4SL: (Commerical End Use) | Department for Environment, Food and Rural Affairs (DEFRA) (2014) SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document, December 2014 |
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**Notes**

| | |
|---|---|
| GAC | Generic Assessment Criteria |
| na | Comprises multiple contaminant, no applicable GAC |
| *123** | S4UL exceeds the vapour saturation limit |
| *123*** | S4UL exceeds the solubility saturation limit |
| - | No applicable GAC readily available |
| | Elements present naturally in soil with typically low toxicity |
| <0.1 | Concentration less then the method detection limit |
| - | Not analysed |
| | Contaminant of Concern in excess of Human Health GAC |

*Table F3: Soil GAC Protective of Human Health*

| Contaminant of Concern | MDL | Units | Human Health (Commercial Worker) | GAC Source | Maximum Concentration Measured |
|---|---|---|---|---|---|
| N-Nitrosodimethylamine | 0.1 | mg/kg | - | | <MDL |
| Phenol | 0.1 | mg/kg | 760.0 | S4UL | 0.64 |
| Bis(2-chloroethyl)ether | 0.1 | mg/kg | - | | <MDL |
| 2-Chlorophenol | 0.1 | mg/kg | 3,500.0 | S4UL | <MDL |
| 1,3-Dichlorobenzene | 0.1 | mg/kg | 30.0 | S4UL | <MDL |
| 1,4-Dichlorobenzene | 0.1 | mg/kg | 4,400.0 | S4UL | <MDL |
| 2-Methylphenol | 0.1 | mg/kg | 41,000.0 | USEPA | <MDL |
| 1,2-Dichlorobenzene | 0.1 | mg/kg | 30.0 | S4UL | <MDL |
| Bis(2-chloroisopropyl)ether | 0.1 | mg/kg | 47,000.0 | USEPA | <MDL |
| 3&4-Methylphenol | 0.1 | mg/kg | 82,000.0 | USEPA | 3.20 |
| N-Nitrosodi-n-propylamine | 0.1 | mg/kg | - | | <MDL |
| Hexachloroethane | 0.1 | mg/kg | - | | <MDL |
| Nitrobenzene | 0.1 | mg/kg | - | | <MDL |
| Isophorone | 0.1 | mg/kg | - | | <MDL |
| 2,4-Dimethylphenol | 0.1 | mg/kg | - | | 3.50 |
| 2-Nitrophenol | 0.1 | mg/kg | - | | <MDL |
| Bis(2-chloroethoxy)methane | 0.1 | mg/kg | - | | <MDL |
| 2,4-Dichlorophenol | 0.1 | mg/kg | - | | <MDL |
| 1,2,4-Trichlorobenzene | 0.1 | mg/kg | 220.0 | S4UL | <MDL |
| 4-Chloroaniline | 0.1 | mg/kg | - | | <MDL |
| Hexachlorobutadiene | 0.1 | mg/kg | - | | <MDL |
| 4-Chloro-3-methylphenol | 0.1 | mg/kg | - | | <MDL |
| 2-Methylnaphthalene | 0.1 | mg/kg | 3,000.0 | USEPA | 80.32 |
| 1-Methylnaphthalene | 0.1 | mg/kg | - | | 60.00 |
| Hexachlorocyclopentadiene | 0.1 | mg/kg | 7.5 | USEPA | 1.37 |
| 2,4,6-Trichlorophenol | 0.1 | mg/kg | - | | <MDL |
| 2,4,5-Trichlorophenol | 0.1 | mg/kg | 82,000.0 | USEPA | <MDL |
| 2-Chloronaphthalene | 0.1 | mg/kg | 60,000.0 | USEPA | <MDL |
| 2-Nitroaniline | 0.1 | mg/kg | 8,000.0 | USEPA | <MDL |
| Dimethyl phthalate | 0.1 | mg/kg | - | | <MDL |
| 2,6-Dinitrotoluene | 0.1 | mg/kg | 1.5 | USEPA | <MDL |
| 3-Nitroaniline | 0.1 | mg/kg | - | | <MDL |
| 2,4-Dinitrophenol | 0.1 | mg/kg | - | | <MDL |
| 4-Nitrophenol | 0.1 | mg/kg | - | | 24.40 |
| 2,4-Dinitrotoluene | 0.1 | mg/kg | 7.4 | USEPA | <MDL |
| Dibenzofuran | 0.1 | mg/kg | 1,000.0 | USEPA | 23.89 |
| Diethyl phthalate | 0.1 | mg/kg | - | | <MDL |
| 4-Chlorophenylphenyl ether | 0.1 | mg/kg | - | | <MDL |
| 4-Nitroaniline | 0.1 | mg/kg | 110.0 | USEPA | <MDL |
| 2-Methyl-4,6-dinitrophenol | 0.1 | mg/kg | - | | <MDL |
| Azobenzene | 0.1 | mg/kg | 26.0 | USEPA | <MDL |
| 4-Bromophenylphenyl ether | 0.1 | mg/kg | - | | <MDL |
| Hexachlorobenzene | 0.1 | | 110.0 | S4UL | <MDL |
| Pentachlorophenol | 0.1 | mg/kg | 400.0 | S4UL | <MDL |
| Carbazole | 0.1 | mg/kg | - | | 5.49 |
| Di-n-butyl phthalate | 0.1 | mg/kg | - | | <MDL |
| Butylbenzyl phthalate | 0.1 | mg/kg | - | | <MDL |
| Bis(2-ethylhexyl)phthalate | 0.1 | mg/kg | 160.0 | USEPA | <MDL |
| Di-n-octyl phthalate | 0.1 | mg/kg | - | | <MDL |

The following GACs have been used in order of availablity:

| | |
|---|---|
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| USEPA | GAC based on US Environmental Protection Agency (USEPA) Regional Screening Levels (RSL). Available at https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables |

**Notes**

| | |
|---|---|
| GAC | Generic Assessment Criteria |
| na | Comprises multiple contaminant, no applicable GAC |
| *123** | S4UL exceeds the vapour saturation limit |
| *123*** | S4UL exceeds the solubility saturation limit |
| - | No applicable GAC readily available |
| | Elements present naturally in soil with typically low toxicity |
| <0.1 | Concentration less then the method detection limit |
| - | Not analysed |
| | Contaminant of Concern in excess of Human Health GAC |

# APPENDIX G

## Geotechnical Laboratory Certificates

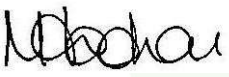
EXPLORATION
& TESTING ASSOCIATES

Unit 8B, Bowburn South Industrial Estate, Durham, DH6 5AD

# Laboratory Test Report

| | |
|---|---|
| Client: | Hall Construction Services Limited |
| Job Number: | D10082AG-216 |
| Project: | Prairie Phase II |
| Report Number: | L22-159 |
| Date Received: | 07.03.2022 |
| Client Contact: | David Simpson |
| Address: | Stotforth Hill House<br>Windlestone<br>Rushyford<br>County Durham<br>DL17 0NF |

| | |
|---|---|
| Testing Required: | Moisture Content - BS:1377-2:1990<br>Plasticity Index - BS EN ISO 17892-12:2016<br>Particle Size Distribution – BS 1377-2:1990<br>Sedimentation by Pipette - BS:1377-2:1990* Determination of Maximum Dry Density / Optimum Moisture Content by 4.5kg Rammer - BS:1377-4:1990<br>Particle Density by Gas Jar - BS:1377-2:1990 Clause 8.2 |
| Date Testing Started: | 09.03.2022 |
| Date Testing Finished: | 21.03.2022 |

| | |
|---|---|
| Date Report Issued: | 21.03.2022 |
| Reviewed By: |  <br>N. O'Brien - Laboratory Manager |
| Authorised By: |  <br>N. Hodson - Materials Director |
| Remarks: | (*) Denotes testing is outside of UKAS Accreditation Scope. |

Samples will be stored for one month after the report has been issued before being disposed of.

The published results are appertaining only to the specimens tested.



UKAS TESTING
20632

EXPLORATION & TESTING ASSOCIATES

# Determination of Moisture Content, Liquid Limit, Plastic Limit and Derivation of Plasticity Index

| Project No. | Project Name |
|---|---|
| D10082AG-216 | Steelhouse GI |

| Hole No. | Sample | | | Soil Description | Water Content % | Passing 425µm % | Liquid Limit % | Plastic Limit % | Plasticity Index % | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| | Type | Ref | Depth | | | | | | | |
| SHO-TS1-AUK-TP103-S4 | B | MS1756/3 | 1.00 | Dark grey sandy GRAVEL | 11 | | | | | |
| SHO-TS1-AUK-TP104-S4 | B | MS1756/4 | 1.60 | Grey sandy GRAVEL with cobbles | 14 | | | | | |
| SHO-TS1-AUK-TP107-S8 | B | MS1756/8 | 2.00 | Grey, Sandy GRAVEL with COBBLES | 19 | | | | | |
| SHO-TS1-AUK-TP106-S4 | B | MS1756/6 | 2.50 | Brown clayey sandy GRAVEL with cobbles | 13 | | | | | |
| SHO-TS1-AUK-TP101-S4 | B | MS1756/1 | 3.50 | Grey sandy GRAVEL with cobbles | 5.6 | | | | | |
| SHO-TS1-AUK-TP105-S5 | B | MS1756/5 | 4.00 | Brown gravelly SAND | 7.6 | | | | | |
| SHO-TS1-AUK-TP106-S6 | B | MS1756/7 | 4.00 | Grey sandy GRAVEL with cobbles | 10 | | | | | |
| SHO-TS1-AUK-TP107-S9 | B | MS1756/9 | 4.20 | Brown, Slightly Sandy, Slightly Gravelly CLAY with Occasional COBBLES | 9.9 | 60 | 39 -1pt | 23 | 16 | Sample tested in natural state - material passing 425um estimated by hand picking |
| SHO-TS1-AUK-TP102-S6 | B | MS1756/2 | 4.70 | Grey sandy GRAVEL with occasion clay pockets | 16 | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

Moisture Content carried out in accordance with BS 1377: Part 2: 1990: Clause 3.2

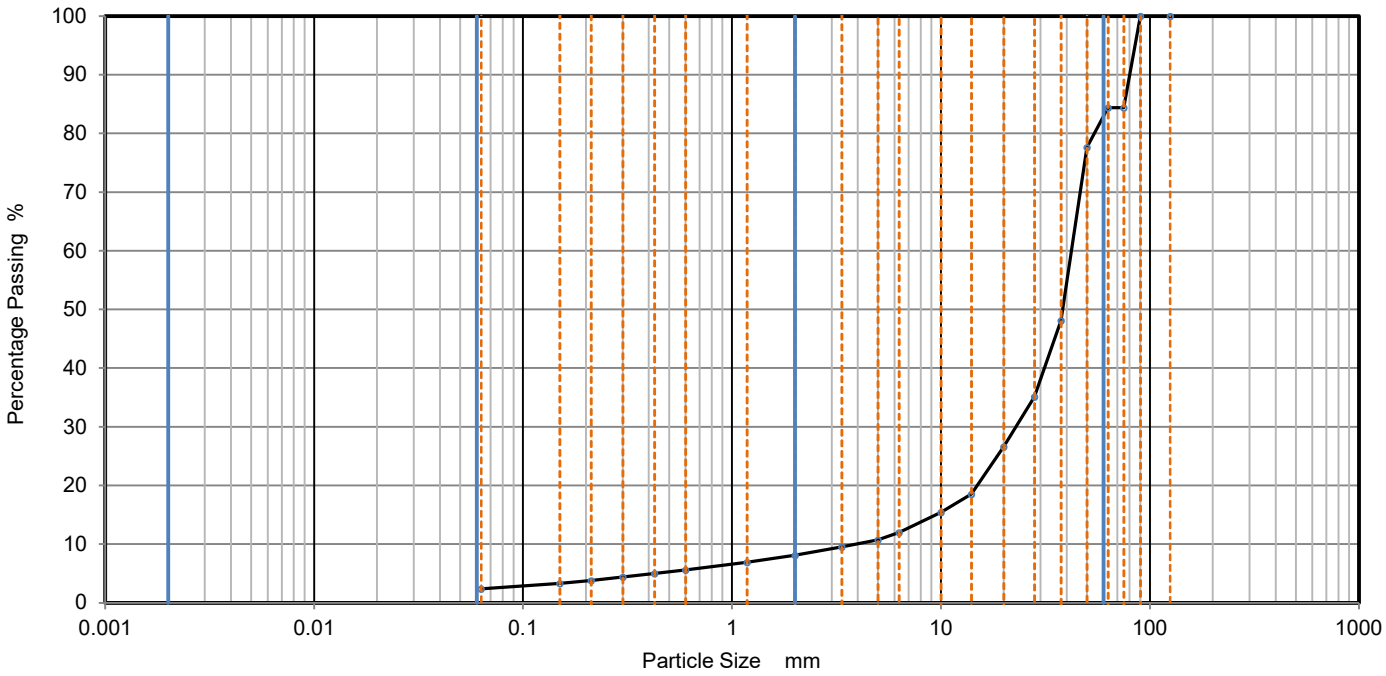
Liquid Limit, Plastic Limit & Plasticity Index all performed in accordance with BS EN ISO 17892: Part 12: 2018 - Fall cone four point method - Cone 80g/30°

| Date | Approved By | |
|---|---|---|
| | N Hodson | UKAS Accredited Laboratory No. 20632 |
| 21/03/2022 11:54 |  | |

EXPLORATION & TESTING ASSOCIATES

# PARTICLE SIZE DISTRIBUTION

| | | | | | |
|---|---|---|---|---|---|
| | | | | Job Ref | **D10082AG-216** |
| | | | | Borehole/Pit No. | SHO-TS1-AUK-TP101-S4 |
| Site Name | Steelhouse GI | | | Sample No. | MS1756/1 |
| Soil Description | Grey sandy GRAVEL with cobbles | | | Depth, m | 3.50 |
| Specimen Reference | | Specimen Depth | m | Sample Type | B |
| Test Method | BS 1377-2:1990 - Wet & Dry Sieving | | | KeyLAB ID | EAT_202203102 |




| Sieving | | Sedimentation | |
|---|---|---|---|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125 | 100 | | |
| 90 | 100 | | |
| 75 | 84 | | |
| 63 | 84 | | |
| 50 | 78 | | |
| 37.5 | 48 | | |
| 28 | 35 | | |
| 20 | 27 | | |
| 14 | 19 | | |
| 10 | 15 | | |
| 6.3 | 12 | | |
| 5 | 11 | | |
| 3.35 | 10 | | |
| 2 | 8 | | |
| 1.18 | 7 | | |
| 0.6 | 6 | | |
| 0.425 | 5 | | |
| 0.3 | 4 | | |
| 0.212 | 4 | | |
| 0.15 | 3 | | |
| 0.063 | 2.4 | | |

| **Sample Proportions** | % dry mass |
|---|---|
| Very coarse | 16 |
| Gravel | 76 |
| Sand | 6 |
| | |
| Fines <0.063mm | 2 |

| **Grading Analysis** | | |
|---|---|---|
| $D_{100}$ | mm | |
| $D_{60}$ | mm | 42.1 |
| $D_{30}$ | mm | 22.9 |
| $D_{10}$ | mm | 3.98 |
| Uniformity Coefficient | | 11 |
| Curvature Coefficient | | 3.1 |

Remarks

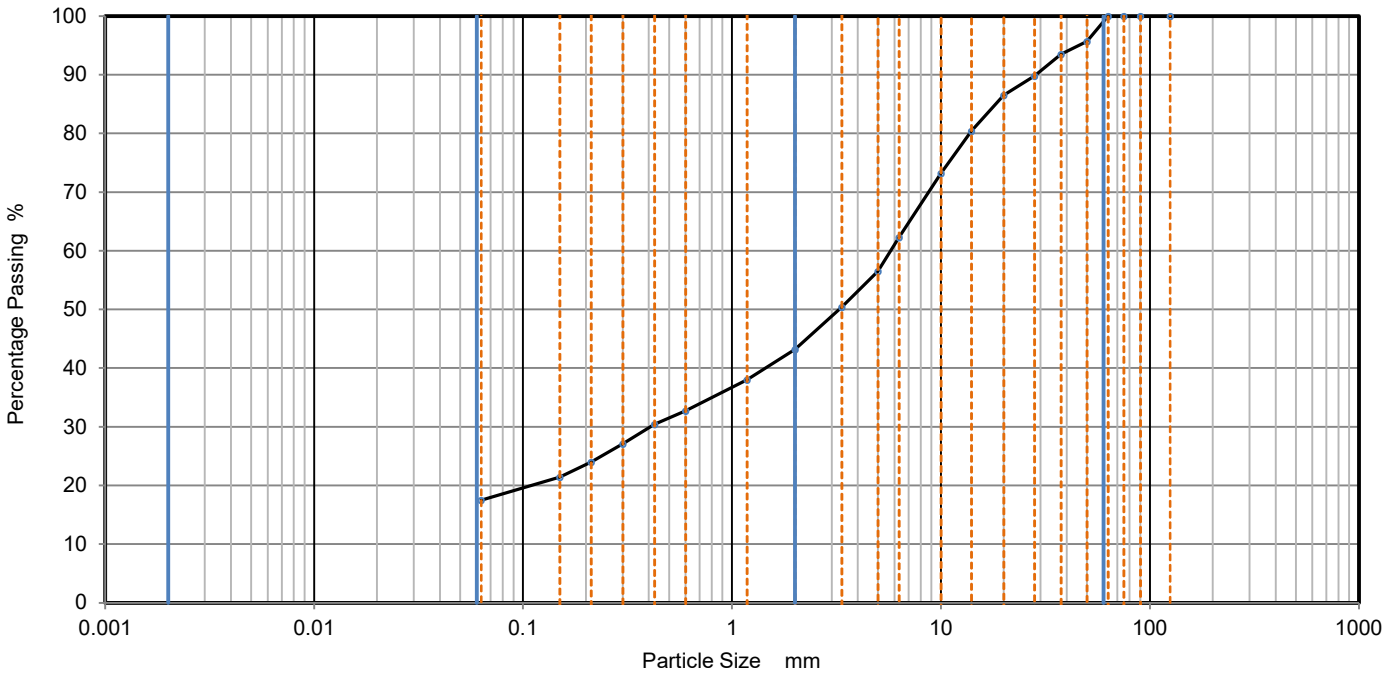
Preparation and testing in accordance with BS 1377-2:1990 unless noted below

| Date | Approved By | | UKAS Accredited Laboratory No. 20632 |
|---|---|---|---|
| 21/03/2022 11:56 | N Hodson | N Hodson | |

EXPLORATION & TESTING ASSOCIATES

# PARTICLE SIZE DISTRIBUTION

| | | | | | |
|---|---|---|---|---|---|
| | | | | Job Ref | **D10082AG-216** |
| | | | | Borehole/Pit No. | SHO-TS1-AUK-TP102-S6 |
| Site Name | Steelhouse GI | | | Sample No. | MS1756/2 |
| Soil Description | Grey sandy GRAVEL with occasion clay pockets | | | Depth, m | 4.70 |
| Specimen Reference | | Specimen Depth | m | Sample Type | B |
| Test Method | BS 1377-2:1990 - Wet & Dry Sieving | | | KeyLAB ID | EAT_202203103 |




| Sieving | | Sedimentation | |
|---|---|---|---|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125 | 100 | | |
| 90 | 100 | | |
| 75 | 100 | | |
| 63 | 100 | | |
| 50 | 96 | | |
| 37.5 | 94 | | |
| 28 | 90 | | |
| 20 | 87 | | |
| 14 | 80 | | |
| 10 | 73 | | |
| 6.3 | 62 | | |
| 5 | 57 | | |
| 3.35 | 50 | | |
| 2 | 43 | | |
| 1.18 | 38 | | |
| 0.6 | 33 | | |
| 0.425 | 30 | | |
| 0.3 | 27 | | |
| 0.212 | 24 | | |
| 0.15 | 21 | | |
| 0.063 | 17.5 | | |

| **Sample Proportions** | % dry mass |
|---|---|
| Very coarse | 0 |
| Gravel | 57 |
| Sand | 26 |
| | |
| Fines <0.063mm | 17 |

| **Grading Analysis** | | |
|---|---|---|
| $D_{100}$ | mm | |
| $D_{60}$ | mm | 5.75 |
| $D_{30}$ | mm | 0.407 |
| $D_{10}$ | mm | |
| Uniformity Coefficient | | |
| Curvature Coefficient | | |

Remarks

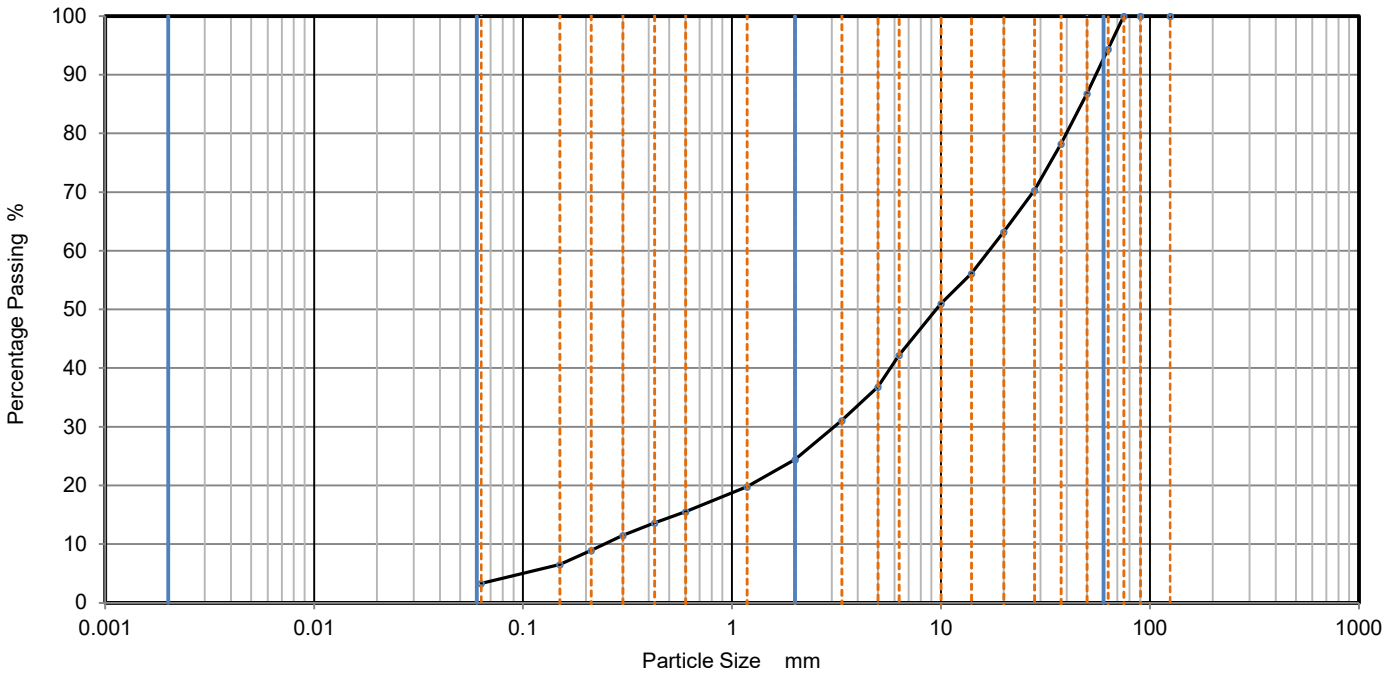
Preparation and testing in accordance with BS 1377-2:1990 unless noted below

| Date | Approved By | | UKAS Accredited Laboratory No. 20632 |
|---|---|---|---|
| 21/03/2022 11:57 | N Hodson | N Hodson | |

EXPLORATION & TESTING ASSOCIATES

# PARTICLE SIZE DISTRIBUTION

| | | | | | |
|---|---|---|---|---|---|
| | | | | Job Ref | **D10082AG-216** |
| | | | | Borehole/Pit No. | SHO-TS1-AUK-TP103-S4 |
| Site Name | Steelhouse GI | | | Sample No. | MS1756/3 |
| Soil Description | Dark grey sandy GRAVEL | | | Depth, m | 1.00 |
| Specimen Reference | | Specimen Depth | m | Sample Type | B |
| Test Method | BS 1377-2:1990 - Wet & Dry Sieving | | | KeyLAB ID | EAT_202203104 |




| Sieving | | Sedimentation | |
|---|---|---|---|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125 | 100 | | |
| 90 | 100 | | |
| 75 | 100 | | |
| 63 | 94 | | |
| 50 | 87 | | |
| 37.5 | 78 | | |
| 28 | 70 | | |
| 20 | 63 | | |
| 14 | 56 | | |
| 10 | 51 | | |
| 6.3 | 42 | | |
| 5 | 37 | | |
| 3.35 | 31 | | |
| 2 | 24 | | |
| 1.18 | 20 | | |
| 0.6 | 16 | | |
| 0.425 | 14 | | |
| 0.3 | 12 | | |
| 0.212 | 9 | | |
| 0.15 | 7 | | |
| 0.063 | 3.3 | | |

| **Sample Proportions** | % dry mass |
|---|---|
| Very coarse | 6 |
| Gravel | 70 |
| Sand | 21 |
| | |
| Fines <0.063mm | 3 |

| **Grading Analysis** | | |
|---|---|---|
| $D_{100}$ | mm | |
| $D_{60}$ | mm | 17 |
| $D_{30}$ | mm | 3.07 |
| $D_{10}$ | mm | 0.245 |
| Uniformity Coefficient | | 69 |
| Curvature Coefficient | | 2.3 |

Remarks

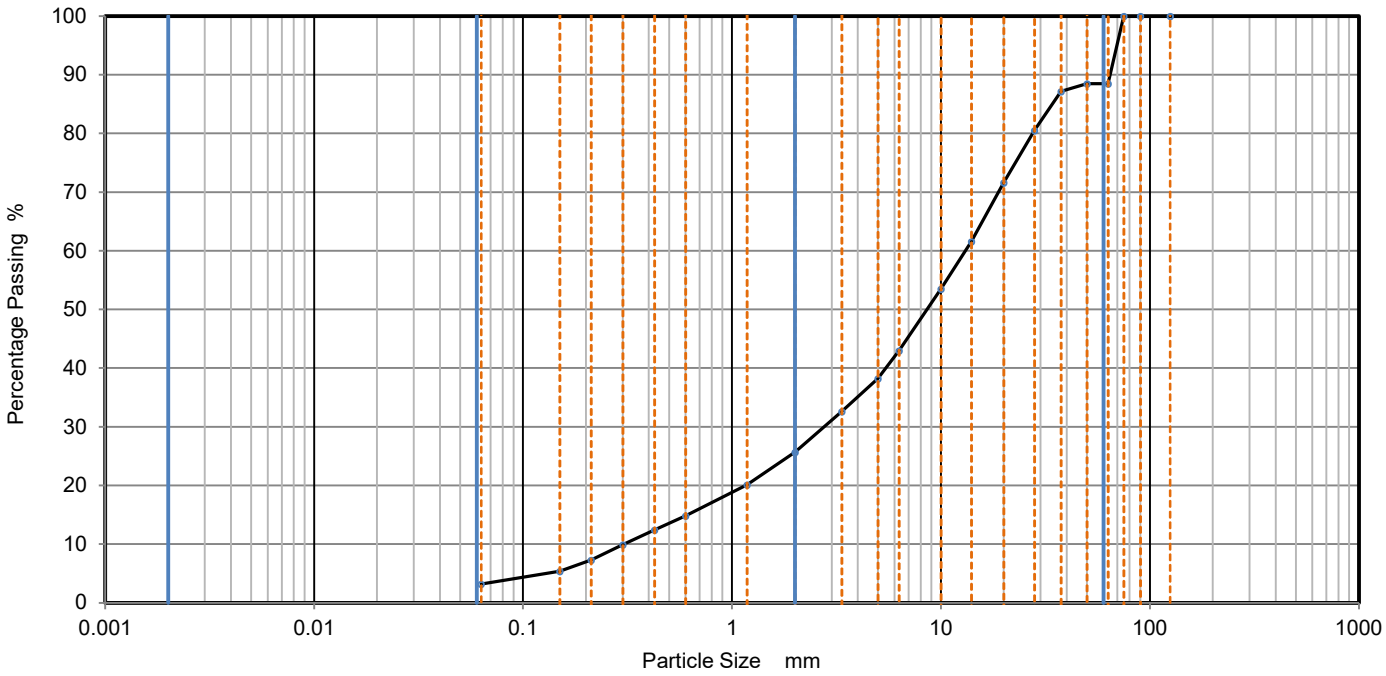
Preparation and testing in accordance with BS 1377-2:1990 unless noted below

| Date | Approved By | | UKAS Accredited Laboratory No. 20632 |
|---|---|---|---|
| 21/03/2022 11:55 | N Hodson | N Hodson | |

EXPLORATION & TESTING ASSOCIATES

# PARTICLE SIZE DISTRIBUTION

| | | | | | |
|---|---|---|---|---|---|
| | | | | Job Ref | **D10082AG-216** |
| | | | | Borehole/Pit No. | SHO-TS1-AUK-TP104-S4 |
| Site Name | Steelhouse GI | | | Sample No. | MS1756/4 |
| Soil Description | Grey sandy GRAVEL with cobbles | | | Depth, m | 1.60 |
| Specimen Reference | | Specimen Depth | m | Sample Type | B |
| Test Method | BS 1377-2:1990 - Wet & Dry Sieving | | | KeyLAB ID | EAT_202203105 |




| Sieving | | Sedimentation | |
|---|---|---|---|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125 | 100 | | |
| 90 | 100 | | |
| 75 | 100 | | |
| 63 | 89 | | |
| 50 | 89 | | |
| 37.5 | 87 | | |
| 28 | 81 | | |
| 20 | 72 | | |
| 14 | 62 | | |
| 10 | 54 | | |
| 6.3 | 43 | | |
| 5 | 38 | | |
| 3.35 | 33 | | |
| 2 | 26 | | |
| 1.18 | 20 | | |
| 0.6 | 15 | | |
| 0.425 | 12 | | |
| 0.3 | 10 | | |
| 0.212 | 7 | | |
| 0.15 | 5 | | |
| 0.063 | 3.2 | | |

| **Sample Proportions** | % dry mass |
|---|---|
| Very coarse | 12 |
| Gravel | 63 |
| Sand | 23 |
| | |
| Fines <0.063mm | 3 |

| **Grading Analysis** | | |
|---|---|---|
| $D_{100}$ | mm | |
| $D_{60}$ | mm | 13.1 |
| $D_{30}$ | mm | 2.76 |
| $D_{10}$ | mm | 0.304 |
| Uniformity Coefficient | | 43 |
| Curvature Coefficient | | 1.9 |

Remarks

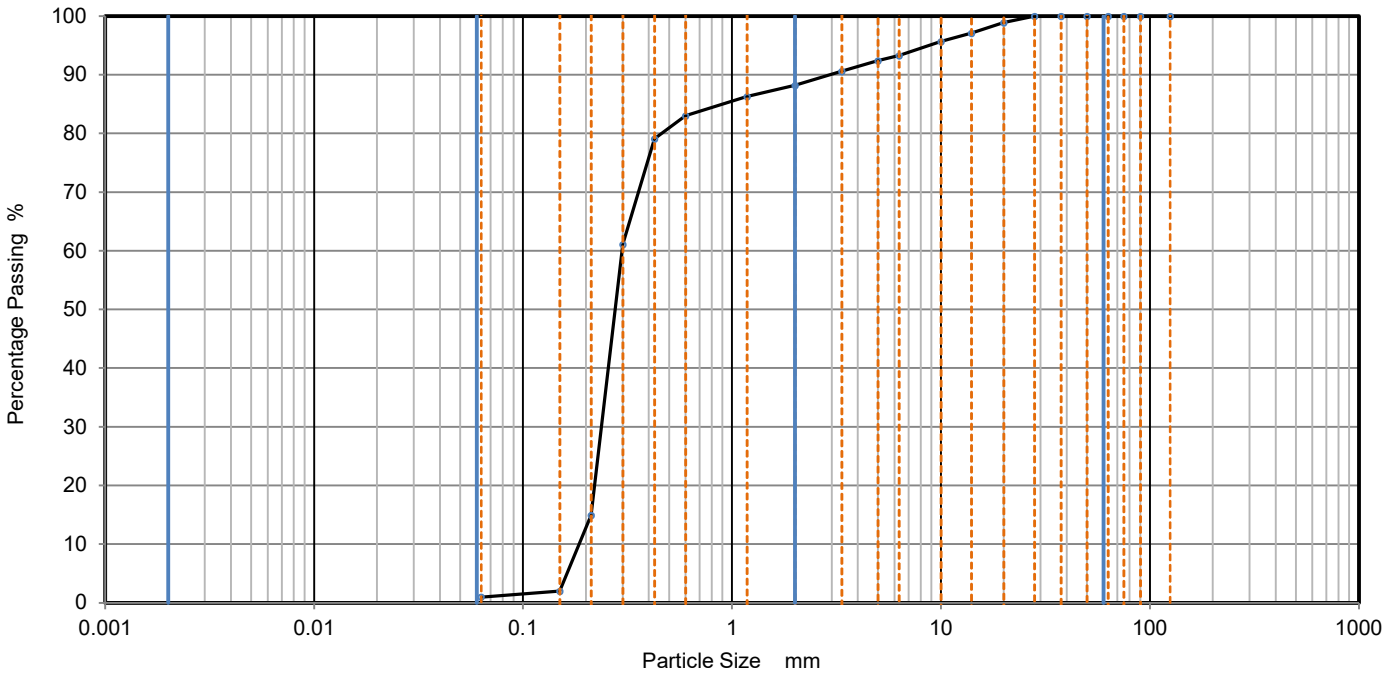
Preparation and testing in accordance with BS 1377-2:1990 unless noted below

| Date | Approved By | | |
|---|---|---|---|
| 21/03/2022 11:56 | N Hodson | N Hodson | UKAS Accredited Laboratory No. 20632 |

EXPLORATION & TESTING ASSOCIATES

# PARTICLE SIZE DISTRIBUTION

| | | | | | |
|---|---|---|---|---|---|
| | | | | Job Ref | **D10082AG-216** |
| | | | | Borehole/Pit No. | SHO-TS1-AUK-TP105-S5 |
| Site Name | Steelhouse GI | | | Sample No. | MS1756/5 |
| Soil Description | Brown gravelly SAND | | | Depth, m | 4.00 |
| Specimen Reference | | Specimen Depth | m | Sample Type | B |
| Test Method | BS 1377-2:1990 - Wet & Dry Sieving | | | KeyLAB ID | EAT_202203106 |




| Sieving | | Sedimentation | |
|---|---|---|---|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125 | 100 | | |
| 90 | 100 | | |
| 75 | 100 | | |
| 63 | 100 | | |
| 50 | 100 | | |
| 37.5 | 100 | | |
| 28 | 100 | | |
| 20 | 99 | | |
| 14 | 97 | | |
| 10 | 96 | | |
| 6.3 | 93 | | |
| 5 | 92 | | |
| 3.35 | 91 | | |
| 2 | 88 | | |
| 1.18 | 86 | | |
| 0.6 | 83 | | |
| 0.425 | 79 | | |
| 0.3 | 61 | | |
| 0.212 | 15 | | |
| 0.15 | 2 | | |
| 0.063 | 1.0 | | |

| **Sample Proportions** | % dry mass |
|---|---|
| Very coarse | 0 |
| Gravel | 12 |
| Sand | 87 |
| | |
| Fines <0.063mm | 1 |

| **Grading Analysis** | | |
|---|---|---|
| $D_{100}$ | mm | |
| $D_{60}$ | mm | 0.298 |
| $D_{30}$ | mm | 0.237 |
| $D_{10}$ | mm | 0.186 |
| Uniformity Coefficient | | 1.6 |
| Curvature Coefficient | | 1 |

Remarks

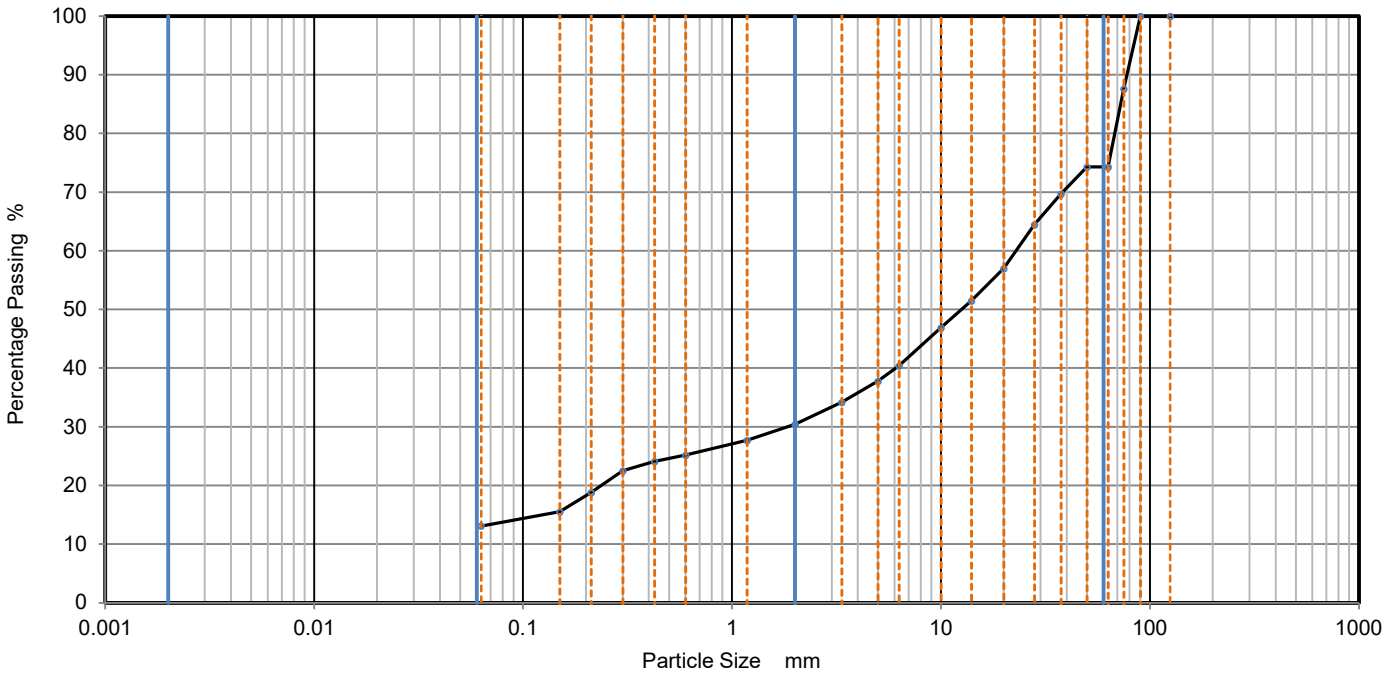
Preparation and testing in accordance with BS 1377-2:1990 unless noted below

| Date | Approved By | | |
|---|---|---|---|
| 21/03/2022 11:57 | N Hodson | N Hodson | UKAS Accredited Laboratory No. 20632 |

EXPLORATION & TESTING ASSOCIATES

# PARTICLE SIZE DISTRIBUTION

| | | | | | |
|---|---|---|---|---|---|
| | | | | Job Ref | **D10082AG-216** |
| | | | | Borehole/Pit No. | SHO-TS1-AUK-TP106-S4 |
| Site Name | Steelhouse GI | | | Sample No. | MS1756/6 |
| Soil Description | Brown clayey sandy GRAVEL with cobbles | | | Depth, m | 2.50 |
| Specimen Reference | | Specimen Depth | m | Sample Type | B |
| Test Method | BS 1377-2:1990 - Wet & Dry Sieving | | | KeyLAB ID | EAT_202203107 |




| Sieving | | Sedimentation | |
|---|---|---|---|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125 | 100 | | |
| 90 | 100 | | |
| 75 | 88 | | |
| 63 | 74 | | |
| 50 | 74 | | |
| 37.5 | 70 | | |
| 28 | 65 | | |
| 20 | 57 | | |
| 14 | 52 | | |
| 10 | 47 | | |
| 6.3 | 40 | | |
| 5 | 38 | | |
| 3.35 | 34 | | |
| 2 | 30 | | |
| 1.18 | 28 | | |
| 0.6 | 25 | | |
| 0.425 | 24 | | |
| 0.3 | 23 | | |
| 0.212 | 19 | | |
| 0.15 | 16 | | |
| 0.063 | 13.1 | | |

| **Sample Proportions** | % dry mass |
|---|---|
| Very coarse | 26 |
| Gravel | 44 |
| Sand | 17 |
| | |
| Fines <0.063mm | 13 |

| **Grading Analysis** | | |
|---|---|---|
| $D_{100}$ | mm | |
| $D_{60}$ | mm | 22.9 |
| $D_{30}$ | mm | 1.85 |
| $D_{10}$ | mm | |
| Uniformity Coefficient | | |
| Curvature Coefficient | | |

Remarks

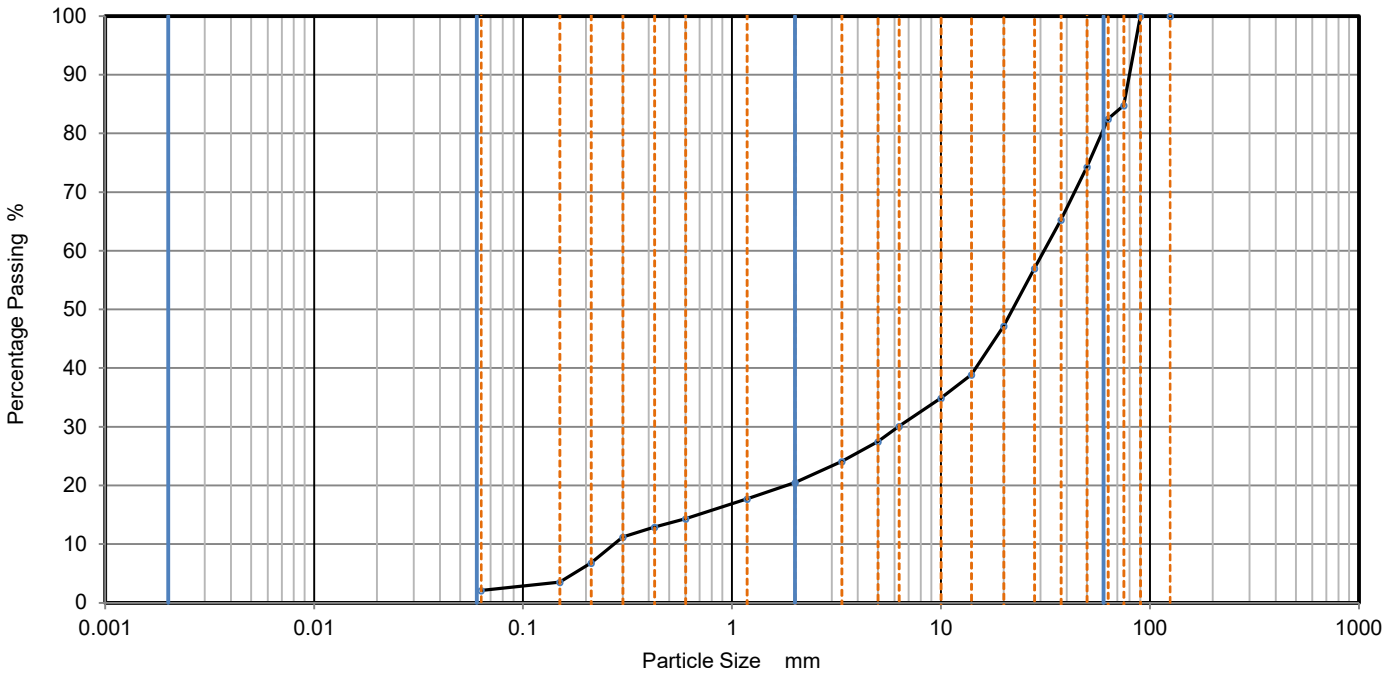
Preparation and testing in accordance with BS 1377-2:1990 unless noted below

| Date | Approved By | | |
|---|---|---|---|
| 21/03/2022 11:56 | N Hodson | N Hodson | UKAS Accredited Laboratory No. 20632 |

EXPLORATION & TESTING ASSOCIATES

# PARTICLE SIZE DISTRIBUTION

| | | | | | |
|---|---|---|---|---|---|
| | | | | Job Ref | **D10082AG-216** |
| | | | | Borehole/Pit No. | SHO-TS1-AUK-TP106-S6 |
| Site Name | Steelhouse GI | | | Sample No. | MS1756/7 |
| Soil Description | Grey sandy GRAVEL with cobbles | | | Depth, m | 4.00 |
| Specimen Reference | | Specimen Depth | m | Sample Type | B |
| Test Method | BS 1377-2:1990 - Wet & Dry Sieving | | | KeyLAB ID | EAT_202203108 |




| Sieving | | Sedimentation | |
|---|---|---|---|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125 | 100 | | |
| 90 | 100 | | |
| 75 | 85 | | |
| 63 | 83 | | |
| 50 | 74 | | |
| 37.5 | 65 | | |
| 28 | 57 | | |
| 20 | 47 | | |
| 14 | 39 | | |
| 10 | 35 | | |
| 6.3 | 30 | | |
| 5 | 28 | | |
| 3.35 | 24 | | |
| 2 | 21 | | |
| 1.18 | 18 | | |
| 0.6 | 14 | | |
| 0.425 | 13 | | |
| 0.3 | 11 | | |
| 0.212 | 7 | | |
| 0.15 | 4 | | |
| 0.063 | 2.1 | | |

| **Sample Proportions** | % dry mass |
|---|---|
| Very coarse | 18 |
| Gravel | 62 |
| Sand | 18 |
| | |
| Fines <0.063mm | 2 |

| **Grading Analysis** | | |
|---|---|---|
| $D_{100}$ | mm | |
| $D_{60}$ | mm | 31.2 |
| $D_{30}$ | mm | 6.23 |
| $D_{10}$ | mm | 0.272 |
| Uniformity Coefficient | | 110 |
| Curvature Coefficient | | 4.6 |

Remarks

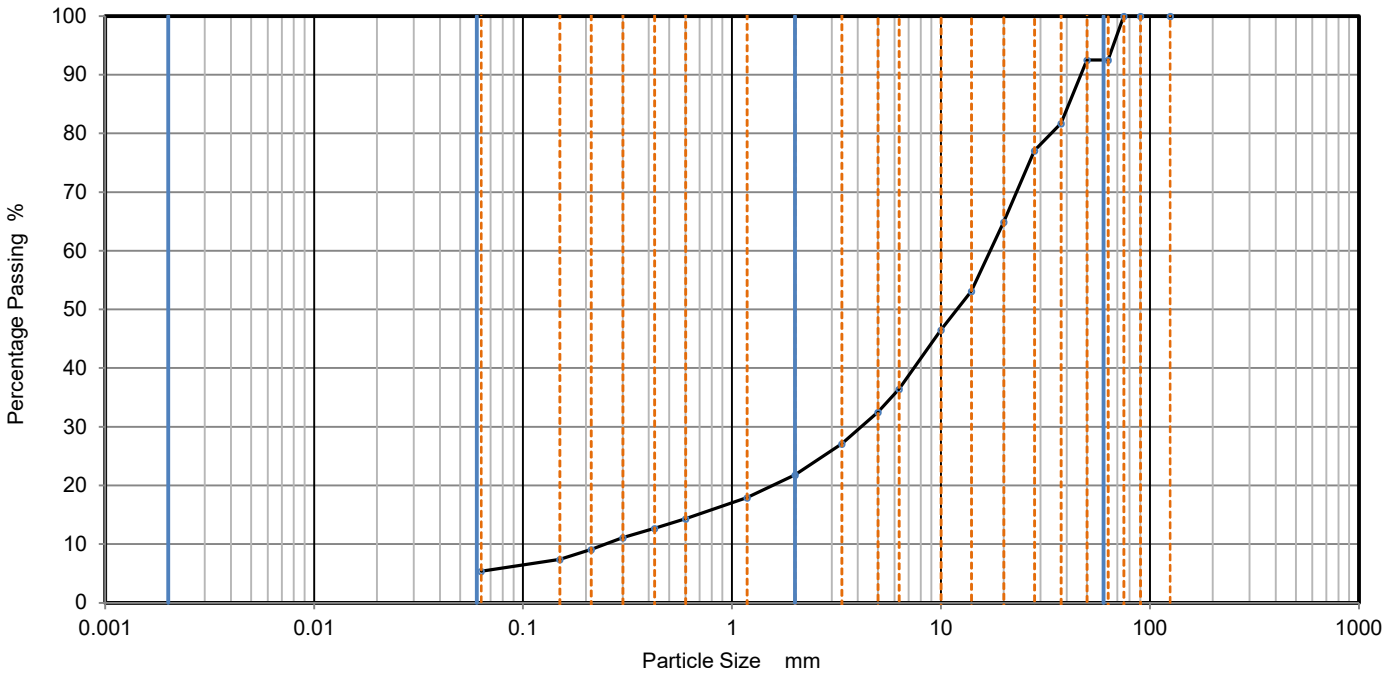
Preparation and testing in accordance with BS 1377-2:1990 unless noted below

| Date | Approved By | | |
|---|---|---|---|
| 21/03/2022 11:57 | N Hodson | N Hodson | UKAS Accredited Laboratory No. 20632 |

EXPLORATION & TESTING ASSOCIATES

# PARTICLE SIZE DISTRIBUTION

| | | | | | |
|---|---|---|---|---|---|
| | | | | Job Ref | **D10082AG-216** |
| | | | | Borehole/Pit No. | SHO-TS1-AUK-TP107-S8 |
| Site Name | Steelhouse GI | | | Sample No. | MS1756/8 |
| Soil Description | Grey, Sandy GRAVEL with COBBLES | | | Depth, m | 2.00 |
| Specimen Reference | | Specimen Depth | m | Sample Type | B |
| Test Method | BS 1377-2:1990 - Wet & Dry Sieving | | | KeyLAB ID | EAT_202203109 |




| Sieving | | Sedimentation | |
|---|---|---|---|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125 | 100 | | |
| 90 | 100 | | |
| 75 | 100 | | |
| 63 | 93 | | |
| 50 | 93 | | |
| 37.5 | 82 | | |
| 28 | 77 | | |
| 20 | 65 | | |
| 14 | 53 | | |
| 10 | 47 | | |
| 6.3 | 36 | | |
| 5 | 33 | | |
| 3.35 | 27 | | |
| 2 | 22 | | |
| 1.18 | 18 | | |
| 0.6 | 14 | | |
| 0.425 | 13 | | |
| 0.3 | 11 | | |
| 0.212 | 9 | | |
| 0.15 | 7 | | |
| 0.063 | 5.4 | | |

| **Sample Proportions** | % dry mass |
|---|---|
| Very coarse | 8 |
| Gravel | 71 |
| Sand | 16 |
| | |
| Fines <0.063mm | 5 |

| **Grading Analysis** | | |
|---|---|---|
| $D_{100}$ | mm | |
| $D_{60}$ | mm | 17.2 |
| $D_{30}$ | mm | 4.16 |
| $D_{10}$ | mm | 0.247 |
| Uniformity Coefficient | | 70 |
| Curvature Coefficient | | 4.1 |

Remarks

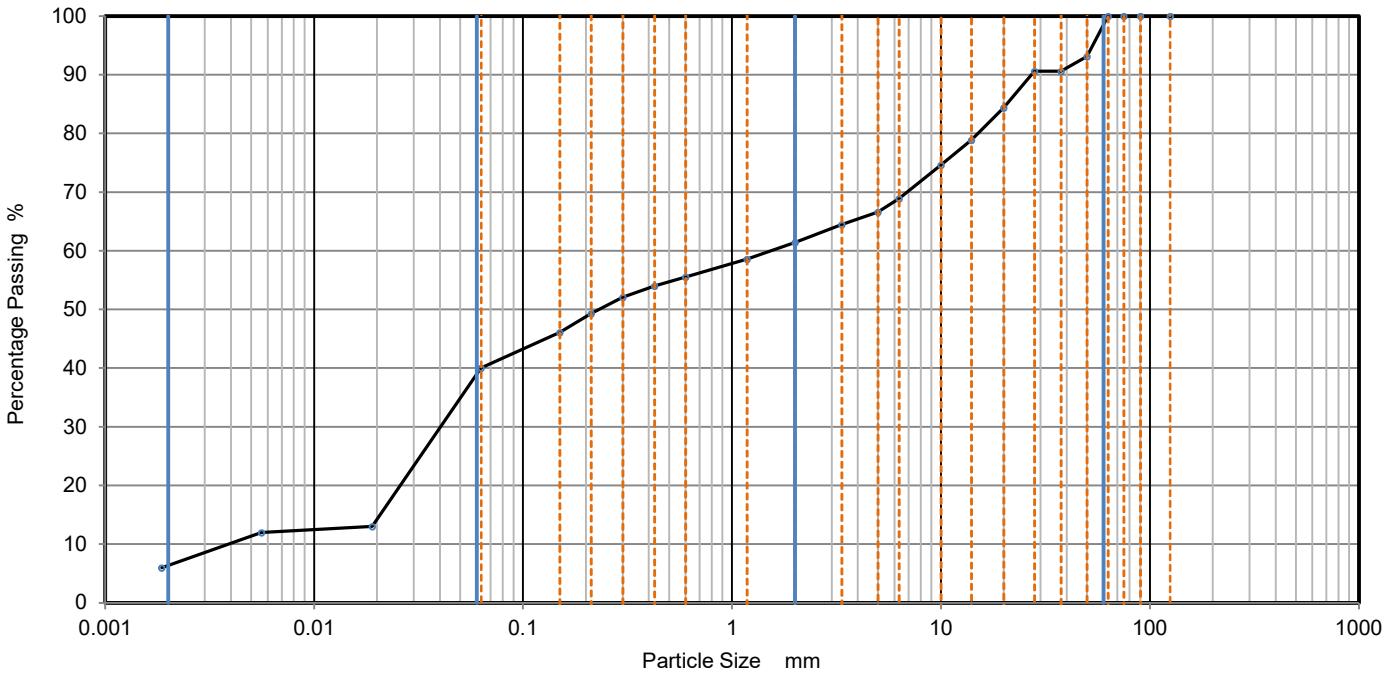
Preparation and testing in accordance with BS 1377-2:1990 unless noted below

| Date | Approved By | | UKAS Accredited Laboratory No. 20632 |
|---|---|---|---|
| 21/03/2022 11:56 | N Hodson | N Hodson | |

EXPLORATION & TESTING ASSOCIATES

# PARTICLE SIZE DISTRIBUTION

| | | | | | |
|---|---|---|---|---|---|
| | | | | Job Ref | **D10082AG-216** |
| | | | | Borehole/Pit No. | SHO-TS1-AUK-TP107-S9 |
| Site Name | Steelhouse GI | | | Sample No. | MS1756/9 |
| Soil Description | Brown, Slightly Sandy, Slightly Gravelly CLAY with Occasional COBBLES | | | Depth, m | 4.20 |
| Specimen Reference | | Specimen Depth | m | Sample Type | B |
| Test Method | BS1377:Part 2:1990, clauses 9.2 and 9.4 | | | KeyLAB ID | EAT_2022031010 |




| Sieving | | Sedimentation | |
|---|---|---|---|
| Particle Size mm | % Passing | Particle Size mm | % Passing |
| 125 | 100 | 0.0189 | 13 |
| 90 | 100 | 0.0056 | 12 |
| 75 | 100 | 0.0019 | 6 |
| 63 | 100 | | |
| 50 | 93 | | |
| 37.5 | 91 | | |
| 28 | 91 | | |
| 20 | 84 | | |
| 14 | 79 | | |
| 10 | 75 | | |
| 6.3 | 69 | | |
| 5 | 67 | | |
| 3.35 | 65 | | |
| 2 | 61 | | |
| 1.18 | 59 | | |
| 0.6 | 56 | Particle density (assumed) | |
| 0.425 | 54 | 2.90 | Mg/m3 |
| 0.3 | 52 | | |
| 0.212 | 49 | | |
| 0.15 | 46 | | |
| 0.063 | 40.0 | | |

| **Sample Proportions** | % dry mass |
|---|---|
| Very coarse | 0 |
| Gravel | 39 |
| Sand | 21 |
| Silt | 33 |
| Clay | 7 |

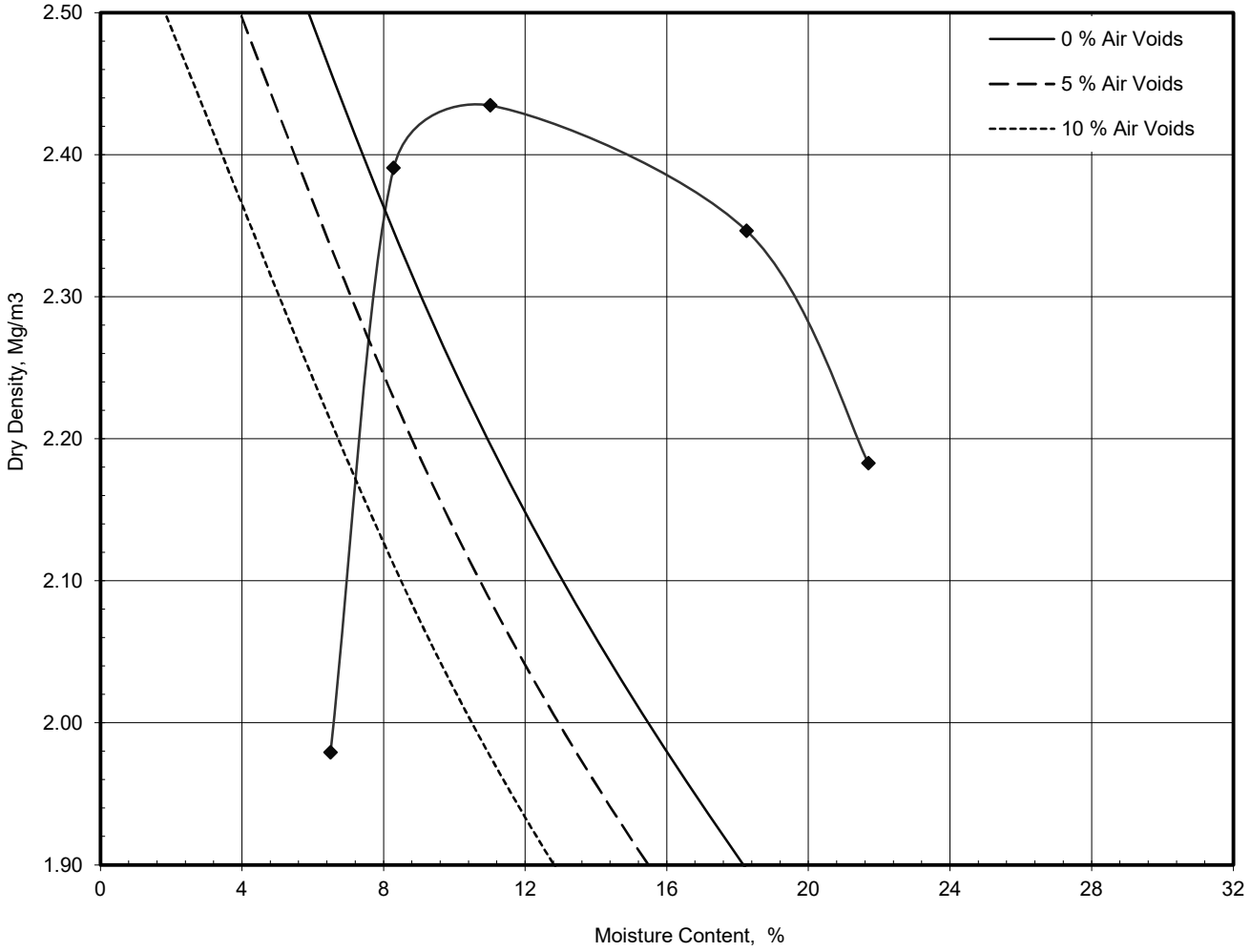
| **Grading Analysis** | | |
|---|---|---|
| $D_{100}$ | mm | |
| $D_{60}$ | mm | 1.53 |
| $D_{30}$ | mm | 0.0406 |
| $D_{10}$ | mm | 0.00392 |
| Uniformity Coefficient | | 390 |
| Curvature Coefficient | | 0.27 |

Remarks

Preparation and testing in accordance with BS 1377-2:1990 unless noted below

| Date | Approved By | | |
|---|---|---|---|
| 21/03/2022 11:57 | N Hodson | N Hodson | UKAS Accredited Laboratory No. 20632 |

| EXPLORATION & TESTING ASSOCIATES | **Dry Density / Moisture Content Relationship Heavy Compaction** | | Job Ref | **D10082AG-216** |
|---|---|---|---|---|
| | | | Borehole / Pit No | SHO-TS1-AUK-TP102-S6 |
| Site Name | **Steelhouse GI** | | Sample No | MS1756/2 |
| Soil Description | Grey sandy GRAVEL with occasion clay pockets | | Depth | 4.70 m |
| Specimen Ref. | | Specimen Depth m | Sample Type | B |
| Test Method | BS1377:Part 4:1990, clause 3.6, 4.5kg rammer | | Keylab ID | EAT_202203103 |
| | | | Compaction Test Reference/No. | |




| Preparation | | Material used was air dried |
|---|---|---|
| Mould Type | | CBR |
| Samples Used | | Separate specimens tested |
| Material Retained on 37.5 mm Sieve | % | 8 |
| Material Retained on 20.0 mm Sieve | % | 16 |
| Particle Density - Assumed | Mg/m³ | 2.90 |

| **Maximum Dry Density** | Mg/m³ | **2.43** |
|---|---|---|

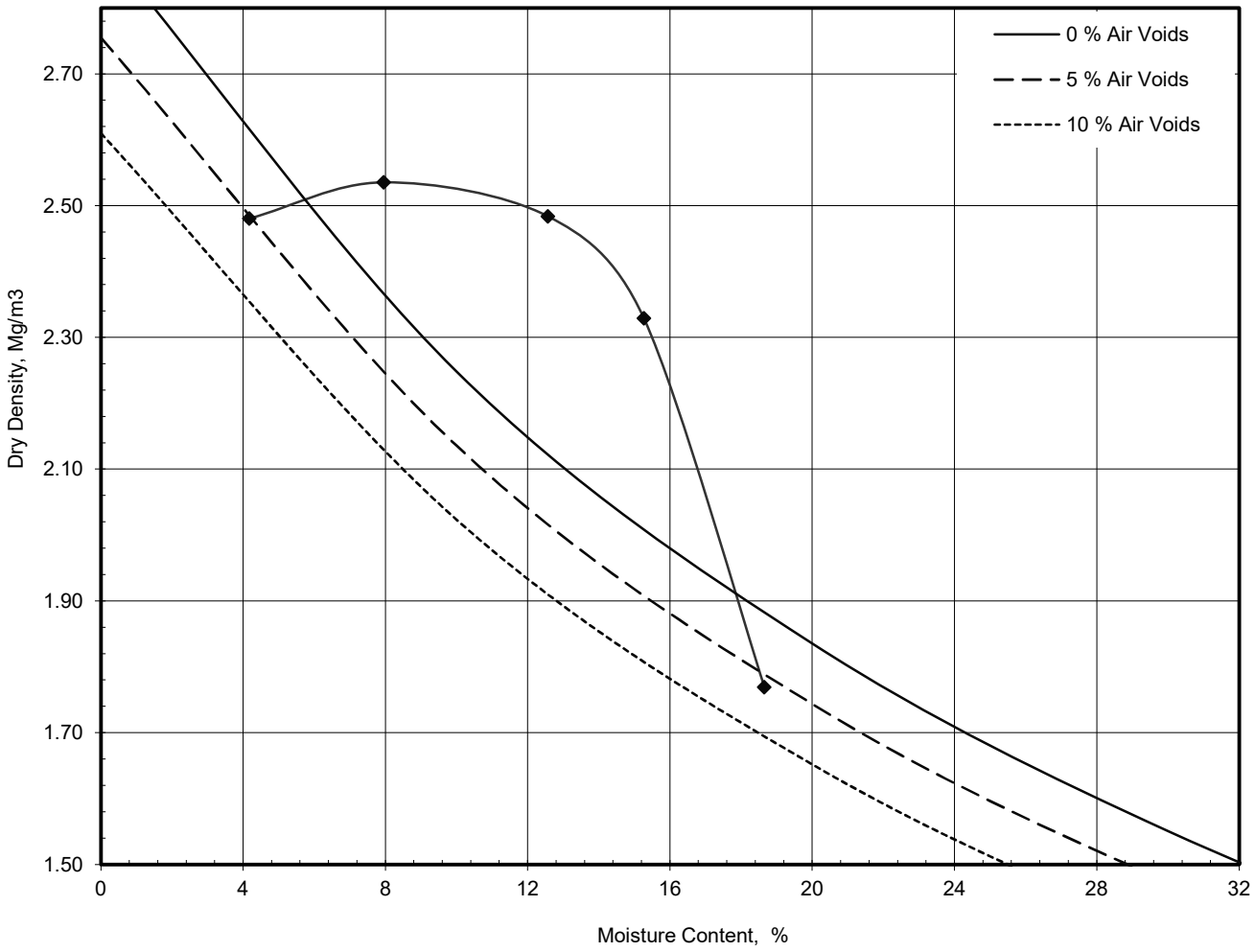
| **Optimum Moisture Content** | % | **11** |
|---|---|---|

| Comments | Date | Checked | Approved | |
|---|---|---|---|---|
| | | | N. Hodson | UKAS Accredited Laboratory No. 20632 |
| | 21/03/2022 12:02 | N. O'Brien | | |

| EXPLORATION & TESTING ASSOCIATES | **Dry Density / Moisture Content Relationship Heavy Compaction** | Job Ref | **D10082AG-216** |
|---|---|---|---|
| | | Borehole / Pit No | SHO-TS1-AUK-TP103-S4 |

| | | | | | |
|---|---|---|---|---|---|
| Site Name | **Steelhouse GI** | | | Sample No | MS1756/3 |
| Soil Description | Dark grey sandy GRAVEL | | | Depth | 1.00 m |
| Specimen Ref. | | Specimen Depth | m | Sample Type | B |
| Test Method | BS1377:Part 4:1990, clause 3.6, 4.5kg rammer | | | Keylab ID | EAT_202203104 |

Compaction Test Reference/No.

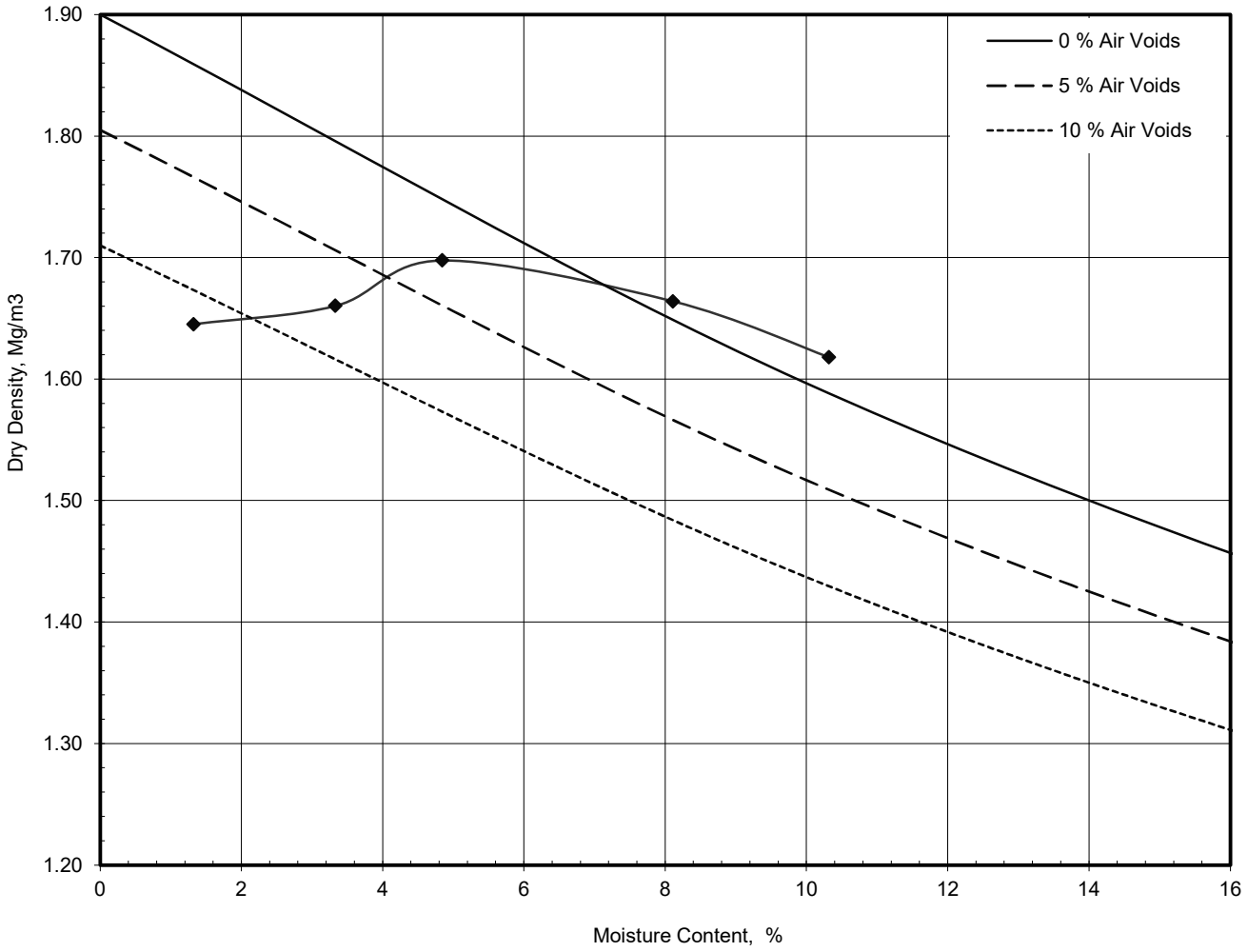



| Preparation | | Material used was air dried |
|---|---|---|
| Mould Type | | CBR |
| Samples Used | | Separate specimens tested |
| Material Retained on 37.5 mm Sieve | % | 26 |
| Material Retained on 20.0 mm Sieve | % | 23 |
| Particle Density - Assumed | Mg/m³ | 2.90 |

| | | |
|---|---|---|
| **Maximum Dry Density** | Mg/m³ | **2.54** |
| **Optimum Moisture Content** | % | **13** |

| Comments | Date | Checked | Approved | |
|---|---|---|---|---|
| Test carried out deviating from BS:1377-4:1990 due to material retained on 37.5mm sieve | 21/03/2022 11:59 | N. O'Brien | N. Hodson | UKAS Accredited Laboratory No. 20632 |

| EXPLORATION & TESTING ASSOCIATES | **Dry Density / Moisture Content Relationship Heavy Compaction** | | Job Ref | **D10082AG-216** |
|---|---|---|---|---|
| | | | Borehole / Pit No | SHO-TS1-AUK-TP105-S5 |
| Site Name | **Steelhouse GI** | | Sample No | MS1756/5 |
| Soil Description | Brown gravelly SAND | | Depth | 4.00 m |
| Specimen Ref. | | Specimen Depth m | Sample Type | B |
| Test Method | BS1377:Part 4:1990, clause 3.5, 4.5kg rammer | | Keylab ID | EAT_202203106 |
| | | | Compaction Test Reference/No. | |




| Preparation | | Material used was air dried |
|---|---|---|
| Mould Type | | One Litre |
| Samples Used | | Single sample tested |
| Material Retained on 37.5 mm Sieve | % | 2 |
| Material Retained on 20.0 mm Sieve | % | 3 |
| Particle Density - Assumed | Mg/m³ | 1.90 |

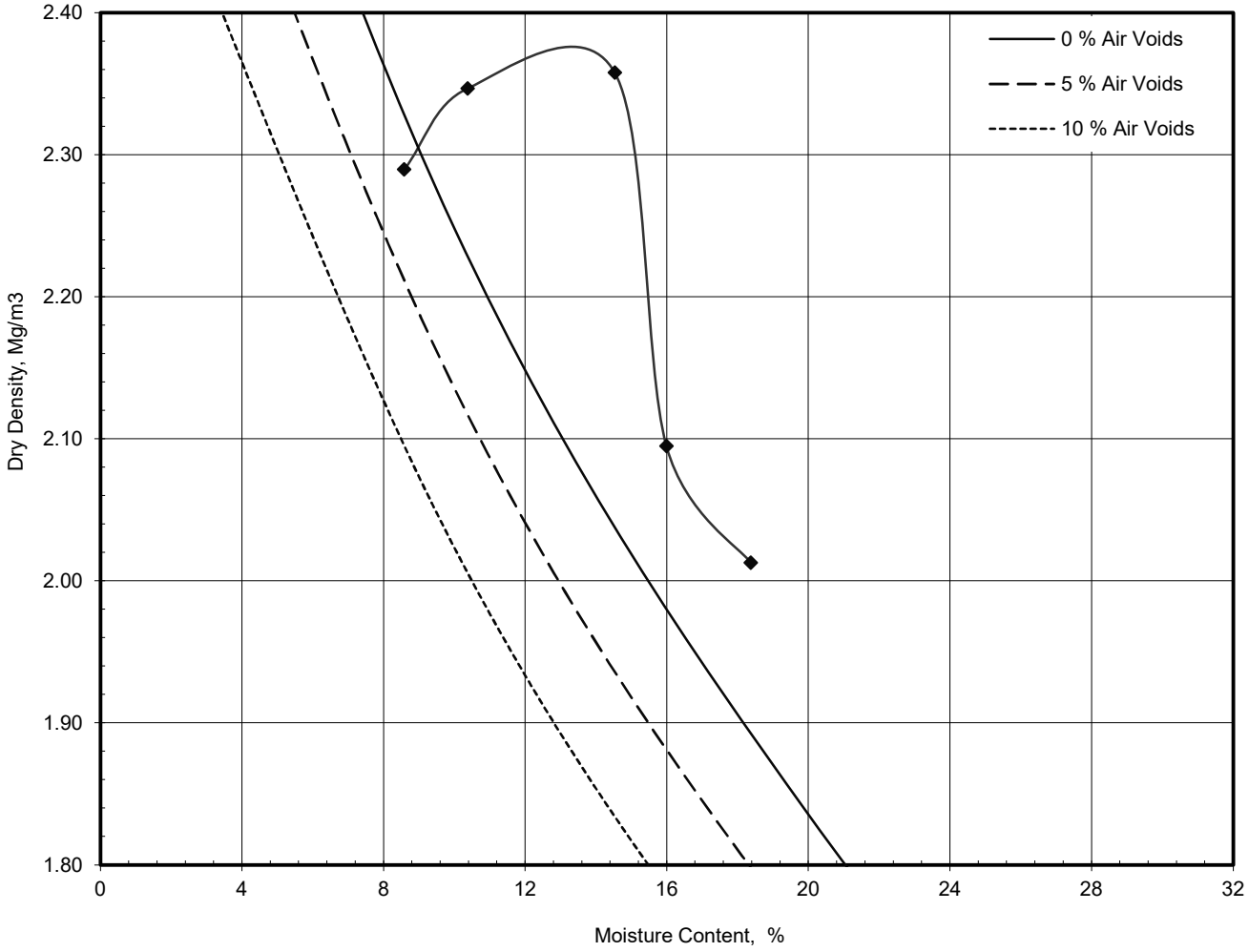
| **Maximum Dry Density** | Mg/m³ | **1.70** |
|---|---|---|

| **Optimum Moisture Content** | % | **4.8** |
|---|---|---|

| Comments | Date | Checked | Approved | |
|---|---|---|---|---|
| | | | N. Hodson | UKAS Accredited Laboratory No. 20632 |
| | 21/03/2022 12:01 | N. O'Brien | | |

| EXPLORATION & TESTING ASSOCIATES | **Dry Density / Moisture Content Relationship Heavy Compaction** | Job Ref | **D10082AG-216** |
|---|---|---|---|
| | | Borehole / Pit No | SHO-TS1-AUK-TP106-S4 |

| | | | | | |
|---|---|---|---|---|---|
| Site Name | **Steelhouse GI** | | | Sample No | MS1756/6 |
| Soil Description | Brown clayey sandy GRAVEL with cobbles | | | Depth | 2.50 m |
| Specimen Ref. | | Specimen Depth | m | Sample Type | B |
| Test Method | BS1377:Part 4:1990, clause 3.6, 4.5kg rammer | | | Keylab ID | EAT_202203107 |
| | | | | Compaction Test Reference/No. | |




| Preparation | | Material used was air dried |
|---|---|---|
| Mould Type | | CBR |
| Samples Used | | Separate specimens tested |
| Material Retained on 37.5 mm Sieve | % | 31 |
| Material Retained on 20.0 mm Sieve | % | 12 |
| Particle Density - Assumed | Mg/m³ | 2.90 |

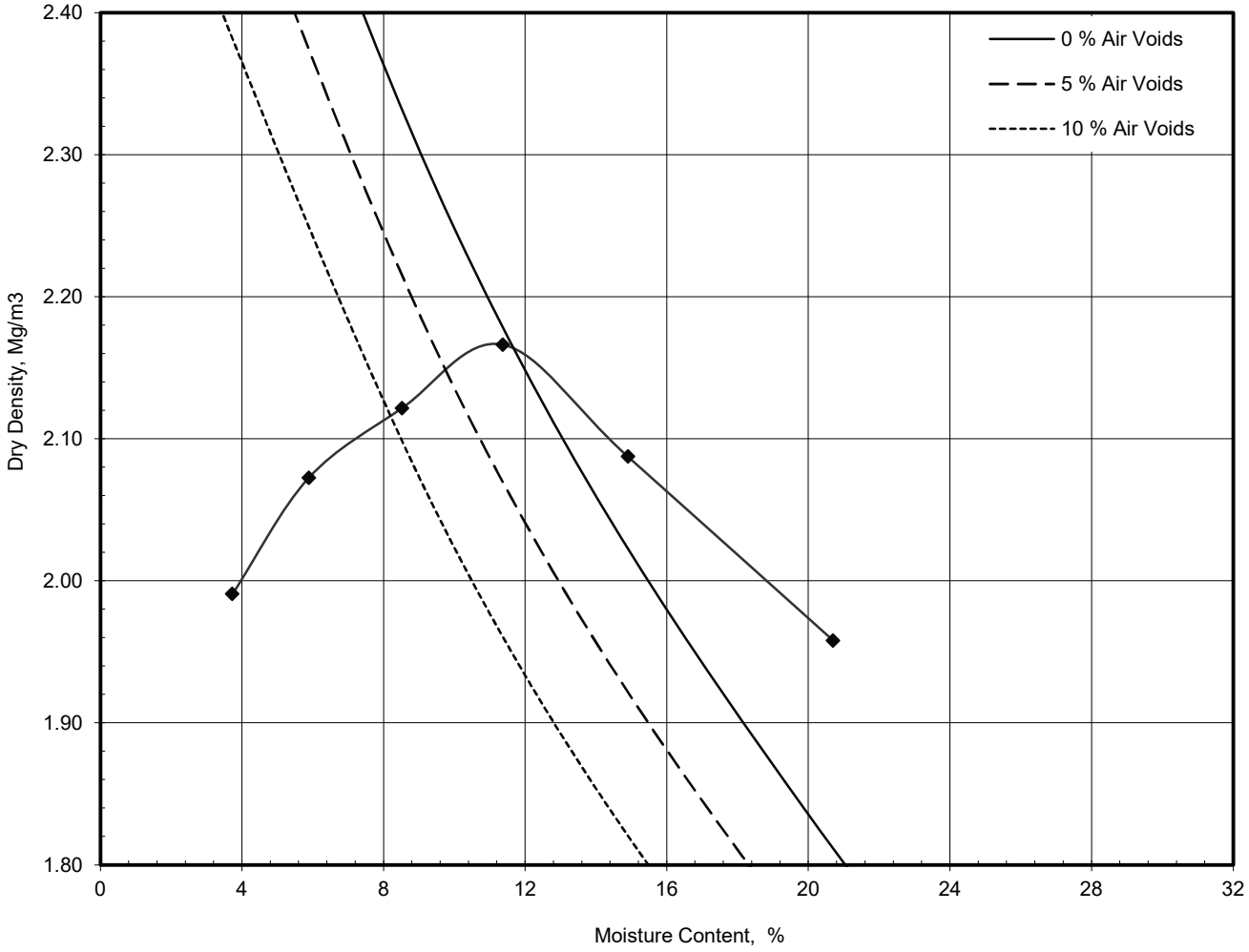
| | | |
|---|---|---|
| **Maximum Dry Density** | Mg/m³ | **2.36** |
| **Optimum Moisture Content** | % | **15** |

| Comments | Date | Checked | Approved | |
|---|---|---|---|---|
| Test carried out deviating from BS:1377-4:1990 due to material retained on 37.5mm sieve | 21/03/2022 11:59 | N. O'Brien | N. Hodson | UKAS Accredited Laboratory No. 20632 |

| EXPLORATION & TESTING ASSOCIATES | **Dry Density / Moisture Content Relationship Heavy Compaction** | Job Ref | **D10082AG-216** |
|---|---|---|---|
| | | Borehole / Pit No | SHO-TS1-AUK-TP107-S9 |

| | | | | | |
|---|---|---|---|---|---|
| Site Name | **Steelhouse GI** | | | Sample No | MS1756/9 |
| Soil Description | Brown, Slightly Sandy, Slightly Gravelly CLAY with Occasional COBBLES | | | Depth | 4.20 m |
| Specimen Ref. | | Specimen Depth | m | Sample Type | B |
| Test Method | BS1377:Part 4:1990, clause 3.6, 4.5kg rammer | | | Keylab ID | EAT_2022031010 |

Compaction Test Reference/No.




| Preparation | | Material used was air dried |
|---|---|---|
| Mould Type | | CBR |
| Samples Used | | Separate specimens tested |
| Material Retained on 37.5 mm Sieve | % | 11 |
| Material Retained on 20.0 mm Sieve | % | 9 |
| Particle Density - Assumed | Mg/m³ | 2.90 |

| | | |
|---|---|---|
| **Maximum Dry Density** | Mg/m³ | **2.17** |
| **Optimum Moisture Content** | % | **9.9** |

| Comments | Date | Checked | Approved | |
|---|---|---|---|---|
| Samples tested deviating from BS:1377-4:1990 Due to Material Retained on 37.5mm Sieve | 21/03/2022 12:02 | N. O'Brien | N. Hodson | UKAS Accredited Laboratory No. 20632 |

EXPLORATION & TESTING ASSOCIATES

# Particle Density by Gas Jar - Summary of Results

| Project No. | Project Name |
|---|---|
| D10082AG-216 | Steelhouse GI |

| Hole No. | Sample | | | | Soil Description at test horizon | Particle Density $Mg/m^3$ | Remarks |
|---|---|---|---|---|---|---|---|
| | Ref | Top | Base | Type | | | |
| SHO-TS1-AUK-TP104-S4 | MS1756/4 | 1.60 | | B | Grey, Sandy GRAVEL with Many Cobbles | 3.00 | |
| SHO-TS1-AUK-TP107-S8 | MS1756/8 | 2.00 | | B | Grey, Sandy GRAVEL with Cobbles | 2.91 | |
| SHO-TS1-AUK-TP101-S4 | MS1756/1 | 3.50 | | B | Grey, Sandy GRAVEL with Many Cobbles | 3.26 | |
| | | | | | | | |
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| Notes | Comments | Date | Approved | |
|---|---|---|---|---|
| Tests performed in accordance with BS 1377 unless annotated otherwise.<br>Gas Jar tests to BS1377: Part 2 : 1990, clause 8.2 | | 21/03/2022 12:09 | N.Hodson | UKAS Accredited Laboratory No. 20632 |

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